O. R. TAMBO DISTRICT MUNICIPALITY

O.R. TAMBO
DISTRICT MUNICIPALITY

CONTRACT NUMBER: MIS 535 774 C

DESCRIPTION: MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU

CONTRACT 3

JUNE 2025

NAME OF BIDDER:

BID AMOUNT:

CSD SUPPLIER NUMBER:

CLOSING DATE & TIME: **07 August 2025 @ 12H00**

Prepared for:
The Municipal Manager
O. R. Tambo District Municipality
Private Bag X6043
MTHATHA
5099

Tel. No. (047) 501 6400

Prepared by:
The Infrastructure Water and Sanitation Services
O. R. Tambo District Municipality
Private Bag X6043
MTHATHA
5099

Tel. No. (047) 501 6425

PLEASE CHECK x / √

That you have read all the pages of the bid document. ……..

That you have completed ALL the forms required to be completed ……
in NON-ERASEABLE INK.

That your arithmetic calculation in the pricing schedule is correct. ……..

That you have attached ALL necessary documentation relating to the ……..
composition of the bidding entity, i.e.

- Company registration documents naming the shareholders and Directors / members of the company, close corporation etc.
- Joint venture agreement if bidding entity is a joint venture.

That the COMPLETE bid document is submitted. ……

That the FORM OF OFFER is completed in full and signed. …….

That ALL returnable documents are completed and signed. ……..…..

Ensure that your bid is submitted by 12H00PM on the closing date of the bid.

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Number	Heading	Colour
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Part T1: Tendering procedures		
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T1.3	Standard Conditions of Tender	Pink
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T2.1	List of Returnable Documents	Yellow
T2.2	Returnable Documents for Tender Evaluation Purposes	Yellow
T2.3	Returnable Documents Incorporated into the Contract.	Yellow
The Contract		
Part C1: Agreements and Contract Data		
C1.1	Form of Offer and Acceptance	Yellow
C1.2	Contract Data	Yellow
C1.3	Tenderer's Direct Participation of Targeted Labour	White
C1.4	Specification for SMME Sub-Contractor Employment	White
C1.5	Performance Guarantee (Pro Forma)	White
C1.6	Adjudication	White
C1.7	Agreement in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993)	White
Part C2: Pricing data		
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Part C3: Scope of Work		
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C3.2	Engineering	Blue
C3.3	Procurement	Blue
C3.4	Construction	Blue
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Part C4 : Site Information		
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C4.2	Rainfall Data	Green
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APPENDIX A Locality Layout

APPENDIX B Monthly Reporting Templates

APPENDIX C PEM Environmental Specs

APPENDIX D PHS OHS Specs

APPENDIX E HIV/AIDS Awareness Education Specification

APPENDIX F Baseline Risk Assessment

APPENDIX G Geotechnical Investigation

APPENDIX H Rainfall Data

APPENDIX J Book of Drawings

T1.1: TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited from suitably qualified and experienced contractors who are registered with CIDB for the Construction of the following project under the O. R. Tambo District Municipality.

Project Number	Name and Description	CIDB Grading	Bid Closing Date and Time
Contract No.: MIS 535 774 C	Mthatha Central Corridor Regional Bulk Water Supply – Phase 1: Construction of Bulk Gravity Main from Lindile to KwaTshatshu: Contract 3	7CE or higher	07 August 2025 @12pm

A compulsory clarification meeting with representatives of the Employer will take place at **10H00** on Friday, **11th of July 2025** at the **O.R. Tambo District Municipal Offices:** Myezo, **before proceeding to site.**

The municipality will not repeat any matters already covered in the compulsory briefing meeting to the tenderers who arrive more than 10 minutes late to the meeting, nor will it allow such tenderers to complete the attendance register. Any bid received from a tenderer who did not attend the briefing meeting and sign the attendance register will not be considered.

Bid documents Must be downloaded on the O. R. Tambo District Municipality's website (www.ortambodm.gov.za), alternatively on the e-Tender website (www.etenders.gov.za) at no cost.

Bids must be completed in black ink, enclosed in a sealed envelope, and clearly marked with the "**Project number, project name and description"**, deposited in the Open Tender Box, Ground Floor, O. R. Tambo District Municipality Building, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape, not later than 12H00pm on 07 August 2025.

It must be expressly understood that the Municipality does not accept responsibility for ensuring that bid submissions sent by courier or post, or delivered in any other way, are deposited in the Tender Box. It is therefore preferable for the tenderer to ensure that its bid submission is placed in the Tender Box by its own staff or representative(s).

Tender submissions will be opened in public at **12H00pm on 07 August 2025.** The Municipality reserves the right not to accept the lowest priced tender or any tender at all, or to accept the whole or part of any tender.

In terms of the O.R. Tambo District Municipality SCM Policy Section 72 and 73, the Municipality will apply Fair Distribution of Municipal Resources on Capital Infrastructure Projects, Objective criteria on the evaluation and award of bids.

RETURNABLE DOCUMENTS TO BE SUBMITTED WITH THE BID:

- Copy of business registration documents, as issued by CIPC.
- Certified copy of identity documents of directors/ shareholders/ partners / members, as the case maybe.
- Original Valid Tax Clearance Certificate or a Confirmation of Tax Validity with the pin issued by SARS

INVALID OR NON-SUBMISSION OF THE FOLLOWING RETURNABLE DOCUMENTS WILL DISQUALIFY A BID SUBMISSION:

- Complete fully the bid document or to provide the information requested, or to sign the bidat the appropriate spaces provided or next to errors.
- Fill and properly sign the form of offer
- Attach proof of registration with CSD.
- Attach audited annual financial statements of the bidding entity (for projects in excess of R10 million);
- Attach unaudited annual financial statements for close corporations and companies if the public interest score is below 350 in line with the companies act of 2008;
- Attach proof of latest municipal rates and taxes statement **of the bidder and each company director** and each company indicating that rates and taxes are not in arrears for more than 3 months.
- Attach proof of latest municipal water and sanitation charges statement **of the bidder and each company director** indicating that rates and taxes are not in arrears for more than 3 months for bidders who reside in the O. R. Tambo District Municipality area.
- Attach a confirmation of address from a ward Councillor where the bidder and company directors operate and reside in a peri-urban area where no rates and taxes and service charges are not billed.
- Attach a copy of a valid lease agreement where the bidder does not own the property they are operating from.
- Attach proof or registration with the Construction Industry Development Board (CIDB).
- Attach joint Venture Agreement or Consortium Agreement signed and initialed on each page (if applicable).
- Attach consolidated company registration documents, bank account, SARS Tax pin, CSD (for JV or Consortium)
- **NOTE:** Joint Ventures and Consortiums will only be considered provided they submit consolidated company registration documents and on award will be required to submit a joint venture or consortium bank account and a joint venture or consortium SARS Tax PIN.

EVALUATION OF BIDS IN TERMS OF THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK REGULATIONS,2022:

Bids will be evaluated in three stages, namely:

- Stage 1 – Compliance with Bid Rules and other Requirements
- Stage 2 – Functionality Assessment
- Stage 3 – Price and Preference Points

Tenders will be evaluated in terms of the Supply Chain Management policy of the O. R. Tambo District Municipality. The lowest tender will not necessarily be accepted, and the Municipality reserves right to accept the whole or part of any tender or not to consider any tender not suitably endorsed. An **90/10-point system** shall apply **where 80 points** is allocated for price and **20 points allocated for specific goals** of contributor as follows:

The specific goals allocated points in terms of this tender	**Maximum Number of Points Allocated on 80/20 System**
51% Black-owned enterprises	05
100% Women-owned enterprises	05
100% Youth-owned enterprises	05
Where the Enterprise head office or Primary Place of business is located within O. R. Tambo District.	05

CONDITIONS OF THE TENDER WITH REGARDS TO SUB-CONTRACTING

It is a Condition of this Tender that the Successful Tenderer must Subcontract a **Minimum of 30% of the value of the Contract Sum** (Excluding CPA and Contingencies) to the Designated groups as indicated in the Tender Document

Tenders may only be submitted on tender documentation issued. No late, faxed, e-mailed, or other form of tender will be accepted.

Technical enquiries: Mr. N. Noto, telephone number 047 501 6425 or email: nkosiyabon@ortambodm.gov.za.

All Supply Chain Management enquiries may be directed to Mr. S. Hopa, telephone number 047 5016449 or Email: sakhiwoh@ortambodm.org.za during office hours: Monday to Friday 08H00-13H00 and 13H30-16H30.

Tenderers must submit copies of all supporting documents necessary to prove conformance with Specific Goal criteria listed above in order to be eligible for Specific Goal points.

B. Mase
Municipal Manager

T1.2: TENDER DATA

The Standard Conditions of Tender are those contained in Annexure C of the Construction Industry Development Board (CIDB) *Standard for Uniformity in Engineering and Construction Works Contracts (August 2019)* as published in Board Notice 423 of 2019, in Government Gazette No. 42622, on 08 August 2019.

The Standard Conditions of Tender Procurement make several references to the Tender Data for details that apply specifically to the Tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard Conditions of Tender.

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

Clause	Wording / Data
C.1.1	**General**
C.1.1.1	The Employer is: O. R. Tambo District Municipality Private Bag X6043 Mthatha, 5099 Telephone: 047 501 6425 Email: nkosiyabon@ortambodm.gov.za
C.1.1.2	Tenderers shall declare any perceived, known and potential conflict of interest under Returnable Documents: Declaration of Intent of Persons in Service of State and Declaration of Tenderers Supply Chain Management Practices.
C.1.2	The Tender documents issued by the Employer comprise: **Tender** T1.1 Tender Notice and Invitation to Tender. T1.2 Tender Data T1.3 Standard Conditions of Tender T2.1 List of Returnable Documents T2.2 Returnable Documents for Tender Evaluation Purposes T2.3 Returnable Documents to be Incorporated into the Contract **Contract** **Part C1: Agreements and Contract data** C1.1 Forms of Offer and Acceptance C1.2 Contract Data C1.3 Tenderer's Direct Participation of Targeted Labour C1.4 Specification for SMME Sub-contractor Employment C1.5 Performance Guarantee (Pro forma) C1.6 Adjudication C1.7 Agreement in Terms of the Occupational Health and Safety Act 1993 (Act 85 of 1993)

Clause	Wording / Data
	Part C2: Pricing Data C2.1 Pricing Instructions C2.2 Bill of Quantities **Part C3: Scope of Works** C3.1 Description of the Works C3.2 Engineering C3.3 Procurement C3.4 Construction C3.5 Management C3.6 Health and Safety C3.7 Project Specifications **Part C4: Site Information** **Part C5: Tender Drawings** **Appendices A – H.** Documents not issued to Tenderer's, but available from the S.A. Federation of Civil Engineering Contractors, the S.A. Institution of Civil Engineering, the S.A. Bureau of Standards, the Government printers, the Construction Industry Development Board, and the Employer, as applicable: a) GCC2015 "General Conditions of Contract for Construction Works", Third Edition, second print, 2015 published by the South African Institute of Civil Engineering (SAICE) *Tel 011 805 5947) b) S.A. National Standards SANS 1200 Standardised Specifications for Civil Engineering Construction. c) The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (November 2022). d) The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and Construction Regulations (2014) and COVID-19 requirements for Construction Sites.
C1.3	**Interpretation** The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.
C.1.4	**Communication**: Attention is drawn to the fact that verbal information, given by the Employer's Agent during site visits/clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer. Only information issued formally by the Employer's Agent in writing to tenderers will be regarded as amending the Tender Documents. The Employer's Agent is: Name: BM Infrastructure Development

Clause	Wording / Data
	Address: 48 Flamingo Drive Southernwood Mthatha, 5099 Contact person: Andile Tulelo Telephone: 047 531 0424 Email: info@bmengineers.co.za
C.2	**Tenderer's obligations**
C.2.1.1	Only those tenderers who are registered with the Construction Industry Development Board (CIDB) (as "Active" at the time of tender closing) or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tender for an **7CE or Higher** class of construction work, are eligible to submit a tender offer. **Joint ventures are eligible to submit a tender offer provided that:** a) Every member of the joint venture is registered (as "Active") with the CIDB (at the time of tender closing). b) The Lead partner has a contractor grading designation in the CE class of construction work and not lower than one level below the required grading designation in the class of construction works under considerations and possess the required recognition status. c) The combined contractor grading designation calculated in accordance with the Construction Industry Development Board Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for **7CE or Higher** class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations. d) 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 it defines precisely the conditions under which the joint venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. e) The Tenderer, if a Joint Venture, must submit a signed JV Agreement with the tender specific to the tendered Contract and clearly showing 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. Tenderers are eligible to submit a tender offer, provided they have submitted the following tender requirements listed below: a) Tax Tenderers shall be registered and in good standing with the South African Revenue Services (SARS) and must submit/append documentary evidence/proof in the form of a valid Tax Clearance PIN Number and/or a valid Tax Number issued by SARS. Failure to provide a valid Tax Clearance PIN number and/or Tax Number will result in the tender being rejected. Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance PIN Number

Clause	Wording / Data
	and/or Tax Number. b) The tenderer is registered on the National Treasury Central Supplier Database (CSD) and provide proof of registration must be in the form of CSD registration number. Also note the following: i. Tenderers who are not registered are not precluded from submitting bids but must be registered prior to Contract Award. ii. In the case of Joint Venture partnerships this requirement will apply individually to each party to the Joint Venture. iii. Tenderers who wish to register as service providers on the CSD can register online at https://secure.csd.gov.za/Account/Register. iv. For further enquiries contact the Supply Chain Management Unit on Tel: 043 707 3700. c) A resolution authorizing a person to sign the bid documents (Full completion and signing of Form 2.2.2 or resolution on company letter head). d) Attendance of Compulsory Site Briefing: Only Tenderers who have attended the compulsory site briefing, signed the attendance register and have Form 2.2.7 Certificate of Attendance at Clarification Meeting signed by the Employer's Agent or his representative, will be eligible to submit a tender offer. e) A valid CIDB registration with a minimum grading of **7CE or Higher**. In case of JV, the tenderer has submitted a mandatory JV agreement that includes the agreement and banking details and stipulates the JV lead partner's as well as JV partners CRS numbers are indicated on the form (proof must be attached). f) A signed Form of Offer in the Contract Section C1.1. g) The tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector. h) The Tenderer has not failed to perform on any previous contract and has not been given written notice to this effect. i) Further Compulsory Documents to be submitted by the Tenderer: In addition to all the documents listed from a) to k) above and all other documents requested in Section T2.1 and T2.2 (Returnable Documents), it is further required that copies of the following current and valid company certificates be provided: i. Letter of Good Standing (Form 2.2.5) from Compensation Commissioner or Insurer in terms of Section 80 of the Compensation for Occupational Injuries and Diseases (COID) Act (Act No 130 of 1993). ii. Letter of Good Standing from Department of Labour (UIF). iii. In the case of Joint Ventures, the above shall be provided for each JV Partner. The above documents shall be included in the Supporting Documents file.
C.2.3	*Amend the Clause to read:* ".....and notify the Employer's Agent of any discrepancy ...."

Clause	Wording / Data
C.2.6	**Receipt of Addenda's:** All tenderers to acknowledge receipt of any Addendums issued and to complete **Form 2.3.1: RECORD OF ADDENDA TO TENDER DOCUMENTS** in the Returnable Documents. Failure to apply instructions contained in addenda may render a tenderer's offer non-responsive in terms of Condition of Tender clause C.3.8.
C.2.7	For particulars regarding the compulsory clarification meeting (site inspection meeting) refer to the **Tender Notice and Invitation to Tender (T1.1)** of this document. The onus rests with the tenderer to ensure that the person attending the clarification meeting on his behalf is appropriately qualified to understand all directives and clarifications given at that meeting. **Tenderers must sign the attendance register in the name of the tendering entity. Addenda will be issued to, and only tenders will be received from, those entities appearing on the attendance register.**
C.2.8	The employer shall respond to clarifications received up to **7 working days** before the tender closing time.
C.2.9	The employer does not provide insurance. The contractor is responsible for providing full insurance cover for the contract.
C.2.10	**Pricing the Tender Offer** Tenderers are requested to state the rates and currencies in Rand. *Delete the contents of **Clause C.2.10.3** and replace with the following:* "This tender is subject to Contract Price Adjustment as set out in the Contract Data. An alternative offer of fixed rates will not be accepted."
C.2.11	Add the following to the Clause*:* "In the event of a mistake having been made on the price schedule, it shall be crossed out in non-erasable ink and be accompanied by an initial of each signatory to the Tender at each and every price alteration." "If correction fluid has been used on any specific item price, such item will not be considered. Corrections in terms of price may not be made by means of correction fluid such as Tippex or similar product. No correction fluid may be used in a Price Schedule where prices are calculated to arrive at a total amount. If correction fluid has been used, the tender as a whole will be classified non-responsive and not be considered.

Clause	Wording / Data
	The Employer and/or Employer's Agent will reject and classify the tender non-responsive if corrections are not made in accordance with the above."
C.2.12	**Alternative Tender Offers** *Delete the contents of **Clause C.2.12** and replace with the following:* "No alternative offers will be accepted. This includes changes to the 'as-scheduled' allowance for Contingencies."
C.2.13.2	*Delete the contents of **Clause C.2.13.2** and replace with the following:* "Return all returnable documents to the Employer after completing them in their entirety by writing legibly in non-erasable ink. Notwithstanding the format in which the tender documents are issued to Tenderers, no electronic form of tender offers will be accepted. The Original to be submitted shall comprise: • Tender Document, as proof of specifications tendered on and duly completed and signed. • Indexed Lever-Arch file (or files) with all supporting documentation clearly marked with Tenderer's name clearly marked on the spine or cover. • Tender Drawings (Book of Drawings) need NOT be submitted. Failure to comply with these requirements may result in the tender being declared non-responsive. Notwithstanding any statement in any of the Returnable Documents listed in T2 to the effect that supporting documentation must be attached to the associated Returnable Document, the supporting documentation must be placed in the supporting documentation files as stipulated above. The Bill of Quantities must be fully and correctly filled in by hand in black ink. The binding of the original volume of the Tender Document may NOT be dismantled.
C.2.13.3	Number of Duplicate Copies required is none.
C.2.13.4	**Add the following** to the clause: "Only authorised signatories may sign the original and all copies of the tender offer where required in terms of C.2.13.3 In the case of a **ONE-PERSON CONCERN** submitting a tender, this shall be clearly stated. In case of a **COMPANY** submitting a tender, include a copy of a **resolution by its board of directors** authorising a director or other official of the company to sign the documents on behalf of the company.

Clause	Wording / Data
	In the case of a **CLOSE CORPORATION** submitting a tender, include a copy of a **resolution by its members** authorising a member or other official of the corporation to sign the documents on each member's behalf. In the case of a **PARTNERSHIP** submitting a tender, **all the partners** shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case **proof of such authorisation** shall be included in the Tender. In the case of a **JOINT VENTURE/CONSORTIUM** submitting a tender, include **a resolution** of each company of the Joint Venture together with a resolution by its members authorising a member of the Joint Venture to sign the documents on behalf of the Joint Venture. **Failure to submit proof of authorisation to sign the tender, shall result in a Tender Offer being regarded as non-responsive."**
C.2.13.5	The employer's address for delivery of tender offers is given under Clause C.2.15.1 The identification details are: **MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU: CONTRACT 3**
C.2.13.6	A two-envelope system will not be followed.
C.2.13.7	Place and seal the printed and completed tender document in an envelope clearly marked "TENDER" and bearing the Employer's name, the contract number and description, the tenderer's authorised representative's name, the tenderer's postal address and contact telephone numbers.
C.2.13.9	Electronic, telephonic, telegraphic, telex, facsimile or e-mailed tender offers will **not** be accepted.
C.2.14	The tenderer is required to provide all the data or information as requested below: • All the documents and schedules as listed under T2.1 & T2.2: Returnable Documents required for tender evaluation purposes. • All the documents and schedules as listed under T2.3: Returnable Documents that will be incorporated in the Contract. Should a Tenderer not provide all the above-mentioned data or information, the Tenderer will be considered non-responsive. *Add the following to the clause:* "Accept that the Employer shall in the evaluation of tenders take due account of the Tenderer's past performance in executing similar construction works of comparable magnitude, and the degree to which he possesses the necessary technical, financial, and other resources to enable him to complete the Works successfully within the contract period. Satisfy the Employer as to his ability to perform and complete the Works timeously, safely and with satisfactory quality, by furnishing details in Part T2 – Returnable Documents.

Clause	Wording / Data
	Accept that the Employer is restricted in accordance with clause 4. (4) of the Construction Regulations, 2014, to only appoint a contractor who he is satisfied has the necessary competencies and resources to carry out the work safely. Accept that submitting inferior and inadequate information relating to health and safety (as required in clause C2.23) shall be regarded as justifiable and compelling reasons not to award a contract to a Tenderer."
C.2.15.1	The closing date and time for submission of tender offers is on the **07 August 2025 at 12:00pm.** The employer's address for the delivery of tender offers and identification details to be shown on each tender offer package are given below. Only tenders submitted to this tender box will be opened and considered. It is the Tenderer's responsibility to make sure it is delivered into the tender box before closing. Location of Tender Box: O. R. Tambo District Municipality Physical Address: O. R. Tambo District Municipality Ground Floor (Next to the Entrance) Myezo Park Nelson Mandela Drive Mthatha, 5099 Identification Details: Place the signed tender offer in a package marked **"MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAINS FROM LINDILE TO KWATSHATSHU: CONTRACT 3"** Telephonic, telegraphic, telex, facsimile, e-mailed or posted tender offers will not be accepted.
C.2.16.1	**Tender Offer Validity** *Add the following to the end of* ***Clause C.2.16.1****:* "The tender offer validity period is **90 days**. If the tender validity expires on a Saturday, Sunday or public holiday, the tender shall remain valid and open for acceptance until the closure of business on the following working day."
C.2.16.3	Where a tenderer, at any time after the opening of his tender offer but prior to entering a contract based on his tender offer: • withdraws his tender. • gives notice of his inability to execute the contract in terms of his tender; or • fails to comply with a request made in terms of C.2.17, C.2.18 or C.3.9. Withdrawal is accepted and tenderers shall sign a letter to acknowledge withdrawal of bid**.**
C.2.17	**Clarification of Tender Offer after Submission** *Add the following to the end of* ***Clause C.2.17****:*

Clause	Wording / Data
	"A tender may be rejected as non-responsive if the Tenderer fails to provide any clarification requested by the Employer, or confirmation of registration with CIDB within the time for submission stated in the Employer's written request for such clarification or confirmation. A tender may be rejected if the unit rates or lump sums for some of the items in the bill / Bill 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."
C.2.18	The Tenderer shall, when requested by the Employer to do so, submit any additional information requested under this clause within **7 working days** of the date of request.
C.2.22	The tenderer is required to return all tender documents with the Tender Offer, prior to the closing time for the submission of Tender Offers.
C.2.23	The tenderer is required to submit the following with his tender: **CSD Supplier Number and Tax compliance PIN numbers in case of Bidder only / Consortia / JV:** a) Bidders must ensure compliance with their tax obligations. b) 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. c) Application for tax compliance status (TCS) 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. d) Bidders may also submit a printed TCS together with the bid. e) In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate proof of TCS / PIN / CSD number. f) Where no TCS is available, but the bidder is registered on the central supplier database (CSD), a CSD number must be provided. g) Proof of Contractor Registration drawn from the Construction Industry Development Board website should be attached to Returnable Document Form 2.2.18. h) Evidence of registration and proof of good standing with a compensation insurer who is approved by the Department of Labour in terms of Section 80 of the Compensation for Occupational Injuries and Diseases Act (Act No 130 of 1993) (COID). The Tenderer is required to disclose all inspections, investigations and their outcomes conducted by the Department of Labour into the conduct of the Tenderer at a time during the 36 months preceding the date of this Tender (Refer Returnable Document Form 2.2.5). i) Proof of Registration in respect of each partner, where a tenderer satisfied the CIDB contractor grading designation requirements through the formation of a joint venture.

Clause	Wording / Data
C.3.1.1	*Delete the contents of **Clause C.3.1.1** and replace with the following:* "The Employer will respond to a request for clarification received up to seven working days before the tender closing time stated in the Tender Data."
C.3.2	The Employer shall issue addenda until three working days before the tender closing time. *Add the following to **Clause 3.2**:* Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.
C.3.4.1	The time and location for the opening of tender offers are: Time: **12:00pm** on the **07th August 2025**
C.3.4.2	Tenders will be opened immediately after the closing time for tenders at: Location: O. R. Tambo District Municipality Physical Address: O. R. Tambo District Municipality Myezo Park Nelson Mandela Drive Mthatha 5099
C.3.5	A two-envelope procedure **will not** be followed.
C.3.7	**Grounds for rejection and disqualification** *Add the following to the end of **Clause C.3.7**:* "Tenderers will be disqualified if, a) Any of the directors/shareholders of the Tenderer are 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, from information given in the completed Compulsory Enterprise Questionnaire, the Employer considers that there is a potential conflict of interest which may potentially compromise the tender process. In the event of disqualification, the Employer may, at his sole discretion, impose a specified period during which tender offers will not be accepted from the offending tenderer and report same to the CIDB and National Treasury.
C.3.8.2	*Add the following directly after **Clause C.3.8.2 c)**:* "A tender offer that does not meet the requirements as specified below, will be deemed non-responsive:

Clause	Wording / Data
	• The Tenderer offer does not meet any one of the eligibility criteria specified in Clause C.2.1 as amended. • 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. • 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. • The Tenderer's price is based on fixed rates in lieu of Contract Price Adjustment. • 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 changing any quantity or percentage allowance in the Pricing Schedule or failing to incorporate the requirements of Addenda where these materially affected the pricing e.g. where the Notice to Tenderers required any amendments or replacements of part or all of the Bill of Quantities and the submitted Bill of Quantities does not reflect these changes)."
C.3.9.	Arithmetical errors, omissions, discrepancies and imbalanced unit rates *Delete the text of **Clause C.3.9** and replace with:* Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount appearing in words shall govern. Where there is a discrepancy between the amount in the Form of Offer and the Pricing Data Summary to the BOQ, the amount in the Form of Offer shall govern. Check responsive tender offers for: a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: i. line-item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or ii. the summation of the prices. d) imbalanced unit rates. Notify shortlisted tenderers of all errors, omissions or imbalanced rates that are identified in their tender offers. Where the tenderer elects to confirm the errors, omissions or re-balancing of imbalanced rates the tender offer shall be corrected as follows: a) If bills of quantities or pricing schedules apply and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the unit rate shall govern, and the line item

Clause	Wording / Data
	total shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted, and the unit rate shall be corrected. b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall be corrected. c) Where the unit rates are imbalanced adjust such rates by increasing or decreasing them and selected others while retaining the total of the prices derived after any other corrections made under a) and b) above. Where there is an omission of a line item, no correction is possible, and the offer may be declared non-responsive. Declare as non-responsive and reject any offer from a tenderer who elects not to accept the corrections proposed and subject the tenderer to the sanction under C.2.16.3. The tenderer is required to submit balanced unit rates for rate only items in the pricing schedule. The rates submitted for these items will be taken into account in the evaluation of tenders.
C.3.11	Tenders will be evaluated in terms of the O. R. Tambo District Municipality's procurement policy. The Employer reserves the right to contact references and make enquiries to determine the tenderer's competence, reliability, experience, reputation, and capability to perform the contract.
C.3.11.1	*Add the following new paragraph directly under **Clause C.3.11.1**.* The **Evaluation of tender offers** will be undertaken as follows: *Replace the contents of the entire sub-clause with the following:* The procedure for evaluation of responsive tender offers will be method 2 of table F.1 of SANS 294: 2004. Financial offer & Preferences. The bid will be awarded to the bidder who has scored the highest points for price and preferences combined **BUT** the prerequisite will be to obtain at least **80 points** for quality (functionality), which will be explained in Stage 2 below. Nevertheless, O. R. Tambo District Municipality retains the right to accept any bid. **Stage 1:** Compliance with Bid Rules and other Requirements The bids will be checked to ensure that they comply with the bid rules and all other requirements of the project document. Tender offers will be screened to identify schedules and requested documents that are incomplete or have not been submitted. In particular, the following documentation must be completed and/or included within the bid. • The form of Offer and Acceptance • Audited financial statements for any tender price over R10million • Certified company registration documents and ID of members • Form C: Compulsory Enterprise Questionnaire

Clause	Wording / Data

- Form D: Certificate of Authority for Signature
- Form E: Amendments, Qualifications and Alternatives
- Form H: Certificate of Good Standing
- Form I: Relevant company experience
- Form J: Details of key staff and CVs
- Form M: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2022
- All information supporting the above forms
- Addenda issued during the bid period, if any.
- The pricing schedule

Tender offers will be tested for compliance with all the requirements of the as-amended Standard Conditions of Tender including the following:

a) Eligibility (C.2.1)
b) Pricing the tender offer (C.2.10.3)
c) Alterations to documents (C.2.11)
d) Alternative tenders offer (C.2.12)
e) Submitting a tender offer (C.2.13)
f) MBD4 – Bidders' Disclosure.

Tender offers will be declared non-responsive should they fail to comply with any one of the requirements of 1) above. Failure to supply the required and requested information will render the Bid Non-responsive, and the Bid will be disqualified.

Stage 2: Minimum Conditions of Tender / Functionality

The next state in the evaluation process will consist of evaluating Functionality scores, as follows:

FUNCTIONALITY EVALUATION

ITEM	WEIGHT
Minimum Conditions of Tender / Functionality (see detailed criteria below)	**100**
• Experience with respect to similar projects	60
• Qualifications and Experience of key staff assigned to the contract	40

Only bidders who score ***80 points or more*** on stage 2 will be evaluated further and therefore eligible for award.

The maximum score for functionality shall be **100**, distributed as follows:

Clause	Wording / Data		
	MINIMUM CONDITIONS OF TENDER		
		Minimum conditions of tender / Functionality	Maximum tender evaluation points provided
	B1.1	**Experience on similar projects**	**60**
		Experience on similar projects: Proven experience in the construction of Water Supply pipelines (Bulk and Reticulation), or Waterborne Sewer pipelines (Bulk and Reticulation) contracts**. Appointment Letter** from the Client and Practical Completion not older than 06 months or Completion Certificate signed by the Client for each Contract shall be included in the supporting documentation submitted with the bid document as evidence with the Contract No, Contract Name, Employer and Employer's Agent and Date of Completion clearly shown. **Copies of the Certificate of Completion MUST be submitted with the bid. No points will be awarded where Certificates of Completion have not been submitted with the Bid. Reference letters will not be accepted.**	
		At least three (3) construction contracts of a similar nature whose total sum value of at least R 25 million, successfully completed within the last 10 years.	60
		At least two construction contracts of a similar nature whose total sum value of at least R 20 million, successfully completed within the last 10 years.	30
		The Contractor has less than two Completed Projects of less than R20 Million or the Contractor failed to provide evidence of experience.	0
	B1.2	Qualifications and Experience of key personnel (NB no key personnel member may be assigned more than one duty on the Contract, i.e. different personnel must be assigned for each of the following key positions) **Contracts Manager** = Minimum BSC or B-Tech in Civil Engineering/ NQF level 7 Registered as a Professional in terms of Engineering Council of South Africa as **Pr Tech or Pr Eng** or SACPCMP as a **Pr CPM or Pr CM**, **Site Agent** = Minimum ND in Civil Engineering NQF Level 6, Registered as a Professional in terms of the Engineering Council of South Africa as a **Pr Techni** or Registered as Professional in terms of SACPCMP as a **Pr CPM and Pr CM** and Foreman = Minimum Grade 12/ N3 Civil Engineering/ Plumbing. Bidders must submit CV's and contactable references, **SMME Construction Manager** = Minimum National Diploma in Civil Engineering or higher NQF level 6, **Health and Safety Officer (Permanently on Site)** = Hold Professional Registration with SACPCMP in the category of Professional Health and Safety Officer and have at least three years' experience in the role of Health and Safety Officer on Civil Engineering construction sites. Bidders must submit CV's/Resume and contactable references.	**40**
		Contracts Manager, Construction Manager (Site Agent), SMME Construction Manager and Health and Safety Officer	
		Favourable previous experience in the Civil Engineering field with a minimum of 10 years; **Contracts Manager** = 15 points, 6-9 years = 10 points & 3-5 years = 8 points.	15

Clause	Wording / Data

	Favourable previous experience in the Civil Engineering field with a minimum of 5 years; **Construction Manager (Site Agent)** = 10 points, 3-4 years = 8 points & 1-2 years = 6 points.	10
	Favourable previous experience in managing SMME's in the Civil Engineering field with aminimum of 5 years; **SMME Construction Manager** = 8 points, 3-4 years = 6 points & 1-2 years = 4 points.	8
	Favourable previous experience in the Civil Engineering field with a minimum of 5 years; **Health and Safety** = 7 points, 3-4 years = 5 points & 1-2 years = 3 points.	7
	Contractor failed to provide evidence of qualification and experience.	0

STAGE 3: EVALUATION FOR PRICE AND SPECIFIC GOALS (80/20)

The procedure for Stage 3 of evaluation is as follows:

a) PRICE.....80

b) SPECIFIC GOALS.....20

a) Points Awarded for Price (Ps)

80/20 preference point system for acquisition of goods or services with a Rand value of up to R50 000 000 (all applicable taxes included).

Scoring of Price:

1. Review financial offer and correct discrepancies between totals and calculations / summations in accordance with the Tender Data (C.3.9).
2. Reduce all tender offers to a common base i.e. comparative offer.
3. Confirm the tenderers are eligible for the specific goals claimed.
4. Score Tender Offer for Specific Goals.
5. Score Tender Offer for Price.

A maximum of 80 points is allocated for price on the following basis, Total Points and rank Tender Offers.

b) Points awarded for specific goals

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 a table below as may be supported by proof/ documentation included with:

Scoring of Specific Goals:

In accordance with the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2022, the points allocation for Specific Goals are as follows:

Clause	Wording / Data

The specific goals allocated points in terms of this tender	Number of points Allocated on 80/20 system
51% Black-owned enterprises	05
100% Women-owned enterprises	05
100% Youth-owned enterprises	05
Where the Enterprise head office or Primary Place of business is located within O. R. Tambo District.	05

Points will be awarded to tenderers who are eligible for preference Specific Goals. The terms and conditions of the Preference Schedule shall apply in all respects to the tender evaluation process and any subsequent contract.

Tenderers must submit certified copies of all supporting documents necessary to prove conformance with Specific Goal criteria listed above in order to be eligible for Specific Goal points.

Note that the objective Criteria as per the SCM Policy Paragraph 72 and 73 will be applied:
72. Fair Distribution of Municipal Resources on Capital Infrastructure Projects on Awards

- Tenders will be evaluated and adjudicated as per legislation requirements, treasury guidelines and municipal policy. Fair distribution will be achieved as follows:
- A bidder will not be awarded the same commodity of work more than once in within a period of three months.
- If the highest scoring bidder has been previously awarded for the same commodity tender within that three months, then the next highest scoring bidder will be considered for recommendation and award.
- If the highest scoring bidder has been previously recommended for award in the same sitting for a tender of the same commodity, the next highest scoring bidder will be considered for recommendation and award.

73. Objective criteria on the evaluation and award of bids

- The objective criteria on the evaluation and awards of bids by the municipality will be based on the following criteria and reasoning:
- Where the bidders price offer is below the engineer's estimate, that bid will be rejected as it will pose a risk to the municipality of non-completion of the project to be implemented thus leading to underspending on grants and delays in completion of projects within projected time period.
- Further in line with CIDB Practice Note 5, paragraph 3.4 (3), the municipality will judge the reasonableness of financial offers and reject all tender offers with unrealistic financial offers.

Having made the final selection:

1. An intention to Award will be issued and published on the O. R. Tambo District Municipality's website, which is www.ortambodm.gov.za.
2. If no objection is received within **fourteen** days of the intention to award being issued, the successful Tenderer will be notified of O. R. Tambo District Municipality's acceptance of his/her bid.

Clause	Wording / Data
C.3.11.3	**Risk Analysis** *Add the following new sub-clause:* Notwithstanding compliance with regards to CIDB registration or any other requirements of the tender, the employer will perform a risk analysis in respect of the following: a) reasonableness of the financial offer; b) reasonableness of unit rates and prices. No tenderer will be recommended for award unless the tenderer has demonstrated that he/she has the resources and skills required to complete the project successfully.
C.3.12	*Replace the contents of **Clause 3.12** with the following:* Full insurances to be provided by the Contractor. The Contractor must provide the Employer with the insurance policy information and certificates of insurance prior to the commencement of the contract.
C3.13	*In addition to the requirements of **Clause C3.13**, a tender will only be accepted if:* a) The Tenderer's tax matters are in order with the South African Revenue Services. b) The Tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation (CRS Number or print out to be provided). c) The Tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector. d) The Tenderer is registered in the Department of National Treasury - Central Supplier Database (CSD Number to be provided). e) The Tenderer has not: i) abused the Employer's Supply Chain Management System or ii) failed to perform on any previous contract and has been given a written notice to this effect. f) The tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are not permitted to submit tenders or participate in the contract; In the case of Joint Ventures all members of the JV are to complete the Compulsory Enterprise Questionnaire. g) The tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer. h) Attended a compulsory briefing session and site inspection. Signing the briefing and site inspection attendance register is mandatory. i) The Form of Offer and Acceptance is correctly completed and signed.
C.3.16	An Employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the Employer, register and

Clause	Wording / Data
	publish the award on the CIDB Register of Projects.
C.3.17	The number of paper copies of the signed contract to be provided by the employer is **one**.
C.3.18	All requests shall be in writing.
C.3.19	*Add the following new clause below Clause C.3.18:* **"Jurisdiction"** unless stated otherwise in the tender data, each Tenderer and the Employer undertake to accept the jurisdiction of the law courts of the Republic of South Africa.
C.3.20	*Add the following new clause below Clause C.3.18:* The successful tenderer will be encouraged to include as much of the Direct Participation required minimum 30% spend by subcontracting to local EMEs or QSEs from the immediate area of the Site. The details of any EMEs / QSEs need not to be submitted with the tender but will be required of the preferred bidder prior to the signing of the Contract.

Annex C
(normative)

Standard Conditions of Tender

As published in Annexure C of the Construction Industry Development Board (CIDB) Standard for Uniformity forconstruction Procurement, Board Notice 423 Government Gazette No 42622 of 08 August 2019.

C.1 General

C.1.1 Actions

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

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

Note:
1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in theability of that person to act properly in his or her position even if no improper acts result.

2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

C.1.1.3 The employer shall not seek, and a tenderer shall not submit a tender without having a firm intention and the capacity to proceedwith the contract.

C.1.2 Tender Documents

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

C.1.3 Interpretation

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

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

For the purposes of these conditions of tender, the following definitions apply:

a) conflict of interest means any situation in which:

i) someone in a position of trust has competing professional or personal interests which make it difficult tofulfil his or her duties impartially; s
ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for theirpersonal or corporate benefit; or
iii) incompatibility or contradictory interests exist between an employee and the organisation which employsthat employee.

b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can beutilised to have been taken into consideration;

c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action ofthe employer or his staff or agents in the tender process;

d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or theaward of a contract arising from a tender offer to the detriment of the employer, including collusive practicesintended to establish prices at artificial levels;

C.1.4 Communication and employer's agent

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

C.1.5 Cancellation and Re-Invitation of Tenders

C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if-

(a) due to changed circumstances, there is no longer a need for the services, works orgoods requested; or

(b) funds are no longer available to cover the total envisaged expenditure; or

(c) no acceptable tenders are received.

(d) there is a material irregularity in the tender process.

C1.5.2 The decision to cancel a tender must be published in the CIDB website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.

C1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

C.1.6 Procurement procedures

C.1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer

who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

C.1.6.2 Competitive negotiation procedure

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

C.1.6.2.2 All responsive tenderers, or at least a minimum of not less than three responsive tenderers that are highest rankedin terms of the evaluation criteria stated in the tender data, shall be invited to enter into competitive negotiations, based onthe principle of equal treatment and keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

C.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they areto submit their best and final offer.

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

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

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

C.1.6.3.2 Option 2

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

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

C.2 Tenderer's obligations

C.2.1 Eligibility

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

C.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both)or any other criteria which formed part of the qualifying requirements used by the employer

as the basis in a prior processto invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

C.2.2 Cost of tendering

C.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costsincurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so asnot to incur any costs pertaining to the printing of the tender documents.

C.2.3 Check documents

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

C.2.4 Confidentiality and copyright of documents

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

C.2.5 Reference documents

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

C.2.6 Acknowledge addenda

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

C.2.7 Clarification meeting

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

C.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days beforethe closing time stated in the tender data.

C.2.9 Insurance

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

C.2.10 Pricing the tender offer

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

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

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

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

C.2.11 Alterations to documents

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer,or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

C.2.12 Alternative tender offers

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

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

C.2.12.3 An alternative tender offer may only be considered if the main tender offer is the winning tender.

C.2.13 Submitting a tender offer

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

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

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

C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorised signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as

"ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tenderdata, as well as the tenderer's name and contact address.

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

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

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

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

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

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

C.2.15 Closing time

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

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

C.2.16 Tender offer validity

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

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

C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer’s agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated un C.2.16 lapses before the employer evaluating tender, the contractor reserves theright to review the price based on Consumer Price Index (CPI).

C.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with therequirements of C.2.13 with the packages clearly marked as “SUBSTITUTE”.

C.2.17 Clarification of tender offer after submission

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation

of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment ofcertain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer issought, offered, or permitted.

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

C.2.18 Provide other material

C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarised joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

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

C.2.19 Inspections, tests and analysis

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

C.2.20 Submit securities, bonds and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other tender documents

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

C.2.23 Certificates

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

C.2 The employer's undertakings

C.2.1 Respond to requests from the tenderer

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

C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) orany other criteria which formed part of the qualifying requirements used to prequalify a

tenderer to submit a tender offer interms of a previous procurement process and deny any such request if as a consequence:

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

C.2.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from thedate that tender documents are available until three (3) days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant suchextension and, shall then notify all tenderers who drew documents.

C.2.3 Return late tender offers

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

C.2.4 Opening of tender submissions

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

C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, numberof points claimed for its BBBEE status level and time for completion for the main tender offer only.

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

C.2.5 Two-envelope system

C.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.
C.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

C.2.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for

the award of a contract, until after the award of the contract to the successful tenderer.

C.2.7 Grounds for rejection and disqualification

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

C.2.8 Test for responsiveness

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

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

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

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

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

C.2.9 Arithmetical errors, omissions and discrepancies

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

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

a) the gross misplacement of the decimal point in any unit rate;
b) omissions made in completing the pricing schedule or bills of quantities; or
c) arithmetic errors in:

    i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedulesof prices; or
    ii) the summation of the prices.

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

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

a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and, the rate shall be corrected. Where there is anobviously gross misplacement of the decimal point in the unit rate,

the line item total as quoted shall govern, and the unit rate shall be corrected.

b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked torevise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

C.2.10 Clarification of a tender offer

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

C.2.11 Evaluation of a tender offer

The Standard Conditions of Tender standardise the procurement processes, methods and procedures from the time thattenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following systemrequirements:	
Requirement	**Qualitative interpretation of goal**
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timelyaccess to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions fromdoing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	Cost effective

The activities associated with evaluating tender offers are as follows:

a) Open and record tender offers received
b) Determine whether or not tender offers are complete
c) Determine whether or not tender offers are responsive
d) Evaluate tender offers
e) Determine if there are any grounds for disqualification
f) Determine acceptability of preferred tenderer
g) Prepare a tender evaluation report
h) Confirm the recommendation contained in the tender evaluation report

C.3.11.1 General

The Employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of worksto evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified on tender data.

C.2.12 Insurance provided by the employer

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

C.2.13 Acceptance of tender offer

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

a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipmentand other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
c) has the legal capacity to enter into the contract;
d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008,bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities, or is subject to legal proceedings in respect of any of the foregoing;
e) complies with the legal requirements, if any, stated in the tender data; and
f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

C.2.14 Prepare contract documents

C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part ofthe tender documents to take account of:

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

C.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

C.2.15 Complete adjudicator's contract

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

C.2.16 Registration of the award

An employer must, within twenty-one (21) days from the date on which a contractor's offer to perform a construction workscontract is accepted in writing by the Employer, register and publish the award on the CIDB Register of Projects.

C.2.17 Provide copies of the contracts

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

C.2.18 Provide written reasons for actions taken

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

T2.1 RETURNABLE DOCUMENTS

Each tenderer is required to complete and return the tender documents issued.

The following documents are also to be completed and returned, as they constitute part of the tender.

Whilst many of the returnable are required for the purpose of evaluating the tenders, some will form part of the subsequent contract, as they form the basis of the tender offer.

For this reason, it is very important that tenderers complete, sign submit and return all information, documents and schedules, as requested and relevant.

T2.1 List of Returnable Documents required for Tender evaluation purposes		
	Form 2.2.1	General Information of the Tenderer
	Form 2.2.2	Authority for Signatory
	Form 2.2.3	Schedule of Previous Experience
	Form 2.2.4	Schedule of Current Projects
	Form 2.2.5	Declaration of Good Standing Regarding Tax
	Form 2.2.6	Registration at the Central Supplier Database
	Form 2.2.7	Certificate of Attendance at Site Meeting
	Form 2.2.8	Proposed Organisation and staffing
	Form 2.2.9	Proposed Key Personnel
	Form 2.2.10	Schedule of Proposed Sub-Contractors
	Form 2.2.11	Financial References
	Form 2.2.12	Municipal Bidding Documents (MBD forms): MBD 1 – Invitation to bid MBD 4 – Declaration of Interest MBD 5 – Declaration for Procurement above R10 million MBD 6.1 – Preference Points Claim Form in Terms of PPPFA MBD 8 – Declaration of Bidder's Past Supply Chain Management Practices MBD 9 – Certificate of Independent Bid Determination
	Form 2.2.13	Schedule of proposed plant and equipment
	Form 2.2.14	Health and safety plan
	Form 2.2.15	Preliminary programme
	Form 2.2.16	Estimated monthly expenditure
	Form 2.2.17	Declaration regarding fulfilment of the Construction Regulations, 2014
	Form 2.2.18	CIDB Registration
	Form 2.2.19	Letter of Good Standing
T2.3 Returnable Documents that will be incorporated into the contract		
	Form 2.3.1	Record of Addenda to Tender Documents
	Form 2.3.2	Procurement Form
	Form 2.3.3	Original Tax Clearance Certificate
	Form 2.3.4	National Treasury: Central Supplier Database

T2.2 RETURNABLE DOCUMENTS FOR TENDER EVALUATION PURPOSES

RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Form 2.2.1 General Information of Tenderer

Form 2.2.2 Authority of Signatory

Form 2.2.3 Schedule of Previous Experience

Form 2.2.4 Schedule of Current Projects

Form 2.2.5 Declaration of Good Standing Regarding Tax

Form 2.2.6 Registration on the Central Supplier Database

Form 2.2.7 Certificate of Attendance at Site Meeting

Form 2.2.8 Proposed Organisation and Staffing

Form 2.2.9 Proposed Key Personnel

Form 2.2.10 Schedule of Proposed Sub-consultants

Form 2.2.11 Financial References

Form 2.2.12 Municipal Bidding Documents (MBDs)

- MBD 1 – Invitation to bid
- MBD 4 – Declaration of Interest
- MBD 5 – Declaration for Procurement above R10 million
- MBD 6.1 – Preference Points Claim Form in Terms of PPPFA
- MBD 8 – Declaration of Bidder's Past Supply Chain Management Practices
- MBD 9 – Certificate of Independent Bid Determination

Form 2.2.13 Schedule of Proposed Plant and Equipment

Form 2.1.14 Health and Safety Plan

Form 2.1.15 Preliminary Programme

Form 2.1.16 Estimated Monthly Expenditure

Form 2.1.17 Declaration Concerning Fulfilment of The Construction Regulations, 2014

Form 2.1.18 CIDB Registration

Form 2.1.19 COID Letter of Good Standing

FORM 2.2.1 GENERAL INFORMATION OF TENDERER

1. Name of Tenderer: ……

2. Contact details

Address : …… Tel no : ……

Fax no : ……

Cell no : ……

E-mail address: ……

3. Legal entity: Mark with an X.

Sole proprietor	
Partnership	
Close corporation	
Company (Pty) Ltd	
Joint venture	

In the case of a Joint venture, provide details on joint venture members:

Joint venture member	Type of entity (as defined above)

4. Income tax reference number: ……

(in case of a joint venture, provide for all joint venture members)

5. Municipal services area where the enterprise is registered: ……..

(in case of a joint venture, provide for all joint venture members)

6. Company / close corporation Registration Number: ……..

(in case of a joint venture, provide for all joint venture members)

7. VAT Registration number: ……..

(in case of a joint venture, provide for all joint venture members)

8. CIDB registration number: ……..

(in case of a joint venture, provide for all joint venture members)

ATTACH THE FOLLOWING DOCUMENTS HERETO

1. For Closed Corporations

Certified copies of CK1 or CK2 as applicable (Founding Statement)

2. For Companies

Certified copies of Shareholders register

3. ID copies

Certified ID Copies for members

4. CIDB registration

Proof of registration with CIDB

5. CSD registration

Proof of registration with Central Supplier Database

6. For Joint Venture Agreements

Copy of the Joint Venture Agreement between all the parties, as well as the certified documents in (1), and or (2) and (4) and (4) of each Joint Venture member.

7. Copy of the latest municipal service account where enterprise is registered

8. Director's / Shareholder's Municipal Rates

9. Specific Goal Points Contribution

10. Central Supplier Database Summary Report

FORM 2.2.2 AUTHORITY OF SIGNATORY

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

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

A. Certificate for Company

I,……., chairperson of the board of directors of

……, hereby confirm that by resolution of the board (copy attached) taken on……202…., Mr/Mrs…….acting in the capacity of… ,was authorised to sign all documents in connection with this tender and any contract resulting from it on behalf of the company.

As witness

1……. .....……

Chairman

2……. .....……..

Date

B. Certificate of Partnership

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

hereby authorise Mr/Mrs……, acting in the capacity of……to sign all documents in connection with the tender for Contract ..... and any contract resulting from it on our behalf.

NAME	**ADDRESS**	**SIGNATURE**	**DATE**

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

C. Certificate for Joint Venture

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Mrs……..., authorised signatory of the company ,

acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract……..., and any other contract resulting from it on our behalf.

This authorisation is evidenced by the attached power of attorney signed by legally authorisedsignatories of all the partners to the Joint Venture.

NAME OF FIRM	**ADDRESS**	**DULY AUTHORISED SIGNATORY**
Lead partner CIDB registration no …….		Signature : ..... Name : ..... Designation : .....
 CIDB registration no …….		Signature : ..... Name : ..... Designation : .....
 CIDB registration no …….		Signature : ..... Name : ..... Designation : .....
 CIDB registration no …….		Signature : ..... Name : ..... Designation : .....

A copy of the Joint Venture Agreement showing clearly the percentage contribution of each partnerto the Joint Venture shall be appended to this Schedule.

D. Certificate for Sole Proprietor

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

as……

As Witness:

1…….. ……

Signature: Sole owner

2…….. ……..

Date

E. Certificate for Close Corporation

We, the undersigned, being the key members in the business trading as……

hereby authorise Mr/Mrs ……..……

Acting in the capacity of....., to sign all documents in connection with the tender

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

NAME	ADDRESS	SIGNATURE	DATE

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

ATTACH HERETO THE DULY SIGNED AND DATED ORIGINAL OR CERTIFIED COPY OF AUTHORITY OF SIGNATORY ON COMPANY LETTERHEAD

FORM 2.2.3 SCHEDULE OF PREVIOUS EXPERIENCE

Provide the following information on relevant previous experience (indicate specifically projects of similar or larger size and/or which is similar with regard to type of work, as defined in Tender Clause C3.11.1).

Practical Completion not older than 12 months or Completion certificates must be submitted for project to be considered for evaluation of Compliance as per Tender Clause C3.11.1.

Description	**Value (R) VAT excluded**	**Year(s) work executed**	**Reference**		
			Name	**Organisation**	**Tel no**

Name of Tenderer: …… Date: ……

Signature: ……...

Full name of signatory: ……

FORM 2.2.4 SCHEDULE OF CURRENT PROJECTS

Provide the following information on current relevant projects. **This information is material to the award of the Contract.**

Description	Value (R) VAT excluded	Date Appointed	Reference		
			Name	Organisation	Tel no

Name of Tenderer: …… Date: ……

Signature: ……...

Full name of signatory: ……

FORM 2.2.5 DECLARATION OF GOOD STANDING REGARDING TAX

SOUTH AFRICAN REVENUE SERVICES	Tender No: ……..…….. Closing Date: ……

DECLARATION OF GOOD STANDING REGARDING TAX

PARTICULARS

1. Name of Taxpayer/Tenderer: .....
2. Trade Name: .....
3. Identification Number: (If applicable)
4. Company / Close Corporation registration number:
5. Income Tax reference number:
6. VAT registration number: (If applicable)
7. PAYE employer's registration number: (If applicable)
8. Monetary value of Bid:

DECLARATION

I, the undersigned, the above taxpayer/Tenderer, hereby declare that my Income Tax, Pay-As-You-Earn (PAYE) and Value-Added-Tax (VAT) obligations of the above-mentioned taxpayer, which include the rendition of returns and payment of the relevant taxes:

(i) Have been satisfied in terms of the relevant Acts; or

(ii) That suitable arrangements have been made with the Receiver of Revenue, to satisfy them.*

……..… ……..…… ……

SIGNATURE CAPACITY DATE

PLEASE NOTE:* The declaration (ii) cannot be made unless formal arrangements have been made with the Receiver of Revenue with regard to any outstanding revenue/outstanding tax returns.

In terms of Clause 43 of the Municipal Supply Chain Management Policy, tenderers must ensure that they are up-to-date with their payments of taxes. It is a condition of bid that the taxes of the successful tenderer must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the tenderer's tax obligations.

The tenderer must attach to this page an **Original(s)** of a **Valid Tax Clearance Certificate(s)**.

1. In order to meet this requirement tenderers are required to complete in full the form TCC 001"Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign tenderers / individuals who wish to submit bids.

2. SARS will then furnish the tenderer with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.

3. The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.

   Alternatively, the tenderer must submit a Tax Compliance Status PIN to allow Supply Chain Management to verify the real-time compliance status.

Tax Compliance Status PIN	……

4. In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.

5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.

6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za

No contract shall be awarded to a Tenderer who does not have a valid Tax Clearance Certificate.

FORM 2.2.6 REGISTRATION ON THE CENTRAL SUPPLIER DATABASE

Attach proof of registration with the National Treasury Central Supplier Database. **This information is material to the awardof the Contract.**

ATTACH CERTIFIED PROOF OF REGISTRATION ON THE NATIONAL CENTRAL SUPPLIER DATABASE

FORM 2.2.7 CERTIFICATE OF ATTENDANCE AT SITE MEETING

This is to certify that

….....(Tenderer)

of .....(address)

……

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

…… (location) on.....(Date)

starting at …….

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

Particulars of person(s) attending the meeting:

Name ..... Signature …….

Capacity .....

Name ..... Signature …….....

Capacity .....

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

Name ..... Signature …….

Capacity ..... Date & Time ……

FORM 2.2.8 PROPOSED ORGANISATION AND STAFFING

The tender offer shall include an organogram clearly showing the team of key personnel the Tenderer proposes to assign to the Contract and how responsibilities for the various disciplines or work and components of the Works will be assigned. The name, roles and responsibilities of each person and the name of their employer must be clearly set out, and corresponding job descriptions must be provided as an addendum to the organogram.

In the case of a Joint Venture or where major sub-contractors are made use of, the organogram must show how respective responsibilities are to be allocated.

As a minimum, the organogram must show how respective responsibilities are to be allocated. As a minimum, the organogram must include for the personnel detailed in Returnable Document FORM 2.1.12: Experience of Key Personnel.

The Tenderer shall include the requisite organogram and addendums in the Supporting Documentation file, to be submitted in accordance with Clause C2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.

FORM 2.2.9 PROPOSED KEY PERSONNEL

Curriculum Vitae (CV), up to a maximum of five (5) pages must be submitted, for each of the key personnel **(**at least **Contract Manager, Construction Manager, SMME Construction Manager and Construction Health & Safety Officer** proposed in Returnable Document: **FORM 2.1.8**: Proposed Organisation and Staffing. The CVs must specifically include the qualifications, professional accreditation, experience of **10 years** (**Contract Manager**) and **5 years** (**Construction Manager, SMME Construction Manager and Construction Health & Safety Officer)** roles and responsibilities in construction projects of a similar nature. Contact details of at least three (3) contactable referees must also be provided. A template for CV's is provided overleaf.

Each CV must be clearly cross-referenced to and labelled to correspond with the organogram submitted in terms of Returnable Document: FORM 2.1.8: Proposed Organisation and Staffing, so as to indicate which role the person in question is proposed to fulfil in the Contract.

The Tenderer shall include the requisite CVs in the Supporting Documentation file, to be submitted in accordance with Clause C2.13.3 of T1.2 Variations to the Standard Conditions of Tenders.

The proposed key personnel will be evaluated for Compliance based on Clause C3.11.1.

Name and Surname	**Position**	**Qualifications and Years of Experience (Post qualification)**
	Contracts Manager	
	Construction Manager (Site Agent)	
	SMME Construction Manger	
	Construction H&S Officer (SACPCMP: CHSO .....) Attach CV and proof of registration and qualification	
	Other	

Note: In respect of positions of Contract Manager and Construction Manager **two** separate individuals are required for the above positions (and this is to be stated in the tender document).

INSERT KEY PERSONNEL CVs HERE ACCORDING TO THE TEMPLATE BELOW

Name:
Professional:
Date of Birth:
Parent Firm:
Position in Firm: Indicate if Director, Contractor's Representative, Design Engineer (with component of responsibility), Installation/construction Foreman (with component of responsibility) etc.
Years with Firm:
Nationality:

Tertiary Education (and year obtained):

Professional Accreditation (and year obtained):

Years of Relevant Experience:

Languages: Indicate first language. If the first language is not English, please indicate proficiency in English. In other languages, including South African indigenous languages, please show speaking, reading and writing ability.

Language	Speaking	Reading	Writing
English			

Countries of Work Experience

Proposed Position of Team

Key Qualifications

Under this heading, give outline of staff members experience and training most pertinent to the assigned work on the team.

Relevant Experience

Describe degree of responsibility held by staff member on relevant previous assignments, and give dates, project values and locations. For experience in the last ten years, also give types of activities performed and Client references where appropriate.

Summary of Other Experience

Under this heading, list all positions held by staff member since graduation, giving dates, names of employing organisation, title of position held and location, type and value of construction projects.

References

Declaration

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications and that, at the time of signature, I am available and will serve in the position indicated for me in the proposal for **TENDER NUMBER: MIS 535 774 C: MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU: CONTRACT 3**

Signed Date ……

Name Position …….

CV – CONTRACT MANAGER

CV – CONSTRUCTION MANAGER (SITE AGENT)

CV – SMME CONSTRUCTION MANAGER (MENTOR TO SMMEs)

CV – CONSTRUCTION HEALTH AND SAFETY OFFICER

FORM 2.2.10 SCHEDULE OF PROPOSED SUB-CONTRACTORS

NAME OF SUB-CONTRACTOR	FULL DESCRIPTION OF WORK TO BE PERFORMED BY SUB- CONTRACTORS

NB: It is a Condition of Contract that a minimum of 30% of the construction work shall be subcontracted to QSEs and EMEs as contemplated in the 'The Broad-Based Black Economic Empowerment Act (No. 53 of 2003) as amended by B-BBEE Act 46 of 2013 (The Act)'. The Contractor shall take all reasonable and practical measures to support, mentor, train, upskill and supervise such subcontractors as envisaged in the Strategic Objectives of the Amended Construction Sector Code.

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed above being approved by the Employer's Agent.

Name of Tenderer: ……...…Date: ……

Signature: ……...

Full name of signatory: ……

FORM 2.2.11 FINANCIAL REFERENCES

FINANCIAL STATEMENTS

I/We agree to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Employer.

DETAILS OF TENDERERS BANKING INFORMATION

I/We hereby authorise the Employer/Employer's Agent to approach all or any of the following banks for the purposes of obtaining a financial reference:

BANK NAME:			
ACCOUNT NAME: (e.g. ABC Civil Construction cc)			
ACCOUNT TYPE: (e.g. Savings, Cheque etc)			
ACCOUNT NO:			
ADDRESS OF BANK:			
CONTACT PERSON:			
TEL. NO. OF BANK / CONTACT:			
How long has this account been in existence:	(Tick which is appropriate)	0-6 months	
		7-12 months	
		13-24 months	
		More than 24 months	

Name of Tenderer: …… Date: ……

Signature: ……..

Full name of signatory: ……

ATTACH AUDITED FINANCIAL STATEMENTS

FORM 2.2.12 MUNICIPAL BIDDING DOCUMENTS (MBD)

MBD 1 - PART A INVITATION TO BID

BID NUMBER:	CONTRACT NO.: **MIS 535 774 C**	CLOSING DATE:	07 August 2025	CLOSING TIME:	12h00 pm
DESCRIPTION:	**MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU: CONTRACT 3**				

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT:

TENDER BOX, GROUND FLOOR, O. R. TAMBO DISTRICT MUNICIPALITY BUILDING
NELSON MANDELA DRIVE
MYEZO PARK
MTHATHA
EASTERN CAPE

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:		CSD No:	
STATEMENT OF RATES AND TAXES OF THE BIDDER	Yes No		STATEMENT OF RATES AND TAXES OF THE COMPANY	Yes No

[STATEMENT OF RATES AND TAXES OF THE BIDDER AND OF THE COMPANY/ LEASE AGREEMENT FOR LEASED PROPERTY MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS]			
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTHAFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	Yes No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FORTHE GOODS /SERVICES /WORKSOFFERED?	Yes No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMSOFFERED		TOTAL BID PRICE	R
SIGNATURE OF BIDDER	……	DATE	
CAPACITY UNDER WHICHTHIS BID IS SIGNED			

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL INFORMATION MAY BE DIRECTED TO:	
DEPARTMENT	SCM DEPARTMENT	CONTACT PERSON	Mr. N. Noto
CONTACT PERSON	Mr. Sakhiwo Hopa	TELEPHONE NUMBER	047 501 6425
TELEPHONE NUMBER	047 501 6449	FACSIMILE NUMBER	N/A
FACSIMILE NUMBER	N/A	E-MAIL ADDRESS	**nkosiyabon@ortambodm.gov.za**
E-MAIL ADDRESS	**sakhiwoh@ortambodm.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 BEACCEPTED FOR CONSIDERATION.
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED).
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC)AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E- FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.
2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	YES	NO
3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA?	YES	NO
3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	YES	NO
3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	YES	NO
3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	YES	NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOTREGISTER AS PER 2.3 ABOVE.

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

SIGNATURE OF BIDDER: **……**

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……

DATE: **……...**

MBD 4 - DECLARATION OF INTEREST

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

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

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

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

3.2 Identity Number: ……

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

……

3.4 Company Registration Number: …….

3.5 Tax Reference Number:……

3.6 VAT Registration Number: ……

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

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

3.8.1 If yes, furnish particulars…….....
….....[1] MSCM Regulations: “in the service of the state” means to be –

(a) a member of –
  (i) any municipal council;
  (ii) any provincial legislature; or
  (iii) the national Assembly or the national Council of provinces;
(b) a member of the board of directors of any municipal entity;
(c) an official of any municipality or municipal entity;
(d) an employee of any national or provincial department, national or provincial public entity or constitutional institutionwithin 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 orbusiness and exercises control over the company.

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

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

……...

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

3.10.1 If yes, furnish particulars

……..

……

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

3.11.1 If yes, furnish particulars…….

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

3.12.1 If yes, furnish particulars

…….....

……

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

3.13.1 If yes, furnish particulars…….....

……

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

3.14.1 If yes, furnish particulars

……

……

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

Full name	Identity number	State employee number

…… …….

Signature Date

..…… ……..

Capacity Name of Bidder

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:

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
1.	Are you by law required to prepare annual financial statements?		
1.1	If yes, submit audited annual financial statements for the past three years or since the dateof establishment if established during the last 3 years.		

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
2.	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than 3 months or anyother 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 3 months or other service provider inrespect of which payment is overdue for more than 30 days.		
2.2	If yes, provide details: …….. …….. ……..		

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
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?		
3.1	If yes, provide details: ……. ……. ……..		

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
4.	Will any portion of the goods of services be sourced from outside the Republic, and if so,what portion, and whether any portion of payment from the municipality is expected to be transferred outside of the Republic?		
4.1	If yes, provide details: ……. ……. …….		

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 THIS DECLARATIONPROVE TO BE FALSE.

…… ……..

Signature Date

…… ……

Position Name of Bidder

MBD 6.1

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

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

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

1. GENERAL CONDITIONS

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

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

1.2 To be completed by the organ of state

(*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	POINTS
PRICE	**90**	**80**
SPECIFIC GOALS	**10**	**20**
Total points for Price and SPECIFIC GOALS	**100**	**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**

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.2.1. POINTS AWARDED FOR PRICE

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

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

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

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

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

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

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

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

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

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

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

The specific goals allocated points in terms of this tender	Number of points allocated (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)
51% Black-owned enterprises	04	05		
100% Women-owned enterprises	02	05		
100% Youth-owned enterprises	02	05		
Where the Enterprise head office or Primary Place of business is located within O. R. Tambo District.	02	05		

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: ……..……

……..……

……..…

……..……

.

MBD 8 - DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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 committedany 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 publicsector contract during the past five years; or
d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention andCombating 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 inwriting of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the *audi alteram partem* rule was applied). The Database of Restricted Suppliers now resides on the NationalTreasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	☐	☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12of 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 oflaw 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

MBD 9 - CERTIFICATE OF INDEPENDENT BID DETERMINATION

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

2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between partiesin 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.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

PROJECT NO.: _____

MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU: CONTRACT 3

in response to the invitation for the bid made by:

O. R. TAMBO DISTRICT MUNICIPALITY

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 authorised 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 authorised 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 organisation, other than the bidder, whether or not affiliated with the bidder,who:

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

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

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

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

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

    (a) prices;

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

allocation)

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

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

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

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

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

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

[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.

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

…… ……..

Signature Date

…… ……

Position Name of Bidder

FORM 2.2.13 SCHEDULE OF PROPOSED EQUIPMENT

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

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

Quantity	**Description, Size, Capacity, etc**

Attach additional pages if more space is required.

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

Quantity	**Description, Size, Capacity, etc**

Attach additional pages if more space is required.

SIGNED BY/ON BEHALF OF TENDERER:

Signed ..... Date ……

Name ..... Position ……..

FORM 2.2.14 HEALTH AND SAFETY PLAN

Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2014 issued in terms of Section 43 of the Act as well as COVID-19 requirements. 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 prepare and attach a Health and Safety Plan in relation to the Client Health and Safety Specification 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. The Tenderer's Health and Safety Plan shall cover inter-alia the following details:

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

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

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

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

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

SIGNED BY/ON BEHALF OF TENDERER:

Signed ..... Date ……

Name ..... Position ……..

FORM 2.2.15 PRELIMINARY PROGRAMME

The Tenderer shall provide a preliminary programme in Gantt Chart format showing how the requirements of C1.2: Contract Data and Part C3: Scope of Work will be met; and outlining the key activities and milestones and Critical Path for the Works and the sequencing thereof. In addition, a preliminary cash flow forecast, matching the progress of the programme must be submitted.

The programme must be based on the tendered Time for Completion.

The preliminary programme must be included in the Supporting Documentation file to be submitted in accordance with Clause C.2.13.3 of T1.2: Variations to the Standard Conditions of Tender.

FORM 2.2.16 ESTIMATED MONTHLY EXPENDITURE

The Tenderer shall state his estimated cashflow on the contract based on his/her preliminary programme, tendered rates and submission of payment certificates to the Employer in the table below. Amounts for Contract Price Adjustment shall not be included.

Payment Certificate No.	Amount (VAT Included)					
	A	B	A - B			Cumulative cash flow
	Payments Received	Expenditure		Net cash flow		
1	None		d		j=d	
2			e		k=j+e	
3			f		l=k+f	
4			g		m=l+g	
5			h		n=m+h	
6			etc		etc	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
etc						
Maximum negative cash flow: take the largest negative number in the last column and write it here >>						

SIGNED BY/ON BEHALF OF TENDERER:

Signed ..... Date ……

Name ..... Position ……..

FORM 2.2.17 DECLARATION CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014

In terms of Regulation 4(3) of the Construction Regulations, (hereinafter referred to as the Regulations), promulgated on 18 July 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.

Tenderers shall answer the questions below:

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

(Tick)

YES	
NO	

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

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

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

.....

.....

.....

.....

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

.....

.....

.....

.....

.....

.....

5. List potential key risks identified and measures for addressing risks:

.....

.....

.....

.....

.....

.....

.....

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

(Tick)

YES	
NO	

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

1. ..... ID NO:.....

(Name in Print): .....

2. ..... ID NO:.....

(Name in Print): .....

FORM 2.2.18 CIDB REGISTRATION

Proof of Contractor's (active) registration on the Construction Industry Development Board (CIDB)

FORM 2.2.19 COID LETTER OF GOOD STANDING

Provide a Certified copy of letter proof of good standing with a compensation insurer who is approved by the Department of Labour in terms of Section 80 of the Compensation for Occupational Injuries and Diseases Act (Act No 130 of 1993) (COID).

T2.3 RETURNABLE DOCUMENTS INCORPORATED INTO THE CONTRACT

RETURNABLE DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

Form 2.3.1 Record of Addenda to Tender Documents

Form 2.3.2 Procurement Form

Form 2.3.3 Original Tax Clearance Certificate

Form 2.3.4 National Treasury: Central Data Supplier Base

FORM 2.3.1 RECORD OF ADDENDA TO TENDER DOCUMENTS

(Addenda received from Employer's Agent for amendments on Tender Documentation)

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

Name of Tenderer: …… Date: ……

Signature: ……...

Full name of signatory: ……

FORM 2.3.2 PROCUREMENT FORM

Acceptable Tenders will be evaluated using a system that awards points on the basis of Tender price and the meeting of specific goals.

DEFINITIONS

"Acceptable Tender" means any Tender which, in all respects, complies with the conditions of Tender and specifications as set out in the Tender document, including conditions as specified in the Preferential Procurement Policy Framework Act (Act 5 of 2000) and the Supply Chain Management of Council.

"Council" refers to the O. R. TAMBO DISTRICT Municipality.

"Equity ownership" refers to the percentage ownership and control, exercised by individuals within an enterprise and they are involved in the day to day running of the Company.

"HDI equity ownership" refers to the percentage of an enterprise, which is owned by individuals, or in the caseof a company, the percentage shares that are owned by individuals meeting the requirements of the definition ofa HDI.

"Historically disadvantaged individuals (HDIs)" means all South African citizens –

(i) Who had no franchise in national elections prior to the introduction of the 1983 and 1993 constitutions(Referred to as Previously Disadvantaged Individuals (PDIs) in this document)

(ii) Women

(iii) Disabled persons.

"SMME's" (small, medium and micro enterprises) refers to separate and distinct business entities, including co- operative enterprises and NGOs, managed by one owner or more, as defined in the National Small Business (Act102 of 1996). Refer to the attached addendum for a definition of SMME's for different economic sectors.

Tenders are adjudicated in terms of ORTDM Procurement Policy, and the following framework is provided as a guideline in this regard.

1 Technical adjudication and General Criteria
- Tenders will be adjudicated in terms of inter alia:
- Compliance with Tender conditions
- Technical specifications

If the Tender does not comply with the Tender conditions, the Tender will be rejected. If technical specifications are not met, the Tender may also be rejected.

With regard to the above, certain actions or errors are unacceptable, and warrants **REJECTION OF THE TENDER**, for example:

- A Tax Verification Pin. (**Only valid tax verification pin** must be attached to the Tender document).
- Pages to be completed, removed from the Tender document, and have therefore not been submitted.
- Failure to complete the Bill of Quantities as required.
- Scratching out without initialling next to the amended rates or information.
- Writing over / painting out rates / the use of tippex or any erasable ink, e.g. Pencil.
- Failure to attend compulsory site inspections.
- The Tender has not been properly signed by a party having the authority to do so, according to the Form 2.2.2 – "Authority for Signatory".
- Form of Offer not completed.
- Particulars required in respect of the Tender have not been provided – non-compliance of Tender requirements and/or specifications.
- The Tenderer's attempts to influence or has in fact influenced the evaluation and/or awarding of the contract.
- The Tender has been submitted after the relevant closing date and time.
- Each page of the Contract portion of this Tender document (Part C1 – C4) must be initialled by the authorised person in order for the document to constitute a proper Contract between the Employer (ORTDM) and the undersigned.
- If any municipal rates and taxes or municipal service charges owed by that Tenderer or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for morethan three months.
- If any Tenderer who during the last five years has failed to perform satisfactorily on a previous contract with the municipality or any other organ of state after written notice was given to that Tenderer that performance was unsatisfactory.

2 **Size of enterprise and current workload**

Evaluation of the Tenderer's position in terms of:

- Previous and expected current annual turnover.
- Current contractual obligations.
- Capacity to execute the contract.

3 **Staffing profile**

Evaluation of the Tenderer's position in terms of:

- Staff available for this contract being Tendered for
- Qualifications and experience of key staff to be utilised on this contract.

4 **Financial ability to execute the contract:**

Evaluation of the Tenderer's financial ability to execute the contract. Emphasis will be placed on the following:

- Contact the Tender's bank manager to assess the Tenderer's financial ability to execute the contract and the Tenderer hereby grants his consent for this purpose.

5 **Good standing with RSA Revenue Services**

- Determine whether an original tax pin or an original valid tax clearance certificate has been submitted.
- The Tenderer must affix a Tax Verification Pin to page T2.2.5 of the Tender document.

6 **Penalties**

7 The O. R. Tambo District Municipality will if upon investigation it is found that a preference in terms of the Contract has been obtained on a fraudulent basis, or any specified goals are not attained in the performance of the contract, on discretion of the Municipal Manager, one or more of the following penalties will be imposed:

- Cancel the contract and recover all losses or damages incurred or sustained from the Tenderer.
- Impose a financial penalty of twice the theoretical financial preference associated with the claim, whichwas made in the Tender.
- Restrict the suppliers, its shareholders, and directors on obtaining any business from the O. R. Tambo District Municipality for a period of 5 years.

DECLARATION

I/We the undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm, certifies that theitems mentioned in part of the foregoing procurement form and returnable documents qualifies/qualify for the preference(s) shown and acknowledge(s) that:

The information furnished is true and correct.

The contractor may be required to furnish documentary proof to the satisfaction of the O. R. Tambo District Municipality that the claims are correct.

If the claims are found to be inflated, the O. R. Tambo District Municipality may, in addition to any other remedy it may have, recover from the contractor all cost, losses or damages incurred or sustained by the O. R. Tambo District Municipality as a result of the award of the Contract and/or cancel the contract and claim any damages which the O. R. Tambo District Municipality may suffer by having to make less favourable arrangements after such cancellation.

Signature of Tenderer

Signed at_____on_____day of_____202____

For the tenderer

WITNESSES:

1. _____

2. _____

_____

FORM 2.3.3 ORIGINAL TAX CLEARANCE CERTIFICATE

FORM 2.3.4 NATIONAL TREASURY: CENTRAL SUPPLIER DATABASE

Proof of registration on the National Treasury Central Supplier Database to be attached here (alternatively the tenderer to provide MAAA number).

CONTRACT

C1 AGREEMENT AND CONTRACT DATA

C1.1 Form of Offer and Acceptance

C1.2 Contract Data (Part 1 & Part 2)

C1.3 Tenderer's Direct Participation of Targeted Labour

C1.4 Specification for SMME Sub-contractor Employment

C1.5 Performance Guarantee (Pro forma)

C1.6 Adjudication

C1.7 Agreement in terms of the Occupational Health and Safety Act 1993 (Act 85 of 1993)

C1.1 FORM OF OFFER AND ACCEPTANCE

1. OFFER

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

CONTRACT NO.: MIS 535 774 C: MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU: CONTRACT 3

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

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

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

_____

_____

_____Rand (in words); R_____(in figures).

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

Signature(s) _____ Date _____

Name(s) _____

Capacity _____

For the **Tenderer** (Name and address of organisation):

_____

Name & Signature of Witness

_____

Signature

_____ _____

Name Date

2. 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
Part C5: Book of Drawings
and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

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

The tenderer shall, within two (2) weeks after receiving a completed copy of this agreement including the schedule of deviation (if any), contact the Employer's Agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. Failure to fulfil any of the obligations in accordance with those terms shall constitute a repudiation of this Agreement.

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

Signature(s) _____

Name(s) _____ Date _____

Capacity _____

For the **Employer** (Name and address of organisation):

_____

Name & Signature

Of Witness _____ _____

Name and Signature Date

3. 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 _____

5. Subject _____

   Details _____

6. 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, as well as any confirmation, clarification, or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the 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:

Signatures (s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____

(Name and address of Organisation)

Name & Signature

Of Witness _____ Date _____

FOR THE EMPLOYER:

Signatures (s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____

(Name and address of Organisation)

Name & Signature

Of Witness _____ Date _____

4. CONFIRMATION OF RECEIPT

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

the ..... (day)

of .....(month)

20 ..... (year)

at .....(place)

For the Contractor: ……
Signature

……
Name

……
Capacity

Signature and name of witness: ……
Signature

……
Name

C1.2 CONTRACT DATA (PART 1)

The General Conditions of Contract for Construction Works, third edition, second print, 2015, published by the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House, 1685, is applicable to this contract and is obtainable from www.saice.org.za.

Copies of the General Conditions of Contract may be obtained from the South African Institution of Civil Engineering Tel: 011 – 805 5947

PART 1: DATA PROVIDED BY THE EMPLOYER

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

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

CONTRACT SPECIFIC DATA

The following contract specific data, amendments, additions or omissions, referring to the General Conditions of Contract for Construction Works, Third Edition, second print, 2015, are applicable to this Contract:

The following amendments and additions to the Clauses are the contract specific data applicable to this Contract:

Clause	Description / Wording
1.1.1.13	The Defects Liability Period is **12 (twelve) months**, measured from the date of Certificate of Completion.
1.1.1.14	Refer Clause 5.5.1
1.1.1.15	The Employer is: O. R. Tambo District Municipality, represented by the **DIRECTOR: INFRASTRUCTURE WATER AND SANITATION SERVICES** and/or such other person or persons duly authorised thereto by the Employer in writing.
1.1.1.16	The Employer's Agent is BM Infrastructure Development, also referred to in the contract as "BMID", or "Employer's Agent". Any reference to the "Engineer" will have the same meaning and reference as the "Employer's Agent"
1.1.1.26	The Pricing Strategy is: A re-measurement contract
1.1.1.28	*Delete the contents of **Sub-Clause 1.1.1.28** and replace with the following:* "Scope of Work means the document(s) containing the Standard Specifications, the Project Particular Specifications and the Drawings, that specify and describe the Works which are to be provided, and any other requirements and constraints relating to the manner in which the work is to be carried out."
1.1.1.35 (new)	*Add the following sub-clause:*

Clause	Description / Wording
	"Drawings" means all drawings, calculations and technical information forming part of the Contract Documents (other than information contained in the Specifications) and any modifications thereof or additions thereto from time to time approved in writing by the Employer's Agent or delivered to the Contractor by the Employer's Agent.
1.1.1.36 (new)	*Add the following sub-clause:* **"Parties"** means the Contractor and the Employer.
1.1.1.37 (new)	*Add the following sub-clause:* **"Letter of Notification"** means the letters of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers. The notification of the decision does not form part of the Employer's Acceptance of the successful Tenderer's Offer and no rights shall accrue.
1.1.1.38 (new)	*Add the following sub-clause:* **"Approved Programme"** means the latest programme submitted by the Contractor and approved by the Employer's Agent. The latest programme agreed and approved by the Employer's Agent supersedes previous approved programmes.
1.2.1.2	The Employer's Agent's address for receipt of communications is: Telephone: 047 531 0424 Email: info@bmengineers.co.za Address (Postal): 48 Flamingo Drive Southernwood Mthatha 50999 Address (Physical): 48 Flamingo Drive Southernwood Mthatha 5099
1.2.1.3 (new) 1.2.1.4 (new) 1.2.1.5 (new)	*Add the following sub-clauses:* Sent by facsimile, electronic or any like communication irrespective of it being during office hours or otherwise. Posted to the Contractor's address and delivered by the postal authorities. Delivered by a courier service and signed for by the recipient or his representative.
1.2.1.6 (new)	*Add the following sub-clause:* Any notice or claim required in accordance with this Contract shall be communicated separately from other communications, on a separate cover with specific reference to the clause in terms of which the communication was made. Provided that the Employer, Employer's Agent and Contractor shall be entitled, by written notice to each other, to change their said addresses**.**
1.3.5	*Add the following to the end of* ***Sub-Clause 1.3.5****:* "No part of any document or drawings issued with this enquiry may be copied, photographed or repeated in any manner or by any process without the written consent of the Employer's Agent.

Clause	Description / Wording
	Copyright is reserved on all designs, specifications, patents and patentable designs, systems and processes contained in the documents and drawings. The person, firm, or body to whom these documents are issued or made available shall be held jointly and severally responsible in their personal and corporate capacities for any contravention of the requirements of Sub-Clause 1.3.5. The recipients of these documents shall treat the documents as well as the details contained herein as private and confidential."
3.2.3	The Employer's Agent shall obtain specific approval from the Employer before executing any of his functions or duties according to the following Clauses of the General Condition of Contract: a) Clause 3.3.1 Nomination of Employer's Agent's Representative b) Clause 3.3.4 Employer's Agent's authority to delegate c) Clause 5.7.3 Acceleration d) Clause 5.11.2 Suspension of the Works by the Employer's Agent e) Clause 5.12.4 Acceleration instead of extension of time f) Clause 6.3.1 Approval of Variation Orders
3.3.6	*Add the following to the clause:* The limit of referring the matter to the Employer's Agent by the Contactor shall be twenty-one (21) days after the decision in question was given by the Employer's Agent's Representative.
4.3.1	*Add the following to the clause:* For conventional construction works the Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) shall apply and the minimum employment conditions which will apply shall be guided by the latest Sectorial Determination: Civil Engineering Sector published from time to time. Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) as per Government Notice R39 of 22 January 2020, shall apply to works described in the Scope of Work as being labour intensive and which are undertaken by unskilled or semi-skilled workers. Compliance with the National Environmental Management Act (**NEMA**), **Act** 107 of 1998. The Contractor shall comply with the Occupational Health and Safety Specification prepared by the Employer in terms of the Construction Regulations, 2014 promulgated in terms of Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993) and COVID-19 requirements. Without limiting the Contractor's obligations in terms of the Contract, the Contractor shall before commencement of the Works or any part thereof, be in the possession of an approved Health and Safety Plan."
4.3.3	***Add the following at the end of Clause 4.3:*** "With regard to the Compensation for Occupational Injuries and Diseases Act (Act No. 130 of 1993), the Contractor shall, within such time as is stated for the production of insurance policies in terms of Clause 8.6.6, deliver to the Employer a letter, either a) from his Insurance Company certifying that the Contractor has affected insurance with the Company for the full extent of his potential liability in respect of all workmen employed by him on the Contract and undertaking to notify the Employer of the expiry date of the policy at least one calendar month before such date, or b) from the Compensation Commissioner certifying that the Contractor has complied with the requirements of the above-mentioned Act and is at present in good standing with the Compensation Fund."

Clause	Description / Wording
4.3.4	***Add the following at the end of Clause 4.3:*** The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as 'the Act', that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act: (i) 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 of the Act. (ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with. The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations. (iii) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor. The Contractor shall be obliged to report forthwith to the Employer and Employer's Agent 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 Contract, and shall, on written demand, provide full details in writing, to the Employer and Employer's Agent, of such investigation, complaint or criminal charge.
4.3.5	***Add the following at the end of Clause 4.3:*** The Contractor shall furthermore, in compliance with Constructional Regulations 2014 to the Act: (i) Acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 4(1)(a) of the Construction Regulation 2014 and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 5(1) of the Construction Regulation 2003 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted to the Employer for approval within fourteen (14) days after **the Commencement Date for each assignment** and shall be implemented and maintained from the Commencement of the Works. (ii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to ensure that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Employer's Agent, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified." The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to ensure that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Employer's Agent, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified."

Clause	Description / Wording
4.5.4	*Delete the contents of **Sub-Clause 4.5.4** and replace with the following:* "For this contract the fees, taxes, levies and other charges to be paid by the Contractor in terms of Sub-Clause 4.5.1.1 will not be refunded by the Employer. The cost thereof shall be deemed to be included in the prices tendered for relevant items in the Bill of Quantities."
4.12.2	*Add the following to the end of **Sub-Clause 4.12.2**:* "The Employer's minimum requirements for approval of the Construction Manager: a) Must be in the employment of the Contractor; b) Must be registered with the minimum Minimum BSC or B-Tech in Civil Engineering/ NQF level 7 Registered as a Professional in terms of Engineering Council of South Africa as **Pr Tech or Pr Eng** or SACPCMP as a **Pr CPM or Pr CM**; and c) Must have a minimum of 5 years' experience in Water Supply / Waterborne Sewer pipelines and concrete reservoir structures."
5.3.1	"The documents required from the Contractor before commencement of the works are: a) Health and Safety Plan (refer to Clause 4.3) b) Initial Programme (refer to Clause 5.6) c) Security (refer to Clause 6.2) d) Insurance (refer to Clause 8.6) e) Cashflow Projection f) Overall Construction Methodology with Quality Management Plan g) Occupational Health and Safety Agreement Form C1.4 h) Method Statement in terms of EMP i) Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer)" "The documentation required from the Provincial Director (DoL) before commencement with works execution are: a) Construction Work Permit (CWP) and site-specific number for each construction site in terms of Regulation 3(3) of Construction Regulation, 2014. b) In terms of Regulation 3(1) of Construction Regulations, 2014, the Employer must apply to the Provincial Director (DoL) in writing for a Construction Work Permit at least (thirty) 30 days before Commencement of the Works, said application must be in terms of Regulation 3(2) of the Construction Regulations, 2014 and including documentation in terms of the Regulations 3(2) of Construction Regulations, 2014. Commencement of the Works is estimated to be **Fifty (50)** days after the commencement of the Contract."
5.3.2	The Contractor shall submit the documentation required under subclause 5.3.1 including that required for the application for the Construction Work Permit and Commencement with Works, within fourteen (14) days from the commencement of the Contract.
5.3.3	*Add the following to the end of **Sub-Clause 5.3.3**:* **"**However, deemed commencement of the Works shall not be construed as approval of the documentation submitted. The Contractor shall not commence working until the Department of Labour has issued the Construction Work Permit in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2014"
5.4.1	Between the wording "… Site," and "the Location …." In the third line, add the following:

Clause	Description / Wording
	"subject to the Contractor having an approved project specific Health and Safety Plan in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2014 and complied with the initial requirements thereof,"
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but as set out in the Scope of Works.
5.4.4 (New)	*Add the following new **Sub-Clause 5.4.4:*** **"**The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his/her own cost any additional facilities outside the Site required by him/her for the purposes of the Works."
5.5.1	The stipulated maximum time limit for Practical Completion is **305 days** measured from the commencement date. The period to achieving Practical Completion starts from Commencement Date of the Contract (5.2.1) and is inclusive of: a) **14** days to comply with Clause 5.3.1 b) **32** days to allow Employer to obtain Construction Work Permit in terms of Construction Regulation 2014, provided the Health and Safety Plan of the Contractor was in order and approved by the Employer Agent (namely Construction Health and Safety Agent) c) **305** days of construction period, thus **10 Months**.
5.8.1	Delete the words "between sunset and sunrise" in the first line and replace with "outside normal working hours". "Non-working" days shall be Sundays. The Contractor will be allowed to work on Saturdays if he so chooses, but Saturdays will not be taken into account when calculating working days or any extension of time granted. The "special" non-working days are: a) Any statutory public holiday in terms of the Public Holidays Act, and, where such statutory public holiday falls on a Sunday, and the next Monday subsequently becomes a statutory public holiday in terms of the Public Holidays Act, then both the relevant Sunday and the relevant Monday shall be special non-working days under the contract; b) any proclaimed statutory day of mourning; c) any proclaimed statutory election day which is proclaimed as a statutory public holiday; and **d)** all annual year-end shutdown periods as recommended by the South African Bargaining Council for the Civil Engineering Industry.
5.9.3	*Delete the contents of **Sub-Clause 5.9.3** and replace with the following:* **"**The Contractor shall give adequate written notice to the Employer's Agent of any instructions or drawings, which the Contractor may require for the execution of the Works and the Employer's Agent shall deliver such instructions and/or drawings to the Contractor. The notice shall include details of the necessary drawing or instruction, details of by when it should be issued, and details of the nature and amount of the delay likely to be suffered if it is late.
5.12.1	*Add the following to Clause 5.12.1:* An Extension of Time awarded only becomes effective at the original Due Completion Date if, by that date, Practical Completion has not been achieved. To adjust the Due Completion Date, the circumstance must in fact delay Practical Completion. d) Float belongs to the Project.

Clause	Description / Wording
5.12.2.2	*Add the following to Clause 5.12.2.2:* "Extension of time resulting from abnormal weather will be calculated as per the provisions in C3.4.2.6 of the Project Document.
5.12.4	*Delete the contents of **Clause 5.12.4** and replace with the following:* "instead of granting extension of time, if feasible, the Employer's Agent may request the Contractor to accelerate the rate of progress to achieve Practical Completion without extension of time and agree the cost for payment of such acceleration in accordance with Clause 5.7.3."
5.12.5 (new)	*Add the following to Clause 5.12* **Critical Path Provision** • A delay in so far as extension of time is concerned, will be regarded as a delay only if, on a claim by the Contractor in accordance with the General Conditions of Contract, the Employer's Agent rules that all progress on an item or items of work on the critical path of the approved programme for the execution of the Works by the Contractor, has been brought to a halt. Delays on normal working days only, based on a working week, of five normal working days, will be taken in account for the extension of time.
5.13.1	*Delete the contents of **Sub-Clause 5.13** and replace with the following:* If the Contractor fails by the Due Completion Date to complete the Works, or any specific portion thereof that is identified in the Scope of Works to the extent which entitles him in terms of Clause 5.14.2 to receive a Certificate of Practical Completion for the Works, then the Contractor shall be liable to the Employer for the sum(s) stated below as (a) penalty/ies for every day which shall elapse between the Due Completion Date for the Works or the specific portion of the Works and the actual Date of Practical Completion of the Works or of the specific portion. The penalty for delay shall be **R 21 000 or 0.02% of the Contract Value (excluding VAT) per day**; **whichever is the higher value**." To cover the Employer's Agent Cost for additional Supervision and Additional Services.
5.14.1	The requirements for achieving Practical Completion are: • Reservoirs - All concrete structures are complete including associated chambers, the Employer's Agent has been provided with all relevant test results including as-built positions; all relevant pressure and water tightness tests have been conducted and passed and have been signed off. • Water - All pipes, structures and valves etc. are installed and complete; the Employer's Agent has been provided with all relevant test results including as-built positions; The pipes must be functioning in the manner for which they were intended. When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Employer's Agent shall, within 14 days after receiving such request, either where the Works: • Has reached Practical Completion issue a Certificate of Practical Completion to the Contractor and to the Employer; or • Has not reached Practical Completion, issue a written list to the Contractor defining the incomplete work and defects to be rectified to achieve Practical Completion. Should the Employer's Agent not issue a Certificate of Practical Completion or such a list within the 14 days, Practical Completion shall be considered to have been achieved on the expiry of the 14 days of the written request in terms of Clause 5.14.1.
5.14.2	*Delete the contents of **Sub-Clause 5.14.2** and replace with the following:*

Clause	Description / Wording
	"As soon as the work referred to in the list issued in terms of Clause 5.14.1 has been duly completed and defects that manifested after the list was issued rectified, the Employer's Agent shall deliver to the Contractor and to the Employer a Certificate of Practical Completion together with a further written list setting out the work to be completed to justify the issuing of a Certificate of Completion."
5.16.3	The latent defect period is **ten (10) years**, commencing on the day after the date of certification of Practical Completion.
6.2.1	*Add the following to the end of **Sub-Clause 6.2.1**:* "The security to be provided by the Contractor shall be: • A performance guarantee of ten per cent **(10%)** of the Contract Sum (worded exactly as per the pro forma included in C1.5). • The performance guarantee shall be from an approved South African Insurance Company or Bank to be jointly and severally bound with the Contractor, in accordance with the provisions of the Form of Guarantee."
6.2.3	*Add the following to the end of **Sub-Clause 6.2.3**:* The Contractor shall submit proof of renewal to the Employer's Agent.
6.3.1	*Add the following to the end of the Clause:* **Variations** that have a financial implication will be approved by ORTDM in line with their approved Supply Chain Management Delegation of Authority prior to work commencement. **Contingencies** are under the sole control of the of ORTDM and may be used upon approval by the delegated authority of ORTDM.
6.5.1.2.1	*Add the following to the end of **Sub-Clause 6.5.1.2.1**:* "Gross remuneration" referred to in **Sub-Clause 6.5.1.2.1** shall be the nominal hourly or monthly remuneration actually paid to workmen and foremen before any additions for the Contractor's contribution to pension, medical aid, housing, tools, unemployment insurance, site allowance etc., and also before any deductions for tax, pension, medical aid, unemployment insurance, etc."
6.5.1.2.2	*Add the following to the end of **Sub-Clause 6.5.1.2.2**:* "Net cost of materials" referred to in **Sub-Clause 6.5.1.2.2** shall be the net invoiced cost of materials after the deductions of all discounts, direct or indirect."
6.5.1.2.3	The percentage allowance to cover overhead charges is **15%**.
6.6.1	The provisional sums stated in the Bill of Quantities are net amounts covering the actual expenditure which the Employer may incur.
6.7.6 (new)	*Add the following sub-clause below 6.7.5:* The Works are measured in accordance with the current SANS 1200 standard specifications and the standard system of measurement of Civil Engineering quantities for South Africa, published by the South African Institution of Civil Engineers. No claims arising from the method of measurement will be entertained.
6.8.2	*Add the following to the end of **Sub-Clause 6.8.2**:* "The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following coefficients// indices / references: The value of "x" is 0.10 The values of the coefficients are:

Clause	Description / Wording
	a = 0,20 [Labour] b = 0,30 [Contractor's equipment] c = 0,40 [Material] d = 0,10 [Fuel] The relevant geographical area is "**Eastern Cape (Province)**". The base month will be the month prior to the month in which tenders close. The definitions of "L"," P"," M" and" F" referred to in Clause 1 of the Contract Price Adjustment Schedule are as follows: • "L" is the "Labour Index" and shall be the "Consumer Price Index" for the urban area nearest to the Site as stated in the Contract Data and as published in the Statistical News Release P0141, Table A of Statistics South Africa. • "P" is the "Plant Index" and shall be the "Producer Price Index" for "Plant and Equipment" as published in the Statistical News Release P0151, Table 4 of Statistics South Africa. • "M" is the "Materials Index" and shall be the "Producer Price Index" for "Civil Engineering Material", for the industry as stated in the Contract Data, and as published in the Statistical News Release P0151, Table 6 of Statistics South Africa. • "F" is the "Fuel Index" and shall be the "Producer Price Index" for "Diesel", for the area as stated in the Contract Data, as published in the Statistical News Release P0142, Table 1 of Statistics South Africa.
6.8.3	Price adjustments for variations in the costs of special materials: **Not allowed**
6.9.1	*Add to Clause 6.9.1:* "The Contractor shall where practicable before delivery, and in any event not later than 24 hours after delivery to the Site, inform the Employer's Agent of any materials which are not his sole property."
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is **80%** on submission of a payment guarantee.
6.10.3	The Retention Money shall be **10%** (ten percent) of the value of the Works. The "Limit of the retention money" is **5%** (five percent) of the Contract Price.
6.10.4	**Replace** the wordings "within 7 days" and "within 28 days" in Clause 6.10.4 with the wording "within 5 working days: and "within 30 days".
6.11	Replace ***"15 per cent"*** in the heading, the marginal heading and in the third line after 6.11.1.3 with ***"20 per cent"***.
7.2.1	*Add at the end of Clause 7.2.1:* "Unless otherwise directed in writing by the Employer's Agent, materials for the Permanent Works shall be new and unused.
7.4.4.1	*Replace the comma after the word* "them" *in the last line of* ***Sub-Clause 7.4.4.1*** with a full stop, and replace the word "and" with the following: "The cost of all tests and testing required as part of the Contractor's own quality control programme, whether particularised or not, shall be deemed to have been allowed for in his tender; and"

Clause	Description / Wording
7.8	The Defects Liability Period shall be **12 (twelve) months**, measured from the date of Certificate of Completion.
7.8.1	*In subclause 7.8.1 delete the following:* "(fair wear and tear excepted)"
7.8.2.2	*In subclause 7.8.2.2 add the following:* ", subject to such work being done on a written instruction by the Employer's Agent."
8.3.1	**Excepted risks** In Clause 8.3.1.9 insert at the beginning, "Except where the Contract specifically so provides,".
8.6.1	*Add the following to the end of **Sub-Clause 8.6.1**:* "Insurances shall be maintained in force for the duration of the Contract, and in respect of Sub-Contractors, the Contractor shall be deemed to have complied with the provisions of the requirements relating to insurance by ensuring that the Sub-Contractors have effected such insurances."
8.6.1.1.2	The value of the 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 damages and loss to be included in the insurance sum is **01% (One Percent)** of the Contract Price.
8.6.1.2	*Add the following to the end of **Sub-Clause 8.6.1.2**:* "SASRIA (Riot) Certificate to be issued in joint names of Employer and Contractor for the full value of the works (including VAT)."
8.6.1.3	The limit of indemnity liability insurance shall be Ten Million (**R10 000 000.00**). Add to Clause 8.6.1.3: "The minimum amount of insurance required in terms of this Clause shall be per event, the number of events being unlimited.
8.6.1.5	*Add the following to the end of **Sub-Clause 8.6.1.5:*** The Contractor and/or his subcontractors shall provide, and maintain in force for the duration of the contract, the following additional cover: a) Complying with the provisions of the Compensation for Occupational Injuries and Diseases Act 1993, as amended; b) Insure all persons employed on the contract who do not fall within the provisions of the Compensation for Occupational Injuries and Diseases Act, against the contractor's Common Law Liability to such employees for the sum of not less than R1 000 000 (one million rand) for any one accident; c) Motor Vehicle Liability insurance comprising: • Insurance in accordance with the Road Accident Fund; • "Balance of Third Party" Motor Risks including Passenger Liability;

Clause	Description / Wording
	d) "All Risks" insurance on all constructional plant and machinery and allied equipment including all temporary accommodation brought onto site. "Furthermore, the insurance cover effected by the Contractor shall meet the following requirements: a) The insurance policy held by the Contractor shall cover "wet risks" where a portion of the works is subject to possible, occasional or regular inundation." b) Where one or more hired vehicles or Contractor's own vehicles are required for the Employer's Agent's site monitoring staff, such vehicles are to be fully comprehensively insured. Insurance of all materials stored off Site, and intended for incorporation in the Permanent Works, including their delivery to the Site and off-loading on Site, to the value of such materials for which payment is made in terms of Clause 6.10.1.1 hereof.
8.6.5	*In the second line of* ***Sub-Clause 8.6.5****, after the word* "effected" *add the words* "in the joint names of the Employer and the Contractor" *Add the following to the end of* ***Sub-Clause 8.6.5****:* "The insurance policy shall contain a specific provision whereby cancellation of the policy prior to the end of the period referred to in Cause 8.2.1 cannot take place without the prior written approval of the Employer." "The Employer shall approve (or disapprove) the terms of the insurances within fourteen (14) days from the date of receipt of the policies provided in terms of Clause 8.6.5."
8.6.6	*Add the following to* ***Clause 8.6.6:*** (a) "The policies and the proof of payment of premiums and continuity of the policies shall be produced within fourteen (14) days.".
8.6.8 (new)	*Add the following Clause:* "In the event of any claim arising under the policies held in terms of this Clause, the Contractor shall forthwith take all necessary steps to lodge his claim on the joint behalf of himself and the Employer, and to secure settlement of such claim, and he shall submit to the Employer's Agent copies of all claims and associated documents. The claim submitted by the Contractor shall cover the cost of repairing and making good as required by Clauses 8.2.2.1 and 8.2.2.3.".
9.1.4	*Replace the contents of* ***Clause 9.1.4*** *with the following:* "Up to the time of termination of the Contract by either party in terms of this Clause, or until the Contractor gives notice in terms of this Clause to terminate the Contract and the Contractor is precluded from exercising his right to terminate the Contract because the Employer agrees to bear any resultant additional costs provided for in Clause 9.1.2.2 hereof, the Contractor: a) will be entitled to an extension of calendar time for working days lost as may be approved by the Employer's Agent, and b) will be reimbursed the cost of delays per working day, where the number of working days will be determined pro rata the effect the delays have on the progress of the work as agreed with the Employer's Agent. Payment in full and final settlement will be made at the rates tendered for the payment items specially provided in the Bill of Quantities. Where the circumstances described in Clauses 9.1.1 and 9.1.2 are applicable only to a certain portion of the contract, the Employer's Agent will decide after consulting the Contractor, to what

Clause	Description / Wording
	extent the Contract as a whole is affected and whether or not a claim in terms of this Clause can be submitted. No payment will be made in terms of this Clause after the expiry of the Due Completion Date.
9.2.1.3.2	*Add the following to the end of* ***Sub-Clause 9.2.1.3.2:*** "or to maintain and extend the validity of the performance guarantee until the Certificate of Completion; or"
9.2.1.3.6	*Delete the contents of* ***Sub-Clause 9.2.1.3.6*** *and replace with the following:* "Is not executing the Works in accordance with the Contract, or is neglecting or failing to carry out his obligations under the Contract, inter alia to comply with any instruction under Clause 4.2"
9.2.1.3.9 (new)	*Add the following Clause:* **"**The Contractor committed a corrupt or fraudulent act during the procurement process or the execution of the contract.
9.2.1.3.10 (new)	*Add the following Clause:* An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefited the Contractor."
10.1.1.1	*Delete the contents of* ***Sub-Clause 10.1.1.1*** *and replace with the following:* "The Contractor shall within 28 days after the commencement of each circumstance, event, act or omission giving rise to such a claim, deliver to the Employer's Agent a written claim, referring to this Clause and setting out:"
10.1.1.1.3	*Delete the contents of* ***Sub-Clause 10.1.1.1.3*** *and replace with the following:* **"**The length of the extension of time, if any, claimed and the basis of the calculation by incorporating the effects of each circumstance, event, act or omission on the critical path of an approved programme, indicating the delay to Practical Completion, and"
10.1.1.2	*Delete the contents of* ***Sub-Clause 10.1.1.2*** *and replace with the following:* "If, by reason of the nature and circumstances of the claim, the Contractor cannot reasonably comply with all or any of the provisions of Clause 10.1.1.1.11 to 10.1.1.1.4 to deliver a claim within the said period of 28 days, he shall:
10.1.1.2.1	Within the said period of 28 days issue a further notice referring to the relevant notice in terms of Clause 10.1.2 and confirming his intention to make the claim and comply with such of the requirements of Clause 10.1.1.1.1 to 10.1 .1.1.4 as he reasonably can, and
10.1.1.2.2	As soon as practicable, comply with such of the requirements of Clause 10.1.1.1.1 lo 10.1.1.1.4 as have not yet been complied with."
10.1.1.3	*Delete the contents of* ***Sub-Clause 10.1.1.3*** *and replace with the following:* "If the circumstance, event, act or omission relating to the claim are of an ongoing nature:
10.1.1.3.1	the Contractor shall, within 14 days after the commencement of each circumstance, event, act or omission giving rise to such a claim, deliver to the Employer's Agent a written notice of his intention to submit a claim, referring to this Clause and setting out the particulars of the circumstance, event, act or omission. Provided that the additional payment or compensation or delay that occurred before

Clause	Description / Wording
	14 days prior the date on which the notice in terms of this clause was delivered, shall be deemed to be covered by the rates and/or prices set out in the Pricing Data and the time stated in the Contract Data relating to Clause 5.5.1.
10.1.1.3.2	The Contractor shall, in addition to delivering the said further notice within 28 days in terms of Clause 10.1.1.2.1, each month deliver to the Employer's Agent, in writing, updated particulars required in terms of Clause 10.1.1.1.1 to 10.1.1.1.4 and, within 28 days after the end of the circumstance, event, act or omission deliver his final claim."
10.1.1.4	*Add the following new **Sub-Clause 10.1.1.4**:* Discussions of claims during site meetings and minutes of such discussions shall not be regarded as a claim or notice by the Contractor of his intention to make a claim unless it is supported by a written submission in terms of Clause 10.1.1.1"
10.1.2	The Contractor shall issue an early warning notifying to the Employer's Agent as soon as he becomes aware of any circumstance, event, act or omission which could: a) increase the Contract Prices, b) Delay Practical Completion, or c) Impact on quality, or impair the performance of the Works in use
10.1.4	If, in respect of any claim to which this Clause refers, the Contractor fails to deliver his claim within the 28 day claim period in terms of Clause 10.1.1.1 or does not deliver a further notice within the period of 28 days in terms of Clause 10.1.1.2.1 or does not deliver his final claim within 28 days after the circumstance, event, act or omission ceased in terms of Clause 10.1 .1 .3.2, the Due Completion Date shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged all liability in connection with the claim. Provided that failure by the Contractor to give an early warning notice in terms of Clause 10.1.2 which an experienced Contractor could have given, the claim shall be assessed by the Employer's Agent and the ruling in terms of Clause 10.1.5 shall be taken into account the lack of mitigation measures employed due the lack of such early warning notice."
10.3.2	*Add the following:* Amicable settlement in terms of Sub-Clause 10.4 shall be utilised for all disputes prior to referring any dispute to adjudication
10.5.1	Dispute resolution shall be by ad-hoc adjudication
10.5.3	The number of Adjudication Board Members to be appointed is **One.**
10.7.1	The determination of disputes which are unresolved in terms of Clause 10.5.3 shall be referred to arbitration for final settlement.
10.10.1	*Delete the contents of **Sub-Clause 10.10.1** and replace with the following:* Nothing herein contained shall deprive the Contractor or the Employer of either party's right to institute immediate court proceedings in respect of failure by the Employer or the Contractor, as the case may be, to pay the amount of a payment certificate on its due date, or to pay any amount of retention money on its due date for payment.
10.10.3	*Delete the contents of **Sub-Clause 10.10.3** and replace with the following:* The Adjudication Board, arbitrator and the court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Employer's Agent. The

Clause	Description / Wording
	Arbitrator and the court shall have full power to and to reconsider any decision by the Adjudication Board relevant to the matter in dispute, and neither party shall be limited in such proceedings before such arbitrator or court to the evidence or arguments put before the Employer's Agent for the purpose of obtaining his ruling, or the Adjudication Board for the purpose of obtaining a decision.
Refer to C.1.3 and C.1.4 (new)	**The following additional clause shall apply:** The Contract Participation Goal (CPG) of 20% applies to this bid: 10% of the Contract Value for Direct Participation by local Labour and 10% for Direct Participation by local enterprises. The Targeted SMME Participation Goal is a minimum of 30% of value of work excluding manufacture of pipes, contingencies, and provisional sums. The information provided in Section C.1.3 and C.1.4 of this document shall be contractually binding, and penalties will be imposed as per the Clauses included in the Sections should the tendered participation goals not be achieved.
11 (new)	**Penalty for failure to meet proposed direct participation of targeted enterprise (new clause)** In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty (P) calculated in the following manner: $P = 0.50 \times (L_M - L_A) \times V_A$ Where: L_M = SMME Subcontractors or Local Resources Goal % stated in the Contract Document L_A = SMME Subcontractors or Local Resources component % which the Employer's Agent certifies as being achieved upon completion of the Contract. V_A = Award Value (Contract Price exclusive of VAT, all provisional or prime cost sums and allowances for contingencies and escalation) P = Rand value of penalty payable

C1.2: CONTRACT DATA (PART 2)

PART 2: DATA PROVIDED BY THE CONTRACTOR

Clause	Description / Wording
1.1.1.9	The Contractor is: …… *(The legal name of the Contractor)*
1.2.1.2	The Contractor's address for receipt of communications and notices is: Address (Postal): …… Address (Physical): …… …… …… …… …… Telephone: …… Facsimile:…….. Email: …… ……

SIGNED BY/ON BEHALF OF TENDERER:

Signed ..... Date ……

Name ..... Position ……

C1.3: TENDERER'S DIRECT PARTICIPATION OF TARGETED LABOUR

1. Applicable Standard Specification

The applicable Standard Specification is SANS 10845 – Part 8 (2015): Construction Procurement –

Part 8: Participation of targeted labour (local resources) in contracts.

2. Definitions

With reference to clause 3 of SANS 10845-8, the following definitions shall apply to this schedule:

2.1 Targeted Labour

Individuals, employed by the Contractor in the performance of the contract, who are defined as the target group in the contract and 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.

2.2 Target Group

The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

i) 55 % women;
ii) 55% youth; and
iii) 2% on persons with disabilities

Target Group specifically excluded contractor's own staff unless such staff are also from the Target Area.

2.3 Target Area

For this project, the target area is defined as the areas within the proximity of the site (Mthatha, ward 14 and ward 37) in the KSD Local Municipality, Eastern Cape Province.

2.4 Targeted Labour Contract Participation Goal (CPGL)

Sum of the wages (excluding any benefits), for which the Contractor, or any of his/her sub-contractors contracts targeted labour in the performance of the contract, expressed as a percentage of the value of the contract.

2.5 Threshold Value

Sectorial Determined Wage Rate for the Civil Engineering Industry as adjusted from time to time (excluding any benefits). As determined in accordance with the Basic Conditions of Employment Act, 75 of 1977.

2.6 Value of the Contract

The contract sum (accepted contract amount) less allowances for specialist work, provisional sums, contingencies and VAT.

2.7 Labour Maximisation

Labour maximisation shall contribute a minimum of 10% of the value of the contract.

3. Conditions associated with the granting of preferences

The tenderer, undertakes to:

a) engage one or more targeted labour in accordance with the provisions of the SANS 10845-8 as varied in Section 4 hereunder;
b) accept the sanctions set out in Section 5 below, should such conditions be breached;
c) complete the Targeted Labour (CPG) calculation form contained in Section 8 below; and
d) complete the Supporting Contract Participation Goal Calculation contained in Section 9 below.

4. Variations to the targeted construction procurement specification SANS 10845-8

The variations to SANS 10845-8 are set out below. Should any requirements of the variations conflict with the requirements of SANS 10845-8, the requirements of the variations shall prevail.

1) Engage one or more targeted labour in accordance with the provisions of the SANS 1914-4 as varied in section 3 hereunder;

Calculations shall be based as a % of targeted labour costs of the Tender Sum (excluding VAT) and not calculated in accordance with methods 1 or 2 in Annexure G of SANS 10845-8.

5. Labour Intensive Work

(a) Competencies of Supervisory and Management

Established contractors shall only engage supervisory and management staff in labour-intensive works who have either completed, or are registered for training towards, the skills programme outlined in Table 1.

Emerging contractors shall have personally completed or be registered on a skills programme for the NQF level 2-unit standard. All other site supervisory staff in the employ of emerging contractors must have completed, or be registered on a skills programme for, the NQF level 2-unit standards or NQF level 4-unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / Supervisor	2	Apply Labour-Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and
		Use Labour-Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	Any one of these 3-unit standards.
		Use Labour-Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman / Supervisor	4	Implement Labour-Intensive Construction Systems and Techniques	This unit standard must be completed, and
		Use Labour-Intensive Construction Methods to Construct and Maintain	Any one of these 3 unit standards
		Roads and Stormwater Drainage Use Labour-Intensive Construction Methods to Construct and Maintain	

Personnel	NQF level	Unit standard titles	Skills programme description
		Water and Sanitation Services Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Construction Manager/ Manager (i.e. the Contractor's most senior representative that is resident on the site)	5	Manage Labour-Intensive against this Construction Processes	Skills Programme against this single unit standard

Details of these skills programmes may be obtained from the CETA ETQA manager (e-mail: gerard@ceta.co.za, Tel: 011-265 5900)

(b) Employment of unskilled and semi-skilled workers

(i) 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.

(ii) The rate of pay shall be as per the latest sectoral determination for the Civil Engineering industry.

(iii) Tasks established by the Contractor shall be such that:

- the average worker completes 5 tasks per week in 45 hours or less; and
- the weakest worker completes 5 tasks per week in 55 hours or less.

(iv) The Contractor shall 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 (iii) above.

(v) The Contractor shall, through all available community structures, inform the local community of the labour-intensive works and the employment opportunities presented thereby. Preference shall be given to people with previous practical experience in construction and / or who come from households:

- where the head of the household has less than a primary school education;
- that have less than one full time person earning an income;
- where subsistence agriculture is the source of income;
- those who are not in receipt of any social security pension income

(vi) The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

- 55 % women;
- 55% youth; and
- 2% on persons with disabilities.

(c) Contract Participation Goals

Established contractors shall only engage supervisory and management staff in labour-intensive works who have either completed

In support of the National Department of Public Works' Expanded Public Works Programme which is aimed at the alleviation of poverty through the creation of employment opportunities, the Employer is seeking to increase the intensity of labour, as appropriate, in all of its infrastructure sector projects.
It is a requirement of this contract, therefore, that the work be executed in such a manner so as to maximise the use of labour intensive construction methods in order to provide low and semi-skilled employment opportunities.

To this end, a minimum targeted labour contract participation goal is specified below, which shall be achieved by the Contractor in the performance of the contract, failing which, penalties as described will be applied.

The specified minimum targeted labour contract participation goal (CPGL) using labour intensive method is 10%

The minimum CPGL is such that the Contractor will have to carry out some of the work that would normally have been undertaken using mechanised construction methods, by using labour intensive construction methods instead. It is left to the discretion of the Contractor to identify suitable work activities for the intensification of labour. The Contractor shall, within 5 working days of being requested in writing by the Employer's Agent to do so, submit details of his/her plan to achieve the minimum CPGL.

(d) Training of targeted labour

The Contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the Contract in a manner that does not compromise worker health and safety.

The cost of the formal training of targeted labour, will be funded by the local office of the Department of Labour. This training will take place as close to the project site as practically possible.

The Contractor shall access this training by informing the relevant regional office of the Department of Labour in writing, within 14 days of being awarded the Contract, of the likely number of persons that will undergo training and when such training is required. The Employer and the Department of Public Works (Fax: 012 3258625/ EPWP Unit, Private Bag X65, Pretoria 0001) shall be furnished with a copy of this request.

The Contractor shall do nothing to dissuade targeted labour from participating in training programmes and shall take all reasonable steps to ensure that each beneficiary is provided with two days of formal training for every 22 days worked.

An allowance equal to 100% of the task rate or daily rate shall be paid by the Contractor to workers who attend formal training.

Proof of compliance with the requirements of the above shall be provided by the Contractor to the Employer prior to submission of the final payment certificate.

It is envisaged that all local labour employed on this Contract shall receive a level of training for which they will receive accreditation.

An employee shall, upon termination of his services, be entitled to a certificate of service showing the full names of his employer (i.e. the Contractor) and the employee, the type of work done by the employee, the date of commencement, a record of training received and the date of termination of his services.

(e) Generic labour-intensive specification

(i) Scope

This Specification establishes general requirements for activities which are to be executed by hand involving the following:

a) trenches having a depth of less than 1,5 meters
b) stormwater drainage
c) low-volume roads and sidewalks

(ii) Precedence

Where this Specification is in conflict with any other standard or specification referred to in this Contract, the requirements of this Specification shall prevail.

(iii) Hand excavatable material

Hand excavatable material is material:

a) Granular materials:
i) whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or

ii) where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100 mm;

b) Cohesive materials:
i) whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or

ii) where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100 mm;

Note:

- A boulder, a cobble and gravel is material with a particle size greater than 200 mm, between 60 and 200 mm, and between 2 mm and 60 mm respectively.
- A dynamic cone penetrometer is an instrument used to measure the insitu shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400 mm and drives a cone having a maximum diameter of 20 mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

GRANULAR MATERIALS		**COHESIVE MATERIALS**	
Consistency	**Description**	**Consistency**	**Description**
Very loose	Crumbles very easily when scraped with a geological pick	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle
Loose	Small resistance to penetration by sharp end of a geological pick	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure
Medium dense	Considerable resistance to penetration by sharp end of a geological pick	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade
Dense	Very high resistance to penetration by the sharp end of geological pick; required many blows for excavation	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

(iv) Trench excavation

Hand excavatable material has to have a consistency of:
Granular Materials – Very loose or Loose
Cohesive Materials – Very soft or Soft
All other consistencies are regarded machine excavatable materials.
Hand excavation only for trenches having a depth of less than 1,5 metres, all other trenches to be done by machine.

(v) Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100 mm. Each layer shall be compacted using hand stampers

a) to 90% Proctor density;
b) such that in excess of 5 blows of a dynamic come penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10 mm and contains no isolated boulders, or
c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

(vi) Excavation

All excavation, as listed under C3.4.2.6(f)(iv) classified as hand excavatable shall be excavated by hand.

The excavation of any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

(vii) Clearing and grubbing

Grass and small bushes shall be cleared by hand.

(viii) Shaping

All shaping shall be undertaken by hand.

(ix) Spreading

All material shall be spread by hand.

6. Training

The Contractor shall make allowance for the employment of a CLO in accordance with the following terms of reference

7. Community Participation

The Contractor shall make allowance for the employment of a CLO in accordance with the following terms of reference (TOR), and a Graduate Engineer as Clerk of Works (COW).

(a) Terms of Reference of CLO

The Community Liaison Officer (CLO) will be responsible to the Project Steering Committee (PSC), who will be involved in the appointment of the CLO. The CLO should be the person with a good standing and respect in the local community and would be selected according to the set criteria by the interviewing panel consisting of Local and District Municipality, ISD Consultant, PSC, Ward Councillor and selected local leadership.

Two (2) CLOs will appointed for the period of physical construction, plus a period of 14 days prior to this period.

The period will include times where small team works are busy in the area e.g. chambers, standpipes and reservoirs. The period will end when no further work is required.

The Contractor will provide office space and stationery for the CLO to carry out his / her duties.

Remuneration for the CLO will be **R7 500 plus R500 for Airtime and Data per CLO per month** for the period of employment. Where the CLO is engaged for part of the month, they shall be paid an equivalent daily amount. The unit for measurement shall be the man-month of CLO employment.

A CLO who fails in their responsibilities may be replaced in consultation with the PSC and ISD Consultant.

The CLO will liaise with the following people in performing these activities:

Contractor:

a. Organise and assist the contractor in explaining to all workers the labour-based construction model.
b. Ensure labourers understand their task and the principles behind task work.
c. Ensure labourers are informed of their conditions of temporal employment.
d. Attend all site meetings and briefing for work procedures.
e. Keep written record of interviews and community liaison which should be summarised and included in the monthly progress reports.
f. Collect monthly welfare reports and submit to social facilitators.
g. Ensure that contractor's workers are paid what is due to them and in time.
h. Assist in the recruitment of labour.
i. Promote and maintain sound relations with community stakeholders and other role players.
j. Screen the supplied labour by the community through Project Steering Committees to ensure compliance with the agreed upon recruitment policy and the government's labour employment targets.
k. Inform local labour about their conditions of temporary employment, to ensure their timeous availability and inform them timeously when they would be relieved, where the rotation of labour is applicable.
l. Keep the labour register of labour and manage records of project local labourers and be able to provide reports on employment statistics.
m. Consult on all decisions regarding local problems and any matters of importance that, in any way will be of relevance to the Contract.
n. To be on site on a daily basis.
o. To register concerns / perceptions and raise them in the PSC meetings.
p. Attend site and PSC meetings to present monthly report on the local community labour involvement and site matters.
q. Identify possible labour dispute and any disciplinary matter and advise the Construction Manager / foreman and assist in the resolution, where necessary must call for the assistance of the Social Consultant for the resolution of the conflicts.
r. Assist the contractor in preparing records of project employees. Assist the contractor in making task measurements and the records thereof.
s. Monitor the production of individual task workers and arrange replacement of those workers who fail to produce a reasonable task output.
t. Attend disciplinary proceedings to ensure that hearings are fair and reasonable.
u. Communicate daily with the contractor to determine additional labour requirements with regard to numbers and skills and pass this to the PSC.
v. Attend weekly meetings with the contractor and make a weekly written report which shall be a prerequisite to being paid.

Social Facilitator:

a. Assist in convening of workshops.
b. Disseminate information to PSC members.
c. Articulate implementing agency policies to PSC members.
d. Communicate labour requirements.
e. Attend induction training programmes for workers and induct labourers.
f. Submit monthly welfare reports to the social facilitators PSC.
g. Communicate labour and skills requirements to the PSC.
h. Assist in the recruitment and engagement of work force.
i. Verify labour records and ensure all engaged qualify as per the Contract requirements.
j. Investigate and report all labour dispute matters to the PSC, advise Construction Manager on resolution.

The residents of each village being served by the scheme are represented by a PSC. All liaison with the community and the committees is the responsibility of the Social Facilitator in conjunction with the Project Manager. The Contractor will be required to liaise through them for any matters to do with the community.

(b) Graduate Engineer (Clerk of Works)

The Contractor shall employ, for the duration of the contract, a Graduate Engineer (National Diploma or BTech) for the duties of a Clerk of Works (COW). The PSC will provide a list of suitable candidates which will be interview by the Contractor before selecting a suitable person. If this person has never done similar work before the Contractor must make allowance to train the person. The Graduate Engineer will be responsible to the Contractor and a short-term contract must be set up to formalise the conditions of the appointment.

The contractor will provide office space, stationery and all other tools and equipment for the COW to carry out his / her duties.

At completion of the contract the Contractor must provide the Graduate Engineer with a certificate of service.

Remuneration for the Graduate Engineer will be **R 6 500 per month for the period of employment**. Where the COW is engaged for part of the month, they shall be paid an equivalent daily amount. The unit for measurement shall be the man-month of Graduate Engineer employment.

The Graduate Engineer shall be trained and mentored in:

- Contract Administration
- Quality Control
- Measurement of Works,
- Site Management System
- Survey

A Graduate Engineer who fails in their responsibilities as outlined in the agreement, may be replaced in consultation with the PSC and ISD.

8. Sanctions

In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty calculated in the following manner:

$$P = 0.5 \times \frac{(D - D_O) \times C_A}{(100)}$$

Where:
D = tendered Contract Participation Goal percentage.

D_O = the Contract Participation Goal which the Employer's representative certifies, based on the credits passed, as being achieved upon completion of the contract.

C_A = Contract Amount

P = Monetary value of penalty payable

9. Tender Contract Participation Goal in respect of targeted labour and local enterprises

I/We hereby tender a Contract Participation Goal of 20% (minimum: **30%**) in compliance with the Employer's Socio-Economic Requirements.

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm or sole proprietor confirms that he/she understands the conditions under which such preferences are granted.

Signature: ……

Name: ……...

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

Telephone: ……..…..

Fax: ……..……

10. Supporting Targeted Labour (CPG) calculation

TYPE OF TARGETED LABOUR	**WORKING HOURS**	**RATE**	**TOTAL WAGE COST**
Permanent labour*			
Temporary labour			
SMME labour			
Local Enterprises			
		TOTAL	

*Note: A tenderer may only claim permanent staff as eligible for preference points if said staff are also from the Target Area. Permanent staff are considered to be those who have been continuously employed by the tenderer for at least three months prior to the commencement of this project.

C1.4: SPECIFICATION FOR SMME SUB-CONTRACTOR EMPLOYMENT

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Revision list

Rev 0.1

- Change SAFCEC Subcontract Agreement to General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments
- Change SMME EoI document compiler from Employer's Agent to the Main Contractor

ACRONYMS

CIDB	-	CONSTRUCTION INDUSTRY DEVELOPMENT BOARD
CM	-	CONSTRUCTION MANAGER (MENTOR)
ECSA	-	ENGINEERING COUNCIL OF SOUTH AFRICA
GCC	-	GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS
EA	-	EMPLOYER'S AGENT
MC	-	MAIN CONTRACTOR (MENTOR)
PM	-	PROJECT MANAGER (MENTOR)
PMT	-	PROJECT MANAGEMENT TEAM
SAICE	-	SOUTH AFRICAN INSTITUTION OF CIVIL ENGINEERING
SARS	-	SOUTH AFRICAN RECEIVER OF REVENUE
SMME	-	SMALL MEDIUM & MICRO ENTERPRISE
SANS	-	SOUTH AFRICAN NATIONAL STANDARDS

1 DEFINITIONS AND INTERPRETATIONS

For the purposes of this section of the Project Specification, the definitions given in the General Conditions of Contract for Construction Works 3rd Edition 2015, the Standard Specifications and the Project Specifications, together with the following definitions shall apply:

a) Main Contract: Any contract for the execution of civil engineering or building or similar construction works, in which the liabilities and responsibilities of the two parties thereto are assigned essentially in a manner which is consistent with that set out in the General Conditions of Contract for Construction Works 3rd Edition, 2015.

b) Project Management Team (PMT): A team that is set up after award of the contract, consisting of a delegate from each of the Main Contractor, the Employer's Agent and the Employer. The function of the PMT will be to consult regarding the management of the subcontracts involving SMMEs. The PMT will also evaluate the Main Contractor's performance regarding the goals set for SMME involvement. The Employer's Project Manager will decide which party is to chair and lead the team. Minutes of these meetings will be taken by the Employer's Agent.

c) SMME Construction Manager: Person provided by Main Contractor to guide, assist and mentor all eligible potential SMMEs tendering and awarded a contract as SMME Sub-Contractors as per section 2.2 of this section of the Specification.

d) Small, Medium and Micro Enterprises: An Affirmable Business Enterprise which adheres to statutory labour practices, is a legal entity, registered with SARS and the Compensation Commissioner or FEMA and continues to operate as an independent enterprise for profit.

e) SMME Sub-Contractor: An Emerging Contractor referred to as an SMME and chosen by the Main Contractor to tender for and, if successful, to provide works as part of the total service required by the Employer for the Contract.

f) Sub-Contractor: A Contractor who contracts with the Main Contractor to provide works as part of the total services required by the Employer for that Contract.

g) SMME Package: Specified work package identified for execution by SMMEs. The identifiers are Employer, Employer's Agent and Main Contractor.

h) Joint Venture: An association of firms, companies or businesses for which purpose they combine their expertise, efforts, skills and knowledge to execute the Contract.

2 SMME TENDER PHASE

2.1 Identification of SMME Contractors

"Immediately upon the award of the Contract the Main Contractor in conjunction with the Employer and the Employer's Agent shall place an advertisement for Expressions of Interest for CIDB class CE SMME contractors to undertake part of the Works. It is intended that SMME subcontracts shall be issued covering certain items of the work which will be identified as set out below."

2.2 Identification of Works Opportunities

General items to be considered as possible work packages for the sub-contractors are listed below. These packages are not all inclusive and contractors are encouraged to exceed the minimum requirements.
Specific work items to be performed by subcontractors will be agreed to post-award. It remains the main contractor's responsibility to ensure compliance with the stipulated contract participation goals.

- Site clearance
- Hand excavation
- Construction of chambers
- Installation of valve and pipeline markers
- Fencing
- Village reticulation

2.3 Tender process for SMMEs

"Potential SMME Sub Contractors shall be invited to tender for each work package."

2.4 Compilation and issue of tender documents

The Main Contractor supported where required by the Employer's Agent shall compile the tender documents in such a manner that it will facilitate the achievement of all objectives and principles pertaining to procurement and development of SMMEs as stated in or as may reasonably be inferred from the conditions of this contract.

All tender documentation shall be reviewed, approved and issued by the Main Contractor with all copies of tender documents compiled deemed to be included in the tendered rates or mark-up provision allowed for the various SMME work packages. The tender or quotation document will be issued to invited SMMEs at NO COST and the Main Contractor is to make allowance for such cost in his tendered rates.

2.5 Site Briefing Session

The Main Contractor shall facilitate a Site Briefing Session for the invited SMMEs. The Main Contractor will also make sure that all relevant parties including the PMT are present and given an opportunity to present specific aspects of the requirements pertaining to their tender requirements.

2.6 Pre-Tender Assistance to the SMMEs

At the briefing session, the Main Contractor assisted by the PMT will be responsible for ensuring that prospective SMME Tenderers fully comprehend the:

i. implications of the liabilities and responsibilities inherent in the subcontract applicable;
ii. scope and extent of the portion of the works included in the subcontract;
iii. the requirements for quality control of works;
iv. the requirements for occupational health and safety;
v. proper procedures for the submission of the tenders;
vi. procedures and basis on which tenders will be adjudicated and the subcontracts awarded.

2.7 Adjudication

a) The Main Contractor shall receive all tenders at a location identified by him. All sealed tender submissions will be placed in a proper tender box provided by the Main Contractor for this purpose. A submission register will be maintained by the Main Contractor for all tenders received.

b) All tenders received shall be evaluated by the Main Contractor for final approval. The draft tender evaluation report shall be distributed to the PMT members 5 working days prior to the PMT meeting for comments and perusal in order to finalise the evaluation before the meeting. The format of the tender evaluation report must be agreed upon at the first PMT meeting.

   The evaluation of the Occupational Health and Safety plans will be done by the Main Contractor SHE Officer.

c) The PMT shall have the right to interview any tenderer for the purpose of:
   - clarifying any aspect of the tender;
   - querying abnormally high or low rates and prices, and
   - clarifying rates and prices which are not in balance with other tendered rates and prices.

d) The Main Contractor shall provide all reasonable opportunity to such tenderers who have been interviewed, to correct obvious and patent errors, provided always that this can be achieved without altering the total tendered sum.

2.8 Award of Tender

The Main Contractor will award the work with the successful SMME Tenderers, and a Sub-Contract Agreement will be signed between the Main Contractor and the successful SMME Tenderers.

2.9 Sub-Contract Agreement

A Sub-Contract Agreement in accordance with the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments will be compiled by the Main Contractor with the assistance of the Employer's Agent. They shall be responsible for ensuring that the terms and conditions are consistent with all requirements as specified in or reasonably may be inferred from the provisions of this Contract. All costs associated with the tender process including the conclusion of the agreement are for the Main Contractor's account.

The final terms and conditions of each subcontract agreement shall be subject to the approval of the PMT, prior to entering into the subcontract agreement. The Main Contractor may not enter into any subcontract agreement that contains terms more onerous or disproportionate to the risks inherent in the main contract for either the SMME or the Main Contractor.

The terms and conditions of the subcontract agreement shall specifically ensure that the provisions of the main contract pertaining to:

a) The allowable sources from which workers may be drawn in terms of the contract;
b) The terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract works;
c) Any training to be provided to the temporary workforce;
d) Occupational health and safety; and
e) The use of labour-intensive methods.

Shall apply in respect of all SMME Contracts.

3 CONSTRUCTION PHASE

3.1 Mentorship

The Main Contractor shall closely manage and supervise and assist all SMMEs in all aspects of management, execution and completion of subcontracts. This shall typically include assistance with planning the works, sourcing and ordering of materials, labour relations, monthly measurements and invoicing procedures, etc. The extent and level of such management, guidance and assistance to be provided by the Main Contractor shall be directed at enabling the SMMEs to achieve the successful execution and completion of the subcontract. Payment for such on-going assistance is deemed included in the rate tendered for the administrative cost of SMMEs.

3.2 Guide, Assist and Mentor SMMEs

The Main Contractor shall employ on a full-time basis an SMME Construction Manager. The CV of the proposed individual must be submitted to the Employer's Agent for approval based on the requirements shown below.

The SMME Construction Manager will manage the SMMEs and report monthly on progress of each SMME to the Project Management Team (PMT).

Such Construction Manager must be adequately experienced with SMME work(s) concern and the development thereof and will be subject to the approval of the Employer. The SMME Construction Manager will render full-time assistance to and mentor the SMMEs and shall:

i. Possess a minimum of five years site-based experience in the civil engineering construction industry and have a sound knowledge of the minimum requirements to carry out construction work effectively and efficiently.
ii. Possess 3 years civil engineering administrative experience.
iii. Be registered with ECSA registration (Engineering Council of South Africa): Pr. Eng or Pr. Tech or SACPCMP (South African Council for the Project and Construction Management Professions) as a Pr. CPM or Pr. CM.
iv. Would preferably hold a mentoring certificate.

v. Maintain the programme of the subcontract.
vi. Ensure continuous supervision and assistance to the SMME sub-contractors.

The SMME Construction Manager will report on performance of the SMME on a monthly basis. On completion, the Main Contractor will issue a Final Certificate as given in the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments within seven days after the final completion.

3.3 Dispute Resolution Procedures

The Main Contractor shall at all times:

a) Apply the terms and conditions of the subcontract fairly and justly, taking due cognisance of the level of sophistication and experience of the particular SMME concerned, as well as the level of subcontract applicable.
b) Closely manage and supervise all SMMEs and wherever feasible, shall give reasonable warning to SMMEs when any contravention of the terms of the subcontract has occurred or appears likely to occur. The Main Contractor shall, whenever feasible, give the SMMEs reasonable opportunity to rectify any such contravention or to avoid such contravention and shall render all reasonable assistance to the SMME in this regard.
c) If no agreement can be reached between the Main Contractor and the sub-Main Contractor, the matter shall be referred to a mutually acceptable mediator as required in the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments.

When taking any actions or imposing any penalties as are provided for in the subcontract, the Main Contractor shall explain fully to the SMMEs that such actions are provided for in the subcontract.

3.4 Quality of Work and Performance of the Sub-Main Contractor

If the Sub-Contractor, in the opinion of the Main Contractor, fails to comply with the criteria as listed below, the Main Contractor shall issue a written warning to the Sub-Contractor, stating all the areas of non-compliance. A copy of the letter of warning shall be forwarded to the Employer's Agent. These criteria include:

a) Acceptable standard of works as set out in the specifications in the sub-contract tender document.
b) Progress in accordance with the time constraints in the Sub-Contractor's tender document.
c) Punctual and full payment of the workforce and suppliers.
d) Occupational health and safety compliance.
e) Compliance with environmental requirements.

The Sub Contractor shall have fourteen (14) days from the date of receipt of the warning letter from the Main Contractor to satisfactorily rectify the issues raised by the Main Contractor, with the exception of point (d) and (e), for which the response time shall be 24 hours. If a satisfactory solution cannot be reached after the mediation process this will be sufficient grounds for the Main Contractor to terminate the contract provided the Project Management Team is satisfied that the Main Contractor has made every effort to correct the performance by the Sub Contractor.

3.5 Payment of SMMEs

3.5.1 SMME Sub-Contractors are to be invited to submit their payment certification or claim monthly and are to be paid by the Main Contractor within Thirty (30) days of receipt of invoice.

3.5.2 Payment to SMMEs **MAY BE** delayed pending payment of the Main Contractor by the Employer.

3.5.3 Payment to SMMEs may not be subjected to set off costs unless provided for in law, and may not exceed 5% of the payment, unless approved by the Employer.

3.5.4 Payment to SMMEs may not be discounted for early payment.

3.5.5 No interim payment of the SMME invoice may be unfairly withheld or delayed for whatever reason.

3.5.6 The Main Contractor must acknowledge and honour cessions in favour of recognised financiers or suppliers of the SMME if presented to the PMT and approved.

3.6 Main Contractor's Liability

No provision or requirement set out in this specification shall be deemed to relieve the Main Contractor of any liability or obligation under the contract, and in accordance with the provisions of Clause 4.4 of the General Conditions of Contract for Construction Works 2015, the Main Contractor shall be fully liable for the acts, defaults and negligence of any

SMMEs, his agents or employees, as fully as if they were the acts, defaults and negligence of the Main Contractor, his agents or employees save as specified in the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments.

Any failure or neglect by the Main Contractor to comply with the provision of the specifications, or any omission or neglect by the Main Contractor in adhering to or applying the principles as are described and inherent in the specifications, shall be deemed to constitute a warrant for the Employer's Agent to act in terms of Clause 9.2 of the General Conditions of Contract for Construction Works 2015.

3.7 Performance Guarantee

The following Performance Guarantees will be applied on the SMME Sub Contracts:

3.7.1	up to R1 000 000	shall be zero percent	(0%);
3.7.2	R1 000 001 to R4 000 000	shall be five percent	(5%);
3.7.3	Exceeding R4 000 000	shall be ten percent	(10%)

All the above will be of the accepted SMME Sub-Contract Value and will be required from SMMEs as stated in the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments.

Where such guarantees are provided by SMME, the return of same will be related to the time when the work carried out by the SMME is complete to the satisfaction of the Main Contractor and the Employer's Agent.

3.8 Retention

Five percent (5%) of the Sub-Contract Value (excluding VAT) will be deducted as retention on SMME, with half to be released on issue of the Completion Certificate for the specific SMME Sub-Contract with the remaining retention released on issuing of the Final Approval Certificate after the twelve (12) months Defects Liability Period. This deduction will be made from each payment certificate till it reaches the maximum of 5% of the Sub-Contract Value.

3.9 Measurements

An item has been measured in Bill of Quantities allowing the Main Contractor to price for the cost of the Main Contractor to manage and supervise the SMMEs during the execution of their works. The price tendered will be deemed to include all incidentals by the Main Contractor to comply with the conditions of this specification. No other claims will be entertained should SMMEs affect the contract works in any way, and the Main Contractor shall deem to include such effects in the handling cost percentage for the different SMME work packages above.

3.10 Sub-Contracting by SMME

The Main Contractor shall not permit SMME Sub-Contractors to further subcontract on any other conditions than those applying in the project specification to Sub-Contractors or SMME Sub-Contractors.

3.11 Joint Venturing & Consortium

The Main Contractor shall not permit the SMME Sub-Contractors to enter into a Joint Venture or form a consortium with an external SMME(s) unless PMT approves so before the tender award. The SMME may only be allowed to enter into Joint Venture or form a consortium with the other invited SMME(s) on the package concerned.

4 PORTFOLIOS OF EVIDENCE & UP-GRADE SUPPORT

4.1 Keeping of Records

The Main Contractor shall assume responsibility for the compilation and maintenance of comprehensive records detailing each SMME's progress during the construction period, starting from the award of a subcontract to an SMME until the successful completion of the subcontract work or termination of the subcontract. To this end the Main Contractor shall arrange for the completion, on behalf of the SMME Sub Contractor, of the Employer's pro-formas to be provided by the Employer at award of the Main Contract. The Main Contractor must also keep a register of the details of each SMME engaged.

The Main Contractor shall keep comprehensive records of the training given to each trainee and SMME, at the successful completion of each course; each trainee shall be issued with a certificate indicating the course contents as proof of attendance and completion. The Main Contractor shall keep a register of certificates issued. Whenever required, the Main Contractor shall provide copies of such records to the Employer's Agent.

4.2 Monthly Returns

The Main Contractor's participation performance will be measured monthly in order to monitor the extent to which he is striving to reach the targets in this contract. The Main Contractor shall complete and return on a monthly basis the following pro-forma forms of the Employer (to be provided by the Employer at award of the Main Contract):

- Report on employment.
- Report on the SMME's Plant and Equipment.
- Report on progress against programme.
- Report on financial status.
- Report on engineering training.
- Report on development training.
- Report on safety training.

The completed forms shall be presented to the Employer's Agent at each site meeting. Failure to adhere to this requirement shall result in the delay of any payment due until the Employer's Agent confirms that the forms have been received.

4.3 Main Contractor's duties upon completion of each sub-contract

The Main Contractor shall, on completion of each and every subcontract completed in accordance with the provisions of this specification, issue free of charge to the SMME within 7 (seven) days of the completion of the subcontract, a Certificate of Experience on a single A4 page containing the following:

a) Contract data:
   i. Contract title;
   ii. Main Contractor's full name and address;
   iii. Employer's Agent's name and address;
   iv. Employer's name and address.

b) Subcontract data:
   i. SMME name and address;
   ii. Scope or extent of the subcontract works;
   iii. Value of the subcontract works;
   iv. Applicable level of the subcontract;
   v. Duration of the subcontract;
   vi. Date of completion of the subcontract;
   vii. Description of the training undergone by the SMME.

In addition, the SMME Construction Manager must provide comments of the performance of the SMME Sub Contractor in respect of contract execution, Labour management and OHS principles.

c) Certifying the SMME's successful completion of the subcontract.

5 MEASUREMENT AND PAYMENT

Payment Ref **Unit**

SM10.01 Provision of an SMME Construction Manager ..... Month

The monthly tendered rate must include for all costs arising from the full-time mentoring, guidance and supervision of the SMME Sub Contractors, including salary, accommodation, transport and all other expenses incurred.

SM10.02 Expressions of Interest for SMME's ..... Number (No)

The tendered sum must include all costs incurred in the preparation of the expressions of interest, advertising and evaluation of the replies for presentation to the PMT.

SM10.03 Tenders for SMME's..... Number (No)

Payment under this item shall be the number of SMME sub contract, tender processes which the Contractor carries out. The tendered rate shall include full compensation for the compilation and issue of tender documents, tender invitation, training and provision of assistance to tenderers, evaluation of tenders and award of sub contracts.

SM10.04 Administrative costs of mentoring SMME Sub Contractors ..... Month

The tendered sum must include for all costs incurred in the administration of the mentoring of SMME Sub Contracts but not including the costs of the duties of the SMME Construction Manager or normal site supervision and administration activities. These could include the costs of outside specialists such as estimators, OHS or environmental specialists.

SM10.05 Preliminary and General costs associated with SMME's and fluctuation between the Contractor's tendered rates and the rates of SMME subcontractors ..... Provisional Sum (Prov. Sum)

Measurement and payment shall be in accordance with the provisions of clause 6.6 of the Conditions of Contract.

The Contractor shall, for inclusion in his monthly certificate, produce a schedule of work packages undertaken by SMME subcontractors, clearly indicating the P&G costs incurred which shall be limited to 20% of each SMME package.

The provisional sum makes provision for the SMME subcontractor's establishment on site and general obligations, which will be included in the SMME subcontractors' contracts, and for funds to deal with the fluctuations between the Contractor's tendered rates and the rates of the approved SMME subcontractors."

SM10.06 Handling Costs and Profit Associated with SM10.05 ..... Percentage (%)

The Contractor is required to calculate the total percentage mark up for his handling costs and profit on Item SM10.05 which shall be claimed monthly under this pay item.

6 FINANCIAL PENALTY

In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty (P) calculated in the following manner:

$P = 0{,}50 \times (L_M - L_A) \times V_A$

Where:

L_M = SMME Subcontractors or Local Resources Goal % stated in the Contract Document

L_A = SMME Subcontractors or Local Resources component % which the Employer's representative certifies as being achieved upon completion of the Contract.

V_A = Award Value (Contract Price exclusive of VAT, all provisional or prime cost sums and allowances for contingencies)

P = Rand value of penalty payable

7 ACCEPTANCE OF THE SMME SUB-CONTRACTOR SPECIFICATION

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm or sole proprietor. confirms that he/she understands the conditions under which such preferences are granted.

Signature: ……

Name: ……...

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

Telephone: ……..…..

Fax: ……..……

C1.5: PERFORMANCE GUARANTEE (PRO FORMA)

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

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:	.....
Physical address:	.....
"Employer" means:	**O. R. Tambo District Municipality**
"Contractor" means:	.....
"Employer's Agent" means:	**BM Infrastructure Development**
"Works" means:	**MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU: CONTRACT 3**
"Site" means:	**MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU: CONTRACT 3**
"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:	**FIXED**
"Expiry Date" means:	Within 14 days after the issue of the Certificate of Completion by the Employer's Agent in terms of Clause 5.14.4 of the General Conditions of Contract.

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

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

2 The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the 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. The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3 The Guarantor hereby acknowledges that:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Signed at .....

Date .....

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

Capacity .....

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

Capacity .....

Witness signatory: (1) .....

Witness signatory: (2) .....

C1.6: ADJUDICATION

Adjudication shall be carried out in terms of Clauses 10.5 and 10.6 of the General Conditions of CONTRACT 2015.

The Disclosure Statement and the Adjudication Board Member Agreement to be used in this Contract are contained Appendices 4 and 5 of the General Conditions of Contract GCC 2015.

C1.7: AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT No 85 OF 1993)

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

THIS AGREEMENT is made between .....…….. ……..

(hereinafter called "the Employer") of the one part, herein represented by……..

in his capacity as ……..……..

and ……..……..……..

(hereinafter called "the Mandatary") of the other part, herein represented by:

……..

in his capacity as ……..

duly authorised to sign on behalf of the Mandatory.

WHEREAS the Contractor is the Mandatary of the Employer in consequence of an agreement between the Contractor and the Employer in respect of

CONTRACT No: ……CONTRACT TITLE ……..

for the construction, completion and maintenance of such Works;

AND WHEREAS the Employer and the Mandatary have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatary with the provisions of the Occupational Health and Safety Act, 1993 (Act 85 of 1993);

NOW THEREFORE THIS AGREEMENT WITNESSED AS FOLLOWS:

1 The Mandatary undertakes to acquaint the appropriate officials and employees of the Mandatary with all relevant provisions of the Act and the regulations promulgated in terms thereof.

2 The Mandatary shall execute the work in accordance with the Contract Documents pertaining to this Contract.

3 This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or Employer’s Agent requiring him to commence the execution of the Works, to either

(a) the date of the Final Approval Certificate issued in terms of Clause 5.16.1 (GCC 2015) of the General Conditions of Contract (hereinafter referred to as "the GCC"), or

(b) the date of termination of the Contract in terms of Clauses 9.1, 9.2 or 9.3 (GCC 2015) of the

GCC.

4 The Mandatary declares himself to be conversant with the following:

(a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:

(i) Section 8 : General duties of employers to their employees;

(ii) Section 9 : General duties of employers and self-employed persons to persons other than employees;

(iii) Section 37 : Acts or omissions by employees or mandataries, and

(iv) Subsection 37(2) relating to the purpose and meaning of this Agreement.

(b) The procedures and safety rules of the Employer as pertaining to the Mandatary and to all his subcontractors.

5 In addition to the requirements of Clause 8.4 (GCC 2015) of the GCC and all relevant requirements of the Contract, the Mandatary agrees to execute all the Works forming part of this Contract and to operate and utilise all machinery, plant and equipment in accordance with the Act.

6 The Mandatary is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.

7 The Mandatary warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.

8. The Mandatary undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:

(a) The Mandatary shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatary shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatary obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.

(b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Mandatary to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.

(c) The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Mandatary and/or his employees and/or his subcontractors.

In witness thereof, the parties hereto have set their signatures hereon in the presence of the subscribing witnesses:

Signature(s) of authorised agents: ……. Date……..

Name(s) (in block letters): ……

Capacity of authorised agents: ……

for and on behalf of the Mandatary ……
(Name and address of organisation)

Witness:..... (Full name – in block letters – and signature)
(Name)

……
(Signature)

Date: ……

For and on behalf of the Employer:

Signature(s) of authorised agent(s) …… Date…….

Name(s) (in block letters) ……..

Capacity of authorised agents: ……

for the Employer: ……. (Name and address of organisation)

Witness:.....(Full name – in block letters – and signature)
(Name)

……
(Signature)

Date: ……

C2 PRICING DATA

C2.1 Pricing Instructions

C2.2 Bill of Quantities

C2.1 PRICING INSTRUCTIONS

C2.1.1 PREAMBLE TO THE BILL OF QUANTITIES

C2.1.1.1 The Conditions of Contract, the Contract Data, the Scope of Work, the Site Information, and the Drawings shall be read in conjunction with the Bill of Quantities.

C2.1.1.2 Measurement and payment shall be in accordance with the relevant provisions of clause 8 of each of the SANS 1200 Standardised Specifications for Civil Engineering Construction or the Particular Specifications referred to in the Scope of Work, subject to the variations and amendments contained therein.

C2.1.1.3 The Bill of Quantities 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 of Quantities, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Employer's Agent 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 of Quantities.

Clause 8 of each Standardised Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Scope of Work, all set out which ancillary or associated activities are included in the rates for the specified operations.

C2.1.1.4 Descriptions in the Bill of Quantities are abbreviated and comply generally but may differ from those in the Standardised Specifications and Scope of Work. No consideration will be given to any claim by the Contractor submitted on such a basis. The Bill of Quantities has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities[1]. Should any requirement of the measurement and payment clause of the appropriate Standardised or Particular Specifications be contrary to the terms of the Bill of Quantities or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardised or Particular Specification, as the case may be, shall prevail.

C2.1.1.5 Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.

C2.1.1.6 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

1 The standard system of measurement of civil engineering quantities published by the South African Institution of Civil Engineers.

implied in the documents on which the tender is based.

C2.1.1.7 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" appears 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 be required.

Should the Tenderer group several 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.

C2.1.1.8 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 Works Assignment 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.

C2.1.1.9 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 Standardised 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

C2.1.1.10 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	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1 000 kg)

m^2	=	square metre	No	=	number
m^2.pass	=	square metre-pass	sum	=	lump sum
ha	=	hectare	MN	=	Meganewton
m^3	=	cubic metre	MN.m	=	Meganewton-metre
m^3.km	=	cubic metre-kilometre	PC sum	=	Prime Cost sum
ℓ	=	litre	Prov sum	=	Provisional sum
kℓ	=	kilolitre	%	=	per cent
MPa	=	MegaPascal	kW	=	kilowatt
Mℓ	=	Megalitre (1000 kℓ)	kN	=	kilonewton

CORRECTION OF ENTRIES MADE BY TENDERER

Any entry made by the Tenderer in the Price Schedule, forms, etc., which the tenderer desires to change, shall not be erased or painted out. A line shall be drawn through the incorrect entry and the correct entry shall be written above in black ink and the full signature of the Tenderer shall be placed next to the correction.

C2.2 PRICING SCHEDULE

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
1	**SANS 1200 A**	**PRELIMINARY AND GENERAL - BULKLINE - CONTRACT 3**				
1.1	8,3	Scheduled Fixed-Charge and Value-Related Items				
1.1.1	8.3.1	Contractual Requirements	Sum	1		
		Provision for the site facilities:				
1.1.2	8.3.2.1	a) Facilities for the Engineer	Sum	1		
1.1.3	8.3.2.2	b) Facilities for the Contractor	Sum	1		
1.1.4	8.3.3	General reponsibilities and other fixed charge obligations.	Sum	1		
1.1.5	8.3.4	Removal of site establishment on completion of the project	Sum	1		
1.1.6		Compliance with the OHS Act regulations (Rate to include for risk assessment of Ependemic and other adjustments to ensure compliance for the assignment including maintenance of a register for workers contacts.)	Sum	1		
1.1.7		Preparation of a OHS Plan	Sum	1		
		Costs of medical certificate and Medical Surveillance including Screenings of Employees.				
1.1.8		a) Initial (baseline) medical examinations	No.	25		
1.1.9		b) Exit examinations	No.	25		
		Environmental Managemant				
1.1.10		a) Compliance with Environmental Management plan including waste management Bins	Sum	1		
1.1.11		Provision of survey equipment for the use of the Engineer	No	1		
1.2	8.4	SCHEDULED TIME-RELATED ITEMS				
1.2.1	8.4.1	Contractual requirements	Sum	1		
1.2.2	8.4.2	Occupation and maintanance of the site facilities				
1.2.3	8.4.2.1	a) Facilities for the Engineer	Sum	1		
1.2.4	8.4.2.2	b) Facilities for the Contractor	Sum	1		
1.2.5		General responsibilities and other time related abligations .	Sum	1		
					Carried Forward	

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
					Brought Forward	
1.2.6		Compliance with the OHS Act regulations (Rate to include risk assessment for Ependemic and other adjustments to ensure compliance for the assignment including maintenance of a register for workers contacts.)	Sum	1		
1.2.7		Contractors supervision for the duration of the contract	Month	10		
1.2.8		Full time Health and Safety Officer for the duration of the contract	Month	10		
1.3		SUMS STATED PROVISIONALLY BY THE ENGINEER				
1.3.1		Employment of CLO for the duration of the Contract (R8500 pm plus R500 pm cellphone allowance)	Prov. Sum	1	R90 000,00	R90 000,00
1.3.2		Contractors markup on item 1.3.1	%	R90 000,00		
1.3.5		Allow for 3x Civil Engineering trainee	Prov. Sum	1	R285 000,00	R285 000,00
1.3.6		Contractors markup on item 1.3.5	%	R285 000,00		
1.3.7		Allow for accommodation for site personnel for the full duration of the contract	Prov. Sum	1	100 000,00	R100 000,00
1.3.8		Contractors markup on item 1.3.7	%	R100 000,00		
1.3.9		Provision of Laptop computers and printer for the use of the RE and ARE for the full duration of the contract	Prov. Sum	1	20 500,00	R20 500,00
1.3.10		Contractors markup on item 1.3.9	%	R20 500,00		
1.3.11		Allow for Data and Airtime to the Engineers site personnel for the duration of the Contract	Prov. Sum	1	R20 000,00	R20 000,00
1.3.12		Contractors markup on item 1.3.11	%	R20 000,00		
1.3.13		Provision of Engineering Survey as instructed by the Engineer	Prov. Sum	1	R30 000,00	R30 000,00
1.3.14		Contractors markup on item 1.3.13	%	R30 000,00		
1.3.15		Allow for the provision of the Engineer's Bakkie for the duration of the Contract. The amount allowed for is inclusive of fuel	Prov. Sum	1	R200 000,00	R200 000,00
1.3.16		Contractors markup on item 1.3.15	%	R200 000,00		
					Carried Forward	

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
					Brought Forward	
1.3.17		Payment of PSC members for attendance of meetings for the duration of the contract (10 No members at R500 per member per meeting)	Prov. Sum	1	R50 000,00	R50 000,00
1.3.18		Contractors markup on item 1.3.17	%	R50 000,00		
1.3.19		Amount provisionally allowed for the procurement and management of SMME contractors	Prov. Sum	1	R100 000,00	R100 000,00
1.3.20		Management fee on item 1.3.19	%	R100 000,00		
1.3.21		Additional allowance for full time site supervision (Assistant Resident Engineer) for the full duration of the contract	Prov. Sum	1	R1 155 060,00	R1 155 060,00
1.3.22		Contractors markup on item 1.3.21	%	R1 155 060,00		
1.3.23		Additional Allowance for Occupational Health and Safety Agent Monitoring for the duration of the contract	Prov. Sum	1	R250 000,00	R250 000,00
1.3.24		Handling costs and profit in respect of 1.3.23	%	R250 000,00		
1.3.25		Additional Allowance for Institutional Social Development (ISD Agent) Services for the duration of the Contract	Prov. Sum	1	R250 000,00	R250 000,00
1.3.26		Handling costs and profit in respect of 1.3.25	%	R250 000,00		
1.3.27		Additional Allowance for Environmental Control Officer as instructed by Engineer	Prov. Sum	1	R250 000,00	R250 000,00
1.3.28		Handling costs and profit in respect of 1.3.27	%	R250 000,00		
		Temporary Works				
1.3.29		Maintain all roads where construction activities will take place	Prov. Sum	1	R50 000,00	R50 000,00
1.4		Plant and materials				
		The Employer shall not supply any plant or materials.				
1.4.1	C3.4.4	All materials shall comply with the requirements of the South African Bureau of Standards, Supply of a Fully branded Toyota Hilux single cab raider bakkie mounted with carrier for pipe loading at the base to O.R. Tambo District Municipality for Operational and Maintenance department.	Prov. Sum	1	R400 000,00	R400 000,00
1.5	8.7	Dayworks				
1.5.1		Foreman	hr	75		
1.5.2		Skilled	hr	75		
1.5.3		Semi-skilled	hr	75		
1.5.4		Unskilled	hr	75		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
2	**SANS 1200 C**	**SITE CLEARANCE - BULKLINE - CONTRACT 3**				
2,1		CLEAR SITE				
2.1.1	8.2.1	Clear and grub vegetation in strip 2m wide on pipe route. Rate to include for trees of girth up to and including 1m.	m	7 795		
2.1.2	8.2.2	Where instructed remove and grub large trees and tree stumps of girth:				
2.1.2.1	8.2.2(a)	over 1m and up to 2m.	No.	10		
2.1.3	8.2.10	Remove topsoil in 600mm wide strip to depth of 150mm, stockpile, maintain and reinstate.	m^3	818		
2.1.4	8.2.13	Remove existing gravel layer works to stockpile and maintain (for use as selected layers) as instructed by the Engineer.				
2.1.4.1		Gravel layer works to District Roads.	m^3	50		
2.1.4.2		Fill material	m^3	25		
2.1.4.3		Relocation of existing fences	km	1		
2.1.4.4		Working adjacent to existing services (stormwater pipes, stormwater v-drains, water pipes and electrica and telecommunication services)	m	390		
2.1.4.5		Working parallel to existing services (stormwater pipes, stormwater v-drains, water pipes and electrica and telecommunication services)	No	33		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
3	**SANS 1200 D & 200 DB**	**PIPE TRENCHES - BULKLINE - CONTRACT 3**				
3,1	8.3.2	Excavation				
3.1.1	8.3.2(a)	Excavate in all materials for trenches backfill, compact, and dispose of surplus/unsuitable material, for pipes:				
3.1.1.1		Up to and including 350mm ND for total trench depth:				
3.1.1.1.1		Exceeding 0,0m but not exceeding 1.5m	m³	16 370		
3.1.1.1.2		Exceeding 1.5m but not exceeding 3.5m	m³	4 092		
3.1.1.1.3		Extra over item for 3.1.1.1.1 for hard rock (Prov)	m³	4 911		
3.1.1.1.4		Extra over item for 3.1.1.1.1 for bolder excavation (Prov)	m³	1 637		
3.1.1.1.5		Extra over item for 3.1.1.1.1 for blasting to remove rock	Prov Sum	1	R50 000,00	R50 000,00
3.2		Slope Protection (Provisional)				
3.2.1		Earth diversion berms as instructed by the Engineer	No.	156		
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
4	**SANS 1200 DK**	**GABIONS AND PITCHING - BULKLINE - CONTRACT 3**				
4,1	8,2	Excavate materials for gabions	m^3	333		
4,2	8.2.1	Surface preparation for bedding of gabions.				
4.2.1	8.2.1	Cavities filled with approved excavated material or rock (Provisional Quantity)	m^2	200		
4.2.2	8.2.1	Cavities filled with 15MPa concrete	m^2	27		
4,3	8.2.2	Construct gabions using double twisted hexagonal mesh type 80 with 3.4mm OD frame wire and 2.7mm OD mesh wire to SANS 1480:2005:				
4.3.1		Supply and install the following rock filled gabion baskets complete :				
4.3.1.1		2 x 1 x 1m with 80 x 100mm galv. mesh	m^3	33		
4.3.1.2		3 x 2 x 1m with 80 x 100mm galv. mesh (Reno Mattress)	m^3	27		
4,4	8.2.4	Geotextile (Type AG 200) placed where ground water seepage occurs:				
4.4.1	8.2.4	Below gabion mattresses	m^2	100		
Total Carried Forward To Summary						

SECTION 5 : BEDDING

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
5	**SANS 1200 LB**	**BEDDING - BULKLINE - CONTRACT 3**				
5,1	8.2.1	Provision of Bedding from Trench Excavation				
5.1.1	8.2.1 (a)	Selected granular material	m^3	13 096		
5.1.2	8.2.1 (b)	Selected fill material	m^3	8 730		
5,2	8.2.2	Supply only of Bedding by Importation				
5.2.1	8.2.2.1	From other necessary excavations (Provisional)				
5.2.1.1	8.2.2.1 (a)	Selected granular material	m^3	3 929		
5.2.1.2	8.2.2.1 (b)	Selected fill material	m^3	2 619		
5.2.2	8.2.2.3	From Commercial sources				
5.2.2.1	8.2.2.3 (a)	Selected granular material	m^3	1 310		
5.2.2.2	8.2.2.3 (b)	Selected fill material	m^3	873		
5,3	8.2.3	Concrete Bedding Cradle (Provisional)				
5.3.1		15/19 Grade concrete	m^3	6		
5,4	8.2.4	Encasing of Pipes in Concrete (Provisional)				
5.4.1		Encasement of Pipe in 25/19 Grade concrete including all formwork and reinforcement (100kg steel per m^3 conctrete) for water crossings. Refer to standard detail	m^3	22		
5,5	8.2.4	Thrust Blocks				
5.5.1		Construct thrust blocks in 25/19 Grade concrete including all preparation work and formwork required. Refer to standard detail	m^3	37		
5,6		Suspension River Crossing				
5.6.1		Construct the suspended river crossing supported with reinfored concrete pillars in 25/19 Grade concrete including all preparation work and formwork required. Refer to standard detail	Sum	1		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6	**SANS 1200 L**	**MEDIUM PRESSURE PIPELINES - BULKLINE - CONTRACT 3**				
6,1	8.2.1	Supply, bed, lay, disinfect, join and test potable water pipelines. All works inclusive in the rate, except where specific items are provided. All activites in accordance with project specifications.:				
		uPVC Pipes				
6.1.1		90 mm dia. CL 12	m	1		Rate Only
6.1.2		90 mm dia. CL 16	m	1		Rate Only
6.1.3		110 mm dia. CL 9	m	1		Rate Only
6.1.4		110 mm dia. CL 12	m	1		Rate Only
6.1.5		160 mm dia. CL 9	m	1		Rate Only
6.1.6		160 mm dia. CL 16	m	1		Rate Only
6.1.7		200 mm dia. CL 9	m	1		Rate Only
6.1.8		200 mm dia. CL 16	m	3 025		
6.1.9		250 mm dia. CL 9	m	1		Rate Only
6.1.10		250 mm dia. CL 16	m	4 770		
6.1.11		315 mm dia. CL 9	m	1		Rate Only
6.1.12		315 mm dia. CL 16	m	1		Rate Only
6,2	8.2.16	Pipeline Markers as per standard detail	No.	78		
6,3		Provision for relocation and fixing of damaged pipeline during construction period.	Prov. Sum	1	R266 495,62	R266 495,62
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
7	**SANS 1200 L**	**PIPE FITTINGS AND SPECIALS - BULKLINE - CONTRACT 3**				
	8.2.2	Extra-over 8.2.1 for the Supplying, Laying and Bedding of Specials complete with Couplings as follows:-				
	8.2.4	Supply, lay, joint and bed including cutting pipes where required for the following:				
7,1		**uPVC Pipe Bends (CL 25)**				
7.1.1		90mm dia 11.25° bends.	No.	1		Rate Only
7.1.2		90mm dia 22.5° bends.	No.	1		Rate Only
7.1.3		90mm dia 45° bends.	No.	1		Rate Only
7.1.4		90mm dia. 90° bends.	No.	1		Rate Only
7.1.5		160mm dia 11.25° bends.	No.	1		Rate Only
7.1.6		160mm dia 22.5° bends.	No.	1		Rate Only
7.1.7		160mm dia 45° bends.	No.	1		Rate Only
7.1.8		160mm dia. 90° bends.	No.	1		Rate Only
7.1.9		200mm dia 11.25° bends.	No.	7		
7.1.10		200mm dia 22.5° bends.	No.	6		
7.1.11		200mm dia 45° bends.	No.	4		
7.1.12		200mm dia. 90° bends.	No.	3		
7.1.11		250mm dia 11.25° bends.	No.	6		
7.1.12		250mm dia 22.5° bends.	No.	6		
7.1.13		250mm dia 45° bends.	No.	3		
7.1.14		250mm dia. 90° bends.	No.	3		
7.1.15		315mm dia 11.25° bends.	No.	1		Rate Only
7.1.16		315mm dia 22.5° bends.	No.	1		Rate Only
7.1.17		315mm dia 45° bends.	No.	1		Rate Only
7.1.18		315mm dia. 90° bends.	No.	1		Rate Only
7,2		**PVC Reducers (CL 25)**				
7.2.1		110mm x 90mm	No.	1		Rate Only
7.2.2		160mm x 110mm	No.	1		Rate Only
7.2.3		250mm x 160mm	No.	2		
					Carried Forward	

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
					Brought Forward	
7.2.4		250mm x 200mm	No.	1		Rate Only
7.2.5		250mm x 315mm	No.	1		Rate Only
7.2.6		400mm x 315mm	No.	1		Rate Only
7,3		**UPVC Equal Tees (CL 25)**				
7.3.1		90mm x 90mmx 90mm	No.	1		Rate Only
7.3.2		1100mm x 110mm x 1100mm	No.	1		Rate Only
7.3.3		160mm x 160mmx 160mm	No.	1		Rate Only
7.3.4		250mm x 250mm x 250mm	No.	1		
7.3.3		315mm x 315mmx 315mm	No.	1		Rate Only
7,4		**UPVC UN-Equal Tees (CL 25)**				
7.4.1		110mm x 90mmx 110mm	No.	1		Rate Only
7.4.2		160mm x 90mmx 160mm	No.	1		Rate Only
7.4.3		160mm x 110mmx 160mm	No.	1		
7.4.4		250mm x 160mmx 250mm	No.	1		
7.4.4		315mm x 250mmx 315mm	No.	1		Rate Only
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
8		**VALVES :BULKLINE - CONTRACT 3**				
8,1	8.2.3	Extra-over 8.2.1 for the supplying, fixing and Bedding of Valves as indicated below:				
		Isolation Valves Complete (Class 25)				
8.1.1		Supply and install the following flanged Resilient seal Gate valves complete with prefabricated valve chamber, with non-rising spindle, Clockwise closing, including all gaskets, bolts, nuts and washers as per detailed drawings. All valve chambers will be installed by SMME contractors				
8.1.1.1		90mm	No.	1		Rate Only
8.1.1.2		160mm	No.	1		Rate Only
8.1.1.3		200mm	No.	1		Rate Only
8.1.1.4		250mm	No.	8		
8.1.1.5		315mm	No.	1		Rate Only
		Air Valves Complete (Class 25)				
8.1.2		Supply and install Air Valve assemblies Complete with valve chamber as per detailed drawings. Rate is inclusive of valve chamber, scour pipework and headwall to scour pipe.				
8.1.2.1		90mm	No.	1		Rate Only
8.1.2.2		110mm	No.	1		Rate Only
8.1.2.3		160mm	No.	1		Rate Only
8.1.2.4		200mm	No.	7		Rate Only
8.1.2.5		250mm	No.	17		
8.1.2.6		315mm	No.	1		Rate Only
		Scour Valves Complete Class 25				
8.1.3		Supply and install Scour Valve assemblies Complete with wedge gate valve and valve chamber as per detailed drawings. Rate is inclusive of valve chamber, scour pipework and headwall to scour pipe.				
8.1.3.1		90mm	No.	1		Rate Only
8.1.3.2		110mm	No.	1		Rate Only
8.1.3.3		160mm	No.	1		Rate Only
8.1.3.4		200mm	No.	5		
8.1.3.5		250mm	No.	12		
8.1.3.6		315mm	No.	1		Rate Only
					Carried Forward	

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
					Brought Forward	
		Non Return Valves Complete Class 25 Supply and install No Return Valve assemblies Complete and valve chamber as per detailed drawings. Rate is inclusive of valve chamber with manhole cover and non return pipework.				
8.2		200mm	No.	1		Rate Only
		Bulk Water Meter Complete				
8.3		Supply and install 315mm Water meter assemblies Complete and valve chamber as per detailed drawings. Rate is inclusive of valve chamber with manhole cover and all pipework	No.	1		Rate Only
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
9		**BOOSTER PUMP :BULKLINE - CONTRACT 3**				
9,1		**BOOSTER PUMPS STATION BUILDING**				
9,1,1		Supply all material and labour to construct booster pump station complete in accordance with drawing P2023-23-409 and as directed by the Engineer. The tendered rate shall be inclusive of all earthworks and relevant tests required. All materials and workmanship to conform to specifications.	Sum	1		
9,2		**BOOSTER PUMPS INSTALLATION**				
9.2.1		Supply and install Duty and Stand-by Grundfos Hydro MPC-E 2 CRIE 15-2 50 Hz or similar approved booster pumps including all electrical and electronic cables and MMC panel. The tendered rate to include all pipework, water meters, valves, pump controls, etc.. The contractor will also be required to compile an operations manual and train operators as identified by the Client.	Sum	1		
9,3		**ESKOM POWER CONNECTION**				
9,3,1		Application and Connection of eskom power from the existing eskom powerline to the booster pump station.	Prov. Sum	1	R 680 000,00	R 680 000,00
9,4		Contractor's mark up on item 5.1 and 5.2	%	R 680 000,00		
9,5		**FENCING**				
9,5,1		Security fence constructed of 2.4m High formed of thirteen strands of straining wires each strand formed of twisted double strand 1,6mm thick galvanised wires incorporating three barbs in every twist at 150mm centres mechanically strained between straining and/or gate and corner posts at maximum 10m centres with one end passed through holes and securely tied to posts and other end securely tied to and including eyebolts bolted onto posts with and including 2,5mm galvanised binding wire; the fence complete with and including three rows of flat wrap razor security wire in 600mm diameter vertical loops fixed at each intersection with barbed straining wires with and including 2,5mm galvanised binding wire. With 100mm Diameter x 3,5mm thick galvanised intermediate post 3,4m long with pressed steel cap welded onto top; the post to be holed as required for wires and straining bolts and with 150 x 150 x 4mm mild steel base plate welded onto bottom end: including setting up post and embedding in position in concrete base	m	40		
9,5,2		Supply and install double leaf vehicle gates	No.	1		
Total Carried Forward to Summary						

OR TAMBO DISTRICT MUNICIPALITY

MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1

CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU - CONTRACT 3

MIS 535 774 C

SUMMARY OF SECTIONS

SECTION	DESCRIPTION	AMOUNT (RAND)
1	PRELIMINARY AND GENERAL - BULKLINE - CONTRACT 3	
2	SITE CLEARANCE - BULKLINE - CONTRACT 3	
3	PIPE TRENCHES - BULKLINE - CONTRACT 3	
4	GABIONS AND PITCHING - BULKLINE - CONTRACT 3	
5	BEDDING - BULKLINE - CONTRACT 3	
6	MEDIUM PRESSURE PIPELINES - BULKLINE - CONTRACT 3	
7	PIPE FITTINGS AND SPECIALS - BULKLINE - CONTRACT 3	
8	VALVES :BULKLINE - CONTRACT 3	
9	BOOSTER PUMP STATION - CONTRACT 3	
9	**TOTAL OF SECTIONS (VAT EXCLUDED)**	
10	ADD: CONTINGENCIES @ 10%	
11	**SUB-TOTAL**	
12	ADD: VAT @ 15%	
13	**TOTAL PROJECT COST**	

Project Duration is 10 Months

Signature : _____

Name: _____

Capacity: _____

Company Name : _____

Date : _____

SIGNED BY/ON BEHALF OF TENDERER

NAME	SIGNATURE	DATE

COMPANY STAMP

DECLARATION

(In respect of completeness of Tender)

O. R. TAMBO DISTRICT MUNICIPALITY

Nelson Mandela Drive

Myezo Park

Mthatha

I/we, the undersigned, do hereby declare that these are the properly priced Bill of Quantities forming Part C2 of this Contract Document in consecutive order upon which my/our tender for the CONTRACT NUMBER: MIS 535 774 C – MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU: CONTRACT 3 has been based. We confirm that I/we have read through the Tender Document to my/our understanding and all the Annexures in relation to this Tender.

SIGNED BY/ON BEHALF OF TENDERER

NAME	SIGNATURE	DATE

Part C3: SCOPE OF WORK

O. R. TAMBO DISTRICT MUNICIPALITY

CONTRACT NO: MIS 535 774 C

MTHATHA CENTRAL CORRIDOR REGIONAL BULK WATER SUPPLY – PHASE 1: CONSTRUCTION OF BULK GRAVITY MAIN FROM LINDILE TO KWATSHATSHU:

CONTRACT 3

C3.1 Description of the Works

C3.2 Engineering

C3.3 Procurement

C3.4 Construction

C3.5 Management

C3.6 Health and Safety

C3.7 Project Specification

C3.1. DESCRIPTION OF THE WORKS

STATUS

In the event of any discrepancy between the Scope of Work and any part of the SANS 1200 Standardised Specifications, the Bill of Quantities or the Drawings, the Scope of Work shall take precedence and prevail in the Contract.

C3.1.1 Employer's Objectives

The objective of the Employer (O. R. TAMBO DISTRICT MUNICIPALITY) is to provide communities within the Mthatha Central Corridor Regional Bulk Water Supply Phase 1 with reliable water supply at RDP standards.

Mthatha Central Corridor Regional Bulk Water Supply Phase 1 will supply villages within KSD LM Ward 14 & 37 and will be supplied from the bulk infrastructure constructed under KSD PI Bulk. The water source will be the existing Mthatha Dam abstraction and Water Treatment Works (WTW).

This CONTRACT intends to provide secondary bulk infrastructure to Ward 14 and 37 (KwaMhaga, Lalini, and Singangeni) villages of the King Sabata Dalindyebo (KSD) Local Municipality with potable water.

Based on the specific goals, the Employer is aiming to promote enterprises located in Eastern Cape Province and in O. R. Tambo District in particular.

C3.1.2 Overview of the Works

This contract entails the construction of secondary bulk gravity mains infrastructure to villages in ward 14 and 37.

C3.1.3 Extent of the Works

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

a) Construction (Supply and laying) of bulk gravity main and the rising main pipelines consisting of the following diameters and approximate lengths respectively:

- Approximately 4,769km of 250mm diameter uPVC Class 16.
- Approximately 3.023km of 200mm diameter uPVC Class 16.

b) The construction and installation of booster pump, isolating valves, air valves, scour valves and the construction of the chambers for the booster pumps and the valve assemblies.

c) Construction of river crossing and pipe protections;

d) Testing, cleaning and commissioning.

e) Subcontracting a minimum of 30% of the of value of work excluding manufacture of pipes, contingencies, and provisional sums to SMMEs as per the project specification.

f) Dealing with community participation with regards to the construction.

g) Environmental management of the area during and after the completion of construction.

h) Compliance with the requirements of the Occupational Health & Safety Act of 1993, Construction Regulations 2014 and COVID-19 requirements.

This description of the Works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract. Approximate quantities of each type of work are given in the Bill of Quantities.

C3.1.4 Location of the Works

The Project is located in O. R. Tambo District Municipality within King Sabata Dalindyebo Local Municipality, at the Lalini, KwaMhaga and Sigangeni Village, as illustrated in Figure 1, Appendix A. The location of the site is indicated on the locality plan bound as Appendix A.

C3.1.5 Temporary Works

The Contractor will be responsible for determining the extent of temporary works required to execute the contract, and the cost thereof shall be included in the rates for the respective items of work. Nonetheless, it is envisaged that temporary work may be required for the following activities:

- Pipeline trenches requiring shoring due to space and depth constraints.
- Construction of pipelines near existing fences, which must be temporarily removed, will require the erection and maintenance of temporary fencing until restoration of the original fences.
- Construction of pipe trenches near existing properties or through existing accesses may require the provision of temporary access for pedestrians, livestock or vehicles.
- Traffic control measures where construction takes place at or close to existing roads.
- Safety measures deemed necessary by the Health and Safety specification or the Contractor's own risk assessment (e.g. pedestrian barriers).

C3.1.6 Construction Programme

The programme of construction shall be submitted to the Employer's Agent within the time stipulated in these documents. The programme shall clearly show all activities related to the works and shall indicate which activities are on the critical path.

In compiling the programme, the Contractor shall consider the following:

- The requirements and effects of employing labour-intensive construction methods.
- The lead-time for training of local labour.
- The accommodation and safeguarding of public access and traffic.
- Establishment and de-establishment times.
- Time to obtain all permits and wayleaves.
- Appointment of Community Liaison Officer (CLO).
- All public and Contractor close down periods.
- All other activities required in terms of this document.

If during the contract, the execution of the work deviates in any manner from the programme, the Contractor

shall, on instruction by the Employer's Agent, within one week of such instruction submit a revised programme. Should such a revision be because of the Contractor falling behind with his work, the programme shall clearly show the steps to be taken to rectify the situation so as to enable the contract to be completed within the stipulated contract period. Positive steps to increase production through increased resources, or the more efficient usage of existing resources shall accompany such a programme. The tender programme shall however be used.

C3.2. ENGINEERING

C3.2.1 Design Services and Activity Matrix

Responsibilities for design and related documentation are as follows:

- Concept, feasibility and overall process — Employer
- Basic engineering and detail layouts to tender stage — Employer
- Final design to approved construction stage — Employer
- Temporary works — Contractor
- Preparation of record drawings and GIS information — Contractor/Employer

C3.2.2 Employer's Design

The Employer's design encompasses the permanent Works described in C.3.1.3 and what is included on the drawings.

C3.2.3 Design Brief

The design of the permanent Works is the responsibility of the Employer's Agent.

The Contractor is responsible for the design of the temporary Works required for the construction and execution of the permanent Works.

Where the Contractor is to supply the design of designated parts of the permanent Works or temporary Works, he shall supply full working drawings supported by a professional Employer's Agent's design certificate.

C3.2.4 Drawings

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works and dimensions shall not be scaled from the Drawings, unless required by the Employer's Agent.

The Employer's Agent will, on the request of the Contractor, and in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate As-Built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends, and all other underground infrastructure shall be given by either co-ordinates, or stake value and offset. Where necessary, levels shall also be provided.

A marked-up set of Drawings shall be kept and updated by the Contractor on a day-to-day basis. This information shall be supplied to the Employer's Agent Representative on a regular basis.

All information in possession of the Contractor where required by the Employer's Agent and/or the Employer's Agent Representative to complete the As Built/Record Drawings, must be submitted to the Employer's Agent Representative before the Certificate of Completion may be issued.

The Drawings prepared by the Employer for the permanent Works are listed and bound under **Appendix J.**

The Employer reserves the right to issue amended and/or additional Drawings during the Contract.

C3.2.5 Design Procedures

The Contractor is responsible for the design of all the temporary works required for the construction and execution of the Permanent Works. This includes, inter alia, temporary roads, access control, accommodation of traffic, shoring of trenches and excavations, dewatering, all health and safety measures, environmental management as well as temporary support systems, until the completion of the Contract.

C3.3. PROCUREMENT

C3.3.1 Preferential Procurement Procedures

All works to be completed in this contract shall be executed in accordance to the O. R. Tambo District Municipality's preferential procurement policies and procedures.

C3.3.2 Subcontracting

C3.3.3 Scope of Mandatory Subcontract Works

Where possible, work that can be subcontracted to EMEs and QSEs is identified and detailed in Part C1, Section C1.4 and in Part C1, Section C1.3, the requirements for the procurement and employment of local labour are specified. It is noted that the work identified in this document is not exhaustive and it shall be required from the Contractor to ensure that a minimum of 30% of the Works is done by local EMEs and QSEs.

No work may be sub-contracted to another party unless approval is given by the ORTDM in writing. The Contractor is to submit to the ORTDM in writing a request for appointment of a particular sub-contractor. Accompanying this request is to be the full detail of the sub-contractor, including:

- Previous experience.
- Work which will be sub-contracted to him/her.
- Approximate value of the work to be sub-contracted.

C3.3.4 Preferred Subcontractors / Suppliers

The Contractor will be required to liaise with the Employer, Employer's Agent and local community structures to finalise the list of local EMEs and QSEs to be employed as part of the project.

C3.3.4.1 Subcontracting Procedures

A formal tender process will be followed to appoint the Subcontractor which will be facilitated by the Employer, Employer's Agent and Main Contractor.

All subcontractors appointed under **C3.3.2.1** above shall be:

- Registered with the CIDB
- Allocated work within the category and value limits designated by their CIDB grading
- Be in good standing with the Department of Labour
- Registered on the Central Supplier Database.

Proof of the above is to be provided to the Employer's Agent before appointment of the subcontractor.

C3.3.5 Attendance on subcontractors

The Contractor shall guide, assist, advise and mentor the local EME and QSE subcontractor/s and guidance on how to establish and determine rates.

The Contractor shall be responsible for ensuring that the prospective local EME and QSE subcontractor/s fully comprehends the:

- Implications of the liabilities and responsibilities inherent in the contract into which the tenderer entered.
- Implications of the tendered rates.
- Scope and extent of the Works.
- Proper procedures for the submission of a tender.
- Procedures and basis on which tenders will be evaluated and awarded.

The Contractor shall closely manage, mentor, supervise, guide and assist the EEs in all aspects of management, planning, execution and the completion of work.

The above shall include inter alia, but is not limited to, the following:

(i) Planning and programming of the Works.
(ii) The sourcing, ordering, purchasing, hiring all the necessary Construction Equipment, Materials, tools and incidentals necessary and required for the successful execution and completion of the Permanent as well as the Temporary Works.
(iii) Labour relations and employment.
(iv) Monthly measurements, costing and invoicing.
(v) General safety, occupational health and safety matters.
(vi) Functions of civil engineering infrastructure, structures, services and systems.
(vii) Interpreting and understanding the contract.
(viii) Construction and maintenance methods and procedures.
(ix) Communication.
(x) Cash-flow control, submitting invoices and payment certificates.
(xi) Planning, programming, scheduling, critical path control and acceleration.
(xii) Maintenance planning.
(xiii) Material procurement and control.
(xiv) Risk limitation and management.
(xv) Quality assurance and procedures.
(xvi) Compliances with all applicable laws, regulations, statutory provisions and agreements.
(xvii) General Conditions of Contract and Contract Data.
(xviii) Contractual claims, if situations arise that entitle a contractor to claims in terms of the Conditions of Contract.
(xix) Profit and loss.
(xx) Replacement and running costs of Construction Equipment.

The extent and level of management, mentorship, supervision, guidance and assistance to be provided by the Contractor shall be in commensuration with the expertise of the relevant EME and QSE and should be so directed as to enable the EME and QSE to achieve the successful execution and completion of the respective works.

C3.4. CONSTRUCTION

C3.4.1 WORKS SPECIFICATIONS

C3.4.1.1 Applicable SANS 1200 Standardised Specifications

The SANS 1200 Standardised Specifications for civil engineering construction that are applicable are listed in C3.7.1.

C3.4.1.2 Particular Specifications

The Particular Specifications for work not covered by the SANS 1200 Standardised Specifications are listed in C3.7.1 and included in C3.7.3.

C3.4.1.4 Variations and Additions to the SANS 1200 Standardised Specifications

Variations and additions to the SANS 1200 Standardised Specifications listed in C3.7.1 are given in section C3.7.2.

C3.4.2 SITE ESTABLISHMENT

C3.4.2.1 Services and facilities provided by the Employer

(a) Water Sources

The Contractor shall make his own arrangements regarding the supply of water.

The Contractor shall, in accordance with the provisions of subclause C3.4.2.2(b), and at his own expense, make all arrangements necessary for the supply and distribution of water as may be required for the purposes of executing the Contract, including water for both construction purposes and domestic use as well as for making all arrangements in connection therewith.

The Contractor shall further, at his own expense, be responsible for providing all necessaries for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith. Payment for the aforementioned shall be deemed to be covered by the rates and prices tendered and paid for the various items of work included under the Contract.

The Contractor shall make himself thoroughly acquainted with the regulations relating to the use of water and shall take adequate measures to prevent the wastage of water.

The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Employer's Agent, which approval shall not be unreasonably withheld. The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Employer's Agent, produce proof of such compliance.

The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations. All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract.

The Contractor shall, whenever reasonably required by the Employer's Agent, produce test results

demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

The Employer accepts no responsibility for the shortage of water due to any cause whatsoever or for the additional costs incurred by the Contractor as a result of such shortage.

(b) Power / Electricity Supply

The Contractor shall make his own arrangements with the Electricity Department for a supply of electricity if required and shall pay establishment and consumption costs at the tariffs ruling at the time.

The Contractor shall, in accordance with the provisions of subclause C3.4.2.2(c), and at his own cost, make all arrangements necessary for the supply and distribution of electrical power required for construction purposes as well as for use in and about his site establishment.

The Contractor shall comply with all prevailing legislation in respect of the generation and distribution of electricity and shall, when required by the Employer's Agent, produce proof of such compliance.

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

(c) Excrement Disposal / Sanitary Facilities

The Contractor shall, in complying with his obligations in terms of subclause C3.4.2.2(d), at his own cost, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, all to the satisfaction of the responsible health authorities in the area of the Site.

All such excrement shall be removed from the Site and shall not be disposed of by the Contractor on the Site. The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

The Contractor shall further, as a minimum, supply and maintain chemical toilets for use by his workmen. The number of toilets shall be based on one toilet per fifteen personnel on site.

Under no circumstances will the Contractor's staff be allowed to use any other toilet facilities in and around the Site.

(d) Disposal Site

All material cleared on the site, rubble, spoil and refuse shall be disposed of at the one of the municipal solid waste sites. Hazardous material shall only be disposed of at the waste site with Waste license issued by the Department of Environmental Affairs.

These are dedicated disposal sites and therefore no separate overhaul shall be paid. The Contractor shall pay all charges levied at the waste site and must make allowance in his rates to cover these charges as no separate payment will be made in this regard.

(e) Area for Contractor's site establishment

The Employer has no suitable areas available where the Contractor may erect offices, workshops, stores and other facilities that he requires for the purposes of the Contract. The Contractor shall, at his own cost, be responsible for locating and making all arrangements necessary for securing an area suitable to meet his needs in respect of the erection of the Contractor's offices, stores and other facilities, including the facilities to be provided for the Employer's Agent in accordance with the Contract.

Any potential area proposed by the Contractor shall be within reasonable proximity to the Site of the Works and its location shall be subject to the approval of the Employer's Agent, which approval shall not be unreasonably withheld.

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

(f) Accommodation of employees

The Contractor shall make his own arrangements for the accommodation of his employees. Where field accommodation is required, the Contractor shall comply fully with the wishes of the various landowners, as in their agreement with the Employer, to the satisfaction of both land owner and Employer.

C3.4.2.2 Facilities provided by the Contractor

The Contractor shall provide for the use of the Employer's Agent, maintain and service, as applicable, the following facilities as specified in SANS 1200 AB and PSAB.

(a) Facilities for the Employer's Agent

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

(i) Contract Nameboard

The Contractor shall provide, erect and maintain 2 No. of Contract Nameboards at such positions and locations as directed by the Employer's Agent. The Contractor shall, before ordering or manufacturing any such Contract nameboards, obtain the Employer's Agent written approval in respect of all names and wording to appear on the Contract nameboards. The Contractor shall keep the Contract nameboard in good state of repair for the duration of the Contract and shall remove them on completion of the Contract.

(ii) Health and Safety Sign Board

The Contractor shall erect and maintain 1No. of Health and Safety Sign Board at such positions and locations as directed by the Health and Safety Agent and the requirements specified on the Health and Safety Plan.

(iii) Office building

The Contractor shall provide on the Site an office for the exclusive use of the Employer's Agent and his Representative. Such office shall comply with and be furnished in accordance with the requirements of subclause 3.2 of SANS 1200 AB and PSAB. The Contractor shall maintain the office in accordance with the requirements of subclause 5.2 of SANS 1200 AB.

Such office accommodation shall be provided within the Contractor's site establishment facilities.

(iv) Site Meeting venue

The Contractor shall provide within his own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of **fifteen** (15) persons at site meetings. The Employer's Agent shall be allowed free use of such a venue for conducting any other meetings concerning the Contract at all reasonable times.

(v) Survey equipment and assistant(s)

The Contractor shall, for the duration of the Contract, in accordance with the requirements of PSAB provide survey equipment for the exclusive use of the Employer's Agent and his staff.

The Contractor shall, in accordance with the requirements of subclause 5.5 of SANS 1200 AB, make available to the Employer's Agent, two (2) survey assistants.

(vi) Site Instruction Book

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

(b) Water

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

The Contractor shall further, at his own expense, be responsible for providing all necessaries for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith.

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

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

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

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

(c) Electricity

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

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

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

(d) Excrement disposal

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, to the satisfaction of the responsible health authorities in the area of the Site and the Employer's Agent. All such excrement shall be removed from the Site and shall not be disposed of by the Contractor on the Site.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No latrines are available and therefore the Contractor shall supply portable chemical toilets for use by his workmen. The number of toilets shall be based on one toilet per fifteen personnel on site. Under no circumstances will the Contractor's staff be allowed to use private or public toilet facilities.

The Contractor shall provide water and soap for his staff to be able to wash with at each site of the Works. The waste water shall be disposed of off-site.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this subclause and the costs thereof shall be deemed to be included within the Contractor's tendered Preliminary and General Items.

C3.4.2.3 Site Usage and Security on site

Access to site shall be limited to the Contractor and his personnel. The Contractor shall be responsible to control unauthorised entry to the site and shall inform the Employer's Agent of any breach of such rules. The site shall be managed and used for its intended purpose. The Contractor is required to keep a visitors log and ensure full compliance with site safety standards.

The Contractor shall make provision for security on site against theft and robbery, as his sole responsibility. The cost for providing adequate security, as and when required, must be borne by the Contractor.

C3.4.2.4 Permits and Wayleaves

The Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site, and shall ensure that any wayleaves, permissions or permits obtained by the Employer's Agent prior to the award of the contract are transferred into the Contractor's name.

The Contractor shall abide by any conditions imposed by such wayleaves, permissions or permits.

The Contractor shall ensure that all wayleaves, permissions and permits are kept on site and are available for inspection by the relevant service authorities on demand.

The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

C3.4.2.5 Features requiring special attention

(a) Site maintenance

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

The general neatness and tidiness along the pipe route is to be maintained and therefore the Contractor shall on a day to day basis, keep the area of the Works in a condition acceptable to the Employer's Agent, the Employer's Health and Safety Agent and the Environmental Control Officer.

(b) Testing and Quality Control

(i) Contractor to engage services of an independent laboratory

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of an approved independent laboratory to undertake all testing of materials, the results of which are specified in, or may reasonably be inferred from, the Contract. These results will be taken into consideration by the Employer's Agent in deciding whether the quality of materials utilised, and workmanship achieved by the Contractor comply with the requirements of the Specifications. The foregoing shall apply irrespective of whether the specifications indicate that the said testing is to be carried out by the Employer's Agent or by the Contractor.

The Contractor shall be responsible for arranging with the independent testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less than the frequencies and in the manner specified. The Contractor shall promptly provide the Employer's Agent with copies of the results of all such testing carried out by the independent laboratory.

For the purposes of this clause, an "independent laboratory" shall mean an "approved laboratory" (as defined in subclause PSA 7.2) which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control or financial interest in the Contractor.

(ii) Additional testing required by the Employer's Agent

In addition to the provisions of subclause C3.4.2.5(b)(i): Contractor to engage services of an independent laboratory, the Employer's Agent shall be entitled at times during the Contract to require that the Contractor arrange with the independent laboratory to carry out any such tests, additional to those described in subclause C3.4.2.5(b)(i), at such times and at such locations in the Works as the Employer's Agent shall prescribe. The Contractor shall promptly and without delay arrange with the independent laboratory for carrying out all such additional testing as required by the Employer's Agent, and copies of the test results shall be promptly submitted to the Employer's Agent.

(iii) Cost of Testing

a) Testing in term of subclause C3.4.2.5(b)(i)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of subclause C3.4.2.5(b)(i), above shall be borne by the Contractor and shall be deemed to be included in the tendered rates and prices for the respective items of work as listed in the Bill of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of subclause C3.4.2.5(b)(i).

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes necessary to carry out additional tests (e.g. re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor's account.

b) Additional tests required by the Employer's Agent

The costs of any additional tests required by the Employer's Agent in terms of subclause C3.4.2.5(b)(ii): Additional testing required by the Employer's Agent, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Bill of Quantities; provided always that the costs of any such additional tests ordered by the Employer's Agent, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

(c) Contractor supplied equipment

The Contractor shall when required to supply any testing, measuring and/or survey equipment for the Employer's Agent's use provide calibration certificates or verification certificates (as appropriate) for all equipment. This shall apply for both shared equipment as well as for equipment specified to be provided for the Employer's Agent's use on site.

Calibration or verification, by certified authorities shall be subject to the Employer's Agent's approval prior to the delivery of any equipment to the Employer's Agent; and thereafter at intervals as prescribed for the relevant equipment but not less than every twelve (12) months.

The calibration or verification certificate for each item of equipment shall be submitted to the Employer's Agent for approval prior to its use or within seven (7) days of subsequent re-calibration/verification.

Unless otherwise provided for in the bill of quantities the cost of providing the above specified equipment shall be deemed to be included in the tendered rates and prices for the respective items of work as listed in the Bill of Quantities.

Failure to submit certificates shall result in payment for the equipment being withheld.

(d) Opening up and closing don of designated borrow pits

Measurement and payment for opening up and closing down designated borrow pits, including removing and stockpiling overburden and restoring the Site, shall be made under item 8.3.4 of SANS 1200 D. This item applies to all borrow material required under this Contract.

The requirements of subclause 5.2.2.2 of SANS 1200 D regarding the opening up, maintenance and closing down of borrow pits shall be adhered to.

(e) Access to properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 8.1.2 of the Conditions of Contract.

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

Notwithstanding the afore-going, the Contractor may, with the prior approval of the Employer's Agent (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the

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

(f) Monthly statements and payment certificates

The statement (measured quantities) to be submitted by the Contractor in terms of Clause 6.10 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Employer's Agent, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

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

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

Any delay by the Contractor in making the said adjustments and submitting to the Employer's Agent the requisite copies of the adjusted statement for the purposes of the Employer's Agent payment certificate will be added to the times allowed to the Employer's Agent in terms of Clause 6.10.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

The Contractor is further required to complete the monthly reporting template forms, refer to PSA 8.1.2.2 and Appendix B. These forms shall be submitted together with the Contractor's monthly payment certificates. Payment of the Contractor is conditional on this information being accurate and timeously provided. The Employer's Agent payment certificate template will be used as the only format for submission to the Employer.

The monthly statements accompanying the payment certificates shall include:

i. Contractor's Invoice;
ii. Interim Payment Certificate;
iii. Proof of Delivery and Invoices of all materials Claimed as Materials on Site;
iv. Construction Progress Report, including all items as per C1.4 Item 4.2 Monthly Returns
v. Programme update
vi. Cashflow vs Expenditure to date report, including all items as per C1.4 Item 4.2 Monthly Returns
vii. Proof of Job Creation / Signed Labour Returns
viii. Detailed report on monthly and cumulative Contract Participation Goals achieved, as per Item C1.4 Item 4.2 Monthly Returns.

(g) Construction in restricted areas

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices tendered

will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

(h) Notices, signs, barricades and advertisements

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

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

(i) Workmanship and quality control

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

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

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

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

C3.4.2.6 Extension of time due to abnormal rainfall

a) Extension of time in respect of delays resulting from wet climatic conditions on the Site will only be considered in respect of abnormally wet climatic conditions and shall be determined for each calendar month or part thereof, in accordance with the formula given below:

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

Where:

V = Extension of time in calendar days in respect of the calendar month under consideration:

If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.

When the value of V for any month exceeds the number of days in the particular month, V will be the number of days in the month.

Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.

Nn = Average number of days in the relevant calendar month, as derived from existing rainfall records, on which a rainfall of 20mm or more has been recorded for the calendar month.

Rw = Actual average rainfall in mm recorded for the calendar month under consideration.

Rn = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.

The factor (Rw - Rn)/X shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

b) The rainfall records for Mthatha for the period 2000 to 2020 from South African Weather Service (see Appendix G) are reproduced in the accompanying table, and the monthly averages (Rn and Nn) for this period shall, for the purposes of this Contract be taken as normal and as the values to be substituted for Rn and Nn. The values of X and Y shall be 20 and 10 respectively.

c) The potential extension of time V has been calculated for each month and year of the period concerned to indicate the possible effect of the rainfall formula. The values of V were obtained by applying the rainfall formula and using the actual rainfall figures and the calculated values of Rn and Nn indicated in the table.

d) The Contractor shall, at his own cost, provide and erect on the Site at a location approved by the Employer's Agent, an approved rain gauge, which shall be fenced off in a manner which will prevent any undue interference by workmen and others. The Contractor shall, at his own cost, arrange for the reading of the rain gauge on a daily basis for the duration of the Contract. The gauge readings, as well as the date and time at which the reading was taken shall be recorded in a separate record book provided by the Contractor for this purpose. All entries in the rainfall record books shall be signed by the person taking the reading and the gauge shall be properly emptied immediately after each reading has been taken. If required by the Employer's Agent, the Employer's Agent shall be entitled to witness the reading of the gauge.

e) The Contractor's claims in terms of Clause 5.12 of the Conditions of Contract for extension of time in respect of delays resulting from wet climatic conditions on the Site during each month, shall be submitted in writing to the Employer's Agent monthly; provided always that

(i) the period allowed to the Contractor in terms of Clause 10 of the Conditions of Contract in which to submit his claim for each month shall be reduced to seven (7) days, calculated from the last day of the month to which the claim applies; and

(iii) the 28-day period allowed to the Employer's Agent in terms of Clause 10.1.2 of the Conditions of Contract in which to give his ruling on the claim, shall be reduced to fourteen (14) days.

The Contractor's monthly claim shall be accompanied by a copy of the signed daily rainfall readings for the applicable month.

f) The extent of any extension of time which may be granted to the Contractor in respect of wet climatic conditions (whether normal or abnormal) shall be determined as the algebraic sum of the "V" values for each month between the Commencement Date and the Due Completion Date of the Contract, calculated using the formula above; provided always that:

(i) rainfall occurring within the period of the Contractor's Christmas shut-down period (referred to in the Conditions of Contract) shall not be taken into account in the calculation of the monthly "V" values;

(ii) rainfall occurring during any period during which the Contractor was delayed due to reasons other than wet climatic conditions on the Site, and for which delay an extension of time is granted by the Employer's Agent, shall not be taken into account in the calculation of the monthly "V" values;

(iii) if the algebraic sum of the "V" values for each month is negative, the time for completion will not be reduced on account of subnormal rainfall, and

(iv) where rainfall is recorded only for part of a month, the "V" value shall be calculated for that part of the month using pro rata values for Nn and Rn.

g) The Employer's Agent shall, simultaneous with granting any extension of time in terms of this clause, revise the Due Completion Date of the Contract to reflect an extension of time having been granted in respect of wet climatic conditions, to the extent of the algebraic sum of all the "V" values for all the preceding months of the Contract, less the aggregate of the "Nn" values for the remaining (unexpired) months of the Contract (viz less aggregate of the potential maximum negative "V" values for the remaining Contract Period). Thus, provided that where such period is negative, the Due Completion Date shall not be revised.

h) Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement regarding damage shall be the subject of a separate application for extension of time in accordance with the provisions of Clause 5.12 and Clause 10 of the Conditions of Contract.

MONTH	**N_n**	**R_n**
January	1.8	103.8
February	1.7	84.8
March	1.8	92.5
April	1.0	57.3
May	0.5	21.6
June	0.3	9.7
July	0.3	18.2
August	0.2	25.8
September	0.4	39.0
October	1.2	53.0
November	1.9	86.8
December	1.8	84.1
TOTAL	**13**	**676.6**

C3.4.3 PLANT AND MATERIALS

C3.4.3.1 Plant and materials supplied by the Employer

The Employer will not provide any plant. The Contractor shall provide all plant of whatever nature necessary to enable him to undertake the works as specified.

C3.4.3.2 Materials, Samples and Shop Drawings

Materials or work, which does not conform to the approved samples submitted in terms of Clause 7.4.1 (GCC 2015) of the Conditions of Contract, will be rejected. The Employer's Agent reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such test conducted by or on behalf of the Employer's Agent, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Clause 7 of the Conditions of Contract, be for the Contractor's account.

C3.4.4 CONSTRUCTION EQUIPMENT

C3.4.4.1 Requirements for equipment

All construction plant and equipment used on this contract shall be in good working order, well maintained, of adequate size and fit for purpose. No plant or equipment that leaks oil, fuel or hydraulic fluids may be used on site.

Equipment must be such that work can be executed in an efficient manner.

Any plant or equipment that, in the opinion of the Employer's Agent, is not of adequate size or fit for use shall be removed from the site and replaced with acceptable plant and equipment, all at the Contractor's cost.

All equipment must comply with the requirements as stipulated in the Environmental regulations and specifications and contained in the OHS Act.

C3.4.4.2 Equipment provided by the Employer

The Employer shall not provide any equipment.

C3.4.5 EXISTING SERVICES

C3.4.5.1 Known services

The Contractor shall familiarise himself with all existing services and liaise with all relevant authorities for the location and detection of existing services.
No guarantee can be given that all affected services are indicated on the drawings, or that, if they are shown, they are shown exactly in the correct location. Once located, the exact location, level and nature of the service shall be recorded and given to the Employer's Agent's Representative in writing.

The Contractor shall, subject to the provisions of PSA 5.4, expose all services by hand in advance of his trenching operation in order to reduce the risk of damage to existing services.
The Contractor shall take special care not to damage any existing services and shall comply with all the requirements of the relevant authorities during construction. The Contractor will be held solely responsible for the protection of all known services and for any claims for damages arising from damage to any such service. (See also PSA 5.4).

C3.4.5.2 Treatment of existing services

The Contractor to ensure that existing services supply are not interrupted. All existing services have to remain operational, either through protection or re-routing. Temporary re-routing of existing services is allowed, with the approval of the owner of the service.

C3.4.5.3 Use of detection equipment for the location of underground services

The Contractor to make use of the necessary detection equipment to determine the location of an existing service, before excavation commences to expose the service.

C3.4.5.4 Damage to services

The Contractor shall take special care not to damage any existing services and shall comply with all the requirements of the relevant authorities during construction. The Contractor will be held solely responsible for the protection of all known services and for any claims for damages arising from damage to any such service. (See also PSA 5.4).

Damage that occurs to unknown services during construction will be paid by the Employer.

C3.4.5.5 Reinstatement of services and structures damaged during construction

The Contractor will be responsible for the repair and reinstatement of damaged services in compliance with the service owner's specifications.

C3.5. MANAGEMENT OF THE WORKS

C3.5.1 SPECIFICATIONS

The following Specifications are applicable:

(i) The SANS 1200 Standardised Specifications listed in C3.7.1;
(ii) The Particular Specifications given in C3.7.2; and
(iii) The Variations and Additions to the SANS 1200 Standardised Specifications given in C3.7. 3.

C3.5.2 PLANNING AND PROGRAMME

C3.5.2.1 General

The Contractor's Programme to be submitted in terms of Clause 5.6.1 of the Conditions of Contract shall take all matters that may impact the Contractor's sequence of executing the various components of the Works and the requisite rate of progress of the Works, as may be specified in or reasonably inferred from the Contract.

C3.5.2.2 Format

The Construction Programme to be submitted by the Contractor in accordance with the provisions of Clause 5.6.1 of the Conditions of Contract shall;

(a) Be in the form of a bar chart; and
(b) Clearly indicate the start and end dates and duration of all construction activities and identify the critical path; and
(c) Take full cognizance of all the Contractor's risks and obligations in terms of the Contract.

The said Programme and all revisions thereto shall also be provided to the Employer's Agents in electronic digital format using the MS PROJECT software on a Monthly basis as per Clause 5.6.4.

C3.5.2.3 Failure to maintain construction programme

If the Construction Programme has to be revised in terms of the Conditions of Contract, because the Contractor is falling behind in its programme, the Contractor shall submit a revised programme of how it intends to regain lost time to ensure completion of the Works before the Due Completion Date.

C3.5.2.4 Additional Programming Information

The following (but not limited to) programming information shall be incorporated into the Contractor's initial programme and all subsequently adjusted programmes. The Contractor's programme shall also take full account of the matters described in the sub-clauses hereunder. No additional payments will be made to the Contractor in respect of any additional costs as it may incur in consequence of arranging or adjusting its programme to accommodate the said matters and the Contractor's various tendered rates and prices shall be deemed to fully inclusive of such costs.

(a) Time related items, in respect of the following:
  (i) Time to submit documentation before commencing to carry out the Works – refer to Clause 5.3.1 C1.2 of Contract Data
  (ii) Construction Regulations, 2014 requirements:
    - Regulation 3, Construction work permit process period
    - Regulation 4, notification of construction works period
  (iii) Due Completion Date

(b) All special non-working days defined in the Contract Data.
(c) Contractor's annual shutdown period between December and January
(d) Allowance for a 30 – day float period in the programme for unforeseen circumstances
(e) Meeting the requirements of the Environmental Management Plan
(f) The time needed for preparation and approval of the various mix designs specified in the relevant construction sections of the Scope of Works.

C3.5.3 QUALITY PLANS AND CONTROL

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

The Contractor to submit the Quality Management Plan for the approval by the Employer's Agent before commencing any work.

C3.5.4 ENVIRONMENTAL MANAGEMENT

The Contractor will be responsible for managing his activities so that damage to the environment is minimised, as per the approved Environmental Management Plan contained in Specification PEM. A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance and provision of the Method Statement.

C3.5.5 FORMAT OF COMMUNICATIONS

All contractual communication shall be in writing.

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

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

The above-mentioned shall be kept on Site and shall be accessible to the Employer's Agent at all times.

C3.6. HEALTH AND SAFETY

The Contractor will be responsible for managing his health and safety activities as per the approved Health and Safety Plan, as indicated in Specification PHS. A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014

C3.6.1 HEALTH AND SAFETY REQUIREMENTS AND PROCEDURES

(a) Construction Regulations, 2014

The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37305 and Regulation Gazette No 10113 of 7 February 2014 including COVID-19 requirements. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Project Specifications, Bill of Quantities and Drawings, as well as in the Employers' health and safety specifications (regulation 5(1)(b)) of the Construction Regulations 2014, which are bound in the Contract document.

The Contractor shall in terms of regulation 7(1)(a) provide a comprehensive Health and Safety Plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

C3.6.2 PROTECTION OF THE PUBLIC

The Contractor to ensure the sufficient screening and barricading of the site of works is done to prevent unauthorised public access. If screening/barricading will impact on the movement of the public, the Contractor is to ensure that safe detour routes are allowed and clearly indicated.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

C3.6.3 BARRICADES AND LIGHTING

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

C3.6.4 TRAFFIC CONTROL ON ROADS

The Contractor shall carry out, erect and maintain such temporary works and provide all temporary road signs, pipes, deviations, warning boards, barricades, signs, lighting and demarcations and the like, as are necessary to maintain and safeguard the normal flow of public and private vehicular and pedestrian traffic.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

C3.6.5 MEASURES AGAINST DISEASE AND EPIDEMICS

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014. The Contractor also needs to refer to the Health and Safety Specification and the COVID-19 specification included as Specification PHS to this document for measures to be deployed on site.

C3.6.6 AIDS AWARENESS

The Contractor is required to refer to SANS 1921 – 6 as further amended below and HIV/AIDS Awareness Education Specification (Appendix D). Payment items have been included in the Schedule of Quantities to ensure compliance.

SANS 1921-6	
Variations	
Clause	Specification Data
1 e)	Appointment of an HIV / AIDS Awareness Champion.
4.1 f)	Appointing an HIV/ AIDS Awareness Champion within 14 days of site handover from amongst the workers (which could include the Community Liaison Officer). The champion should be able to speak, read and write English, speak and understand the local languages spoken by the Workers and shall be on site at all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and has the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner. The Awareness Champion shall be responsible for: • Liaising with the Service Provider to assist in organising awareness workshops; • Filling condom dispensers and monitoring condom distribution; • Handing out information booklets; • Placing and maintaining posters
4.1 g)	Provide information about the names of the closest service providers to be displayed on a poster of size not smaller than A2.
4.2.3 c)	Understand and communicate the purpose of voluntary HIV/AIDS testing and counselling.
4.2.3 d)	Recognise the importance of caring for people living with HIV/AIDS and be familiar with the various treatments available, including treatment of opportunistic infections.
4.2.3 e)	Understand and communicate the rights and responsibilities of those living with HIV/AIDS in the workplace and the importance of non-discrimination.
4.3.2	The HIV/AIDS Awareness Champion and the Employer's representative shall certify the report and schedule described in 4.3.1 whenever a claim for payment is issued to the Employer.
5	Sanctions In the event that the Contractor fails to satisfy the requirements of this specification, the Employer may apply sanctions which include the rejection of claims for payment as being incomplete or the withholding of completion certificates (interim or final).

C3.7. PROJECT SPECIFICATIONS

C3.7.1 LIST OF APPLICABLE SPECIFICATIONS

C3.7.1.1 Applicable SANS 1200 Standardised Specifications

For the purpose of this Contract the latest issues of the following Standardised Specifications for Civil Engineering Construction, applicable at the date of the tender advertisement shall apply:

SANS 1200 A:	GENERAL
SANS 1200 AB:	EMPLOYER'S AGENT'S OFFICE
SANS 1200 C:	SITE CLEARANCE
SANS 1200 D:	EARTHWORKS
SANS 1200 DB:	EARTHWORKS (PIPE TRENCHES)
SANS 1200 DK:	GABIONS AND PITCHING
SANS 1200 G:	CONCRETE (STRUCTURAL)
SANS 1200 HA:	STRUCTURAL STEELWORK (SUNDRY ITEMS)
SANS 1200 L:	MEDIUM-PRESSURE PIPELINES
SANS 1200 LB:	BEDDING (PIPES)
SANS 1200 LE:	STORMWATER DRAINAGE

Any reference to a SABS standard, in any context or forum, will be deemed to be a reference to the corresponding SANS standard, and vice versa. Any ambiguity in relation to the standard specifications to be referred to the Employer's Agent for clarity, in terms of the GCC 2015 3rd edition.

The term "project specifications" appearing in any of the SANS 1200 standardised specifications must be replaced with the term "Scope of Work"

C3.7.1.2 Particular Specifications

The following Particular Specifications for work not covered by the SANS 1200 Standardised Specifications are also included hereunder:

PA:	FENCING
PC:	NO-FINES CONCRETE
PEM:	ENVIRONMENTAL MANAGEMENT
PHS:	HEALTH AND SAFETY
PL:	HORIZONTAL DIRECTIONAL DRILLING

C3.7.2 VARIATIONS AND ADDITIONS TO SANS 1200 STANDARDISED SPECIFICATIONS

SANS 1200 A:	GENERAL
SANS 1200 AB:	EMPLOYER'S AGENT'S OFFICE
SANS 1200 C:	SITE CLEARANCE
SANS 1200 D:	EARTHWORKS
SANS 1200 DB:	EARTHWORKS (PIPE TRENCES)
SANS 1200 DK:	GABIONS AND PITCHING
SANS 1200 G:	CONCRETE (STRUCTURAL)
SANS 1200 HA:	STRUCTURAL STEELWORK (SUNDRY ITEMS)

SANS 1200 L: MEDIUM-PRESSURE PIPELINES
SANS 1200 LB: BEDDING (PIPES)
SANS 1200 LE: STORMWATER DRAINAGE

The following variations and additions to the SANS 1200 Standardised Specifications referred to shall apply to this Contract. The prefix “PS” indicates an amendment to SANS 1200. The prefix “PSA” indicates an amendment to SANS 1200 A, “PSDB” to SANS 1200 DB and so on. The letters and numbers following these prefixes respectively indicate the relevant Standardised Specification and clause numbers in SANS 1200 to which the variation or addition thereto applies.

An asterisk (*) placed next to a PS Subclause number denotes the inclusion of an additional Subclause for which no equivalent appears in SANS 1200.

The term “project specifications” appearing in any of the SANS 1200 Standardised specifications must be replaced with the term “Scope of Work”.

Further to the above it should be noted that where in a specific Standardised Specification reference is made to a Subclause in another Standardised Specification, any amendment or addition to the Subclause referred to, as provided for in the Specification, shall apply. The aforementioned shall also apply with respect to Clauses referred to in a Particular Specification.

PSA GENERAL

PSA 1 SCOPE

Replace the contents of Clause 1.1, including the notes, with the following:

"1.1 This specification covers requirements, principles and responsibilities of a general nature which are generally applicable to Civil Engineering construction and building works contracts, as well as the requirements for the Contractor's establishment on the Site."

PSA 2 INTERPRETATIONS

PSA 2.3 DEFINITIONS

In the opening phrase, insert the words: "the definitions given in the Conditions of Contract and" between the words "specification" and "the following".

a) General

Add the following definitions:

'Employers' Agent' (Clause 1.1.1.16 of Conditions of Contract) shall have the same meaning and be synonymous with Engineer throughout the Contract documentation.

'General Items' (Clause 1.1.1.21 of Conditions of Contract) shall have the same meaning and be synonymous with Preliminary and General items.

"General Conditions and Conditions of Contract. The General Conditions of Contract specified for use with this Contract as amended in the Contract Data.

Specified As specified in the Standardised Specifications, the Drawings or the Scope of Work. "Specifications" shall have the corresponding meaning."

c) Measurement and payment

Replace the definitions for "Fixed charge", "Time-related charge" and "Value-related charge" with the following:

"Fixed charge. A charge that is not subject to adjustment on account of variations in the value of the Contract Price or the time allowed in the Contract for the completion of the work.

Time-related charge. A charge, the amount of which varies in accordance with the Time for Completion of the Works, adjusted in accordance with the provisions of the Contract.

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

PSA 2.4 ABBREVIATIONS

a) Abbreviations relating to standard documents

Add the following abbreviation:

"CKS: SANS Co-ordinating Specification."

PSA 3 MATERIALS

PSA 3.1 QUALITY

Where applicable, materials shall bear an official standardisation mark.

Add the following:

"Where proprietary materials are specified, it is to indicate the quality or type of materials or articles required, and where the terms "or similar approved" or "or approved equivalent" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Employer's Agent."

"PSA 3.3* ORDERING OF MATERIALS

The quantities set out in the Bill of Quantities have been carefully determined from calculations based on data available at the time of its compilation but are to be considered as approximate quantities only. Before ordering materials of any kind the Contractor shall be solely responsible for determining, from the Drawings issued or approved by the Employer's Agent for construction purposes, the actual quantities of materials required for the execution of the Works. No liability or responsibility whatsoever shall be attached to the Employer or the Employer's Agent in respect of materials ordered by the Contractor except when ordered in accordance with the Drawings issued or approved by the Employer's Agent for construction purposes."

PSA 4 PLANT

PSA 4.1 SILENCING OF PLANT

Replace the contents of Clause 4.1 with the following:

"The Contractor's attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act (Act No. 85 of 1993) as amended.

The Contractor shall at all times and at its own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other Plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations."

PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

Add the following new paragraph before the existing paragraph in Clause 4.2:

"The Contractor's buildings, sheds and other facilities erected or utilised on the Site for the purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. Only night-watchmen may be on the Site after hours."

Delete "and first-aid services" in the second paragraph of Clause 4.2 and add the following:

"The Contractor shall provide on the Site and in close proximity to the actual locations where the work is being executed, one toilet per 15 workmen, which toilets shall be effectively screened from public view and their use enforced. Such toilets shall be relocated from time to time as the location of the work being executed changes, so as to ensure that easy access to the toilets is maintained.

The Contractor shall, where applicable, make all necessary arrangements and pay for the removal of night soil."

“PSA 4.3* RESTRICTION ON THE USE OF PLANT

Except for the type of plant, and to the extent permitted or approved by the Employer’s Agent, the Contractor shall use only hand tools and equipment in the construction of the Works, or portion(s) of the Works, that are required to be constructed using labour intensive methods.”

PSA 5 CONSTRUCTION

PSA 5.1 SURVEY

PSA 5.1.1 Setting out of the Works

The installed benchmarks shown on the Drawings shall be used by the Contractor for setting out the works. Add the following paragraph:

"The Contractor shall be required to check and verify, prior to commencement of any construction work, all benchmarks and boundary reference pegs, as shown and detailed on the Drawings. Reference and benchmark pegs disturbed and/or removed during the construction period shall be replaced by a Professional Land Surveyor and the Contractor shall bear the cost of such replacement. Payment to check and verify the reference and benchmark pegs will be made in terms of PSA 8.8.5.

Where labour intensive work is specified, the Contractor shall be responsible for the setting out of the task work."

PSA 5.1.2 Preservation and replacement of survey beacons and pegs subject to the Land Survey Act

Delete from the second sentence "Before the commencement . . . . “to” . . . . apparently in their correct positions" and replace with the following:

"Immediately on taking over the site, the Contractor, in consultation and liaison with the Employer’s Agent, shall search for all pegs and the Contractor shall compile a list of pegs that are apparently in their correct position."

Replace the third sentence of Clause 5.1.2 with the following:

“At completion of the Contract, the Contractor shall expose and mark all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor the replacement of pegs that have become disturbed or damaged. The Contractor shall, as a precedent to the issue of the Certificate of Completion, provide to the Employer’s Agent, a certificate from the Registered Land Surveyor, certifying that all the pegs listed at the commencement of construction in accordance with the provisions of this Clause, have been checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all in accordance with the provisions of the said Act.

The costs of replacement and certification as aforesaid shall be entirely for the Contractor’s account, provided always that the Contractor shall not be held liable for the cost of replacement of pegs which:

(a) cannot reasonably be re-established in their original positions by reason of the finished dimensions of the Permanent Works ; and

(b) the Contractor can prove beyond reasonable doubt and to the satisfaction of the Employer's Agent, were disturbed, damaged or destroyed by others beyond its control, and

(c) were in close proximity to the work and which would unavoidably be removed, subject to the Employer's Agent approval being given to remove such pegs."

Add the following:

PSA 5.1.3 As-built Survey

The Contractor shall supply the Engineer with as-built survey data for the entire works, including cover and invert levels, coordinates of manholes, reservoirs, chambers and structures, points of intersection, etc. The Certificate of Completion will not be issued until the as-built survey data has been approved by the Engineer.

PSA 5.2 WATCHING, BARRICADING AND LIGHTING AND TRAFFIC CROSSINGS

Add the following:

"The Contractor shall comply in all aspects with the requirements of the Occupational Health and Safety Act (Act 85 of 1993), refer also PSA 5.7, PSA 5.9 and PSA 5.10."

PSA 5.3 PROTECTION OF STRUCTURES

Replace: "Machinery and Occupational Safety Act, 1983, (Act No. 6 of 1983)" with: "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), as amended," and insert the following after "(Act No. 27 of 1956)": "as amended".

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

Replace the heading and the contents of Clause 5.4 with the following:

"PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 5.4.1 Location of existing services

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by an experienced and competent Contractor to be present on, under, over or within the Site.

Without in any way limiting its liability in terms of the Conditions of Contract in relation to damage to property and interference with services, the Contractor shall, in collaboration with the Employer's Agent, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where it intends to work.

Neither the Employer nor the Employer's Agent offer any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site. No excavation may commence until the position of the service at the crossing point has been marked out and verified by an official of the responsible authority.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Employer's Agent, for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the requirements of Clauses 4.4 and 5.1.2.2 of SANS 1200 D (as amended) shall also apply.

The aforesaid procedure shall also be followed in respect of services not shown on the plans, but which may reasonably be anticipated by an experienced Contractor to be present or potentially present on the Site.

All services, the positions of which have been determined as aforesaid at critical points, shall henceforth be designated as "Known Services" and their positions shall be indicated by the Contractor on a separate set of Drawings, a copy of which shall be furnished to the Employer's Agent without delay.

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the Site, it shall henceforth be deemed to be a "Known Service" and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the Site shall apply. The Contractor shall notify the Employer's Agent immediately should any such service be encountered or discovered on the Site.

Whilst it is in possession of the Site, the Contractor shall be liable for all loss of or damage as may occur to:

(a) Known Services, anywhere along the entire lengths of their routes, as may reasonably be deduced from the actual locations at which their positions were verified as aforesaid, due cognisance being taken of such deviations in line and level which may reasonably be anticipated; and

(b) any other service which ought reasonably to have been a Known Service in accordance with the provisions of this Clause;

as well as for consequential damage, whether caused directly by the Contractor's operations or by the lack of proper protection; provided always that the Contractor will not be held liable in respect of damages occurring to services not being Known Services.

No separate payment will be made to the Contractor in respect of any costs incurred in preparing and submitting to the Employer's Agent, the Drawings as aforesaid and these costs shall be deemed included in the Contractor's other tendered rates and prices included in the Contract.

Payment to the Contractor's in respect of exposing services at the positions agreed by the Employer's Agent and as described above will be made under the payment items (if any) as may be provided therefore in the respective sections of the Specifications pertaining to the type of work involved.

PSA 5.4.2 Protection during construction

The Contractor shall take all reasonable precautions and arrange its operations in such a manner as to prevent damage occurring to all known services during the period which the Contractor has occupation and/or possession of the Site.

Services left exposed shall be suitably protected from damage and in such a manner as will eliminate any danger arising there from to the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

Unless otherwise instructed by the Employer's Agent, no services shall be left exposed after its exact position has been determined and all excavations carried out for the purpose of exposing underground services shall be promptly backfilled and compacted. In roadways, the requirements of subclause 5.9 of SANS 1200 DB should be observed. In other areas compaction is to be to 90% modified AASHTO density.

PSA 5.4.3 Alterations and repairs to existing services

Unless the contrary is clearly specified in the Contract or ordered by the Employer's Agent, the Contractor shall not carry out alterations to existing services. When any such alterations become necessary, the Contractor shall promptly inform the Employer's Agent, who will either make arrangements for such work to be executed by the owner of the service or instruct the Contractor to make such arrangements himself.

Should damage occur to any existing services, the Contractor shall immediately inform the Employer's Agent, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases, the Contractor shall take appropriate steps to minimise damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted by the Contractor, unless approved by the Employer's Agent.

The Employer will accept no liability for damages due to a delay in having alterations or repairs effected by the respective service owners. The Contractor shall provide all reasonable opportunity, access and assistance to persons carrying out alterations or repairs of existing services."

PSA 5.8 GROUND AND ACCESS TO THE WORKS

Add the following:

The Contractor shall further, before commencement of any of the Works, compile a photographic / video recording of all the existing roads, structures, fences, gates, pipeline routes and trees which may be affected during the Works.

Payment will be made in terms of PSA 8.3.2.2 and PSA 8.4.2.3."

"PSA 5.9* MAINTAINING SERVICES IN USE

The Contractor shall take note that he shall not cut off any service in use without the prior approval of the Employer's Agent.

Failure on the part of the Contractor to comply with any of the above provisions will constitute sufficient reason for the Employer's Agent to stop the works until the situation has been remedied, or should he deem it necessary, arrange for the situation to be remedied at the Contractor's cost.

No direct payment will be made for the cost of maintaining services in use. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract."

"PSA 5.10* DEALING WITH AND ACCOMMODATING TRAFFIC

The Contractor shall take note that the existing roads and tracks within and to the Sites shall remain operational throughout the contract period. To this end the Contractor shall provide and maintain all temporary fences, security, barriers, kerb ramps, signs, markings, flagmen, drums, lighting, personnel and all other incidentals necessary to ensure safe and easy passage of all traffic.

Temporary traffic signs etc. as well as all necessary markings shall be erected and maintained by the Contractor and the number and layout of the traffic signs shall comply with the Site Manual entitled "Safety at Roadworks in Urban Areas", as published by the Department of Transport.

Traffic signs shall have a yellow background with either a red / black border.

No direct payment will be made for the cost of dealing with and accommodating traffic. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the contract. Further, the provision of PSA 5.2 shall apply."

"PSA 5.11* SITE MEETINGS

The Contractor's authorised Construction Manager and Contracts Manager will be required to attend regular site meetings, which shall normally be held once a month on dates and at times determined by the Employer's Agent, but in any case, whenever reasonably required by the Employer's Agent. Unless otherwise indicated in the Contract or instructed by the Employer's Agent, such meetings shall be held at the Contractor's offices on the Site. At such monthly meetings, matters such as general progress on the Works, quality of work, problems, claims, payments, and safety etc, shall be discussed, but not matters concerning the day-to-day running of the Contract.

"PSA 5.12***** PROVIDING ACCESS TO ERVEN AND PROPERTIES

Access to erven and properties along the route of trenches and roads shall be provided by the Contractor at all times. To this end suitable crossings shall be constructed where required.

Temporary crossings shall be in the form of portable bridges, temporary backfill or other approved means and shall be capable of permitting the safe passage of all vehicles and pedestrians. The Contractor shall also be responsible for maintaining crossings and for removing same when they are no longer required.
If as a result of restricted road reserve widths and the nature of the Works the construction of bypasses is not feasible, construction shall be carried out under traffic in order to provide access to the properties.

The Contractor may, with the approval of the Employer's Agent, arrange with the occupiers of the affected properties to temporarily close off a portion of a road, footpath entrance, property access road or other access, provided that the Contractor shall give due notice of the intended closure and its probable duration to the occupiers and shall as punctually as possible re-open the route at the prescribed time. Where possible, roads shall be made safe and re-opened to traffic overnight. Any such closure shall be an arrangement between the Contractor and the occupiers and shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs and drums shall be provided by the Contractor to suit the specific conditions.

No direct payment will be made for the cost of providing access. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract."

"PSA 5.14* PROTECTION OF LIVESTOCK

From the time of the occupancy of the Site until the date of the Completion Certificate the Contractor shall take all measures necessary for the protection and control of livestock on the sections of the properties affected by his operations. He shall provide gates in existing fences cut by him for the purpose of access and control, and where necessary, to store materials and plant and the Contractor shall ensure that all gates are kept closed during such time as they are not actually in use by his traffic.

Where the Contractor cannot make alternative arrangements, the Contractor shall erect temporary fencing where necessary to protect livestock exposed to straying through his operations. The fencing shall be maintained in good order during construction operations and on completion of the work it shall be removed from the Site and all surfaces restored to the satisfaction of the property owner.

Payment for the protection of livestock, including the erection of temporary fences and gates where required, shall be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract.

Claims by property owners for loss of or injury to livestock due to negligence on the part of the Contractor, shall be settled by the Contractor."

"PSA 5.15* COMMUNITY LIAISON OFFICER (CLO) MEASUREMENT AND PAYMENT

Employment process for CLO and payment as detailed in Clause/Section C1.3 and C1.4."

"PSA 5.16* GRADUATE ENGINEER MEASUREMENT AND PAYMENT

Employment of Graduate Engineer (COW) and payment shall be as detailed in Clause/Section C1.3 and C1.4."

PSA 6 TOLERANCES

"PSA 6.4* USE OF TOLERANCES

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Employer's Agent, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorised' dimensions.

If the work is constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the calculation of quantities will be based on the 'authorised' dimensions, regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Employer's Agent may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be calculated based on the actual dimensions as constructed."

PSA 7 TESTING

PSA 7.1 PRINCIPLES

PSA 7.1.2 Standard of Finished Work Not to Specification

Insert the words "or checks by an approved laboratory ..." after the words "Where the Employer's Agent checks ..."in the first line of Clause 7.1.2.

PSA 7.2 APPROVED LABORATORIES

Replace the contents of Clause 7.2 with the following:

"Unless otherwise specified in the relevant specification or elsewhere in the Scope of Work, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a specification for the purposes of acceptance by the Employer's Agent of the quality of materials used and/or workmanship achieved, may be carried out:

(a) any testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;

(b) any testing laboratory owned, managed or operated by the Employer or the Employer's Agent;

(c) any testing laboratory established and operated on the Site by or on behalf of the Employer or the Employer's Agent;

(d) any testing laboratory designated by the Employer's Agent."

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 MEASUREMENT

PSA 8.1.1 Method of measurement, all sections of the Schedule
Delete the words "and South West Africa".

PSA 8.1.2 Preliminary and General item or section

PSA 8.1.2.1 Contents

Replace the contents of item (c) with the following:

"The 'duration of construction' applicable to a time-related item shall be the tendered contract period for the total works, plus as applicable, the Civil Engineering Industry Holiday (Dec / Jan) and all gazetted public holidays for the Civil Engineering Industry."

REPLACE THE LAST SENTENCE OF SUBCLAUSE 8.1.2.1(B) WITH THE FOLLOWING:

"Separate items will be scheduled to cover the fixed, value-related and time-related components of the Contractor's General items (clause 1.1.1.21 of the Conditions of Contract) in respect of:

(a) Construction work period:

The number of days for reaching the Due Completion Date (Clause 1.1.1.14 of the Conditions of Contract), being the number of days for achieving Practical Completion of the Works, as specified in the Contract Data and as adjusted by such extensions of time or acceleration as may be allowed in terms of Contract.

(b) Construction Work Permit process period (if applicable):

The actual number of days that the Employer or his agent (in terms of the Construction Regulations, 2014) takes to process and issue the instruction to commence with the Works (Clause 5.3.3.2 of the Conditions of Contract, as amended) from the date of submission of the documentation referred to in Clause 5.3.1 of the Conditions of Contract.

PSA 8.1.2.2 Tendered sums

Replace the contents of this Sub-Clause with the following:

"Except only where specific provision is made in the Specifications and/or the Bill of Quantities for separate compensation for any of these items, the Contractor's tendered sums under items PSA 8.3.1 and PSA 8.4.1 shall collectively cover all charges for:

- risks, costs and obligations in terms of the Conditions of Contract and of this standardised specification; and
- head-office and site overheads and supervision; and
- profit and financing costs; and
- expenses of a general nature not specifically related to any item or items of the permanent or temporary work; and
- providing such facilities on site as may be required by the Contractor for the proper performance of the Contract and for its personnel, including, but without limitation, providing offices, storage facilities, workshops, ablutions, services such as water, electricity, sewage and rubbish disposal, access roads and all other facilities required, as well as for the maintenance and removal on completion of the works of these facilities and cleaning-up of the site of the Contractor's establishment and reinstatement to not less than its original condition, and
- providing the facilities for the Employer's Agent and his staff as specified in the Contract and their removal from the site on completion of the Contract.
- completion of monthly reporting template forms (Refer to Appendix B for Pro Formas)"

PSA 8.2 PAYMENT

PSA 8.2.1 Fixed-charge and Value-related items

Replace the contents of Clause 8.2.1 with the following:

"Payment of fixed charges in respect of Clause 8.3.1 (Contractual requirements) will be made as follows:

(a) EIGHTY PERCENT (80%) of the sum tendered will be paid when the facilities have been provided and approved; and

(b) The remaining TWENTY PERCENT (20%) will be paid when the Works have been completed, the facilities have been removed and the site of the Contractor's establishment has been cleared and cleaned to the satisfaction of the Employer's Agent.

No adjustment will be made to the sum tendered in respect of item 8.3.1 should the value of the Works finally executed, or the Time for Completion vary in any way from that specified in the Tender.

The fixed charged items will include all associated cost to deal with the compulsory sub-contracts, other than cost already included under clause 8.3.1.

Payment for the sum tendered under clause 8.3.2 (Establishment of facilities on site) will be made in three separate instalments as follows:

(a) The first instalment, which is 40% of the sum, will be paid when the Contractor has fulfilled all its obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract, and when the value of work certified for payment, excluding materials on Site and payments

for preliminary and general items, is equal to not less than 5% of the total value of the work listed in the Schedule of Quantities.

(b) The second instalment, which is 40% of the sum, will be made when the amount certified for payment, including retention monies but excluding this second instalment, exceeds 50% of the Tender Sum.

(c) The final payment, which is 20% of the sum, will be made when the Works have been certified as completed and the Contractor has fulfilled all its obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract.

Should the value of the measured work finally completed be more or less than the Tender Sum, the sum tendered under clause 8.3.2 will be adjusted up or down in accordance with the provisions of Clause 7.8 of the Conditions of Contract, and this adjustment will be applied to the third instalment.

The fixed charged items will include all associated cost to deal with the compulsory sub-contracts, other than cost already included under clause 8.3.2."

PSA 8.2.2 Time-related items

Replace the contents of Clause 8.2.2 with the following:

"Subject to the provisions of subclauses 8.2.3 and 8.2.4, payment under item PSA 8.4.1 (time-related preliminary and general charges) will be made as follows:

(a) Construction work period:

Payment shall be made monthly in equal amounts, calculated by dividing the sum tendered for the item by the number of days stated in Contract Data (Clause 1.1.1.14) in months.

Payment for this item shall be inclusive of the time specified in Clause 1.1.1.14 plus any Extension of Time for Practical Completion but shall exclude all days included in PSA 8.2.2(b) and PSA 8.2.2(c).

(b) Construction work permit process period (if applicable):

Payment shall be for the actual number of days it takes the Employer or his agent (in terms of the Construction Regulations, 2014) to process and obtain a construction work permit (if applicable) after the submission of documentation contemplated in Clause 5.3.1 of the Conditions of Contract. The number of days stated in the Contract Data is for tendering purposes only and shall not be used as an entitlement to substantiate any claim.

The daily rate shall be fully inclusive of all costs associated with this period (refer Programme – Scope of Works) and no claim for additional cost will be considered.

The Contractor shall note that any EoT during this period will be extended by the number of days and will be compensation for at the rate priced for in the BOQ."

provided always that the total of the monthly amounts so paid for the item is not out of proportion to the value of the progress of the Works as a whole.

Should the Employer's Agent grant an extension of time for the completion of the total works, the Contractor will be entitled to an increase in the sums tendered for time-related items, which increase shall be in the same proportion to the original tendered sums, as the extension of time is to the duration of construction as defined

in PSA 8.1.2.1. The Contractor shall however note that the aforementioned will not apply to extensions of time granted in terms of PSA 8.4.6.

Payment of such increased sums will be taken to be as full compensation for all additional preliminary and general costs, either time-related costs or fixed costs that result from the circumstances pertaining to the extension of time granted."

The payment to the Contractor for Time-Related Items shall be adjusted in accordance with the following formula in the event of the Contract being extended by means of a Variation Order (VO):

$$\textit{Sum of Tendered amounts for Time Related Items} \times \frac{\textit{Extension of Time authorised by VO}}{\textit{Tender Contract period}}$$

For the purposes of applying this formula “Extension of Time” will exclude the Contractor’s December / January close-down period, if applicable.

The abovementioned adjustment of the payment for Time-Related Items shall be made in the completion Payment Certificate and shall be the only payment for additional Time-Related costs irrespective of the actual period required to complete the Contract including its authorised extensions.

In the case of fixed price contracts, the amount by which the Time-Related Items is adjusted shall not be subject to the Contract Price Adjustment formula.

In the case of contracts subject to Contract Price Adjustment the amount by which the time-related items are adjusted shall be subject to the Contract Price Adjustment formula."

PSA 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS

REPLACE THE CONTENTS OF SUBCLAUSE 8.3.1 WITH THE FOLLOWING:

"PSA 8.3.1 Fixed preliminary and general charges. Unit: sum

The sums tendered shall include full compensation for all fixed-charge preliminary and general charges as described in subclause PSA 8.1.2.2. Payment will be made as described in subclause PSA 8.2.1.1.

PSA 8.3.2 Value-related preliminary and general charges. Unit: sum

The sums tendered shall include full compensation for all value-related preliminary and general charges as described in subclause PSA 8.1.2.2. Payment will be made as described in subclause PSA 8.2.1.2."

“PSA 8.3.2.1 Facilities for the Employer’s Agent as specified in PSAB.....Unit: sum”

“PSA 8.3.2.2 Facilities for the Employer’s Agent as specified in PSA & PSAB.....Unit: sum”

PSA 8.4 SCHEDULED TIME-RELATED ITEMS

PSA 8.4.1 Contractual requirements ..... Unit: Sum

REPLACE THE CONTENTS OF SUBCLAUSE 8.4 WITH THE FOLLOWING:

"PSA 8.4.1 Time-related preliminary and general charges

The sum tendered shall include full compensation for all time-related preliminary and general charges as described in subclause PSA 8.1.2.2. Payment will be made as described in subclause PSA 8.2.2."

(a) Construction work period .....Unit: sum

(b) Construction work permit process period (if applicable) .....Unit: days

"PSA 8.4.2.1 Facilities for the Employer's Agent as specified in PSAB.....Unit: sum"

"PSA 8.4.2.2 Facilities for the Employer's Agent as specified in PSA & PSAB.....Unit: sum"

"PSA 8.4.6* Compensation in terms of Subclause 5.12.2.4 and Clause 9 of the Conditions of Contract for delays incurred:

(a) Plant .....Unit: Sum per working day
(b) Labour .....Unit: Sum per working day
(c) Supervision.....Unit: Sum per working day
(d) Other services, facilities etc. not covered by (a), (b) and (c).....Unit: Sum per working day

The sum tendered for each item shall cover the full and final standing cost per day of delaying the specified resource or facility and no additional compensation shall apply, notwithstanding any provisions to the contrary in the contract documents, or in respect of any extension of time granted in relation to the circumstances described in Subclauses5.12.2.4 and 9 of the Conditions of Contract.

For the purposes of calculating the total delay, a working week shall be held to consist of five working days and a working day 9 hours.

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

The amount by which compensation for delays is adjusted shall be subject to the contract price adjustment formula as defined in the Conditions of Contract.

This payment item shall only apply to delays which in the opinion of the Employer's Agent are due to the circumstances described in Subclauses 5.12.2.4 and 9 of the Conditions of Contract. No Payment will be made for any salary related or other internally caused strikes. The cost of delays incurred for all other circumstances shall be treated as provided for in the Conditions of Contract.

The provision of this Clause shall in no way prejudice the right of either the Employer or the Contractor to determine the Contract in terms of the provisions of Clause 9 of the Conditions of Contract.

The Contractor shall take note that no payment will be considered for any additional cost incurred in protecting his plant and site establishment, as well as for costs incurred in respect of damage to constructional plant and equipment."

PSA 8.5 SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT

Replace the contents of Clause 8.5 with the following:

"PSA 8.5.1 Works Executed by the Contractor ..... Unit: Prov Sum

The Contractor will be reimbursed in substitution of the Provisional Sums (if any) allowed in the Bill of Quantities for work to be executed by the Contractor, in the amounts determined in accordance with the provisions of Clause 6.6 of the Conditions of Contract.

Replace Clause 8.6 with the following:

"PSA 8.6 PRIME COST ITEMS

PSA 8.6.1 Prime Cost Sums

(a) Description of Item to which Prime Cost Sum Applies..... Unit: PC Sum
(b) Charge Required by Contractor on Sub-item (a) above..... Unit: %

Sub-items (a) and (b) will be provided in the Bill of Quantities for each different item to which a Prime Cost Sum applies.

The Contractor shall be reimbursed under sub-item(s) (a) in substitution of the respective Prime Cost Sums included in the Contract, the actual price(s) paid or payable by him in respect of the goods, materials or services supplied, but excluding any charges for the Contractor's labour, profit, carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under sub-item (b), the respective percentage, as stated by the Contractor in its Tender, of the amount certified by the Employer's Agent for payment under the related sub-item (a). The percentages tendered by the Contractor for each respective sub-item (b) included in the Bill of Quantities shall be deemed to in full and final compensation to the Contractor in respect of any charge by the Contractor for labour, carriage profit, establishment and for any other charges related to the goods, services or materials supplied under the related sub-item (a).

If the Contractor shall have omitted within its Tender to insert a tendered percentage under sub-item (b), or tendered a zero percentage, the Contractor's tendered rate for sub-item (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under sub-item (b)."

Note:

1. Only payments for successful test will be made under the Prime Cost Sum provided in the Bill of Quantities for "additional acceptance control testing by the Employer's Agent".

2. The Contractor is responsible for the cost of process control testing. Payment in terms of the above will only be made for acceptance control testing ordered by the Employer's Agent.

"PSA 8.7 DAYWORK

Replace the contents of subclause 8.7 with the following:

"Measurement and payment shall be in accordance with the provisions of Clause 6.5 of the Conditions of Contract."

PSA 8.8 TEMPORARY WORKS

Replace the heading and contents of subclause 8.8.1 with the following:

PSA 8.8.2 Dealing with Traffic

Delete the entire Clause. The provision of PSA 5.10 shall apply. Refer also PSA 5.2, PSA 5.3, PSA 5.7 and PSA 5.10"

PSA 8.8.4 Existing services

Replace the heading of paragraph (c) with the following:

"(c) Excavate by hand in soft material to expose existing services ..... Unit: m³

Add the following:

"The rate tendered for (c) shall further cover the cost of backfilling the excavation with excavated material compacted to 90% of modified AASHTO maximum density, loading, transporting within a free haul distance of 0,5 km and disposing of surplus material as directed, keeping the excavation safe, dealing with water, protecting the exposed services, and any other operation necessary to complete the work.

No distinction will be made between the various types of services to be exposed, or the depths to which excavations are taken.

Excavation in excess of that authorised will not be measured for payment."

PSA 8.8.5 Cost of survey in terms of Land Survey Act

Delete the entire Clause. The provision of PSA 5.10 shall apply.

"PSA 8.8.7 Dealing with water

(a) Dealing with subsurface water ..... Unit: Sum
(b) Dealing with surface water ..... Unit: Sum

The sum shall cover the cost for the provision, operation, maintaining and removal of all plant and materials required to deal with any water anywhere on site as required in terms of Sub clause 5.1.3 of SANS 1200 D and Sub clause 5.1.2 of SANS 1200 DB. No additional payment will be made for "Special water hazards".

The sum shall cover the cost of providing the necessary plant or materials, or both, fully erected and operative on the Site, the cost of operating and maintaining pumps, well points, sheeting, close timbering, and other equipment, as applicable, for 24 Hours a day, 7 days a week, throughout the period during which the facilities are required, and the cost of removing such goods and restoring the Site to its original condition on completion of that part of the project for which the temporary works were erected.

"PSA 8.8.8* Construct and remove temporary road to be used by the Contractor for haulage and access for the duration of the Contract ..... Unit: Km

The Contractor shall determine the road width required, the necessary surface material, stormwater drainage and layerworks necessary to provide a durable and all-weather haul road.

The rate tendered shall cover the cost of all labour, plant and material necessary to construct and remove at the end of the Contract, the temporary haul road to be used by the Contractor for haulage and access to the reservoir Site.

No contractual claim or associated additional costs shall be evaluated, entertained or paid for any delays due to whatever circumstance incurred as a result of the construction, the use and the maintenance of haul or access roads."

PSA 8.9 WAYLEAVE Unit: sum

The tendered sum shall include full compensation to the Contractor for all the costs involved in obtaining all the necessary wayleaves required on the contract.

PSA 8.10 CONTRACT NAMEBOARDS Unit: No

The tendered sum shall include full compensation to the Contractor for all the costs involved in the supply, installation and maintaining of the specified number of contract nameboards as shown on the drawings, including the removal of the boards at the end of the contract period.

PSA 8.11 QUALITY MANAGEMENT PLAN Unit: sum

The costs of whatever nature for providing the Quality Management Plan as specified in Part C3 will be deemed to be covered by the sums tendered for the respective items in Section A of the Bill of Quantities.

PSA 8.12 PROVISION OF SECURITY PERSONNEL Unit: sum

The costs of whatever nature for providing security personnel the Contractor deems appropriate, taking cognisance of the location of the site, will be deemed to be covered by the sums tendered for the respective items in Section A of the Bill of Quantities.

PSA 8.13 EMPLOYMENT OF COMMUNITY LIAISON OFFICER Unit: Prov. Sum

The costs of whatever nature for Community Liaison Officers, taking cognisance of the location of the site, will be deemed to be covered by the sums tendered for the respective items in Section A of the Bill of Quantities.

PSA 8.14 EMPLOYMENT OF GRADUATE ENGINEER Unit: Prov. Sum

The costs of whatever nature for Graduate Engineer, taking cognisance of the location of the site, will be deemed to be covered by the sums tendered for the respective items in Section A of the Bill of Quantities.

PSA 8.15 SURVEY FOR AND PREPARATION OF AS-BUILT DATA Unit: sum

The sum tendered shall include all costs associated with providing the Engineer with the required as-built information of the works in terms of PSA 5.1.3.

PSAB EMPLOYER'S AGENT'S OFFICE

PSAB 3 MATERIALS

PSAB 3.1 NAMEBOARDS

Notwithstanding the provisions of this Sub-Clause, two Contract Nameboard shall be provided. The nameboard shall further comply with regards to size, painting, decorating and detail to Drawing number P2023_11_NB-01.

PSAB 3.2 OFFICEBUILDING(S)

Replace the words: 'as scheduled" in parenthesis in the first line of this Subclause with:

"as specified in Portion 1 of the Project Specification";

Replace 3.2d) with the following:

"d) Eight chairs"

And replace Subclause 3.2(j) with the following:

"(j) an air-conditioning unit capable of both heating in winter and cooling in summer."

Add the following items after j):

"k) 1 x Pin board to hold A0 drawing.

l) 1 x 110 ℓ refrigerator."

Add after "Employer's Agent" in the third last line:

"The minimum standard of toilet shall be the chemical type."

"PSAB 3.3* CARPORT

The Contractor shall provide on Site for the duration of the Contract three (3) number of carports for exclusive use of the Employer's Agent and his Representatives. Each car-port shall be constructed so that the vehicle parked under it is always protected against the direct rays of the sun. The carport area shall be at least 20m² and the floor shall be covered with a layer of crushed stone to alleviate dusty and muddy conditions. The carports shall be positioned so as to provide easy and convenient access to the Employer's Agent office."

"PSAB 3.3* PROTECTIVE CLOTHING

The Contractor shall provide and replace when necessary four sets of safety helmets, reflective jacket for use by Employers Agent & Employer visitors to site.

PSAB 4 PLANT

PSAB 4.1 TELEPHONE

Replace Sub-clause 4.1 of SANS 1200 AB with the following:

"One site telephone or two cellular telephone shall be made available to the Employer's Agent.

The Contractor shall, at its own cost, arrange for the provision thereof and the Contractor shall further provide associated service contracts from a reputable cellular service provider, for the exclusive use of the Employer's Agent and his staff. The Contractor shall further insure the cellular phones against loss or damage from whatever cause arising and shall ensure that all cellular phone accounts are promptly paid on the due dates for payment. The Contractor shall further, at its own cost, ensure the prompt repair of all cellular phones provided under this Clause, when reasonably required by the Employer's Agent."

"PSAB 4.2* ELECTRONIC EQUIPMENT

The Contractor will provide various items of electronic equipment for the exclusive use by the Employer's Agent and his site staff, to assist in the administration of the Contract, for the duration of construction. The electronic equipment includes a digital camera(s), software, a printer(s), scanner, GPS, and related consumables.

The Contractor shall also provide signal booster on the Site, to enable electronic devices that requires signal to function properly and maintain it for the duration of the Contractor.

The equipment shall always remain the property of the Employer's Agent, including upon completion of construction and the Contractor shall have no obligation other than the payment in terms of clause 8.6 of SANS 1200 and PSA 8.6.

"PSAB 4.3* SURVEY EQUIPMENT

The Contractor shall provide the following survey equipment for use by the Employer's Agent:

a) 1 x automatic level with tripod,
b) 1 x level staff with staff bubble,
c) 2 x ranging rods,
d) 1 x builder's spirit level of length 900 mm,
e) 1 x steel tape of length 50 m,
f) 1 x pocket tape of length 5 m,
g) 1 x steel level transfer plate,
h) 1 x measuring wheel, and
i) all steel and wood pegs, concrete, hammers, picks, etc., that the Employer's Agent may require.

The Contractor shall provide proof, at the start of the Contract, that the tacheometer and automatic level that have recently been serviced by an acceptable institution and shall, throughout the period of construction, service and maintain all survey equipment and he shall insure same and indemnify the Employer and the Employer's Agent against all claims for loss, breakage or theft of such equipment.

All survey equipment shall be provided for the exclusive use of the Employer's Agent.

"PSAB 4.4* ACCOMMODATION FOR EMPLOYER'S AGENTSTAFF

The Employer's Agent will locate suitable accommodation for the Employer's Agent's Representative staff which shall be leased in the name of either the Contractor or Employer's Agent. The period of the lease shall extend until the end of the month in which the Completion Certificate is issued."

PSAB 5 CONSTRUCTION

PSAB 5.1 NAMEBOARDS

Replace the contents of this Clause with the following:

"The Contract Nameboards shall be erected within fourteen days of the Commencement Date and shall be placed where ordered. Any damage to this board shall be repaired within seven days of a written instruction issued by the Employer's Agent's Representative.

Further to the above the Contractor will not be allowed to erect more than two of his own nameboards in the area of the Works. The position of these shall be agreed to by the Employer's Agent. No payment will be made for the supply, erection or maintenance of the Contractor's nameboards and the Employer's Agent reserves the right to order the removal of the nameboards if not properly maintained.

All nameboards shall be removed within 7 days of the issue of the "Certificate of Completion".

PSAB 5.5 SURVEY ASSISTANTS

A survey assistant will be required from time to time to assist the Employer's Agent Representative.

PSAB 8 MEASUREMENT AND PAYMENT

Delete the contents of this Clause. The appropriate measurement and payment clauses have been included under Clause 8 of SANS 1200 A and PSA.

PSC SITE CLEARANCE

PSC 3 MATERIALS

PSC 3.1 DISPOSAL OF MATERIAL

Add the following:

"The Contractor shall obtain his own dumping sites for the disposal of material and all transport costs shall be included in the rates tendered for the various clearance items."

PSC 5 CONSTRUCTION

PSC 5.1 AREAS TO BE CLEARED AND GRUBBED

Add the following:

“Notwithstanding the above, the Employer’s Agent may, where particular areas are scarcely vegetated, order that the clearing and grubbing operation be totally or partially omitted, in which case no payment will be made under this section.

Payment will then only be made for excavation included under the relevant earthworks section.”

"Pipeline routes shall be cleared to a distance of between 1 - 1,5 m on both sides of the pipeline centre line. Route pegs or markers shall not be destroyed or damaged during clearing operations."

PSC 5.2 CUTTING OF TREES

PSC 5.2.3 Preservation of trees

PSC 5.2.3.2 Individual trees

REPLACE THE LAST SENTENCE WITH THE FOLLOWING:

"An amount of R100.00 will be deducted from moneys due to the contractor as a penalty for every tree that is damaged or removed unnecessarily."

PSC 5.5 RECLEARING OF VEGETATION

ADD THE FOLLOWING:

"Except if otherwise agreed, where areas have to be recleared on the written instruction of the Employer’s Agent, such reclearing shall be carried out at the Contractor’s own cost and the Contractor is advised therefore, not to clear areas at such an early stage that reclearing may become necessary.”

PSC 5.6 CONSERVATION OF TOPSOIL

ADD THE FOLLOWING:

“Conservation of topsoil, together with grass, roots and chipped mulch shall be applicable. Stockpiling of topsoil will be allowed on Site in specific locations indicated by the Employer’s Agent. Topsoil shall not be

stockpiled higher than 2,0m. Care shall be exercised to prevent the compaction of topsoil in any way especially by vehicles travelling over such material."

PSC 8.1 BASIC PRINCIPLES

ADD THE FOLLOWING:

"The thickness of the layer that will unavoidably be stripped during clearing of vegetation will be taken as 100 mm. This implies that levels used in earthworks quantity calculations will be 100 mm lower than the original levels excluding stripping of topsoil to stockpile where applicable."

ADD THE FOLLOWING:

"Levels to be used for earthworks quantity calculations will be surveyed once the clearing operation has been completed."

PSC 8.2 PAYMENT

PSC 8.2.1 Clear and grub

REPLACE THE FIRST LINE WITH THE FOLLOWING:

"The area designated by the Employer's Agent to be cleared and grubbed will be measured in square metre to the nearest metre or"

PSC 8.2.7 Dismantle, remove and reinstate pipelines, electricity transmission lines, cables, etc.

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH:

"The tendered rates shall include full compensation for the detection, disconnection, removal, stockpiling, safeguarding, reinstatement and reconnection of services, including all necessary excavation, bedding, concrete bases and backfilling.

In the event of the contractor damaging any of the services he will replace it at his own cost."

"PSC 8.2.11 Remove topsoil to spoil site furnished by Contractor ..... Unit : m^3

The tendered rate shall include full compensation for removing topsoil to a depth of 150 mm and for loading and transporting the material to spoil sites furnished by the Contractor.

PSC 8.2.12 Take down and re-erect existing fences ..... Unit : m

The rate shall cover the cost of taking down the fences, coiling wire, sorting, stacking and guarding all material, the cost of loading, transporting and off-loading such material, the cost of re-erecting the fence in its original position using the dismantled material and the cost of temporary bracing the sections of fence not taken down.

The rate shall also cover the cost of using new tying wire but not the cost of any other new material that may have to be used on the written instructions of the Employer's Agent, as such new material will be paid for under Particular Specification PA: FENCING.

PSC 8.2.13 Demolish existing wall and replace with Vibracrete wall Unit : m

The rate shall cover the cost of dismantling a section of wall and replacing it with a 2,1 m high Vibracrete wall. The rate shall also cover the cost of all excavation necessary and the disposal of all rubble.

PSC 8.2.14 Remove and dispose of kerbing Unit : m

The rate shall cover the cost of the removal and disposal of existing kerbs, including all necessary excavation.

PSC 8.2.15 Remove and reinstate existing:

(a) Kerbs/ Edging..... Unit : m

The tendered rates shall include full compensation for the careful removal of kerbs or edging, the temporary stockpiling and cleaning thereof and the reinstatement once the work has been completed, including all necessary excavation, backfilling and concrete bedding and backing with 15 MPa concrete. In the event of the contractor damaging any of the kerbs, he will replace it at his own cost.

PSD EARTHWORKS

PSD 2 INTERPRETATIONS

PSD 2.1 SUPPORTING SPECIFICATIONS

Replace Clause 2.1.2 with the following:

"PSD 2.1.2: Any of the other SANS 1200 Specifications may form part of the Contract Documents."

PSD 2.3 DEFINITIONS

Replace the word and the definition for "borrow" with the following:

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

Replace the definition for "specified density" with the following:

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

Replace the definition for "stockpile" with the following:

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

Add the following definitions*:*

"**Commercial Source**: A source of material provided by the Contractor, not the Employer, and including any borrow pit, provided by the Contractor.

Fill: An embankment or terrace constructed of material obtained from excavations or borrow pits.

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

Roadbed: The natural in situ material on which the fill, or in the absence of fill, the pavement layers, are constructed."

PSD 3 MATERIALS

PSD 3.1 CLASSIFICATION FOR EXCAVATION PURPOSES

PSD 3.1.1 Method of Classifying

Add the following:

"The classification of material other than 'soft excavation' shall be agreed upon before excavation may commence.

The Contractor shall immediately inform the Employer's Agent if and when the nature of the material being excavated changes to such an extent that a new classification is warranted for further excavation. Failure on

the part of the Contractor to advise the Employer's Agent in good time shall entitle the Employer's Agent to reclassify, at his discretion, such excavated material."

PSD 3.1.2 Classes of excavation

Notwithstanding the provisions of this subclause no distinction will be made between soft and intermediate excavation. All excavation, other than in hard rock excavation, shall for measurement and payment purposes be classified as soft excavation.

All materials encountered in any excavation for any purpose including restricted excavation will be classified as follows:

(a) Hard rock excavation

Hard rock excavation shall be excavation in material (including undecomposed boulders exceeding 0.17 cubic metres in individual volume) that cannot be efficiently removed without wedging and splitting, or hydraulic hammers.

This classification includes materials such as:

- solid unfractured rock occurring in bulk
- solid ledges thicker than 200mm
- igneous rock intrusions
- cemented sedimentary rocks.

(b) Soft excavation

Any material which can be removed by bulldozers or backhoes, shall be classified as soft excavation.

Soft excavation shall be material not falling into the category of hard rock excavation.

(c) Boulder excavation Class A

Excavation in material containing more than 40% by volume of boulders of size in the range 0.03-20 m^3, in a matrix of soft material or smaller boulders.

Excavation in dolomite formations other than solid dolomite will be classed as boulder excavation Class A if the formation contains more than 40% by volume of lumps of hard dolomite of size in the range 0.03-20 m^3, in a matrix of soft material or smaller lumps of hard dolomite.

Excavation of solid boulders or lumps of size exceeding 20 m^3 will be classed as hard rock excavation.

Excavation of fissured or fractured rock will not be classed as boulder excavation but as hard rock or intermediate excavation according to the nature of the material.

(d) Boulder excavation Class B

Boulder excavation Class B shall be excavation of boulders only, which

1) are in material containing 40% or less by volume of boulders of size in the range 0.03-20 m^3, in a matrix of soft material or smaller boulders, and which

2) require individual drilling in order to be loaded by a track type front-ended loader or back-

acting excavator, as the case may be, as specified in (a)(1)or (a)(2) above.

The excavation, of the rest of the material will be classed as soft or intermediate excavation, according to the nature of the material.

PSD 3.2.3 Material Suitable for Backfill or Fill against Structures

Replace the contents of this sub-clause with the following:

"Material used for backfill behind structures shall generally be the material excavated, subject to the following conditions:

(a) The material shall not contain an excessive number of stones retained on a 50 mm sieve; and

(b) The material shall not contain large clay lumps that do not break up under the action of the compaction equipment; and

(c) The liquid limit of the material shall not exceed 40, neither shall the PI exceed 18.

(d) The minimum compaction shall be 93% of modified AASHTO maximum density."

PSD 3.3 SELECTION

PSD 3.3.1 General

Replace the second paragraph with the following:

"The Contractor shall deal selectively with materials from all excavations to ensure that no acceptable backfill or bedding material is contaminated by material unfit for use. No additional payment shall be made in this regard and all costs related to the above selection process shall be included in the applicable payment items. Should useful material be contaminated to such an extent that it is regarded as unfit for use the Contractor shall at his own cost dispose of this material and replace it with material of an equivalent standard to the acceptable in situ material."

PSD 3.3.2 Backfilling and embankments

With reference to the last line of this subclause the material to be used for backfill shall be either 15MPa/19 concrete or material complying with 3.2.2 compacted in 150mm layers to 90% of modified AASHTO maximum density, as ordered on site.

ADD THE FOLLOWING NEW CLAUSE:

"PSD 3.3.3 Selection in borrow pits and excavations

Approval of a borrow area for a certain purpose does not necessarily mean that all the material in that area is suitable for the specified purpose. What it does mean is that the borrow area contains some suitable material. The onus shall rest on the Contractor to ensure that only material that is indeed suitable is removed and used for the specified purpose.

When the Contractor has to select excavated material for a specific purpose, the above provisions relating to borrow areas shall apply mutatis mutandis to excavations.

The Contractor shall not waste or contaminate material that has been selected for a specific purpose."

PSD 4 PLANT

PSD 4.4 DETECTORS

Replace the contents of Clause 4.4 with the following:

“The Contractor shall, for the purposes of detecting and locating underground services in accordance with the provisions of Subclause 5.4 of SANS 1200 A and Subclause 5.1.2 of SANS 1200 D, at its own cost, provide and use detecting equipment which is suitable for the detection of underground cables and pipes.”

PSD 4.2 COMPACTION

Where it is required that the work be carried out using labour intensive methods, the Contractor shall not use compaction plant larger than a walk-behind compactor.

PSD 5 CONSTRUCTION

PSD 5.1 PRECAUTIONS

PSD 5.1.1 Safety

PSD 5.1.1.1 Barricading and lighting

Replace “Machinery and Occupational Safety Act, 1983 (Act 6 of 1983)” with “Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Construction Regulations 2014”.

ADD THE FOLLOWING WORDING:

“Without limiting any obligation which the Contractor may have in terms of any Act, Ordinance or other legislation, the Contractor shall ensure that all excavations which are accessible to the public or which are adjacent to a public road or thoroughfare, or by which the safety of persons may be endangered are protected as set out in Clause 13 of the General Safety Regulations of the Occupational Health and Safety Act, 1993 and that Watchmen are employed to ensure that barricades, barriers and lights are effective at all times.

Trench excavations shall be protected by means of at least two horizontal wires with double sided red/white; chevron tape wrapped over the wires as approved by the Employer’s Agent. The wires shall be stretched tightly between supports along both sides and ends of the excavation at levels approximately 0,45m and 1,12m above the ground. The supports shall consist of poles or iron standards securely planted in solid ground at not more than 10m centres so as to enclose the spoil and the excavations.

Bridges for vehicles and/or pedestrians shall be provided along the route of the work as and where may be considered necessary by the Employer’s Agent. They shall consist of a number of suitably sized steel plates laid across open excavated trenches. They shall be protected on each side by steel handrails, at least 1m high, securely fastened to the steel plates. At least 4 lamps or reflective markers must be provided at each crossing.

Where construction is in, or across, public roads the barricades or barriers and temporary road signs shall be erected. All such signs and positioning thereof shall comply with the requirements set out in Road Note 13 read in conjunction with the SA Road Traffic Signs Manual.”

PSD 5.1.1.2 Safeguarding of excavations

Replace “Machinery and Occupational Safety Act” with “Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Construction Regulations 2014”.

Add the following to paragraph (b) (1):

"Payment for supporting the sides of excavations and trenches shall be deemed to be included in the rates tendered for excavations. No separate payment will be made in this regard and it will be the Contractor's responsibility to ensure the safety and stability of all excavations.

Where trenches have to be widened to accommodate manholes, junction boxes, etc., the cost of supporting the vertical sides of such additional excavations will be deemed to be included in the rates tendered for excavation."

Add the following to paragraph (b) (2):

"The slope of the sides of an excavation or trench may never be steeper than 60° to the horizontal and all costs incurred to slope the sides of an excavation or trench will, irrespective of the angle of the slope, be deemed to be included in the rates quoted for excavation."

PSD 5.1.1.3 Explosives

Replace the contents of this Clause with the following:

“No overbreak allowance shall apply to this Contract.

The Contractor will generally be permitted to use explosives for breaking up hard material during excavations, for demolishing existing structures, and for other purposes where explosives are normally required, subject to the following conditions:

(a) The Employer’s Agent may prohibit the use of explosives in cases where, in his opinion, the risk of injury to persons or damage to property or to adjoining structures is too high. Such action by the Employer’s Agent shall not entitle the Contractor to additional payment for having to resort to less economical methods of construction.

(b) The Employer’s Agent's prior written approval shall be obtained for each and every blasting operation. Such approval may not be withheld where the Contractor use explosives responsibly and carefully.

(c) The Contractor shall fully comply with the requirements of the Explosives Act, Act 83 of 1997 and all other legislation and regulations as may be applicable to blasting and the use of explosives.

(d) Before any blasting is undertaken, the Contractor shall satisfy the Employer’s Agent that he has established whether or not the insurers concerned require pre- and post-blasting inspections of buildings and structures within a certain radius of the proposed blasting area.

Should such inspections be required, the Contractor shall, together with the Employer’s Agent and the insurer, examine and measure the buildings, houses or structures in the vicinity of the proposed blasting site and establish and record, together with the owner, lessee or occupier, the extent of any existing cracking or damage before the commencement of blasting operations.

(e) When there is a possibility of damage to power and telephone lines or any other services or property, the Contractor shall adapt his method of blasting and the size of the charges and shall use adequate protective measures (e.g. cover-blasting, to reduce the risk of damage).

(f) All accidents, injury to persons and animals and damage to property shall be reported to the Employer's Agent, in detail and in writing, as soon as is practicable.

(g) The Employer's Agent shall be given 24 hours' notice by the Contractor before each blasting operation is carried out.

(h) When blasting to specified profiles, the Contractor shall so arrange the holes and charges that the resulting exposed surfaces are as sound as the nature of the material permits. The Contractor shall make good, at its own expense, any additional excavation necessitated by the shattering of rock in excess of any overbreak allowances specified in the Project Specifications or given on any drawing.

Notwithstanding the Contractor's compliance with the above provisions, the Contractor shall remain liable for any injury to persons and animals and loss of or damage to property occurring as a result of blasting operations."

PSD 5.1.2 Existing services

PSD 5.1.2.2 Detection, location and exposure

Replace the contents of Clause 5.1.2.2 with the following:

"The exposure by the Contractor of underground services, as required in terms of Clause 5.4 of SANS 1200 A and PSA 5.4 shall be carried out by careful hand excavation at such positions and to such dimensions as are agreed to by the Employer's Agent.

Unless otherwise instructed or agreed by the Employer's Agent, no service shall be left exposed after its exact position has been determined and all excavations carried out for the purposes of exposing underground services shall be promptly backfilled and compacted to the following densities:

(a) In roadways: 95% Mod AASHTO density; and

(b) In all other areas: 93% Mod AASHTO density.

Where hand excavations to expose underground services have to be carried out in roadways, the Contractor shall reinstate the road layerworks in accordance with the provisions of the Contract or as directed.

Payment in respect of the exposing of the services by means of hand excavation as described above shall be deemed to be covered by the rates tendered under items PSA 8.8.4(c)."

Payment in respect of the reinstatement of layerworks in road ways will be made in accordance with PSDB 8.3.6.1 and subclause 8.3.6.1 of SANS 1200 DB."

PSD 5.1.2.3 Protection of cables

Replace Clause 5.1.2.3 with the following:

"5.1.2.3 Protection during Construction

Further to the requirements of PSA 5.4.2 and Subclause 5.4.2 of SANS 1200 A, major excavating equipment and other Plant shall not be operated dangerously close to Known Services. Where necessary, excavation in close proximity to Known Services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services. No additional payment will apply to such more difficult work.

Should any service not being a Known Service be discovered or encountered during the course of the Contract, the Contractor shall, in addition to complying with the requirements of Sub-clause 5.4.2 of SANS 1200 A (as amended), immediately notify the Employer's Agent thereof and implement such measures as will prevent damage of such service or, if it was damaged in the course of discovery, will prevent and minimise the occurrence of any further damage occurring."

PSD 5.1.2.4 Negligence

The Contractor shall not repair any service damaged. Where the damage is the result of the Contractor's negligence he shall bear all costs of the repairs undertaken by the owner, as well as the costs of associated damages."

DELETE SUBSUBCLAUSE 5.1.2.4

PSD 5.1.5 Reinstatement and maintenance of roads

ADD THE FOLLOWING:

"Where crossings have been made, the roads shall be reinstated in accordance with the details specified in subclause 5.9 of SANS 1200 DB."

PSD 5.1.6 Road traffic control

Delete the contents of Clause 5.1.6 and replace with the following:

"The provisions of PSA 5.10 shall apply as applicable. Where the work affects the operation or safety of public road traffic, vehicular and/or pedestrians in addition, to complying with the requirements of 5.1.1.1, the Contractor shall provide, erect and maintain traffic signs, personnel and equipment that conform to the requirements, layout and guidelines of the "South African Road Traffic Signs Manual", as well as the Site Manual entitled "Safety at Roadworks in Urban Areas" as published by the Department of Transport, in number and in layout, as shown in these manuals.

Where necessary and as shown in these manuals, warning lights, an adequate number of flagmen and appropriate barricades, clearly visible to oncoming traffic at all times of the day and night shall be provided. If steel drums are used for this purpose, they shall be ballasted with soil, sand or stones and the outside shall be whitewashed and provided with retro-reflective material (in the case of tape, of minimum width 10mm), red on the left-hand side facing oncoming traffic and white on the right-hand side. The drums shall be maintained in a clean and effective condition and no stones shall be placed on them.

No direct payment will be made for the cost of providing and complying to the aforementioned. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract."

PSD 5.2 METHODS AND PROCEDURES

PSD 5.2.1 Site preparation

PSD 5.2.1.2 Conservation of topsoil

Add the following:

“Topsoil ordered to be stripped and conserved for later use shall be stockpiled in a manageable heap where designated by the Employer’s Agent. The material together with such vegetation and small roots as may occur within the specified depth shall be stripped, loaded, transported to stockpile within a freehaul distance of 0,5 km, maintained and wetted (dust control) for the full duration of the Contract or until use.”

PSD 5.2.2 Excavation

PSD 5.2.2.1 Excavation for General Earthworks and for Structures

Add the following to paragraph (b):

"When the nature of the material precludes the above procedure, additional excavations shall be carried out to provide working space for the erection of formwork. In general, payment will be made for excavating a working width of 600 mm, but the Contractor may excavate a greater working width at no additional cost to the Employer."
Replace the first sentence of paragraph (e) with the following*:*

"Where excavations have been carried below the authorised levels, the Contractor shall backfill such excavations to the correct level with approved gravel material compacted to 98% of modified AASHTO density or to the density of the surrounding material, whichever is the higher density.

Where excavations for structures have been carried out in hard material, the Employer’s Agent may direct that over-excavation be backfilled with weak concrete if there is a danger of settlement or differential settlement of the foundations.

Where the sides of excavations against which concrete is to be cast have been over-excavated or have collapsed partially, the Contractor shall retrim the excavations if necessary and, unless other remedial measures are agreed to by the Employer’s Agent, shall cast the concrete for the structure, including the additional concrete that may be required as a result of the over-excavation or partial collapse. The cost of the additional concrete or remedial measures shall be for the Contractor's account."

PSD 5.2.2.3 Disposal

Replace the second sentence with the following:

“The Contractor shall, provide all necessary spoil sites for the spoiling of all surplus and unsuitable materials and shall make the necessary arrangements with the owner of the site where the material is disposed of, and pay all charges and levies as may be applicable for the use of such spoil sites.

Every spoil site provided by the Contractor shall be approved by the local authority in whose area it is located, and the spoiling shall comply with the applicable statutory and municipal regulations as well as the requirements of the owner of the spoil site.

Payment to the Contractor in respect of locating and making arrangements for suitable spoil sites and spoiling material at the such sites will be made in accordance with the provisions of Sub-clause PSD 8.3.15.”

“PSD 5.2.2.4* Selection and Stockpiling

Approval or designation of the material in a particular borrow pit or excavation for a particular purpose does not imply that all the material in the borrow pit or excavation is suitable for the particular purpose for which the said approval or designation relates, nor that all material in the borrow pit or excavation should be used

for the particular purpose. The Contractor shall select suitable material from that borrow pit or excavation, discard unsuitable material and reserve material for other purposes as necessary.

The Contractor shall organise and carry out its operations in such a manner as will prevent the contamination of suitable embankment, fill and backfill material with unsuitable materials. Any excavated material which becomes, in the Employer's Agent opinion, unsuitable for use in embankments, fills or backfill as a result of contamination, shall be disposed of in a manner acceptable to the Employer's Agent and shall be replaced by the Contractor with materials acceptable to the Employer's Agent, all at the Contractor's cost.

When required, or when ordered by the Employer's Agent, material shall be temporary stockpiled at sites indicated by the Employer's Agent for later use. The additional costs of stockpiling material shall be paid to the Contractor in accordance with the provisions of Sub-clause PSD 8.3.14."

PSD 5.2.2.5* Excavation of hard rock without blasting

Due to the fact that construction of the pipeline may be alongside existing services, pipelines and in certain areas are near structures/buildings, the Contractor shall exert maximum caution in his methods and operations. In such cases, and where instructed by the Employer's Agent, the Contactor shall use non-explosive methods approved by the Employer's Agent. These methods include hand pneumatic hammers, excavator mounted hydraulic hammers (breakers), expansive chemical products, or other method approved by the Employer's Agent.

The application of this Subclause will not relieve the Contractor of his responsibilities in accordance with Subclause 5.1.1.3 or otherwise in terms of the Contract.

PSD 5.2.2.6 Recording of original ground profiles

The Contractor shall inform the Employer's Agent, in writing, at least 28 days before commencing any work which will result in a change in the topography of the site, whether such work be for the permanent works or for temporary works which the Contractor intends to execute for his own convenience. Thereupon, before commencing the work, the Contractor shall undertake cross-sections of the original ground profiles at structures and a centreline survey of the pipeline or another approved method to determine the ground profiles of the entire area to be worked. In addition, all rock and/or foundation levels shall be recorded as the work proceeds.

The information so obtained shall be permanently recorded on a drawing or drawings which shall each be signed by both the Contractor and the Employer's Agent. The Contractor shall then provide the Employer's Agent with a reproducible copy of each drawing to serve as a permanent record both for the purpose of redesign of pipeline vertical alignment, determining the quantities of excavation and earthworks carried out in the construction of the permanent works and the extent to which temporary works shall be removed or temporary excavations shall be refilled upon completion of the Works."

PSD 5.2.3 Placing and Compaction

PSD 5.2.3.1 Embankments

Replace the first sentence of the sixth paragraph with the following:

"Each layer shall be compacted at OMC to a density as specified and in the case of cohesive soil and 100% of modified AASHTO maximum density in the case of non-cohesive soil."

PSD 5.2.3.3* The material of each area of fill shall, unless otherwise approved, be deposited in layers of thickness, before compaction, not exceeding 150 mm. The material shall be spread to form a layer that is approximately uniform thickness and graded over the whole area of the fill site.

Each layer shall be compacted at OMC to a density of at least 93% of modified AASHTO density in the case of cohesive soil or 100% in the case of non-cohesive soil. Should the material be too wet, owing to rain or any other cause, it shall be harrowed and allowed to dry out to the correct moisture content before compaction is undertaken.

The contractor shall ensure that stormwater will at all times be discharged uniformly over the full fill area or through specially prepared and protected drainage ditches to prevent scouring of the slopes."

"PSD 5.2.3.4 Backfilling over-excavation and overbreak

The material to be used shall comply with 3.2.1, except that the maximum particle size shall not exceed $^{2}/_{3}$ of the thickness of the layer being placed and shall be compacted to at least 93% of modified AASHTO maximum density.

PSD 5.2.4.2 Finishing

a) Topsoiling

IN SUBCLAUSE 5.2.4.2, REPLACE THE WORDING “75 mm” IN THE LAST SENTENCE WITH: “100 mm”

PSD 5.2.4.3 Grass or other vegetation

ADD THE FOLLOWING:

“(a) Fertiliser/soil improvement material

The fertilisers for areas to be hydro-seeded are as follows:

i) Superphosphate – 150 kg/ha
ii) 2 : 3 : 2 (22) – 200kg/ha”

(b) Grass seeds

Only fresh certified seed shall be used, and the seed mixture shall be as follows:

Mix A – (Winter – April to June)

Westerworld ryegrass (var Midmar)	:	20 kg/ha
Cynodon Dactylon	:	20 kg/ha
Eragrosis Curvula	:	20 kg/ha
Eragrosis Tef	:	20 kg/ha

Mix B – (Summer – July to September)
As for Mix A, except that Westerworld ryegrass is substituted with Italian ryegrass (var. Turtetra).”

(c) Anti-erosion compounds

“Anti-erosion compound shall be Verdyol Complex (or similar) applied at a rate of 100kg/ha.”

PSD 5.2.6.2 Grassing

(a) Hydroseeding

Mulch shall be added to the hydro-seeding mix at a rate of 2000kg/ha.

PSD 5.2.6.3 Planting and maintaining the plants

(a) Watering, weeding, mowing and replanting

The mowing of grass to control weeds shall not be measured and paid for.

PSD 5.2.5 Transport for Earthworks

Replace the contents of Sub-clause 5.2.5 with the following:

“The transport and haul of all excavated materials, as well as material imported from commercial sources or borrow pits selected by the Contractor, irrespective of the distance and source, shall be deemed to be freehaul, the cost of which shall be included in the Contractor’s tendered rates and prices for the excavation of the materials. No separate compensation shall apply for the transportation of excavated materials.”

PSD 6 TOLERANCES

PSD 6.1 POSITIONS, DIMENSIONS, LEVELS, ETC.

Add the following:

“PSD 6.1(c) Bulk earthworks

The tolerances applicable to excavations for structural foundations (degree of accuracy II), as specified in Subclause 6.1(a) shall apply, provided no ponding areas or adverse grades result.”

PSD 7 TESTING

PSD 7.2 TAKING AND TESTING OF SAMPLES

Replace the contents of this subclause with the following:

"The Contractor shall arrange with the approved independent laboratory engaged by the Contractor in terms of clause C3.4.9 of the Scope of Works, to carry out sufficient tests on a regular basis as agreed between it and the Employer’s Agent to determine whether the degree of compaction, and, where applicable, the quality of materials used, comply with the Specifications and shall submit the results of these tests to the Employer’s Agent in a form approved by him.

The compaction requirements for fills shall be deemed complied with when at least 75% of the dry-density tests on any lot show values equal to or above the specified density and when no single value is more than five percentage points below the specified value."

PSD 8 MEASUREMENT AND PAYMENT

PSD 8.3 SCHEDULED ITEMS

PSD 8.3.1 Site Preparation

Replace Clauses 8.3.1.1 and 8.3.1.2 with the following:

"Where Site preparation such as clearing, grubbing, the removal of large trees or the removal and stockpiling of topsoil or surface obstructions are required, the provisions and scheduled items of SANS 1200 C shall apply."

PSD 8.3.2 Bulk Excavation

REPLACE THE CONTENTS OF ITEM WITH THE FOLLOWING:

"(a) Excavate in all materials and use for embankment or backfill as ordered, from:

(1) Necessary excavations Unit: m³

(2) Designated borrow pits Unit: m³

(3) Commercial sources Unit: m³

The unit of measurement shall be the cubic metre measured in place in accordance with subclause 8.2 of SANS 1200 D.

Separate items will be scheduled for embankments and backfills for different parts of the works.

The tendered rates shall cover the cost of complying with all the precautions required in terms of subclause 5.1 of SANS 1200 D (as amended), in addition to the cost of excavating in all materials, basic selecting, loading, transporting, off-loading, spreading or backfilling, watering, compacting, final grading, complying with the requirements for tolerances, providing for testing, finishing and tidying, all in accordance with the specifications.

In addition to the foregoing, the tendered rate for subitem (b) shall further include for the costs of royalties (if applicable), whilst the tendered rate for subitem (c) shall also include for the costs of finding a source of suitable material, for making arrangements with the owner of the source, for procuring the material, for the payment of all requisite royalties, charges or damages, and for transporting the material to the site regardless of the distance involved. No payment will be made for the removal of overburden or stockpiling at the commercial source and no extra over payment shall apply for excavating in intermediate, hard or boulder material."

(b) Excavate in all materials and dispose Unit: m³

The unit of measurement shall be the cubic metre of material excavated, measured in place in accordance with subclause 8.2 of SANS 1200 D.

The tendered rates shall cover the cost of complying with all the precautions required in terms of subclause 5.1 of SANS 1200 D (as amended), in addition to the cost of excavating, basic selecting, loading, transporting, off-loading at the spoil site, maintaining and finishing the spoil site, all in accordance with the specifications.

(c) Extra over subitems PSD 8.3.2(a)(1), PSD 8.3.2(a)(2) and PSD 8.3.2(b) for:

(2) Hard rock excavation Unit: m³
(3) Boulder excavation, Class A Unit: m³
(4) Boulder excavation, Class B Unit: m³

The rate shall cover the additional cost of the operations enumerated in subclauses 8.3.2.(a) and 8.3.2.(b) above for any portion of the excavation that is classified as hard rock, boulder excavation class A or boulder excavation class B as applicable. (See Drawing D-2.)"

PSD 8.3.3 Restricted excavation

Replace the heading of subclause 8.3.3 (a) and the contents of the first two paragraphs with the following:

"PSD 8.3.3(a) Excavate for restricted foundations, footings, trenches, stormwater drains outside road reserve, open drains and cut-off drains, in all materials, and use for fill or backfill or berm or dispose, as ordered ..... Unit: m^3

Separate items will be scheduled for each category of excavation and for each class or manner of disposal of excavated material.

All restricted excavation shall be measured by volume.

Replace "in 5.2.2.1 – 5.2.2.3 (inclusive)" at the end of subclause (a) with "in Clauses 5.2.2.1 to 5.2.2.4 (inclusive)."

Delete Clause 8.3.3(b) (1) as well as any reference to intermediate excavation in subclause (b). For the purposes of measurement and payment, excavation other than hard rock and boulder excavation will not be separately classified (refer PSD 3.1.2)."

PSD 8.3.4 Importing of Materials

Delete Clause 8.3.4(a) in totality.

PSD 8.3.6 Overhaul

Delete Sub-clause 8.3.6.

No overhaul will be paid on material for the purposes of this Contract and all costs for transporting material shall be included in the applicable tendered rates and amounts.

PSD 8.3.10 Topsoiling

CHANGE THE UNIT TO "m^3" AND REPLACE THE CONTENTS OF THIS ITEM WITH THE FOLLOWING:

"The unit of measurement shall be the cubic metre and the quantity shall be calculated from the authorised dimensions.

The tendered rate shall include loading of the topsoil from stockpiles, transporting it irrespective of the distance, and off-loading, spreading, shaping and lightly compacting the topsoil."

PSD 8.3.11 Grassing or other Vegetation Cover

ADD THE FOLLOWING AFTER THE SECOND SENTENCE:

"The tendered rate shall be irrespective of the number of applications required to obtain the required spread rate."

PSD 8.3.12 Road traffic signs and markings

Delete the contents of this Sub-Clause.

The provisions of PSA 5.10 shall apply.

"PSD 8.3.14* Extra over items 8.3.2.1 and PSD 8.3.3 for temporary stockpiling ..... Unit: m^3

The unit of measurement shall be the cubic metre of material from necessary excavations, temporarily stockpiled by the Contractor on the instructions of the Employer's Agent, before being used in embankments, fills or backfill.

Measurements shall be taken in place in compacted embankment, fills or backfill as the case may be.

The tendered rate shall include for the costs, additional to those provided for in PSD 8.3.2.1 and PSD 8.3.3 of off-loading, forming and maintaining the stockpile for as long as is required, reloading and transporting regardless of the distance involved from the stockpile.

Payments to the Contractor under this item will only be made in respect of that material stockpiled on the instructions of the Employer's Agent (which instruction shall state specifically that payments for such stockpiling will be paid for under this item) and no payments will be made to the Contractor under this item in respect of materials stockpiled by the Contractor on its own volition, nor for materials necessarily stockpiled by the Contractor in consequence of the sequence of operations adopted by it in the course of executing the Works, whether such stockpiling was avoidable or otherwise."

"PSD 8.3.15* Extra over items PSD 8.3.2 and PSD 8.3.3 for disposing of spoil material on a site provided by the Contractor ..... Unit: m^3

The unit of measurement shall be the cubic metre, measured in accordance with Sub-clause 8.2 of SANS 1200 D, of surplus and/or unsuitable material disposed of, on the instruction of the Employer's Agent, at a spoil site or spoil sites provided by the Contractor.

The tendered rate shall include full compensation for the additional cost of providing a spoil site or other means of disposing of surplus spoil material, for transporting the material regardless of the distance involved, for acceptance charges for such material and for all other incidental costs to dispose of the spoil material."

"PSD 8.3.16* Extra and dispose of unsuitable material from sides or bottom of restricted foundations, footings, trenches and stormwater drains where ordered and replace with:

(a) Selected material complying with subclause 3.2.2 of SANS 1200 ME compacted to 90% of modified AASHTO maximum density ..... Unit: m^3

(b) 15MPa/19 concrete ..... Unit: m^3

Separate items will be scheduled for each type of excavation, source of backfill material and manner of backfill.

The rates tendered shall cover the cost of excavating the unsuitable material to the extent ordered by the Employer's Agent, disposing of the material at a spoil site provided by the Contractor and subsequent backfilling of the excavation using selected material or concrete as ordered.

NOTE:

The work required to construct the selected layer beneath areas to be concrete lined will be measured for payment under (a) as applicable. The unit of measurement shall be the cubic metre of selected material placed and compacted. Any excavation required to accommodate the concrete lining will be deemed to be covered by subclause 8.3.4 of SANS 1200 DM."

PSDB EARTHWORKS (PIPE TRENCHES)

PSDB 3 MATERIALS

PSDB 3.1 CLASSES OF EXCAVATION

Delete the contents of Clause 3.1 and replace with the following:

"The classification shall be as described in PSD 3.1".

PSDB 3.5 BACKFILL MATERIAL

Delete the contents of Clause 3.5(b) and replace with the following:

"In areas subject to road traffic loads which shall be held to extend 1000mm beyond the edge of the roadway, backfill shall comprise of material having a PI = 10 and a CBR at the specified density $\geq$ 45 compacted in 150mm layers to 95% of modified AASHTO maximum density."

Add the following paragraphs to sub-clause 3.5:

"(c) Cement-stabilised backfilling

Backfilling shall, where directed by the Employer's Agent, be stabilised with 5% cement. The aggregate shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed with 5% cement and shall be compacted in layers of 100 mm thick to 90% of modified AASHTO density.

(d) Soilcrete backfilling

The aggregate for soilcrete shall be mixed with 5% cement and shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed in a concrete mixer with the cement and enough water to acquire a consistency that allows the mixture to be placed with vibrators to fill all voids between the pipe and the sides of the trench. Shuttering shall be used where necessary."

PSDB 3.7 SELECTION

Replace the words "if he so wishes" in the first line of the second paragraph with the words "at his own cost".

REPLACE THE SECOND AND THIRD SENTENCES OF SUBCLAUSE 3.7 WITH THE FOLLOWING:

"The Contractor is required to use selective methods of excavation. The Contractor shall selectively remove and keep separate the sandy materials from unsuitable material and place it adjacent to the trench for reuse as backfill, selected fill, selected granular material, selected rockfill or for other use as ordered by the Employer's Agent."

ADD THE FOLLOWING AT THE END OF SUBCLAUSE 3.7:

"Material which, in terms of Subclause 6.2 of SANS 1200 D or Subclause 6.1 of SANS 1200 LB, is too wet for immediate use in the trench (but which is otherwise suitable) will not be regarded as "unsuitable" material and, if so ordered by the Employer's Agent, the Contractor shall spread such material in a suitable area until it has dried sufficient for later use. Should the material which is replaced in the trench become too wet again, due to the fact that the Contractor made insufficient provision for the handling and removal of groundwater in accordance with Subclause 5.5 of SANS 1200 A, the Contractor shall replace the material at his own cost with material which is, in the opinion of the Employer's Agent, suitable.

When preparing his programme and construction methods, the Contractor shall make allowance for selective excavation and the handling and drying out of materials which is too wet for immediate use."

PSDB 4 PLANT

PSDB 4.1 Excavation equipment

Where it is required that the work is to be carried out using labour intensive methods, 4.1 shall read:

"Except that the Contractor may use the tools, equipment and plant specified for the classification of the material in the excavation of that material, the Contractor shall use only hand tools such as picks, shovels and sledgehammers".

PSDB 4.3 Compaction equipment

Where it is required that the work is to be carried out using labour intensive methods, 4.3 shall read:

"The Contractor shall use only hand tampers and hand-held pneumatic tampers to compact the material in the trench. He shall carry out his compaction in such a manner that the pipeline, duct or cable is not stressed or damaged. The material directly above the pipe, duct or cable shall not be compacted until sufficient backfill has been placed to ensure the loads transmitted to the top of the pipe, etc. are no greater than would be imposed by normal road traffic over a pipeline with cover of depth 600 mm".

PSDB 5 CONSTRUCTION

PSDB 5.1.2.2 Special water hazards

The Contractor shall take note that no special water hazards are designated. The Contractor shall therefore deal with all water as specified in 5.1.2.1, including flow into trenches due to a high or perched water table and any overland flow.

PSDB 5.1 PRECAUTIONS

PSDB 5.1.3 a) Sloping ground

DELETE THE SUBCLAUSE AND SUBSTITUTE WITH THE FOLLOWING:

"The Contractor shall be responsible throughout the duration of the Contract, inclusive of the Defects Liability Period, for the provision of all soil erosion preventative measures necessary to protect the trenches, pipeline(s) and land utilised by the Contractor during the Contract from any adverse effects of soil erosion, settlement, scour, etc., resulting from the construction of the Works.

Cross embankments, generally extending across the full width of the working strip, consisting of low earth mounds shaped to rounded form and so oriented as to have a fall of 1% along their length, shall be constructed with compacted material having a minimum density of 90% modified AASHTO density and minimum dimensions and maximum spacings dependent on the slope of the ground along the length of the pipeline, as indicated on the drawings.

Cross-embankments shall be constructed to the same minimum standards and dimensions indicated above wherever artificial slopes have been formed on the working strip or other areas used during construction and, with the approval of the Employer's Agent, are permitted to be so left.

Payment will be made for the construction of cross-embankments provided construction thereof has been either ordered or approved by the Employer's Agent prior to the commencement of such construction."

b) New Subclause under Subclause 5.1.2

ADD THE FOLLOWING NEW SUBCLAUSE TO SUBCLAUSE 5.1.2:

"5.1.2.4 Cross-walls in trenches.
In steeply sloping trenches at between 15 and 20% grade, or where erosion becomes evident on site, or where ordered by the Employer's Agent, the Contractor shall place sacks of earth as cross walls around and above the pipe up to ground level, prior to backfilling, as a soil erosion measure as indicated on the drawings.

Where required, an item will be included in the Bill of Quantities to cover the cost of the supply, installation and maintenance of sack breakers.

5.1.2.5 Concrete anchor blocks where gradient equals or exceeds 20%.
Where the grade of the pipe equals or exceeds 20% the Contractor shall provide concrete anchor blocks.

Where required, an item will be included in the Bill of Quantities to cover the cost of the supply, installation and maintenance of concrete anchor blocks, including the wrapping of the encased pipe portion with an approved tape wrapping such as Denso Ultraflex or similar approved."

c) Accommodation of traffic and access to properties

REPLACE THE SEMICOLON AND THE WORD "and" AT THE END OF SUBCLAUSE 5.1.3(a) WITH A FULL STOP AND REPLACE ITEM (b) WITH THE FOLLOWING:

"(b) Where necessary to achieve compliance by the Contractor with his obligations in terms of subclause C3.4.2.5(e) Scope of Works to provide and maintain pedestrian and vehicular access to properties affected by the works, the Contractor shall construct and maintain to the satisfaction of the Employer's Agent, such temporary access roads around, and/or steel or timber bridges over excavations in roads, pavements, entrances or accesses to properties.

Temporary pedestrian access bridges shall be at least 1,2 m wide and temporary access bridges for vehicles shall be at least 3,6 m wide. All temporary access bridges shall be fitted with handrails as well as protective mesh fencing on both sides.

On completion of the work, the Contractor shall dismantle and remove all such temporary constructions and reinstate these areas to their former condition.

Except only where the Employer's Agent has included in the Schedule of Quantities, particular payment items specifically therefor, the Contractor will not be paid directly for the construction and maintenance of temporary access roads and/or the provision and maintenance of bridges as aforementioned, and the costs thereof shall be deemed included in the Contractor's tendered rates for excavation."

ADD THE FOLLOWING NEW SUBCLAUSE TO SUBCLAUSE 5.1:

"PSDB 5.1.5 Removal of existing pipelines

Where existing pipes have to be removed, they shall be carefully opened up by machine excavation to 300 mm above the pipes after which the whole pipe shall be fully exposed by means of hand excavation. The excavation width shall comply with subclause 8.2.3.

The pipes shall be removed from the trench in a manner approved by the Employer's Agent and brought to the surface for inspection by the Employer's Agent.

Pipes that are declared suitable for reuse and pipes declared unfit for reuse shall be dealt with in an applicable manner described in the specifications, or on the Drawings or on the Employer's Agent's instructions, as relevant.

"PSDB 5.2 MINIMUM BASE WIDTHS

REPLACE PARAGRAPH (a) WITH THE FOLLOWING:

"Where two pipes are placed in the same trench, they shall be 300 mm apart and the specified side allowance shall still be applicable."

ADD THE FOLLOWING AFTER PARAGRAPH (b):

"The above is not applicable to trenches for subsurface drains.

Trenches for subsurface drains shall be excavated to the dimensions and gradients shown on the Drawings or directed by the Employer's Agent.

The specified width of trenches and the width of the excavation measured for payment shall not be less than 0,5 m, but the Contractor may reduce the actual width with the Employer's Agent's permission."

PSDB 5.4 EXCAVATION

Add the following:

"Except where otherwise specified, trenches shall be of such a depth that the minimum cover over the pipes shall be 750 mm, except at road-crossings, where the minimum cover shall be 1000 mm (see drawing 1005270-0000-DRG-CC-603).

No trench may be left open over the period 16 December to 8 January inclusive.

In the open veld the Contractor shall limit the length of trenches open, at any time, to a maximum of 300 m per pipelaying team or between fence crossings, whichever is the shorter. Similarly, the maximum length of open trenches within the villages shall be 100m.

Where trenches have to be excavated under this Contract adjacent to live services / other services laid under other contracts, it may be necessary to shore trenches to prevent damage to the live services / other services. It will be the responsibility of the Contractor to ensure that services constructed under other contracts of live services are not damaged by his operations during the Contract."

Should the Contractor detect areas where the cover is doubtful, he shall report this immediately in writing to the Employer's Agent, before any pipes are laid, so that remedial steps can be taken.

The Contractor shall exert maximum caution in excavating alongside or near existing services, pipelines, buildings or structures. The Contractor shall use non-explosive methods for the excavation of hard rock in these cases and where instructed by the Employer's Agent (see 5.2.2.5)."

PSDB 5.6 BACKFILL

PSDB 5.6.1 General

Replace the first sentence with the following:

"Backfilling of pipe trenches may only commence after the pipe has been laid, firmly bedded in the specified cradle, the blanket placed and compacted as specified and after the pipe has been tested in terms of Clause 7 of SANS 1200 L."

PSDB 5.6.2 Material for backfilling

Replace the last paragraph of this Clause "In areas……backfill" with the following:

"The material for backfilling in areas subject to road traffic loads shall comply with PSDB 3.5."

PSDB 5.6.3 Disposal of soft excavation material

Replace the words "unless otherwise required in the project specification." at the end of this Subclause with:

"or to spoil in accordance with the requirements of PSD 5.2.2.3 and Subclause 5.2.2.3 of SANS 1200 D, as instructed by the Employer's Agent."

PSDB 5.6.4 Disposal of intermediate and hard rock material

REPLACE THE LAST SECTION OF SUBCLAUSE 5.6.4 "…..disposed of as specified in 5.6.3 or removed to designated sites," WITH "….disposed of outside the site boundaries."

PSDB 5.6.6 Completion of backfilling

Add the following:

"If in the opinion of the Employer's Agent insufficient progress is being made with the backfilling of trenches, the Employer's Agent will be entitled to order than no further excavation takes place until the backfilling operation has caught up."

ADD THE FOLLOWING:

"PSDB 5.6.9 Backfilling around structures

Backfilling around a structure shall not be commenced before it has been approved by the Employer's Agent.

Granular material shall be used as backfill material around structures as shown on the drawings and shall be placed in layers not exceeding 150 mm compacted thickness, each layer being thoroughly compacted to 100% of modified AASHTO density as instructed by the Employer's Agent before the succeeding layer is placed. Unsuitable or surplus excavated material shall be spoiled off site."

ADD THE FOLLOWING NEW SUBCLAUSE UNDER SUBCLAUSE 5.6:

"PSDB 5.6.10 Selection and disposal of rockfill to erosion channels.

Where directed by the Employer's Agent, the Contractor shall select rockfill from surplus excavated material and dispose of the material at erosion channels identified by the Employer's Agent.

Rockfill shall be comprised of 40% to 50% by volume of rocks/boulders of size in the range of 0.02–0.50 m^3, with the remaining volume made up of material of smaller particle sizes of which at least 80% passes a 6mm sieve. The rockfill shall be thoroughly mixed before disposal.

The material shall be disposed of at the identified erosion channel sites, to the dimensions and levels confirmed by the Employer's Agent, and compacted."

PSDB 5.7 COMPACTION

PSDB 5.7.1 Areas not subject to Traffic Loads

Add the following sentence:

"All non-cohesive material shall be compacted to 100% of modified AASHTO maximum density."

Replace the heading and contents of subclause 5.7.2 with the following:

PSDB 5.7.2 Areas Subject to Traffic Loads:

In areas subject to traffic loads, trenches shall be backfilled from the top of the bedding to the extent scheduled below in layers of thickness not exceeding 150mm after compaction, and the material shall be compacted to 95% of modified AASHTO maximum density.

TRENCH DESCRIPTION	EXTENT OF BACKFILL
Trenches beneath roadways to be constructed under the contract	Up to designated level of underside of layerworks

PSDB 5.12 UNSTABLE TRENCH BOTTOM

The Employer's Agent may, upon consideration of the condition of the trench bottom, particularly with regard to the properties of the soil materials, order the use of a crushed stone layer in order to provide a stable platform for placing of the pipe bedding and laying the pipe in certain sections of the trenches. The stone layer shall consist of 19 mm single-sized crushed stone and shall have a specified thickness of 150 mm over the specified minimum base width.

Should the material in the trench bottom or the bedding material be of such a nature that it can penetrate the stone layer, the Employer's Agent may instruct the Contractor to enclose the stone layer completely within a

geotextile filter blanket which shall comply with the requirements of PSLB 3.6, and shall have overlaps of at least 200 mm.

PSDB 5.13 LENGTH OF OPEN TRENCH

No more than 300 m of trench per pipe-laying team may be open at any one time.

PSDB 5.14 DEPOSITING MATERIAL EXCAVATED FROM TRENCH

Unless otherwise ordered by the Employer's Agent, all excavated material shall be kept within 5 m of the pipeline centreline. The toe of the bank of excavated material shall be trimmed well back from the edge of the trench so as to leave a minimum 0,6 m clearance between the toe of the bank and the edge of the trench. The Contractor shall keep this strip clear of excavated material at all times.

The Contractor shall take steps to avoid burying or contaminating topsoil which shall be set aside for replacing, as far as practical, on the surface from which it was excavated.

PSDB 5.15 CLEANING UP AS WORK PROCEEDS

The Contractor shall complete all backfilling, trimming, levelling and cleaning up of the Site as work proceeds. This work shall not lag by more than 1 km behind the pipe-laying team."

PSDB 7 TESTING

The Contractor shall carry out density tests as specified in TMH1, in the positions indicated by the Employer's Agent, to determine the compaction of the backfill material in the trenches and the material used for reinstating the road construction layers. No single test result which is below the specified density, will be accepted.

In the case of trenches in areas subject to traffic loads, the Contractor shall, notwithstanding the terms of the second sentence of Subclause 7.1, bear the cost of all density tests carried out except as follows. Where the test results are equal to or exceed the specified density, the Employer will bear the cost of that number of those tests ordered by the Employer's Agent in excess of one test per 20 m^3 of compacted material, based on the total volume of backfill and reinstated road layers, including the replacement of any over-excavation, in areas subject to traffic loads.

The Contractor shall also bear the cost of those density tests, carried out by the Employer's Agent, of which the test results are below the specified density.

PSDB 8 MEASUREMENT AND PAYMENT

PSDB 8.1 BASIC PRINCIPLES

PSDB 8.1.1 Replace "along the route of the pipeline" in the third line of Clause 8.1.1 with "as specified in PSDB 5.6.3".

PSDB 8.1.2 ADD THE FOLLOWING:

"In the road prism or building platform the ground surface from which depth will be measured will always (irrespective of operation sequenced) be the road bed level at centre-line."

PSDB 8.2.3 REPLACE THE CONTENTS OF SUBCLAUSE 8.2.3 WITH THE FOLLOWING:

“Wherever volumetric measurement is required, the volume will be computed according to the depths indicated on the drawings, or to the bottom of the specified bedding cradle, whichever is the greater, and the width determined from the applicable side allowance (see drawing 1005270-0000-DRG-CC-603) plus the nominal width of the pipe. Side allowance shall be measured from the outside of the pipe. No allowance shall be made for the extra thickness of the collars or couplings.

The side allowance for ducts shall be 150 mm and there shall be 300 mm between a Telkom duct and any other duct/service placed in the same trench.

Where two or more pipes/ducts are to be placed in one trench, the specified base width shall be calculated as follows:

The trench width for the deeper service shall be calculated according to above specifications. The effective trench width for the shallower service shall then be the difference between its specified base width and the overlap with the trench of the deeper service.

The trench width for subsurface drains shall be as shown on the drawings.”

Replace the contents of subclause 8.2.4 with the following:

"No separate items will be measured for shoring. Refer to Item PSD 5.1.1.2 in this regard."

“PSDB 8.2.5* If payment in terms of PSA 8.8.4 has been made to expose an existing service and the excavation involved falls within a proposed trench, the quantity measured for trench excavation shall be reduced accordingly.”

PSDB 8.3 SCHEDULED ITEMS

PSDB 8.3.2 Excavation

(a) Excavate in all materials for trenches, backfill, compact and dispose of surplus material ..... Unit: m or m^3

Replace the first sentence with the following:

“Items will be provided for various trenches widths as specified and detailed on the Drawings and various depths in increments as specified in the Bill of Quantities.”

Add the following to Clause (a):

“The rate tendered shall also cover the cost of complying with PSDB 3.5, as well as the cost of any disruption or delay in complying with PSDB 5.4 and PSL 5.1.4.

ADD THE FOLLOWING AT THE END OF SUBCLAUSE 8.3.2(a):

“The Contractor will be allowed to claim the following percentages for interim payment purposes, as the following various activities are completed (Note that the percentage applicable is given as a cumulative figure):

Stage Achieved	Percentage applicable for interim payment
Material excavated	65.0%
Backfill completed and compaction successfully tested	90.0%
Surplus material removed and area finished	100.0%"

Delete Clause 8.3.2 (b)(1) as well as any reference to intermediate excavation in Clause (b). For the purpose of measurement and payment, excavation other than hard rock excavation will not be separately classified (refer PSDB 3.1).

Measurement and payment shall be in accordance with the provisions of 8.3.2(b) of SANS 1200 D (as amended)."
No payments will be made under subitems (1) and (2) in respect of any materials measured and paid for under subitem (3) below."

Add the following new sub-items in 8.3.2 (b):

"(3) Extra over 8.3.2a.and PSDB 8.3.2a for disposing of spoil material on a site provided by the Contractor .....Unit: m^3

The unit of measurement shall be the cubic metre, measured in accordance with Sub-clause 8.2 of SANS 1200 D, of surplus and/or unsuitable material disposed of, on the instruction of the Employer's Agent, at a spoil site or spoil sites provided by the Contractor.

The tendered rate shall include full compensation for the additional cost of providing a spoil site or other means of disposing of surplus spoil material, for transporting the material regardless of the distance involved, for acceptance charges for such material and for all other incidental costs to dispose of the spoil material.
(4) Backfill stabilised with 5% cement where directed by the Employer's Agent.....Unit : m^3

The unit of measurement shall be the cubic metre of backfill material, measured in place after compaction according to the authorised dimensions, which was stabilised on the Employer's Agent instructions in accordance with Sub-clause PSDB 3.5(c).

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing, backfilling and compacting the stabilised material to 90% of modified AASHTO density."

(5) Soilcrete backfill where directed by the Employer's Agent.....Unit : m^3

The unit of measurement shall be the cubic metre of soilcrete placed on the Employer's Agent instructions in accordance with Sub-clause PSDB 3.5(d), measured in place according to the authorised dimensions.

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing and placing the soilcrete as well as for the cost of shuttering if required."

"(6) Hand excavation where ordered by the Employer's Agent in:

i) Soft material Unit: m^3

ii) Hard material Unit: m^3

The unit of measurement shall be the cubic metre of material, measured in place according to the authorised dimensions, which was excavated by hand on the specific prior written instructions of the Employer's Agent;

provided always that the Employer's Agent's said instruction shall have stated that measurement and payment for such hand excavation will be in accordance with this item.

The tendered rate shall include full compensation for the additional cost, effort and time resulting from excavating in the respective materials using hand methods only.

The Employer's Agent shall not be obliged to authorise payment under this item in respect of any hand excavation carried out (whether ordered in writing or otherwise), which hand excavation was in any case necessary to achieve compliance by the Contractor with his obligations under the Contract to

- utilise construction appropriate to the nature of the specific parts of the works; and/or
- protect existing structures and/or services; and/or
- comply with all prevailing legislation and regulations.

Add the following subclauses after subclause 8.3.2(c):

"(d) Excavate in all materials for stormwater inlet and outlet structures and for manholes, catchpits, valve chambers and the like, irrespective of depth, and backfill around structures: Unit: m³

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised dimensions, and excluding the volume of material excavated and paid for under subitem (a).

The tendered rate shall include for the costs of excavating in all materials, backfilling, compacting, trimming and tidying the final surface around the structure, disposing of surplus and unsuitable materials within the free-haul distance and, where applicable, selecting and keeping separate, excavated material suitable for use as backfill.

(e) Excavate open drains in all materials Unit: m³

The tendered rates shall include full compensation for excavating in all materials within the dimensions specified or authorised by the Employer's Agent and to the specified lines and profiles, for the disposal of surplus and unsuitable excavated material where applicable, and in the case of item (d), for backfilling with suitable approved material compacted to 90% of modified AASHTO density around the structures.

(f) Extra over subitems (d) and (e) for excavating in:

(1) Hard rock material Unit: m³

Measurement and payment shall be in accordance with the provisions of 8.3.2(b) of SANS 1200 D (as amended)."

PSDB 8.3.3 Excavation ancillaries

PSDB 8.3.3.3 Compaction in road reserves

REPLACE THE HEADING OF SUBCLAUSE 8.3.3.3 WITH THE FOLLOWING:

" 8.3.3.3 Compaction in road crossings"

REPLACE THE SENTENCE, "The volume will be measured as specified in 8.2.2, 8.2.3 and 8.3.3.1", WITH THE FOLLOWING:

"To determine the volume in the case of gravel roads, the depth will be measured from the underside of the gravel wearing course to the top of the fill blanket, and in the case of bitumen roads, from the underside of the subbase to the top of the fill blanket.

The rest of the trench shall be backfilled as specified in clauses 5.9.3, 5.9.4 and 5.9.5, as applicable, and payment will be made under item 8.3.6.1."

PSDB 8.3.3.4 Overhaul

Replace the contents of this subclause with the following:

“Measurement and payment shall be in accordance with subclause PSD 5.2.5.”

PSDB 8.3.6 Finishing

PSDB 8.3.6.1 Reinstate road surfaces complete with all courses

ADD THE FOLLOWING:

“Where the trench crosses asphalt road surfaces, the rate shall include for neatly saw cutting the existing asphalt surfacing on all edges.”

PSDB 8.3.7 Accommodation of Traffic

Delete Subclause 8.3.7. The provisions of PSA 5.10 shall apply.

ADD THE FOLLOWING ITEMS TO SUBCLAUSE 8.3:

"PSDB 8.3.8 Removal of existing pipes

(a) Excavate in all materials to 300 mm above the pipelines Unit: m^3

The unit of measurement shall be the cubic metre of material excavated for the removal of pipelines in accordance with PSDB 5.11, measured in place according to the authorised dimensions. Depth shall be measured from the ground surface on the centreline of the pipeline to 300 mm above the pipe barrel.

The tendered rate shall include for excavating by any method in all materials and placing the excavated material alongside the trench.

(b) Excavate by hand to expose pipes Unit: m

The unit of measurement shall be the linear metre of pipeline finally exposed by hand excavation methods, measured in plan view along the centreline of the pipeline, irrespective of the class of pipe. Separate items will be scheduled for each different diameter of pipe. The pipe volume as well as the volume of all associated structures such as junction boxes, manholes, valve chambers and the like shall be excluded from the volume of excavation measured.

The tendered rates shall be in full and final compensation for excavating by hand methods from a depth of 300 mm above the pipe barrel in accordance with PSDB 5.11.2 to expose the pipe to its bottom, irrespective of the type or class of pipe, as well as for excavating by hand around junction boxes, manholes, valve chambers and the like.

(c) Remove pipes from trench and stack for inspection Unit: m

The unit of measurement shall be the linear metre of each type and diameter of pipe removed from the trench in accordance with subclause 5.11, measured in plan view along the centreline of the pipeline, without deduction for specials, junction boxes, manholes, valve chambers and the like as may be encountered. Separate items shall be scheduled for each different class and diameter of pipe.

The tendered rates shall be fully inclusive for uncoupling the individual pipes and specials, all additional excavation as may be necessary to facilitate the insertion of lifting slings or the utilisation of other lifting equipment, the provision and utilisation of all such lifting equipment as may be necessary (e.g. cranes), for lifting the pipes and specials out of the trench, cleaning and stacking them along the side of the trench for inspection, attending during the Employer's Agent's inspection and recording the Employer's Agent's decisions on each pipe/special. The tendered rate shall further include for the demolition and removal from the trench of all associated pipeline structures as may be encountered, such as junction boxes, inlet and outlet structures, valve chambers, anchor blocks and the like, and the loading and removal of the debris to spoil.

(d) Deliver pipes and specials declared reusable

(i) Pipes Unit: m

The unit of measurement shall be the linear metre of pipe declared reusable by the Employer's Agent and delivered to the address specified in subclause PSDB 5.11. Separate items will be scheduled for each different type and class of pipe.

The tendered rates shall be fully inclusive for loading the pipes at the side of the trench, transporting to and off-loading at the location specified in PSDB 5.11, and carefully stacking separately according to the type, class and diameter of the pipes.

(ii) Specials Unit: number

The unit of measurement shall be the number of specials declared reusable by the Employer's Agent in accordance with subclause PSDB 5.11 above, irrespective of the type or diameter of the special, delivered to the address specified in subclause PSDB 5.11.

The tendered rate shall be fully inclusive for loading the specials at the side of the trench, transporting to and off-loading at the location specified in PSDB 5.11, and carefully stacking separately according to the type, class and diameter of the specials.

(e) Dispose of pipes and specials unsuitable for reuse

(i) Pipes Unit: m

The unit of measurement shall be the linear metre of pipe declared by the Employer's Agent to be unsuitable for reuse and disposed of by the Contractor in accordance with the requirements of PSDB 5.11.5. Separate items will be scheduled for different types and diameters of pipe.

The tendered rates shall be fully inclusive for loading the pipes at the side of the trench, transporting to and off-loading at the spoil site and dealing with them as specified in PSDB 5.11.5.

(ii) Specials Unit: number

The unit of measurement shall be the number of specials declared by the Employer's Agent to be unsuitable for reuse and disposed of by the Contractor in accordance with the requirements of PSDB 5.11.5. Separate items will be scheduled for different types of special.

The tendered rate shall include for loading the specials at the side of the trench transporting them to and off-loading them at the spoil site and dealing with them as specified in PSDB 5.11.5.

(f) Backfill and compact trench Unit: m^3

The unit of measurement shall be the cubic metre of compacted fill, measured tight according to the authorised dimensions of the trench.

The tendered rate shall be fully inclusive for placing excavated material in the trench and compacting in accordance with subclauses SANS 1200 DB 5.6 and 5.7 (as amended).

(g) Make up deficiency in backfill material Unit: m^3

The unit of measurement shall be the cubic metre of backfill obtained from sources other than the trench excavated for the purposes of removing the pipeline in order to make up any deficiencies in backfill material resulting from the volume previously occupied by the pipeline.

Except that the volume shall be determined as the external volume of the pipes removed together with the external volume of all ancillary structures removed along the pipeline, measurement and payment shall be in accordance with 8.3.3.1 of SANS 1200 DB.

PSDB 8.3.9 Provision of temporary bridges for maintaining access to Properties

(a) Temporary pedestrian bridges Unit: No

(b) Temporary vehicular bridges Unit: No

The unit of measurement shall be the number of temporary pedestrian and vehicular bridges actually provided in accordance with the Specifications.

The tendered rates shall include full compensation for the supply, first installation, maintenance and final dismantling and removal of the temporary access bridges when no longer required, as specified in subclause PSDB 5.1.3.

PSDB 8.3.10 Moving of temporary bridges to and their re-erection in new positions

(a) Temporary pedestrian bridges Unit: No

(b) Temporary vehicular bridges Unit: No

The unit of measurement shall be the number of times each temporary bridge is moved to and re-erected in an entirely new position, excluding its first erection in the position where it was originally installed. No payment shall be made without the Employer's Agent's prior approval for moving and re-erecting a temporary bridge.

The tendered rates shall include full compensation for taking down, transporting, handling, re-erecting and maintaining the temporary bridges in the new positions."

PSDB 8.3.11 Slope Stabilisation

(a) Cross embankments Unit: m^3

(b) Cross Walls Unit: m^3

(c) Concrete anchor blocks Unit: m^3

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised or actual dimensions, whichever is the lesser.

The tendered rates shall include full compensation for slope stabilisation as specified on drawings or authorised by the Employer's Agent. The rate shall include all material, labour, transporting and plant required.

PSDK GABIONS AND PITCHING

PSDK 3 MATERIALS

PSDK 3.1.2 Gabion cages

Gabions boxes shall be constructed of double twisted, hexagonal wire mesh of nominal 80 mm mesh, with 4,4 mm o/d frame wire and 3,7 mm o/d mesh wire complete with partition at 1 m centres.

All wire shall be mild steel to SANS 1580 - 1993, zinc coated by hot dip galvanizing to SANS 675 - 1993.

Gabions Mattresses shall be constructed of double twisted, hexagonal wire mesh of nominal 80 mm mesh, with 4,0 mm o/d frame wire and 3,5 mm o/d mesh wire complete with partition at 1 m centres.

All wire shall be mild steel to SANS 1580 - 2001, zinc coated by hot dip galvanizing to SANS 675 1997.

PSDK 3.1.3 Geotextile

In addition to the requirements of Subclause 3.1.3, the geotextile shall have a mass of at least 150 g/m² and a strength of at least 9,0 kN/m in all directions.

PSDK 3.2 PITCHING

PSDK 3.2.1 Stone

Replace the contents of Table 2 with the following:

TABLE 2: SIZE AND MASS OF INDIVIDUAL STONES FOR PITCHING

1	2	3	4
Size/mass of pitching	Thickness of pitching mm, min	Least dimension mm, min	Mass kg, min
Extra heavy	600	300	180
Heavy	400	190	50
Medium	300	150	27
Light	200	110	11

PSDK 5 CONSTRUCTION

PSDK 5.3.1 General

Notwithstanding the provisions of this Clause the excavation footing trench shall be backfilled with class 20/19 concrete to the proposed top level of the pitching.

PSDK 5.3.2 Grouted pitching

Add the following:

“The exposed stone surfaces shall be cleaned of excess mortar within 1 day of being grouted.”

PSDK 5.3.3 Grouted pitching

Replace the words "(Table 4)" in the second line of the first paragraph with "(Table 2)".

PSDK 8 MEASUREMENT AND PAYMENT

PSDK 8.2 SCHEDULED ITEMS

Replace the heading and contents of Clause 8.2.1 with the following:

"PSDK 8.2.1 Surface preparation for bedding of gabions and pitching ..... Unit: m^2

The rate tendered shall cover the cost of all labour, plant and equipment required to effect minor trimming and shaping as well as compact any loose material to leave a firm flat surface, ready for bedding the gabion cages, mattresses and pitching."

PSDK 8.2.5 Pitching

Notwithstanding the provisions of this Clause the excavation and backfill of footing trenches will be measured for payment under PSDK 8.2.8.

PSDK 8.2.8* Excavation and concrete backfill of footing trenches for pitching ..... Unit: m^3

The rates tendered shall cover the cost of excavating footing trenches over the lengths, widths and depths ordered as if in soft material, trimming trenches, compacting inverts, class 20/19 concrete backfill, as well as the cost of loading, transporting within a free haul distance of 0,5 km and disposal of excavation material as directed.

The volume will be computed from the dimensions ordered. No payment will be made for over-excavation or resultant additional concrete backfill."

PSG CONCRETE (STRUCTURAL)

PSG 2 INTERPRETATIONS

a) General

ADD THE FOLLOWING:

"Construction joint.
A joint required on account of constraints or convenience in the method of construction and that is not a movement, contraction or expansion joint.

Extender:
Material which, when placed with Portland Cement, has a cementing property and is used as a portion of the cement in a concrete mix for economic reasons or for the chemical or physical properties (or both) that it gives to the concrete mix.

Cementitious binder (also referred to as binder):
Common cement that complies with the requirements of SANS 50197-1, and blends of certain types of common cement and cement extenders that comply with the requirements of SANS 55167-1 (2011), SANS 50450-1&2 (2011), SANS 53263-1&2 (2011) and SANS 50934-2&6 (2011) as applicable.

Water/cement ratio:
Ratio (by mass) of the water to the cementitious binder in a concrete mix.

Immediate protection of concrete:
The prevention of moisture loss from the concrete from the time of compaction until full wet-curing is possible"

PSG 2.4 EXPLANATION OF TERMS

PSG 2.4.1 Exposure Conditions

All concrete on the Works shall be as specified for severe exposure condition.

PSG 2.4.2 Joints

Notwithstanding Subclause 2.4.3, "designated joints" will only be joints that are shown on the drawings. Any other joints that are required by the Contractor as a result of his construction constraints or for any other reason, whether approved by the Employer's Agent or not, will not be considered to be designated joints as defined in Subclause 2.4.3, i.e. they will be considered to be "non-designated" joints.

PSG 3 MATERIALS

PSG 3.2 CEMENT

PSG 3.2.1 Applicable Specifications

Replace the contents of this subclause with the following:

"Subject to the provisions of 3.2.2, cement shall comply with the requirements of SANS 50197-1 for CEM I 42, 5 or CEM I 52.5."

PSG 3.2.2 Alternative types of cement

Replace the contents of this subclause with the following:

"Only CEM I 52.5 or CEM I 42.5 (Portland Cements), CEM II A 52.5 or CEM II A 42.5 in accordance with SANS 50197-1 may be used. Further blending with a suitable extender shall be as per PSG5.5.1.7 and PSG 5.5.11.

If the Contractor wishes to use any other type/blend of cement, he shall obtain the Employer's Agent's prior written approval. The tendered rates, however, shall be based on the use of the above-mentioned cements/blends only.
The test results conducted to evaluate the conformity of cement in terms of SANS 50197-1, Clause 9, shall be made available to the Employer's Agent at least 28 days before the materials are used for concrete."

PSG 3.2.3 Storage of cement

Add the following:

"Cementitious binder shall be used in the order in which it is received. Cementitious binder shall not be stored for longer than 10 weeks without the Employer's Agent's permission."

PSG 3.4 AGGREGATES

PSG 3.4.3 Storage of aggregates

Add the following:

"When aggregates of different chloride content are stored on the Site, their use in the various classes of concrete shall be strictly controlled."

"PSG 3.4.5* Aggregate for grouting

Notwithstanding the requirements of Subclause 3.4.1, the grading of the fine aggregate (sand) and coarse aggregate (stone or pea gravel) to be used for grouting shall conform to the gradings given in Tables 1 and 2 respectively, below.

TABLE 1 – SAND	
Test sieve nominal aperture size, mm	% Passing (by mass)
9,5	100
4,75	95 - 100
1,18	45 - 65
0,3	5 - 15
0,15	0 - 5

TABLE 2 - STONE OR PEA GRAVEL	
Test sieve nominal aperture size, mm	% Passing (by mass)
9,5	100
4,74	95 - 100
2,36	0 - 5

"PSG 3.4.6* Samples

At least one month before commencement of concrete work the Contractor shall supply at his own cost representative samples to the Employer's Agent of the aggregates he intends using, together with

certificates from an approved laboratory indicating that the aggregates comply with the specifications. Approximately 50 kg of each sample of aggregate shall be supplied.

After approval these samples shall be taken as standard for the agreed aggregates to be used in the Works. If at any time during the course of the Contract the Employer's Agent considers that there has been any deviation from the approved standard the Contractor shall submit further tested samples of material to the Employer's Agent for approval."

"PSG 3.9* ROOFING FELT

Three-ply roofing felt shall comply with the requirements of SANS 92 for type 40 felt."

"PSG 3.10* WATERSTOPS

"Waterstops shall be of approved manufacture and of the pattern and the material widths scheduled on the drawings. They shall conform to Specifications CKS 388.

All intersections between waterstops shall be prepared by mitring and welding/vulcanising intersection pieces in the factory in accordance with the manufacturer's instructions and to approval of the Employer's Agent. Only straight lengths of waterstop may be field welded, using appropriate jigs and tools.

Where required, waterstops shall have eyelets so that they may be tied securely to the adjacent reinforcement. "Rearguard"-type waterstops shall have flanges or cleats that grip effectively. Where the Contractor proposes alternative products/brands, the widths, profiles, flanges and cleats shall be similar to the specified products and are subject to the approval of the Employer's Agent."

"PSG 3.11* CURING COMPOUND

Curing compound shall be white pigmented natural resin based liquid curing compound complying with ASTM 309-74. Curing compounds shall be suitable for use with potable water"

"PSG 3.12* STAINLESS STEEL

The following grades of stainless steel shall be used:

316L for welded applications,
316 for not-welded applications."

"PSG 3.13* BOND BREAKER

The bond breaker between the top of the blinding layer or dry packed mortar screed and the underside of the floor slab shall be 250-micrometre polythene sheet complying with SANS 952, Type D."

"PSG 3.14* MATERIALS FOR BUILDING WORK

PSG 3.14.1 <u>Cement</u>

The requirements stipulated for subclause 3.2.1 and PSG 3.2.1 shall apply.

PSG 3.14.2 <u>Sand</u>

Sand for mortar shall comply with SANS 1090.

PSG 3.14.3 Bricks

Brickwork shall be built in stretcher bond. The walls shall be built to the dimensions shown on the Drawings or ordered. All bricks shall be well soaked in water immediately before being laid and the previous course of bricks shall be well wetted before the laying of the following course.

Walls shall be carried up regularly so that no brickwork is more than 1m higher than adjoining brickwork.

All bricks shall comply with SANS 227 and shall be NFX burnt clay masonry units free of stones, cracks and other defects. The bricks shall be obtained from an approved manufacturer and samples of the bricks shall be submitted to the Employer's Agent for approval.

PSG 3.14.4 Mortar

Mortar shall comprise of the cement, lime and sand mixed in the proportions given below:

Cement: 50 kg
Lime: 0 – 40L
Sand: 130L (measured loose and damp)"

PSG 3.15 ALKALI-AGGREGATE REACTION

Reference is made to "Fulton's Concrete Technology, Chapter 10, Alkali-silica reaction."

In accordance with this reference, the Contractor shall provide the Employer's Agent with the following (with the concrete mix design submission):

- Type of coarse aggregate
- Source of coarse aggregate
- Recent SANS 6245:2006 test results (accelerated mortar prism method) for the coarse aggregate
- Certificates from cement (and extender) supplier stating the certified active alkali content(s)
- Total active alkali content of the various mix designs, adhering to the maximum values stated below (including calculations)

Result of SANS 6245 Coarse aggregate test (@12 days)	**Description**	**Limit on total active alkali content of mix (kg/m^3)**
Linear Expansion < 0.10%	Aggregate innocuous	N/A
0.10% < Linear Expansion < 0.20%	Slowly reactive/ inconclusive	2.8
Linear expansion > 0.20%	Deleteriously reactive, rapidly expansive	2.1

Over and above the table above, aggregates of the witwatersrand supergroup shall have a limit of 2.0kg/m3 active alkalis in the mix design.

The Employer's Agent may instruct a petrographic analysis of the coarse aggregate for new/unknown coarse aggregates in addition to the tests above.

All costs of the testing described above shall be deemed included in the cost of the rates for concrete.

Note: The equivalent sodium oxide content is measured as $Na_2O + 0.658K_2O$. For cement it is expressed as a percentage by mass, for concrete it is expressed in kg/m^3."

PSG 4 PLANT

PSG 4.1 GENERAL

Add the following subclause:

"PSG 4.1.1 Minimum Plant

The Contractor shall have the following minimum Plant available and in sound working order:

(a) Two concrete mixers, each of sufficient capacity to complete a section of the wall between horizontal construction joints within 4 hours and without interruption.

(b) Two weigh-batchers to supply the mixers.

(c) Four concrete vibrators, at least one of which shall be powered by an internal combustion engine.

(d) One air compressor.

(e) Suitable and adequate Plant to transport and raise concrete and other material and equipment from ground level to the top of the structure at all stages of construction.

(f) Elevated storage tanks of adequate capacity to ensure that sufficient water will be available before commencement of every major concrete-placing operation.

If the Plant used for placing concrete for the structure is electrically or mechanically powered, the Contractor shall also provide some other approved, non-electrically-powered standby means for placing concrete at an adequate rate in the event of a power or mechanical failure of the main Plant.

When the Contractor elects to place a crane inside the walls of the structure during the construction period, he shall communicate with the Employer's Agent in good time to ensure that the design and layout of the panels that form the roof slab and floor allow for such positioning of the crane. When sections of the roof and floor have to be redesigned to accommodate the crane, the redesign cost shall be borne by the Contractor."

PSG 4.5 FORMWORK

PSG 4.5.1 Design

Add the following:

"All formwork or scaffolding (referred from here on as temporary works) required for any part of the Works shall be designed by the Contractor. In accordance with the Construction Regulations under Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), the Contractor shall appoint a competent person to design, inspect and approve the erected temporary works on site. Evidence of each of these processes through sign-off of the designs, inspections and approval of erection shall be submitted to the Employer's Agent throughout the project.

Before commencing with the erection of any temporary works, the design shall be submitted to the Employer's Agent for review and record-keeping. The Employer's Agent will not be responsible for approving temporary works since this remains the responsibility of the Contractor (via the appointment of a competent person). The Employer's Agent will however have the authority to order alterations to the design or sizes of any part of the

temporary works. The Contractor shall check the safety and suitability of all alterations proposed by the Employer's Agent to ensure that all temporary works is safe and proper for the execution of the Works. The fact that the Employer's Agent has altered any part of the temporary works shall not be construed as relieving the Contractor of his responsibility with regard to the strength and stability of the temporary works."

PSG 4.5.2 Finish

Add the following:

"The finish to all exposed concrete shall be smooth and that to buried or backfilled surfaces rough."

PSG 4.5.3 Ties

Add the following:

"No plugs, bolts, ties or clamps of any description used to hold the formwork will be allowed to project into or through the concrete unless expressly approved by the Employer's Agent.

Only approved tie-rods consisting of solid rods (that remain embedded in the concrete) and with removable ends shall be used to hold the formwork of the walls. The removable tie-rod ends shall facilitate removal without damage to the concrete, and no permanently embedded parts of such tie-rods shall have less than 50 mm of cover to the finished concrete surface.

Alternative tie methods other than above may be proposed but must be qualified in the tender and will be subject to the Employer's Agent's approval.

The cavities left in the concrete when the tie-rod end cones are removed shall be soundly caulked with a cement mortar to which an approved shrinkage-reducing agent has been added and shall be neatly finished to a smooth surface uniform with that of the surrounding concrete.

The cost of supplying special tie-rods as well as the filling of cavities left by the tie-rod cones shall be included in the rates tendered for formwork under the appropriate pay items.

On no account shall formwork be secured to reinforcing bars."

PSG 5 CONSTRUCTION

PSG 5.1 REINFORCEMENT

PSG 5.1.2 Fixing

Add the following:

"The Employer's Agent shall only inspect the reinforcing after it has been fixed in place, the formwork cleaned, cover blocks positioned and tied, before concreting commences.

Welding of reinforcing steel will not be permitted."

PSG 5.1.3 Cover

Add the following:

"The distance between pipes in the concrete and the reinforcing steel shall nowhere be less than

(a) 40 mm or

(b) 5 mm plus the maximum size of the coarse aggregate or,

(c) the cover as specified on the Drawings, whichever is the greater."

PSG 5.2 FORMWORK

PSG 5.2.1 Classification of finishes

(b) Smooth

Add the following:

"This finish is obtained by first giving the surface a smooth finish with the joints between formwork panels forming an approved regular pattern suitable for the appearance of the structure. All projections shall then be removed, irregularities repaired, and the surface rubbed or otherwise treated until it is smooth with an even texture, appearance and colour.

If the finish of exposed surfaces does not comply with the requirements for uniformity of the texture and appearance, the Contractor shall, when instructed to do so by the Employer's Agent, rub down the exposed surfaces of the entire structure or any part thereof as specified below, entirely at his own cost. All repairs must be completed before the rubbing commences.

The surface shall be saturated with water for at least one hour. The initial rubbing of the face shall be carried out with a medium coarse carborundum stone together with a small amount of mortar of the same cement/sand ratio as the concrete being repaired. Rubbing shall continue until all form marks, projections and irregularities have been removed and a uniform surface has been obtained. The paste produced by the rubbing shall be kept in place. The final rubbing shall be carried out with a fine carborundum stone and water. This rubbing shall continue until the entire surface has a smooth, even texture and is uniform in colour. The surface shall subsequently be washed with a brush to remove surplus paste and powder."

PSG 5.2.2 Preparation for formwork

Add the following:

"Construction joints shall be positioned as shown on the Drawings."

PSG 5.2.5 Removal of formwork

Replace Table 2 with the following table*:*

1	2	3	4	5	6	7	8	9	10
Formwork to Structural Member	Strength Class of Cement								
	CEM-1			CEM-II-A (or blend of CEM-I with **less** than 20% FA/GGCS /GGBS)			CEM-II-B, CEM-III (or blend of CEM-I and **more** than 20% FA/GGCS /GGBS)		
	Minimum time (24 hour periods) before removal of formwork								
	Weather								
	Hot or Normal	Cool	Cold	Hot or Normal	Cool	Cold	Hot or Normal	Cool	Cold
Beam sides, walls and unloaded columns	1	1.25	1.5	1.5	2	3	3	4	5
Slabs with props left underneath	2	3	4	4	5.5	7	6	8	10
Beam soffits with props left underneath and ribs with a ribbed floor construction	3	4	5	5	7	10	10	13.5	17
Slab props including cantilevers	5	7	9	10	13.5	17	10	13.5	17
Beam props including cantilevers	7	9.5	12	14	17.5	21	14	17.5	21

Add the following subclauses:

"PSG 5.2.5.6

The Contractor shall make provision for the continued support of beams and slabs while the formwork is being removed and/or for back propping of beams and slabs.

Where walls/beams have top slabs attached, the Contractor shall keep the wall/beam propped until such a time as the top slab has attained its design strength. Back-propping of such structures shall be discussed and agreed with the Employer's Agent at the time of programme approval."

PSG 5.3 HOLES, CHASES AND FIXING BLOCKS

Add the following:

"Cover blocks shall be made of mortar to achieve a strength class (and equivalent durability) of the concrete of the element they are placed in. Cover blocks for reinforcing and fixtures may be placed into the concrete provided that neither the strength nor any other desirable characteristic (such as the appearance) of the concrete section is affected or impaired in the opinion of the Employer's Agent.

The holes or cavities left by ferrule cones in the concrete of water-retaining structures shall be filled with an approved non-shrink grout applied strictly in accordance with the manufacturer's specifications."

PSG 5.4 PIPES AND CONDUITS

Add the following:

"All pipes passing through concrete floors, walls or slabs shall be cast into the concrete member simultaneously with the casting of the member. Openings for pipes shall only be left in concrete members when so directed by the Employer's Agent or when shown on the Drawings. Pipes shall be installed in such openings according to the details shown on the Drawings.

If water tightness is a requirement where pipes are cast into walls, floors and slabs, the Contractor shall ensure watertightness where smooth-surfaced pipes are used by using an approved method.

The cost of such method will be deemed to be included in the rates tendered for items PSG 8.9.

Openings left for pipes shall be filled with approved non-shrink grout or micro-concrete."

PSG 5.5 CONCRETE

PSG 5.5.1 Quality

PSG 5.5.1.5 Durability

Delete Table 5

Add the following:

"The exposure conditions of the water-tight concrete are classified as **"severe"**.

The maximum allowable water : binder ratio for watertight concrete shall be **0.50**.

The maximum water : binder ratio for strength concrete shall be **0.60**."

PSG 5.5.1.7 Strength concrete

Add the following:

"The concrete mixes shall be designed by an approved laboratory.

Design

The proportions of the various sizes of aggregate, cement and water shall be such as to produce a dense concrete of adequate workability for the particular circumstances under which the concrete will be transported, placed and compacted. Approved plasticising additives may be used, or instructed to be used by the Employer's Agent, to ensure adequate workability in preference to varying the proportions of water or cement.

All exposed concrete shall be of the same colour. No change in materials or processes shall be made without the Contractor first satisfying the Employer's Agent that no change in colour will result.

Trial mixes

"Whenever "Designed Mixes" are required by the Schedules of Quantities or Drawings, after approval of the aggregates the Contractor shall design for each class of concrete required for the Works, have trial mixes designed within the limits specified herein for 28 day and 7 day strengths and he shall have cubes made and

tested by an approved laboratory at his own expense. The test results of cubes made from trial mixes shall be used to determine the proportions for the "Designed Mixes" to be used in the Works.

Details of the mixes as designed shall in all cases be submitted to the Employer's Agent for approval, 30 days before concreting is carried out and no concrete shall be placed in structures before such approval in writing has been obtained. The proportions of cement, aggregates and water for each mix as approved shall not be changed except with approval of the Employer's Agent.

The Employer's Agent must receive for any particular concrete mix:

- Proportions of each design tested
- Strength of each cube tested
- Density of each cube tested
- The Contractor's nomination of the design he proposes."

PSG 5.5.3 Mixing

PSG 5.5.3.2 Ready-mixed concrete

Add the following:

"Ready-mixed concrete may be used.

Should the Contractor elect to use ready-mixed concrete in the Works he shall provide a qualified technical assistant who shall check the quality of the materials used, the accuracy and effectiveness of the water gauges and all relevant parts of the batching and mixing equipment, the moisture content of the aggregates, the quantities batched, the time of departure of each batch and all other matters which may affect the quality of timely arrival of the concrete.

The technical assistant shall commence work at the batching plant sufficiently in advance of the batching of the first mix to carry out all the required checks and shall remain at the plant throughout the period in which concrete for the Works is being batched.

The technical assistant shall maintain a continuous record of all the tests and checks carried out by him. The record shall be available for the Employer's Agent's inspection at all times and a copy of the record for each day shall be given to the Employer's Agent the following morning.

The Contractor shall further take samples for testing from every load delivered to the Site."

PSG 5.5.5 Placing

Add the following:

"Concreting of the wall between horizontal construction joints shall be carried out in both directions from a point on the wall in order to close the gap with fresh concrete.

Pumping of concrete shall not be permitted unless approved by the Employer's Agent. For such approval, the Employer's Agent may require shrinkage tests of the concrete to meet the criteria in PSG 5.5.11. The rates for concrete will be deemed to include such testing costs.

Should excessive cracking of pumped-concrete occur, the Employer's Agent may instruct the Contractor to revert to conventionally placed concrete. All costs associated with changes in mix design, site placing equipment, and any remedial repairs to concrete will be at the Contractor's expense."

PSG 5.5.6 Compaction

Delete "or (if approved)…. by spading, rodding or forking" in the first sentence of subclause 5.5.6.3.

PSG 5.5.7 Construction joints

Add the following:

"Horizontal construction joints are permitted in structure walls in positions indicated on the drawings or approved by the Employer's Agent. Vertical construction joints in the walls are subject to the written approval of the Employer's Agent and the cost of all such vertical or horizontal construction joints will be deemed to be included in the rates for cast in situ concrete. This also applies to the preparation of concrete to form construction joints in flume walls as specified on the drawings.

The construction joints in water-retaining structures shall be made strictly in accordance with the details shown on the drawings. The joints between screeds and concrete floors shall be regarded as construction joints and the surface of the floor shall be prepared as described for construction joints.

Should the Contractor's method of construction necessitate the placing of a construction or other joint in a position not shown on the drawings, such method of construction and position of the joint shall be approved by the Employer's Agent in writing. The cost of such joint shall be included in the tendered rates and shall include scrabbling of the concrete where steel reinforcement is continuous.

The walls shall be cast in lifts of a height that permits each lift to be poured without interruption in one continuous operation during normal working hours.

It is the Contractor's responsibility to ensure that construction joints are watertight. The Contractor's proposed method for ensuring the watertightness of such joints shall be submitted to the Employer's Agent for his approval.

For construction joints at kickers all additional costs for concrete, preparation, etc will be deemed to be included in the rates tendered for formwork and concrete in walls or sides and kicker joints or construction joints will not be measured separately. Kickers shall be cast monolithically with the floor/slab concrete and the Contractor shall ensure that kickers are thoroughly compacted, immediately protected, and cured using suitable techniques."

PSG 5.5.8 Curing and protection

Add the following:

"Curing shall be conducted for a minimum of 7 days. The method of curing shall be approved by the Employer's Agent for the various elements.

Concrete will not be paid for unless properly cured (including vigorous immediate protection) and proof of curing is continuously visible on Site. The cost of immediate protection and curing shall be deemed to be included in the rates for concrete.

The Contractor is to pay special attention to both the immediate protection and long-term curing of the concrete for the various elements. Where deemed necessary by the Employer's Agent, the Contractor shall submit a Method Statement for approval outlining in detail the various measures that the Contractor will need to undertake to ensure effective immediate protection and long-term curing of the concrete.

Curing compounds will not be accepted as a stand-alone system for the immediate protection of concrete. Only resin-based curing compounds complying with ASTM C309 Type 1 or 2 Class B will be accepted where approved by the Employer's Agent.

Where accepted, the curing compound shall be applied within 30 minutes of the stripping of formwork or, in the case of unformed surfaces, after a minimum of 48 hours of immediate protection. It shall preferably be applied by spraying and the rate of application shall be strictly in accordance with the manufacturer's recommendations. A method of monitoring the area to which curing compound has been applied and the application rate shall be as approved by the Employer's Agent and rigidly applied by the Contractor.

Surfaces of joint rebates, where elastomeric sealant is to be applied, shall be protected from contamination by curing compound by the use of masking tape."

PSG 5.5.10 Concrete surfaces

All unformed concrete surfaces shall, except where otherwise ordered, be given a steel float finish.

Add the following subclause:

"5.5.10.4 Where the surfaces of the concrete are to be additionally hardened or protected the positions of such surfaces and the method to be used will be shown on the Drawings and will be scheduled. Materials or products with a ferrous content will not be allowed.

PSG 5.5.11 Watertight concrete

Add the following:

"The mix designs for watertight concrete must be aimed at ensuring concrete durability and must therefore be guided by the need to:

- Minimise the permeability of the concrete; and
- Maximise the chemical resistance of the concrete to aggressive agents in the environment.
- Reduce the heat of hydration and thermal gradient of thick sections (greater than 400mm thick) at early-age.

The following parameters shall be adhered to:

Parameter	**Limit**
Maximum shrinkage strain (accelerated shrinkage test):	350 µm/m
Maximum water : binder ratio:	See PSG 5.5.1.5
Minimum cementitious binder content:	300kg/m^3
Maximum cementitious binder content:	380kg/m^3
Maximum water content:	185 litres/m^3
Maximum alkali content:	See PSG 3.15
Maximum thermal coefficient of expansion for concrete:	$12x10^{-6}$/°C
Minimum coarse aggregate fraction (as a percentage of total (coarse + fine) aggregates):	0.55

Type of extender required:	Ground Granulated Blast Furnace Slag (GGBS) *OR* Fly Ash (FA)
Minimum and maximum range of extender replacement (as a percentage of total binder content)	30% - 50% (GGBS) 20% - 30% (FA)

Where extenders specified may not be locally available, the Contractor should take into account all the costs required to import and batch the specified extender in the rates for concrete (Item PSG8.4.3).

The following structures shall be considered water retaining/excluding and shall require watertight concrete:

- All reservoirs (including columns and roofs) and reinforced concrete valve-chambers

Where extenders are used/specified, Table 2 (as amended) shall apply, and the immediate protection during casting and the curing of concrete should be given special attention by the Contractor."

Add the following subclauses:

"PSG 5.5.16 Applied loads

No crushed-stone covering or any other loads shall be placed on the roof of the structure before the concrete has attained its design strength, unless approved supports are provided."

PSG 5.5.17 Pipes and conduits

All pipes passing through concrete floors, walls or slabs shall be cast into the concrete member simultaneously with the casting of the member. Openings for pipes shall only be left in the concrete members when so directed by the Employer's Agent or when shown on the Drawings. Pipes shall be installed in such openings according to the details shown on the Drawings.

If watertightness is a requirement where pipes are cast into walls, floors and slabs, the Contractor shall ensure watertightness where smooth-surfaced pipes are used by using an approved method prior to casting in. The cost of such method will be deemed to be included in the rates tendered for item PSG 8.9.

PSG 5.5.18 Soilcrete

Where soilcrete is specified for filling, the soilcrete shall comply with the requirements of subclause PSDB 3.5 (d) of SANS 1200 DB and shall be placed as specified in the subclause.

PSG 5.5.19 Brickwork

Brickwork shall be carried out as specified for manholes in subclause 5.6.4 of SANS 1200 LD using bricks conforming to the requirements for bricks as per subclause 3.5.1 of SANS 1200 LD.

Brickwork shall be built in stretcher bond to the dimensions shown on the Drawings. All bricks shall be well soaked in water immediately before being laid and the previous course of bricks shall be well wetted before the laying of the following course.

PSG 5.5.20 Plasterwork

Plasterwork shall consist of a single coat, comprising one application of a 1 : 4 cement : sand mixture with a wood float finish. The thickness of the plaster shall be between 13 and 20 mm. All plaster shall be finished smooth, shall be plumb and corners shall be rounded and square.

PSG 5.5.21 Granolithic screed/benching

Granolithic concrete shall consist of 1 part of cement, 1,5 parts of sand and 3 parts of 9,5 mm maximum size aggregate by volume. In all other respects it shall comply with the specifications clauses for concrete.

The contact surface of the base concrete shall comply with the requirements for a Degree of Accuracy II finish.

Immediately before placing the granolithic concrete, the base concrete shall be thoroughly cleaned by scrubbing, all the standing water then removed, and a 1:3 cement mortar grout of thick cream consistency well brushed into the prepared surface, the granolithic concrete shall then be applied before the cement grout sets. The granolithic concrete shall not have a slump exceeding 50 mm.

It shall be brought true to profile as shown on the Drawings with a Degree of Accuracy I finish.

PSG 6 TOLERANCES

PSG 6.2 PERMISSIBLE DEVIATIONS

PSG 6.2.3 Specified permissible deviations

Add the following:

"Degree of Accuracy II is applicable, except where specifically shown otherwise on the Drawings.

Every specified permissible deviation is binding in itself. The cumulative effect of permissible deviations will not be considered. The maximum permissible vertical deviation is subject to the other permissible deviations."

Replace Clause 6.2.3(a)(3) with the following:

	Permissible deviation		
	Degree of accuracy		
	III	II	I
	mm	mm	mm
"Cover to reinforcement (see (e) below).....	-0+20	-0+10	-0+10

Replace Clause 6.2.3(d)(5) with the following:

	Permissible deviation		
	Degree of accuracy		
	III	II	I
	mm	mm	mm
"Vertically, per metre of height ..... subject to a maximum of	5 50	3 30	2 10”

Add the following:

"(h) Floors

The maximum permissible deviation from a 3 m long straight line connecting two points on the surface of the finished floor is ± 3 mm.

PSG 7 TESTS

PSG 7.1 FACILITIES AND FREQUENCY OF SAMPLING

PSG 7.1.1 Facilities

Add the following:

"The Contractor shall provide sufficient storage capacity for the concrete test cubes and shall arrange to have them tested by an approved laboratory.

The cost of all testing, including the cost of sampling, storage and the transport of samples shall be included in the rates tendered for concrete work."

PSG 7.1.2 Frequency of sampling

Notwithstanding the requirements of this subclause, the Contractor shall take note that he is responsible for taking an adequate number of tests to ensure that the concrete being used complies with the specification. The Employer's Agent will only carry out such control testing as he may require.

PSG 7.3 ACCEPTANCE CRITERIA FOR STRENGTH CONCRETE

Add the following:

"Test results obtained from the supplier of ready-mixed concrete will not be accepted for evaluation in terms of Subclause 7.3. Samples for testing shall be taken of such concrete at the point of placing.

The rates of sampling and testing will be selected by the Employer's Agent depending on the magnitude of the Works and daily pours. At least one sample (sufficient for 6 cube moulds) shall be taken from each day's casting and from randomly selected daily batches to represent an average volume of not more than those given in the table below. Each sample shall be taken from one particular batch.

Rate 1 Highly Stressed Structure	Rate 2 Ordinary Structure	Rate 3 Mass Concrete
10 m^3 or 10 batches	20 m^3 or 20 batches	50 m^3 or 50 batches
Whichever is the lesser volume		

Unless otherwise agreed by the Employer's Agent tests shall be carried out in an approved laboratory and certified copies of all test results shall be submitted to the Employer's Agent immediately after the test.

Compliance with the specified characteristic strength will be judged by tests made on cubes at an age of 28 days. Tests shall also be made at 7 days.

Not more than 5 % of the tests shall fall below the specified strength.

The average strength determined from any group of three consecutive test cubes shall exceed the specified strength by not less than 7,5 MPa.

Each individual test result shall be greater than 85 % of the specified strength.

When the average strength of three consecutive test cubes fails to meet the second of the above requirements, the mix proportions of subsequent batches of concrete shall be modified to increase the strength.

Where durability and impermeability are prime considerations, the Employer's Agent may order the density of wet concrete to be measured regularly as a check on the concrete mix. This shall be done by placing a sample of concrete being poured in a standardised container, compacting by vibration and then determining the density.

The Employer's Agent may also order tests on the hardened concrete in the structure. These may include non-destructive methods or the taking of cored samples.

In evaluating test results, the Employer's Agent will take the following into consideration:-

(i) The validity of test results.
(ii) Confirmation that specimen sampling and testing has been carried out in accordance with BS 1881.2
(iii) The mix proportions actually used in the concrete under investigation.
(iv) The actual section of the structure represented by the test cube/s.
(v) The possible influence of any reduction in concrete quality on the strength and durability of the affected section of the structure.

The Employer's Agent may thereafter declare the concrete to be defective and order action to be taken as specified."

Add the following subclause:

"PSG 7.3.6 Disinfection of Structure

Before testing for watertightness, the reservoir shall be thoroughly cleaned out, pressure sprayed and washed down with clean water and thereafter with the disinfect solution.

The roof soffit, beams, columns and walls shall be thoroughly sprayed down and the floor scrubbed with the solution specified in subclause 5.10 of SANS 1200 L.

On completion of the disinfection, the disinfectant solution shall be run to waste before the reservoir is filled for testing for watertightness. Disinfection is to be witnessed and approved in writing by the Employer's Agent before watertightness testing may commence.

Should any further work be necessary in the reservoir after testing, the reservoir shall be disinfected at the

Contractor's expense."

Add the following subclause:

"PSG 7.3.7 Testing structure for watertightness

Water (potable) for testing shall be provided by the Contractor and he shall be responsible for providing all necessary equipment that may be required for filling the structure. Such water will not be available by means of the newly installed inlet pipework for each reservoir.

The cost of purchasing and transporting the potable water required for testing shall be covered separately under a provisional sum allowance in Section 1 Item 3.2. Upon agreement and instruction of the Employer's Agent, the Contractor is to take measures to fill the reservoirs with potable water by carting of water from an alternative source (Mthatha furthest), using a minimum 10kl size water truck. The Contractor shall ensure that potable water is in no way compromised during the pumping/transportation.

The method of filling the reservoir with potable water is to be approved by the Employer's Agent. Any drop in water during the stabilisation period that requires topping up of the reservoir is to be included in the provisional sum allowance. Any costs to refill the reservoir due to leaking or retesting of the structure after repair is for the Contractor's account."

The structure shall be filled with water at a uniform rate not exceeding 2,0 m in 24 hours until the top water level has been reached. The water level will then be carefully noted and recorded by the Employer's Agent in relation to a fixed benchmark, and the water level shall be maintained by the addition of further water for a stabilizing period to permit complete absorption of water by the concrete.

The stabilizing period shall be 21 days. After the stabilizing period, the level of the liquid surface shall be recorded at 24-hour intervals for a test period of 7 days. During this 7-day test period the total permissible drop in level, after allowing for evaporation and rainfall, if applicable, shall not exceed 1/500th of the average water depth of the full tank, or 10 mm.

Should the structure not satisfy the 7-day test, then, after the completion of remedial work, it shall be refilled if necessary, left for a further stabilisation period, a further test of 7 days duration shall then be undertaken in accordance with this clause.

In the event of appreciable leakage being evident at any stage of the filling or testing or in the event of the Employer's Agent considering the final degree of watertightness to be unsatisfactory, the Contractor when ordered by the Employer's Agent shall discontinue such filling or testing and shall, at his own expense, take approved steps immediately to rectify the leakage, until a satisfactory test is obtained, which shall prove to the Employer's Agent that a sufficient degree of watertightness has been obtained. It is noted that leaking cracks that do not self-heal in the stabilisation period will be considered defects in the test and will require suitable/approved repair.

The costs of emptying the water-retaining structure which cannot be drained shall be borne by the Contractor.

The water shall be discharged in a manner approved by the Employer's Agent and shall be such that the Employer can utilise the water if he so desires.

The water shall further not be used as a medium for additives to effect remedial work or to stop leaks.

The costs of retesting the structure for watertightness shall be borne by the Contractor, including the cost to obtain water required for such retesting.

PSG 8 MEASUREMENT AND PAYMENT

PSG 8.1 MEASUREMENT AND RATES

PSG 8.1.1 Formwork

Delete “or splays over 20 mm x 20 mm” from the first line of paragraph 8.1.1.2.

Add the following to paragraph 8.1.1.2:

“Splays up to and including 25 mm x 25 mm will not be measured separately and will be deemed to be included in the formwork costs.”

Add the following paragraphs:

“8.1.1.7 For construction joints at kickers, all additional costs for formwork to edges up to 300 mm high will be deemed to be included in the rates tendered for vertical formwork to sides of walls and will not be measured separately in narrow widths.

8.1.1.8 No formwork will be measured to edges of blinding layers under structures, and the cost thereof (if needed) will be deemed to be included in the rates tendered for concrete in blinding layers.

8.1.1.9 Back-shuttering or formwork to top revealed surfaces of sloping or conical formwork will only be measured to surfaces of over 40° and up to 85° to the horizontal.

8.1.1.10 Formwork to horizontal surfaces in reservoirs, chambers, manholes or sumps can either be removed through the manhole cover opening or the Contractor may use permanent formwork at his own cost as no claims in this regard will be considered.”

PSG 8.1.2 Reinforcement

Replace the contents of this Clause with the following:

"The unit of measurement for steel bars shall be the ton of reinforcement in place, in accordance with the Drawings or as authorised by the Employer’s Agent.

The unit of measurement for welded steel fabric shall be the kilogram of fabric reinforcement in place, and the quantity shall be calculated from the net area covered by the mesh, excluding overlaps.

Clips, ties, separators, stools and other steel used for positioning reinforcement will not be measured, unless these are shown on the bending schedules.

The tendered rate shall include full compensation for the supply, delivery, cutting, bending, welding, placing and fixing of the steel reinforcement, including all tying wire, stools, supports and waste."

PSG 8.1.3 Concrete

Add after “mixing, testing” in the second line of subclause 8.1.3.3(a) “including transport to an approved

laboratory,"

Add the following to PSG 8.1.3.3(a):

The tendered rate for walls shall also include for forming vertical joints where authorised."

Delete ", or the plan size of the excavation where additional excavation is provided to facilitate erection of forms" from the second line of paragraph 8.1.3.1(c).

Add the following to PSG 8.1.3.1(d):

"Strip foundations and encasement of pipes shall be cast directly against the sides and bottoms of excavations.

No payment shall be made for additional concrete in overbreak."

PSG 8.2.5 Narrow Widths

Add the following:

"Widths in excess of 300 mm shall not be regarded as narrow widths."

PSG 8.2.6 Box out holes / Form voids

Replace the heading of item (d) with the following:

"Large other than circular, of area over 0,1m² up and including 5m²."

PSG 8.4 SCHEDULED CONCRETE ITEMS

PSG 8.4.3 Strength Concrete, Grade

Replace "Unit: m^3" with "Unit: m^3 or m^2"

Add the following after the last sentence:

"In the case of structural floor screeds, the unit of measurement shall be the square metre and the average thickness and proportions will be stated."

PSG 8.5 JOINTS

Replace "Unit: m" with "Unit: m or m²".

"PSG 8.9* Inserts (type of description stated).....Unit: No

The tendered rate shall cover the cost of taking delivery, installing and fixing in position as detailed, for splitting and cutting the formwork where required, dealing with the reinforcement, ensuring watertightness and casting into concrete of the scheduled items and shall further include all clearing and cleaning preparation as well as for finishing.

Pipes for casting into concrete will be measured elsewhere.

The provision of the items to be built in and fixed will, except if otherwise stated, be measured for payment elsewhere."

PSG 8.11 BRICKWORK Unit: m²

Separate items will be scheduled for brickwork of different thicknesses and classes.

The unit of measurement shall be the nett area (on elevations) of brickwork constructed to the specified thickness, measured in square metres.

The tendered rate shall include full compensation for constructing the brickwork as specified including the provision of all materials and cleaning up on completion of the work.

PSG 8.12 PLASTERWORK:

(a) Plaster (state thickness) Unit: No
(b) Fillets, skirtings, etc (state dimensions) Unit : m

The unit of measurement for subitem (a) shall be the nett area of plasterwork constructed to the specified thickness, measured in square metres or for subitem (b) the nett length of corner filters, skirtings, etc constructed to the specified dimensions, measured in linear metres.

The tendered rate shall include full compensation for constructing the plasterwork including the supply of all materials, mixing, applying, finishing, rounded corners and all else that may be required to complete the work as specified.

PSG 8.13 SCREEDS:

(a) 1:3 floor screeds with falls including V-joints to form panels and a smooth steel trowelled finish/power float finish to top:

(i) Description of application and thickness Unit: m^2
(ii) Etc for other applications and thicknesses

The unit of measurement shall be the square metre of screeds constructed.

The tendered rate shall include full compensation for constructing the screeds as specified including the supply of all materials, preparing the concrete surface to receive the screeds and for all else that may be necessary to complete the work.

PSG 8.14 CAST IN OF PIPES WITH OR WITHOUT PUDDLE FLANGES:

(a) Up to 300 mm nominal bore:

(i) Through (description and thickness of structure elements) Unit: No.

(b) Over 300 mm up to 600 mm nominal bore:

(i) Through (description and thickness of structure elements) Unit: No.
(ii) Etc for other nominal bores in increments of 300 mm

The unit of measurement shall be the number of each size of pipe installed.

The tendered rates shall include full compensation for installing the pipe where new pipes are used (with or without a puddle flange) in the exact position as shown on the drawings, for splitting or cutting the formwork where required, for ensuring watertightness where required and for all additional costs required to install the pipes specified or shown on the drawings.

New pipes shall be measured under the items of the relevant section of the specifications.

“PSG 8.15* ALTERNATIVE METHODS OF FILLING OF STRUCTURES FOR WATERTIGHTNESS TESTING

(a) (Structure stated) Unit: No.

The unit of measurement shall be the number of each structure successfully disinfected and filled to the TWL and maintained (refilled if necessary, as per the watertightness test) at that TWL during the stabilisation period and passing the specified watertightness tests to the satisfaction of the Employer’s Agent.

The sums tendered shall cover the cost of all labour, plant and materials to disinfect, fill the reservoir and keep it filled during stabilisation as well as for the disposal of the disinfectant. The tendered rate shall however not include the cost to procure and cart water from Mthatha (furthest). A provisional sum allowance has been made for the purchasing and carting of water under BOQ Section 1 Item 3.2.

Any costs to refill the reservoir due to leaking or retesting of the structure after repair is for the Contractor’s account.”

PSHA STRUCTURAL STEELWORK (SUNDRY ITEMS)

PSHA 3 MATERIALS

PSHA 3.1 STRUCTURAL STEEL

Add the following:

“Where stainless steel is to be used, the grade shall be 316 or as shown on the Drawings.”

PSHA 5 CONSTRUCTION

PSHA FABRICATION AND ASSEMBLY

PSHA 5.2.2 Cutting

Add the following:

“The edges of flame-cut plates shall be ground smooth.”

PSHA 5.2.4 Welding

The Contractor shall submit with his shop Drawings full details of welding procedures. All welds shall be continuous.

Unless otherwise approved no longitudinal or overhead welding shall be carried out on site. Under no circumstances will cutting and welding of grid covers and frames be permitted on site.

Welders undertaking manual welding of permanent steelwork shall be experienced and competent artisans.

PSHA 5.2.7 Ladders

Replace the heading of with “Ladders and Step Irons”

Add the following:

"Ladders and step irons shall be of stainless steel grade 316 as specified."

"PSHA 5.2.8.3* All open grid floors and frames shall be stainless steel grade 304 as detailed. All open grid floor panels shall be open-ended as specified, except where bonding is specified on the Drawings. Cut outs shall be provided where indicated on the Drawings"

PSHA 8 MEASUREMENT AND PAYMENT

PSHA 8.3 SCHEDULED ITEMS

Replace the heading of subclause 8.3.1 to read:

“PSHA 8.3.1 Structural steel for: (Type of structure indicated)..... Unit: t, No or Sum”

Add the following after the last sentence of subclause 8.3.1:

"Alterations to existing structural steelwork will be described in the schedule and measured in number. Rates for these items shall include full compensation for all labour tools, storing, additional steelwork, reinstallation, cleaning

“PSHA 8.3.3 Ladders, complete and installed ..... Unit: No”

Add the following:

“Separate items will be scheduled for ladders of different materials, dimensions and height.

PSL MEDIUM PRESSURE PIPELINES

PSL 3 MATERIALS

PSL 3.1 GENERAL

Add the following paragraphs:

"Each type of pipe delivered to the Site shall have a standard length corresponding with the standard lengths offered by the pipe manufacturer in his catalogue, with a maximum permissible variation in length of ± 2%.

A pipe that is a shorter or longer than the defined standard will be rejected by the Employer's Agent, except when such non-standard lengths are required in terms of the Contract and have been specifically manufactured or cut as such by the pipe manufacturer or supplier."

PSL 3.4 STEEL PIPES, FITTINGS, AND SPECIALS

PSL 3.4.2 Pipes of nominal bore up to 150 mm

Add the following:

"The pipes shall be 'normalised' or seamless steel pipes and shall be used with malleable cast-iron fittings complying with the requirements of SANS 14.

Where flanges are required, they shall comply with SANS 1123 table 1600 unless otherwise indicated on the Drawings."

PSL 3.7 OTHER TYPES OF PIPES

Replace the heading and contents of subclause 3.7.1 with:

"PSL 3.7.1 uPVC pipes and fittings

uPVC pipes and fittings shall be provided with spigot and socket rubber ring joints and shall comply with SANS 966-1 and shall carry the SABS mark. Solvent welded fabricated fittings will not be acceptable.

"PSL 3.7.2 Polyethylene pipes and fittings

"Polyethylene pipes shall be black HDPE type IV pipes and shall comply with SANS/ISO 4427 and shall carry the SABS mark, manufactured from PE80 or PE100 material with a nominal pressure rating (PN) as indicated on the Drawings and scheduled in the Bill of Quantities.

The HDPE pipes shall be joined together by means butt-welded joints. Where HDPE pipes is to be connected to steel flanges, this shall be done with HDPE stub-flange, supplied with gasket and grade 316 stainless steel backing ring and fasteners.

Compression fittings to be used with HDPE pipes and shall be "Plasson", "Alprene" or approved equivalent with a nominal pressure rating (PN) as indicated on the Drawings and scheduled in the Bill of Quantities."

"PSL 3.7.3 mPVC pipes and fittings

mPVC pipes and fittings shall be provided with spigot and socket rubber ring joints and shall comply with SANS 966-2 and shall carry the SABS mark. Solvent welded fabricated fittings will not be acceptable."

"PSL 3.7.4* Copper tubing and fittings

Copper tubing shall be class 0 and comply with the requirement of SANS 460. Fittings shall be brass "Conex" compression fittings to SANS 1067 and shall carry the SABS mark."

PSL 3.8.3 Flanges and accessories

Add after "insertion piece" in the second line "consisting of a full face gasket".

Notwithstanding the provisions of this clause, Flanges shall comply with SANS 1123 or BS EN 1092 unless required to match existing flanges. Raised face flanges shall be provided for pipework of PN 25 and higher. Flange drilling shall be "off centre" unless required to match an existing flange which is drilled otherwise. The jointing material used on flanged joints shall be of a suitable rubber or compressed mineral fibre at least 3mm thick complying respectively with BS EN 681 or BS EN ISO 23936, as applicable. Gaskets shall be full face. Properly designed O-ring seals are also acceptable subject to receiving approval from the Employer's Agent.

All fasteners, including studs welded to flanges, shall be of stainless steel grade 316 and shall comply with EN ISO 3506-44, as applicable.

All pipes, specials and fittings shall be supplied complete with all necessary stainless steel grade 316 bolts, washers and nuts as well as appropriate full face insertion pieces, applicable to diameter and material.

PSL 3.8.4 Loose flanges

Bolts and nuts shall comply as stated in PSL 3.8.3.

Add new subclause

"PSL 3.8.8* Orifice Plates

Orifice plates shall be manufactured from 10mm thick grade 316 stainless steel and shall be inserted between flanges where it is stated in this document and or the Drawings that orifice plates are required. The orifice shall be sharp edged, double bevelled, with a 4mm edge and shall be manufactured by an approved supplier."

PSL 3.9 CORROSION PROTECTION

PSL 3.9.1 CI pipes

"Notwithstanding the provisions of this subclause, all CI pipes, fittings, specials, valves, meters and hydrants shall be coated internally and externally using "Rilsan" or equivalent to a dry film thickness of at least 200 micron. The coating shall be applied by an approved applicator. Fusion bonded epoxy (FBE) coating applied internally and externally to SANS 1217 or DIN 30677 will also be accepted".

PSL 3.9.2 Steel pipes

PSL 3.9.2.1 Steel pipes of nominal bore up to 150 mm

Add the following:

"Steel pipes utilised for the air vent shall be galvanised only as shown on the Drawings. Steel pipes, fittings and flanges within the chambers shall be hot dip galvanised and FBE coated after fabrication, in accordance with the requirements of SANS 32 for heavy duty applications. Further machining, cutting or welding after hot dip galvanizing will not be allowed. Fusion bonded epoxy (FBE) coating shall comply with the provisions of SANS 1217 or DIN 30677 will also be accepted"

PSL 3.9.2.2 Steel pipes of nominal bore over 150 mm

Add the following:

"Steel pipes shall be hot-dip galvanised where shown on the Drawings and as specified in sub-subclause 3.9.2.1. The hot-dip galvanising shall comply with the requirements of the hot-dip galvaniser's Association of South Africa"

PSL 3.9.6 Corrosive soil

Add the following:

"Where shown on the Drawings, steel pipes in contact with corrosive soil shall be wrapped with Densopol 80 HT or an equivalent approved product, strictly in accordance with the manufacturer's instructions."

PSL 3.10 VALVES

Replace the contents of this subclause with the following:

"Definition of valves will be deemed to also include water meters and Prefabricated Break Pressure Tanks (BPTs).

Valves shall comply with the following requirements in addition to the Specification per valve type detailed below.

- Meet a minimum Pressure Class of 25 bar and or the pressure class as stated in the BOQ, in cases where the BoQ does not specify a pressure class, it shall be taken as 25 Bar.
- They shall be complying with SANS 664/1974 with pressure class as per the Drawings and Bill of Quantities.
- They shall comply with the requirements of SANS 1123 and further specified in this Specification and Bill of Quantities.
- Valves shall be coated before delivery, both internally and externally with a suitable bitumastic paint free of phenols."

PSL 3.10.1 Gate Valves

The following type of gate valves shall be used on this project as measured in the Bill of Quantities

- Flanged gate valves with spindle cap or handwheel (AVK Series 43/60 RSV valves or approved equivalent)
- Flanged Gate Valve with spindle cap (AVK Series 06/40 or approved equivalent)
- Flanged Gate valve with handwheel (AVK Series 06/40 or approved equivalent)
- Socketed gates valves for uPVC pipes shall be AVK Series 01/60 RSV valves or approved equivalent
-
-

- Class 8 "Prestex" (Cobra) or similar approved cast brass full way gate valves complying with SANS 776-1975 shall be used. The valves shall be fitted with non-rising spindles and guided wedges and shall have taper threaded female end connections.

A valve shall be provided with double flanged or double spigoted or double socketed end connections, as billed. Unless otherwise billed, it shall be supplied complete with all jointing material such as insertions, rings, packings, bolts, nuts and washers etc. as necessary for the type of connection billed.

PSL 3.10.2 Air valves

The following type of valves shall be used on this project as measured in the Bill of Quantities

- Three pieces full-bore stainless-steel ball valve
- Three stage double orifice air release and vacuum break valve (Vent-o-Mat model RBX or similar approved air valve)

The valves shall further be as specified on the Drawings and in the Bill of Quantities in terms of size, connection type, pressure rating and model number.

Each air valve shall be supplied with:

i) a bronze isolation cock, (for DN 25 valves only), and
ii) flanged isolating RSV gate valve as specified in this document, and with or without bevel gears and spindle cap or handwheel as specified
iii) three-piece full-bore stainless-steel ball valves with PTFE seats as supplied by Vac-Cent Services, or approved equivalent. The maximum working pressure of 16 bars.

Each double or multiple orifice air valve (flanged) shall be fitted with a suitable drain cock to release the pressure inside the valve when the isolating valve is closed at a time when the float is sealing the large orifice.

Double and Triple orifice air valves shall be provided with cast iron shield plates so designed as to prevent the entry of dirt when the large orifice is open.

PSL 3.10.3 Water Meters

The meter on the outlets of the reservoirs and the Main Supply shall be 50mm - 250mm “Kent Helix 4000”, combination bulk water meter or approved equivalent with flanges to suit PSL 3.8.3.

For the village reticulation / standpipes, the water meter shall be the 165mm long x 15mm VT110T KSM meter or similar approved RDP standard standpipe water meter.

Flanged end connections shall comply with SABS 1123 for a nominal pressure corresponding to that of the water meter and the stated working pressure of the adjacent pipework.

The meter design shall provide for a reasonable clearance behind the rear face of flanges to allow access to e.g. bolts and nuts for installation and removal. The flow rate shall be between 0.35m3/h – 2000m3/h and the maximum working pressure of 16 bars. The accuracy of the meter shall be guaranteed equal or better than ± 0.5% of the measured value.

PSL 3.10.4 Check valves

Check valves shall be AVK Series 53/35 or similar approved resilient seated ball check valves. The ball shall be ductile iron, vulcanised with NBR rubber and shall be of the full-bore type. It shall be externally and internally coated with epoxy coating to DIN 30677. The valve shall further be pressure rated to 20 bar.

The valve shall be suitable for horizontal or vertical mounting, of robust construction, and shall close drop tight at the required operating head. Access to the moving parts shall be possible without removing the valve from the line. In addition, the following shall apply:

a) For flanged check valves:
   i) the valve shall be double flanged;
   ii) the body, cover and door shall be of close-grained cast iron;
   iii) the door shall be fitted with a zinc-free phosphor-bronze face closing on a corresponding bronze face in the body, and
   iv) the door suspension lugs shall be hinged on a long zinc-free, phosphor-bronze spindle supported in trunnion bearings on both sides of the body;

b) For wafer type spring check valves:
   i) the discs shall be either stainless steel or carbon steel with resilient seats, and
   ii) the valve bodies shall be manufactured of the materials specified.

PSL 3.10.5 Control valves

The following type of level and flow control valves shall be used on this project as measured in the Bill of Quantities

For the reservoirs, the following control valves shall be used

- Bermad WW-EN-750-03-66-3Q-Y-C-16-EB-PB-F or similar approved, flow control with Bi-Level and Anti-Surge Closing
- DN50 Equilibrium (ball) float control valves, PN16, with flanged end, or similar approved.

PSL 3.10.6 Prefabricated Break Pressure Tanks (BPTs)

The following type of BPT shall be used on this project as measured in the Bill of Quantities

The LW Tank Systems Prefabricated stainless steel BPTs or similar approved shall be used. The model numbers for the BPTs to be used as below.

- LWTS-50-BPT-01 or similar approved
- LWTS-80-100-BPT-01 or similar approved

PSL 3.11.1 Bricks

Bricks complying with the details shown on the Drawings and Bill of Quantities shall be used.

PSL 3.11.4 Step irons

Step irons complying with the details shown on the Drawings shall be used.

PSL 3.11.5 Manhole covers and frames

The requirements of the subclause shall apply, except that the type of cover and frame to be used shall be as detailed on the Drawings.

PSL 3.11.6 Surface Boxes

All surface boxes, including air, scour and inlet chambers shall be as specified and detailed on the Drawings.

PSL 3.13 PROTECTION DURING STORAGE, HANDLING AND CONSTRUCTION

The Contractor shall satisfy the Employer's Agent that the manufacturer's recommendations for good practice for the transporting, handling, stacking, storing and installing of pipes, pipe fittings, seal rubber etc. are being diligently followed. The Employer's Agent's Representative shall be given the opportunity to inspect all materials immediately upon delivery and prior to installation and shall have the right to reject any materials which, in his or her opinion has / have suffered damage which may impair the long-term durability and or strength of said items.

Pipes and specials shall be protected against damage during all stages of manufacture, delivery, storage and handling.

PSL 5 CONSTRUCTION

PSL 5.1.1 General

Add the following to Clause 5.1.1:

"PVC pipes shall be laid, cut and jointed strictly in accordance with the manufacturer's instructions. A pipeline shall further be laid continuously; the leaving of gaps for fittings will not be permitted.

Where applicable, pipes to be laid in a combined trench shall further be laid so that their joints are directly opposite one another and so that all pipe markings printed on the pipes are positioned at the top."

PSL 5.1.4 Depths and cover

Notwithstanding the requirements of this Subclause, the pipeline shall be laid to the levels shown on the Drawings or as ordered by the Employer's Agent.

Add the following new subclause under PSL 5.1.4

"PSL 5.1.4.6* Position of spindle of gate valves

The top of the spindle of a gate valve shall not be less than 75 mm nor more than 600 mm below the level at which the soffit of the valve box is to be set. To ensure the aforementioned, valve spindle extension pieces shall be fitted by the Contractor, complete with stabilisers, where required."

PSL 5.6 VALVE AND HYDRANT CHAMBERS

PSL 5.6.1 General

Replace the words "drawing L-1" *in the second line with* "the Drawings".

PSL 5.6.2 Construction of chambers

Replace the words "drawing L-1, L-2 and L-3" *in the fourth line with* "the Drawings".

Add the following subclauses:

"PSL 5.11 STANDPIPES

Standpipes shall be erected in the positions and to the details shown on the Drawings.

PSL 5.12 MARKER BLOCKS

Type 1 and Type 2 marker blocks shall be manufactured and positioned as shown on the Drawings.

PSL 5.13 PIPELINE ROUTE MARKERS

Route markers for the various water pipelines shall be erected in the positions and shall be manufactured according to the details shown on the Drawings."

PSL 7 TESTING

PSL 7.3 STANDARD HYDRAULIC PIPE TEST

PSL 7.3.1 **Test pressure and time of test**

PSL 7.3.1.2 The maximum working pressure for the different pipes is indicated by the class of the pipe.

PSL 8 MEASUREMENT AND PAYMENT

PSL 8.1 GENERAL

Replace the second sentence of this Clause with the following:

“No payment will be made for depths of excavation in excess of those specified unless ordered in writing by the Employer’s Agent.”

PSL 8.2 SCHEDULED ITEMS

PSL 8.2.1 Supply, lay and bed pipes complete with couplings .....Unit: m

Add the following:

“The rate tendered shall further cover the cost of the work provided for under 8.2.4, for the supply and installation of all stainless-steel bolts, nuts, washers, insertion pieces, for corrosion protection as specified, and with respect to testing, for the supply and installation of all equipment, fittings and specials required, as well as the cost of water drawn and the disposal of the sterilisation solution. The measured quantity of pipe length will not, except for the payment of materials on site, be measured for payment until the length under consideration has been accepted in terms of subclause 7.3, PSL 7 3.1 and 7.3.3.

“The Contractor shall be responsible for all costs associated with obtaining water for pressure testing of the pipelines. Programming of the testing and commissioning of the scheme should be performed such that once watertightness testing of the reservoirs has been successfully completed, the water inside the reservoirs can be used to test and commission the installed pipelines. No additional provision or payment will be made for water required for testing the pipelines.

The contractor would be required for testing /commissioning/repairing work done by others and accept responsibility/liability for the work done by others following his testing.

The Contractor will be allowed to claim the following percentages for interim payment purposes as the various activities are completed:

Stage of Completion	**Percentage Applicable**
Pipes laid, fully bedded and backfilled in trench	85.00%
Pipes cleaned, disinfected and tested successfully.	100.00%

Note that the percentage applicable is given in the above table as a cumulative figure."

PSL 8.2.2 Extra over 8.2.1 for the supplying, laying and bedding of specials complete with couplings ..... Unit: No

"Tees

Specials will be measured by number, extra over the cost of the installation of the pipes. The tendered rate shall include the supply, lay, bedding, jointing and testing of the specials.

The tendered rate for specials shall be held to include machine collars (where required) on the specials and the couplings / welds necessary to fit the special to the associated pipeline and one set of bolts, nuts and gaskets per flanged special.

Mechanical couplings shall be measured separately by number. The tendered rate shall also include for petroleum mastic and tape wrapping where mechanical couplings and flanges are buried.

Bends

Bends will be measured by number, extra over the cost of the installation of the pipes. The tendered rate shall include the supply, lay, bedding, jointing and testing of the bends. The tendered rate shall also include the cutting of pipes, preparation of pipe ends and repair of corrosion protection (where required)"

PSL 8.2.3 Extra over 8.2.1 for the supplying, fixing and bedding of valves..... Unit: No

Add the following:

"The rate tendered shall also as applicable cover the cost of the provision of corrosion protection as specified as well as the supply and installation and testing of all stainless-steel bolts, nuts, washers, insertion pieces, as required."

PSL 8.2.4 Extra over 8.2.1 for the cutting of the pipe and the supplying and fixing of the extra coupling

Delete this Clause:

Provision has been made under PSL 8.2.1 for the measurement and payment of work included under this Sub-Clause.

PSL 8.2.11 Anchor blocks/Thrust blocks and pedestals

Insert "concrete" *before* "and" *in the last line of the last paragraph*.

REPLACE THE LAST SENTENCE OF SUBCLAUSE 8.2.11 WITH THE FOLLOWING:

"Where measured by number or sum, the rate or sum shall cover the cost of excavation, trimming, backfilling, concrete, formwork, and steel reinforcement (including 80 kg high tensile steel per cubic metre of concrete where the amount of steel is not indicated on the drawings) as well as labour, etc., to complete the thrust block as shown on the drawings in addition to the operations and materials specified in this subclause."

Replace the heading and contents of subclause 8.2.13 with the following:

PSL 8.2.13 Chambers

a) Valve and Meter Chambers, etc..... Unit: No

REPLACE THE SECOND SENTENCE IN SUBCLAUSE 8.2.13 (a) WHICH STARTS WITH THE WORDS "The rate shall cover …" WITH THE FOLLOWING:

"The rates for valve chambers and other pipeline structures shall cover the costs specified for thrust blocks and for all other necessary materials, such as air vents, access covers and access ladders to complete the chamber as detailed on the drawings, but excluding:

i) reinforcing steel, and
ii) pipe specials (valves and fittings).

The rates shall also cover the costs of providing padlocks to all chambers, opened by the same master key."

b) Extra over for chambers of depth exceeding 1,5m ..... Unit: No

Additional depths of chambers in excess of 1,5m will be measured in increments of 0,5m depth for each type of chamber.

The rate tendered shall cover the cost of the complete construction of each extra 0,5m additional depth as well as for additional step irons as required.

Note:

The Contractor shall note that all pipes, specials and fittings in the various valve chambers along the route of the pipeline have been grouped together in the Bill of Quantities and not separately itemised per Sub-Clauses 8.2.2 and 8.2.3. The payment provisions as specified shall none the less apply as appropriate."

PSL 8.2.15 Special Wrapping in Corrosive Soil

Delete this subclause. Provision has been made under PSL 8.2.1 for the measurement and payment of work included under this Sub-Clause.

Add the following new Clauses:

PSL 8.2.16* Marker blocks

(a) Installation of valve markers complete as per Drawing.....Unit: number

(b) Installation of pipe markers complete as per Drawing .....Unit: number

(c) Installation of road crossing markers complete as per Drawing… .....Unit: number

The tendered rate shall include full compensation for all excavation and backfill, labour, equipment and materials to manufacture and install the blocks as shown on the Drawings.

PSL 8.2.17* ..... Supply and install overflow, scour, inlet and outlet pipes at reservoir (description, diameter, and material type specified) Unit: Number

The rate tendered shall cover the cost of the work provided for under 8.2.1, PSL 8.2.1 and 8.2.4, for the supply and installation of all stainless steel bolts, nuts, washers, insertion pieces, for corrosion protection as specified, and with respect to testing, for the supply and installation of all equipment, fittings and specials required, as well as the cost of water drawn and the disposal of the sterilisation solution. The measured quantity of pipe length will not, except for the payment of materials on site, be measured for payment until the length under consideration has been accepted in terms of subclause 7.3, PSL 7.3.1 and PSL 7.3.3.

PSL 8.2.18* Extra over 8.2.1, PSL 8.2.1 and PSL 8.2.17 for building in of overflow, scour, inlet and outlet pipes at reservoir Unit: Sum

The rate tendered shall cover the cost of all labour, materials and equipment to build in the overflow, scour, inlet and outlet into the floor of the reservoir."

PSL 8.2.19* Standpipes complete:

(a) (Give description with reference to drawing).....Unit: number

(b) Etc for other descriptions

The tendered rate shall include full compensation for all excavations for the pipe, for the drain, if required; the base of the concrete pedestal (for the tap); the supply and installation of all pipework and fittings including a 1,2 m long section of the supply pipe measured from the rising pipe; the supply and installation of the taps; backfilling the drain with stone, and the trench with approved backfill material; all formwork and concrete, and; all equipment, labour and diverse material required to complete the standpipe as shown on the Drawings.

PSL 8.2.20* Connection to existing main supply pipe .....Unit: number

The tendered rate shall include full compensation for the cost of excavation, connection to existing 350 mm diameter main supply pipe, removal of surplus material, all labour and equipment necessary to make the connection and all liaison with the local authorities.

PSL 8.2.21* Testing, disinfecting and commissioning of work by Others .....Unit: m

Contractor shall be required to incorporate into his Works length of pipes as shown in the Drawings work done by Others and this rate shall be for the exposing, testing, disinfecting and commissioning as part of his Works pipes done by Others as indicated in the Drawings.

The Contractor shall be responsible for all costs associated with obtaining water for pressure testing of the pipelines. Programming of the testing and commissioning of the scheme should be performed such that once watertightness testing of the reservoirs has been successfully completed, the water inside the reservoirs can be used to test and commission the installed pipelines. No additional provision or payment will be made for water required for testing the pipelines.

PSL 8.2.22* Exposing and repairing work by Others Unit: m

In cases where the testing fails, this item shall be used to compensate the Contractor for exposing and repairing of Work done by others. The rate shall be for labour and plant only. The materials shall be measured under the relevant items in this Specification.

PSL 8.2.23* Supply, Delivery, Installation, Disinfection, Test and commissioning of prefabricated stainless steel Break Pressure Tanks

As per Clause PSL 3.10.6, the Contractor shall supply, deliver, install, disinfection, test and commission prefabricated stainless steel Break Pressure Tanks complete, including galvanised inlet, outlet and overflow pipework, the valves required complete as follows.

(a) LWTS-50-BPT-01 or similar approved for 50mm - 63mm HDPE dia. pipes Unit: number
(b) LWTS-80-BPT-01 or similar approved for 75mm - 90mm uPVC dia. pipes Unit: number
(c) LWTS-100-BPT-01 or similar approved 90mm - 250mm uPVC dia. pipes Unit: number

The tendered rate shall include full compensation for all the pipes, fittings, valves, disinfecting, watertightness testing and commissioning of BPT. The cost shall also include providing the water required for the watertightness test.

PSL 8.2.24* Extra-over item PSL 8.2.23 for the clearing, excavations, formwork and construction of the BPT bases Unit: Number

The tendered rate shall include full compensation for all excavation and backfill, labour, equipment and materials to construct the reinforced concrete base, 300mm thick, 25/19 MPa.

PSL 8.2.25* Extra-over item PSL 8.2.23 and PSL 8.2.24 for any other items not included above however critical for the installation and functioning of the BPTs Unit: Sum

The tendered rate shall include full compensation for all labour, equipment and materials required for the successful installation of the BPTs as detailed in this Specification however not included in the items above

PSL 8.2.26 Take ownership, lay, bed, test and disinfect pipes complete with couplings:

Where allowance has been made for the Contractor to take ownership of material from the Employer, lay, bed, test and disinfect, the tendered rate shall exclude the cost to procure the material, but include all other costs noted in PSL 8.2.1, as well as the costs to take ownership of the material from the Employer, performing all necessary tests and inspection to ensure the material meets the requirements of the contract specification and transport of the material to the site.

PSLB BEDDING (PIPES)

PSLB 2 INTERPRETATIONS

PSLB 2.3 DEFINITIONS

Flexible pipe

Add the following:

“mPVC, HDPE and steel pipes shall all be classified as flexible pipes.”

PSLB 3 MATERIALS

PSLB 3.1 SELECTED GRANULAR MATERIAL

Replace the contents of Clause 3.1 with the following:

"Selected granular material shall have a PI not exceeding 6 and shall be free from sharp-edged particles exceeding 19 mm."

PSLB 3.2 SELECTED FILL MATERIAL

ADD THE FOLLOWING:

"Selected fill material used for bedding shall be stabilised with 5% cement as specified under Subclause PSDB 3.5(c)."

PSLB 3.3 BEDDING

Add the following:

“For the purposes of this clause mPVC, HDPE and steel pipes shall be classified as flexible pipes.”

Where structures are to be built over pipework, where shown on the drawings, or where ordered by the Employer’s Agent, the bedding cradle specified shall be stabilised with 5% cement as specified under Subclause PSDB 3.5(c)."

PSLB 3.4.1 Suitable material available from trench excavation

Replace the words “(but is not required”) in the fifth line with the words “(at his own cost).”

“PSLB 3.5* BEDDING IN WATERLOGGED CONDITIONS

Where ordered by the Employer’s Agent a bedding cradle of the specified thickness, comprising of 6,7 mm concrete stone complying with SANS 1083, shall be used in waterlogged conditions.”

PSLB 5 CONSTRUCTION

PSLB 5.1.1.2 Bottom

Add the following:

"Where expansive clay is encountered in the trench bottom, the selected fill blanket shall comprise of selected granular material."

PSLB 5.1.2 Details of bedding

Notwithstanding the provisions of this subclause, pipes shall be bedded and protected in accordance with the details shown on the Drawings, which shall supersede, as applicable, drawings LB 1 through to LB 5.

Add the following paragraph.

"The dimension "X" for flexible and rigid pipes as indicated on drawing LB-1 will be 150 mm unless otherwise indicated on the drawing. The dimension "X" will be measured from the invert of the pipe."

PLSB 5.1.4 Compacting

REPLACE "90%" WITH: "90% (100% for sand)".

PSLB 5.3 PLACING AND COMPACTING OF FLEXIBLE PIPES

Notwithstanding the provisions of this subclause, the bedding for flexible pipes shall be constructed to the dimensions shown on the Drawings and by using the bedding material specified (refer also PSLB 5.1.2).

PSLB 8 MEASUREMENT AND PAYMENT

PSLB 8.1.3 Volume of bedding materials

Notwithstanding the provisions of this subclause, the volume of bedding will be computed from the dimensions shown on the Drawings.

Replace the last sentence with the following:

"No allowance will be made for bulking of material or any additional volume of bedding material required due to over break or any other cause.

Further, the volume of bedding displaced by the pipeline will not be measured for payment."

PSLB 8.1.5 Disposal of displaced material

Replace the contents of this Clause with the following:

"Material displaced by the pipeline and by imported material from sources other than trench excavation, shall be disposed of at an approved site furnished by the Contractor. No haulage shall be payable for such material."

PSLB 8.1.6 Free-haul

Delete the words "of 0,5 km" in the first line of this Clause.

Refer to SANS 1200 D, Subclause 5.2.5 (Transport for earthworks).

PSLB 8.2.2.3 From commercial sources

(c)* 6,7 mm concrete stone to SANS 1083 ..... Unit: m^3

Add the following to the end of this Clause:

"Commercial sources shall include off-site sources located by the Contractor."

PSLB 8.2.5 Overhaul of Material for Bedding … etc.

Delete this subclause

"PLSB 8.2.6* Extra over 8.2.1 and 8.2.2.1 to screen material for:

(a) Selected granular material ..... Unit : m^3

(b) Selected fill material..... Unit : m^3

The tendered rate shall cover the cost of supplying all labour, plant and equipment necessary to select and stockpile suitable material, as well as for screening the material to comply with the specifications for the different types of bedding material."
ADD THE FOLLOWING:

"PSLB 8.2.7 Provision of stone/geofabric to deal with water..... Unit: m^3/m^2

If in the opinion of the Employer's Agent, the Contractor complied with the requirements for dealing with water as specified in PSA 8.8.7., the Employer's Agent may instruct the installation of crushed stone and filter fabric. Payment for these items will only be made where instruction was given in writing by the Employer's Agent.

The provision of crushed stone bedding material will be measured by volume based on the specified trench width and a maximum layer thickness of 300 mm unless a greater depth has been specified by the Employer's Agent.

The unit rate shall cover the cost of supplying and laying the crushed stone.

The filter fabric will be measured separately by area based on the specified trench width, a stone bedding thickness of 300 mm and an overlap of 300 mm.

The rate shall cover the cost of the supply, delivery and laying of the filter fabric.

PSLE STORMWATER DRAINAGE

PSLE 1 SCOPE

PSLE 1.1 Add the following:

"This specification shall also cove the construction and installation of the subsoil drainage applicable to the reservoir."

PSLE 3 MATERIALS

PSLE 3.4 MANHOLES, CATCHPITS, AND ACCESSORIES

PSLE 3.4.1 Bricks

ADD THE FOLLOWING:

"Bricks shall be engineering bricks complying with the requirements of SANS 227."

ADD THE FOLLOWING SUBCLAUSE:

"PSLE 3.6* MATERIALS FOR SUBSURFACE DRAINS

(a) Pipes and fittings

Pipes for subsurface drains shall be normal duty, perforated or slotted uPVC pipes complying with SANS 791. Fittings shall be heavy duty and shall also comply with SANS 791.

The size of the perforations in perforated pipes shall in all cases be 8 mm in diameter ± 1,5 mm, and the number of perforations per metre shall not be less than 26 for 100 mm pipes and 52 for 150 mm pipes. Perforations shall be spaced in two rows for 100 mm pipes and in four rows for 150 mm pipes, as shown on the Drawings.

Slotted pipes shall have a slot width of 8 mm with a tolerance of 1,5 mm in width. The arrangement of the slots is subject to the Employer's Agent's approval, but the total slot area shall not be smaller than that specified for perforations.

(b) Crushed stone

Crushed stone shall be 19 mm single-sized and shall comply with the requirements of SANS 1083.

(c) Geotextiles and Geofabrics

Geotextiles shall be a non-woven, spun or thermic-bonded continuous filament fabric consisting of at least 85% by mass of polypropylene, polyester or other approved material and manufactured for civil-engineering applications by a recognised manufacturer."

(d) No-fines Concrete

No-fines concrete shall be as specified under Particular Specification PC."

PSLE 5 CONSTRUCTION

Add the following subclauses:

"PSLE 5.8 CONSTRUCTION OF SUBSURFACE DRAINS

After the completion of the blinding and excavations, the bottom portion of the trench and top of blinding shall be lined with geotextile sheeting as shown on the Drawings. The top edges of the vertical portions of the geotextile sheeting shall be tacked to the sides of the excavations with nails or by another suitable approved means. An overlap of at least 200 mm shall be provided at each joint. Geotextile sheeting damaged during the installation or construction shall be replaced at the Contractor's cost.

A layer of crushed stone or no-fines concrete of the thickness shown on the Drawings shall be placed on the geotextile and be lightly tamped and finished to the required gradient.

Pipes of the required size shall be firmly bedded on the permeable material, true to level and grade, and coupled where required. The trench shall then be backfilled with crushed stone or no-fines concrete to the height above the pipes and as shown on the Drawings or as directed by the Employer's Agent.

Crushed stone shall be placed in layers of not more than 300 mm at a time. Care shall be taken to prevent the contamination of crushed stone or no-fines concrete during construction of the subsurface drains and all material contaminated by soil or silt shall be removed and replaced by the Contractor at his own expense.

The drain pipes shall be joined by approved couplers. The pipes shall be laid with the perforations at the top or at the bottom, as directed. The higher end of subsurface drain pipes shall be sealed off with a loose concrete cap of class 20/19 concrete, as shown on the Drawings and at the lower end of the pipe shall be built into a manhole wall providing a positive outlet, or it shall be connected to the stormwater pipes or culverts.

Where applicable, after all the crushed stone or no-fines concrete material has been placed, the protruding vertical filter material has been placed, the protruding vertical sections of the geotextile sheeting shall be folded back across the filter material so that the filter material will be completely enwrapped in the geotextile. An overlap of at least 200 mm shall be provided between the portions folded back.

The top 20 mm of surface of no-fines concrete under the reservoir shall receive a 1 : 4 Cement : Sand mortar and a power floated finish.

The remainder of the trench shall be immediately backfilled with approved impermeable material preferably obtained from the excavations, in layers not exceeding 150 mm and compacted to 90% of modified AASHTO density, unless otherwise ordered by the Employer's Agent. The trench shall be specially protected against the ingress of water, soil and silt until the backfilling with impermeable material has been completed.

Permeable material in subsoil drains shall not be taken to the surface but shall be discontinued at such heights as will be determined by the Employer's Agent.

Any section of a subsurface drain constructed with pipes without perforations or slots shall be backfilled with impermeable backfill material as described above. Suitable excavated material may be used for backfilling.

Payment for excavations as well as for backfilling with impermeable material will be made under SANS 1200 DB.

PSLE 8 MEASUREMENT AND PAYMENT

PSLE 8.2 SCHEDULED ITEMS

PSLE 8.2.1 Supply and lay concrete pipe culverts

Add the following:

"Notwithstanding the stated provisions, bedding will be measured for payment in terms of the appropriate clauses of SANS 1200 LB and PSLB."

PSLE 8.2.8 Supply and installation of manholes, catchpits and the like

Replace the contents of the item with the following:

"Separate items are listed for manholes and catchpits etc. with reference to depths (increments of 1,0 m) and type. The rate shall cover the cost of any excavation in all material (including disposal of surplus) and backfilling with suitable material in accordance with PSLE 5.8 (including importation of material if required) additional to what is measured under the relevant pipe trench item (refer to SANS 1200 DB 8.2.2 and 8.2.3).

The rate shall further cover the cost for building the manholes and catchpits complete as shown on the relevant Drawings.

The depth category of manholes and catchpits shall be measured as the difference between the cover level and the deepest invert level."
Add the following items:

"PSLE 8.2.14 Supply and lay flexible slotted HDPE drainage pipes complete with fittings and couplings on class B bedding (diameter stated) ..... Unit : Number

The payment provisions of 8.2.1 and PSLE 8.2.1 shall apply.

PSLE 8.2.15 Geotextile (description of type, grade, etc)..... Unit: m^2

The filter fabric will be measured in place after installation.

The tendered rate shall include full compensation for procuring, supplying, cutting, overlap, jointing, placing and protecting the filter fabric as specified, as well as for wastage.

PSLE 8.2.16 Crushed stone in subsurface drains: ..... Unit: m^3

The tendered rate shall include full compensation for procuring, supplying, transporting and placing the material as specified. The quantity shall be calculated from the authorised dimensions.

PSLE 8.2.17 Grade 20 MPa/19 mm concrete outlet structures
for subsurface drains (including framework) Unit: m^3

The tendered rate shall include full compensation for procuring and supplying of all materials, providing and erecting formwork, reinforcing and mixing, transporting and placing concrete.

PSLE 8.2.18 Concrete caps for subsurface drain pipes Unit: number

The tendered rate shall include full compensation for supplying and installing the concrete caps.

PSLE 8.2.19 Jointing with existing network Unit: sum

The tendered sum shall include full compensation for the cost of all labour, plant, materials, excavation, backfilling, compaction and overheads to join the subsurface drains to the existing stormwater network.

PSLE 8.2.20 Breaking into existing manhole and installing new pipe:

(a) (State pipe diameter and type) Unit: sum
(b) Etc. for other diameters and types

The tendered rates shall include full compensation for the supply of all labour, plant and materials, making an opening in the existing manhole, installing the new pipe in the new opening, sealing around the pipe, breaking

out the existing benching and channels where required and reconstructing them complete with rendering to suite the new pipe arrangement, disposing of all debris to the dumping site and backfilling around the manhole with selected material.

PSLE 8.2.21 Breaking into existing stormwater pipe, installing new pipe and building new manhole:

(a) (State new pipe diameter and type) Unit: number
(b) Etc. for other new pipe diameters and types

The tendered rates shall include full compensation for the supply of all labour, plant and materials, removing a section of the existing stormwater pipe, installing the new pipe, constructing the complete, new manhole, sealing around the pipes, disposing of all debris to the dumping site and backfilling around the manhole.

PARTICULAR SPECIFICATIONS

PA FENCING

PA 01 SCOPE

This is a Particular Specification and covers the erection of new fences. The fence shall be a security fence and shall be erected in accordance with the dimensions shown on the Drawings.

PA 02 DEFINITIONS

Intermediate post	A fencing member that supports the straining wires.
Mesh	Razor mesh.
Stay	A member connected to a straining post and so embedded in the ground at an angle to assist the straining post in withstanding the pull of the straining wires.
Straining post	A member of the fence that withstands the pull of the straining wires and, where relevant, supports a gate.

PA 03 MATERIALS

PA 03.1 Posts, Stays and Standards

Posts, stays and standards shall be of the type and size indicated on the Drawings. Posts shall include gate posts, straining posts and corner posts.

Metal posts, stays and standards shall comply with the requirements of CKS 82 and SANS 280. "Acceptable" in CKS 82 means "acceptable to the Employer's Agent".

Tubular posts, standards and stays shall be hot dipped galvanised in accordance with SANS 32:1997 Table 1 for Type A.1 articles. All rail and Y-sections shall be provided with a protective coating of tar or other approved material.

Standards shall be 2,5kg/m Y sections of the lengths specified on the drawings.

Corner, gate and straining posts shall be suitably drilled for stay bolts or gate fittings as indicated on the Drawings.

PA 03.2 Bolts for Stays

Bolts, nuts and washers shall be of mild steel and hot dipped galvanised in accordance with SANS 135 Grade 4.6. The length and diameter of the bolts shall be as shown on the Drawings. All the necessary bolts, together with nuts and washers, shall be supplied with each post.

PA 03.3 Wire

All wire shall conform to the requirements of SANS 675:2009 and shall be class B galvanised, except where otherwise specified below:

a) Barbed wire

Barbed wire shall be one or both of the following types:

(i) High-tensile grade, oval shaped, single-strand wire, 2,60 mm x 2,00 mm.
(ii) Mild-steel grade, double strand, uni-directional twist wire, each strand 2,50 mm in diameter.

Barbs shall be spaced at not more than 150 mm intervals.

b) Smooth wire

Smooth wire shall be as shown on the drawings.

All wire used in the construction of fencing and gates shall be Class A zinc coated according to SANS 675.

PA 03.4 Razor Mesh

Razor mesh shall comply with the requirements of SANS 592/84, with 2,5 mm high tensile galvanised core, 0,5 mm galvanised 3 575 blade-drip. The width shall be as shown on the drawings and the edge finish shall be both sides clinched or barbed.

The mesh openings shall be 100 mm across.

PA 03.5 Gates

Gates shall comply with the requirements of CKS 146 and shall be manufactured to the dimensions shown on the Drawings.

Gates shall be complete in every respect, and shall include hinges, washers, bolts and the locking mechanism shown on the Drawings.

PA 03.6 Concrete

Concrete used for fencing shall comply with the requirements of SANS 1200 G, as amended.

PA 03.7 Welded Components

Should items be made up of smaller components, welded together, all hot dipped galvanising shall be performed after items have been welded together. No Welding shall be permitted on site.

PA 03.8 Anchor Pegs

Anchor pegs shall comprise of 10mm diameter mild steel rods, 400mm long and of acceptable design.

PA 04 CLEARING OF FENCE LINE

The clear width for the fence line shall be 2m and shall be carried out in accordance with SANS 1200 C (as amended). The clear width shall be measured and paid as per clause PSC 8.2.1.

PA 05 INSTALLING POSTS AND STANDARDS

Straining posts shall be erected at all ends, corners and bends in the line of fencing and at all junctions with other fences. Straining posts shall not be spaced further apart than shown on the Drawings, but at most 30m apart. The height of the posts above the ground shall be such that the correct clearance between the lowest wire and the ground can be obtained.

Posts shall be accurately set in holes and, where indicated, shall be provided with concrete bases to the dimensions shown on the Drawings.

Holes shall be dug to the full specified depth. Where, due to the presence of rock, the holes cannot be excavated by hand or by pneumatic tools and the Contractor has to resort to the use of explosives, he will be paid separately for the drilling and blasting operations required. Special permission for blasting will be

requires as it is not permitted on this project and the Contractor is to provide evidence that pneumatic tools cannot perform the necessary hard rock excavation (inclusive of boulder excavation of all types).

Corner, gate, end and straining posts shall be braced by means of stays or anchors, as shown on the Drawings. Pipe stays shall be bolted to the posts. Gate posts shall not be used as straining posts, but at each gate post a straining post shall be placed as shown on the Drawings and stayed by means of an anchor consisting of six strands of wire.

Standards shall be firmly planted in the ground at the spacing shown on the Drawings or as directed by the Employer's Agent. The spacing of standards between any two straining posts shall be uniform. In rock or hard material standards shall either be driven or set in holes drilled into the rock. The size of drilled holes shall be such that a tight fit is obtained.

Care shall be taken not to buckle or damage the standards when driven. Where indicated, standards shall be provided with concrete bases to the dimensions shown on the Drawings.

All posts and standards shall be accurately aligned and set plumb and shall be planted with the overhang as shown on the Drawings and at right angles to the direction of the fence. After posts and standards have been firmly set in accordance with the foregoing requirements, the fencing wire shall be attached thereto as described below.

PA 06 INSTALLING WIRE

All fencing wire shall be carefully stretched and hung without sag and with true alignment, and care shall be taken not to stretch the wire so tightly as to cause breaking, to pull up straining posts, or to be easily damaged during veld fires.

Each strand of fencing wire shall be securely fastened in the correct position to each standard with galvanised binding wire. The binding wire for each horizontal fence wire shall pass through a hole or notch in the standard, and the ends of the wire shall be wound at least four times around the fencing wire.

At corner, straining and gate posts the fencing wire shall be securely wrapped twice around the post and secured against slipping by tying the end tightly around the wire by means of at least six snug tight twists. In the case of high-tensile wire, two long windings must first be made before the six tight twists, to prevent the wire from breaking at the first twist. Where smooth wire is used, the loose end shall be bent back and hooked into the opening between the fencing wire and the first winding.

Splices in the fencing wire will be permitted if made in the following manner with the use of a splice tool: The end of each wire at the splice shall be carried at least 75 mm past the splice tool and wrapped snugly around the other wire for not less than six complete turns, after which the two separate wire ends shall be wound in opposite directions. After the splice tool has been removed, the space left by it in the splice wire shall be closed by pulling together the wire ends. The unused ends of wire shall be cut close, to leave a neat splice.

The gaps between gate posts and the adjacent straining posts shall be fenced off with short fencing wires.

PA 07 INSTALLING RAZOR MESH

The razor wire shall be the height indicated on the Drawing. Where indicated on the Drawings, the mesh shall, after being suitably tensioned to ensure that the apertures are square, be attached by binding wire to the straining wires at distances not exceeding 450 mm on top and bottom straining wire and 960 mm intervals on centre wires. In addition, the mesh shall be attached to each post by means of binding wire taken around the post at distances not exceeding 300 mm c/c. The bottom of the fence shall be located level with the ground.

Each mesh panel has a male and female end, care should be taken to fit panels together so that the apertures interlock male to female. The mesh is joined by binding each aperture in 2 places with linking wire.

PA 08 INSTALLING BARBED-TAPE CONCERTINAS

Not applicable.

PA 09 CLOSING OPENINGS UNDER FENCES

At ditches, streams, drainage channels or other hollows where the fence cannot follow the general ground contour, the Contractor shall close the opening under the fence by means of horizontal barbed wires 150 mm apart and stretched between additional straining posts as shown on the Drawings. The opening shall be covered with strips of razor mesh, 1 000 mm wide, fixed to the barbed wires.

In the case of larger streams, the opening below the lower fencing wire shall be closed by means of loose-hanging wire nets/mats as shown on the Drawings. These mats shall be erected at streams only on the instructions of the Employer's Agent.

PA 10 INSTALLING GATES

Gates shall be installed at the positions indicated on the Drawings or as instructed by the Employer's Agent on site. The gates shall be hung on gate fittings in accordance with the details shown on the Drawings. Gates shall be so erected that they swing in a horizontal plane at right angles to the gate posts and clear of the ground in all positions. The top of the gate shall be level with the top of the mesh. Double swing gates shall close to have a gap of not more than 25 mm between them, and other gates shall close to be not further than 25 mm from the gate post.

PA 11 GENERAL REQUIREMENTS AND TOLERANCES

The completed fences shall be plumb, taut, true to line and to the ground contour, and with all posts, standards and stays firmly set.

The height of the lower fencing wire above the ground at posts and standards shall not vary by more than 25 mm from that shown on the Drawings. Other fencing wires shall not vary by more than 10 mm from their prescribed relative vertical positions.

Anchoring of a fence to structures shall be done as shown on the Drawings.

The Contractor shall, on completion of each section of fence, remove all cut-offs and other loose wire or mesh so as to leave the fence with a neat and finished appearance.

PA 12 MEASUREMENT AND PAYMENT

PA 12.01 Supply and erection of new fencing material

(a) Barbed wire (grade, size and type of wire indicated) Unit : m
(b) Smooth wire (grade and size indicated) Unit : m
(c) Barbed tape concertinas (coil diameter indicated) Unit : m

The unit of measurement shall be the metre of each type of fencing wire and barbed-tape concertinas measured between end posts. Binding wire and wire used for the bracing and anchoring of posts shall not be measured for payment.

(d) Razor mesh (mesh size indicated) Unit : m^2

The unit of measurement shall be the square metre of diamond mesh and the quantity shall be calculated on the prescribed width and the length between straining posts or gate posts, or the length of strips for covering openings under fences, or the length used for the covering of gates.

(e) Corner, gate and straining posts, including anchors (type, size and length indicated) Unit : No

The unit of measurement shall be the number of posts erected in accordance with the maximum specified spacing or such lesser spacing as authorised by the Employer's Agent.

(f) Standards (length and type indicated) Unit : No

The unit of measurement shall be the number of standards erected in accordance with the maximum specified spacing or such lesser spacing as authorised by the Employer's Agent.

(g) Droppers (length and type indicated) Unit : number

The unit of measurement shall be the number of droppers erected in accordance with the maximum specified spacing or such lesser spacing as authorised by the Employer's Agent.

The tendered rates shall include full compensation for all excavations, concrete, binding wire, straining wire, bolts, washers and nuts, for the drilling of holes for standards, and for the complete erection of the fence as specified and as shown on the Drawings. The tendered rate for posts shall make provision for the construction of the stays of the types shown on the Drawings.

The quantity of material used shall be determined by measuring the quantities of individual items of material installed in the completed fence. No linear measure of completed fence shall be applicable.

PA 12.02 NEW GATES:

(a) Single leaf (size and type indicated) Unit : No
(b) Double leaf (size and type indicated) Unit : No

The unit of measurement shall be the number of new gates erected. A pair of gates shall be measured as one.

The tendered rate shall include full compensation for gate posts, hinges, bolts, concrete, locking mechanism and straining wire, and for the erection of the gates complete as specified and as shown on the Drawings. It shall not include compensation for any fencing wire or mesh used on the gate.

PA 12.03 THE DRILLING AND BLASTING OF HOLES FOR POSTS AND ANCHORS Unit : No

The unit of measurement shall be the number of holes for posts and anchors made, in accordance with the relevant detail drawings, by drilling and blasting where excavation by hand tools or pneumatic tools cannot be done economically and only upon approval by the Employer's Agent.

The tendered rate shall include full compensation for drilling and blasting the holes and for all other expenses in connection with the provision, storage, transportation and use of explosives.

PC NO-FINES CONCRETE

CONTENTS

PC 01 SCOPE
PC 02 MATERIALS
PC 03 CLASSES OF NO-FINES CONCRETE
PC 04 BATCHING AND MIXING
PC 05 PLACING
PC 06 PROTECTION
PC 07 MEASUREMENT AND PAYMENT

PC 01 SCOPE

This is a Particular Specification and covers the manufacture and placing of no-fines concrete used in the Works.

PC 02 MATERIALS

Cement, aggregate and water shall comply with the requirements of SANS 1200 G.

Each size of aggregate shall be a single size aggregate graded in accordance with SANS 1083.

PC 03 CLASSES OF NO-FINES CONCRETE

No-fines concrete shall be classified by the prefix NF and the size of aggregate to be used. Class NF 19 means a no-fines concrete with a 19 mm nominal size aggregate.

The volume of aggregate per 50 kg of cement for each class of concrete shall be as follows:

Class Aggregate per 50 kg cement

NF 38 0,33 m³
NF 19 0,30 m³
NF 13 0,27 m³

PC 04 BATCHING AND MIXING

Cement shall be measured by mass or in full pockets of 50 kg each and aggregate shall be measured by volume in approved measuring boxes or barrows.

The aggregate shall be moist or wetted before the cement is added. Where drum mixers are used, about 20% of the water shall be poured into the drum before the aggregate and cement are loaded. The mixing time in the drum shall be about 45 to 50 seconds.

The quantity of water added shall be just sufficient to form a smooth grout which will adhere to and completely coat each and every particle of aggregate, and which is just wet enough to ensure that, at points of contact of aggregate, the grout will run together to form a small fillet to bond the aggregate together. The mix shall contain no more than 20 litres of water for every 50 kg of cement.

Mixing shall be done in an approved batch-type mechanical mixer, but small quantities may be hand-mixed.

PC 05 PLACING

No-fines concrete shall be placed in accordance with the procedure approved by the Engineer. It shall be

placed in its final position within 15 minutes of having been mixed.

The concrete shall be worked sufficiently to ensure that it will completely fill the space to be concreted and that adjacent aggregate particles are in contact with one another. Excessive tamping or ramming shall be avoided and under no circumstances shall the concrete be vibrated.

PC 06 PROTECTION

All no-fines concrete shall be protected from the elements and loss of moisture. Protection against loss of moisture shall be accomplished by one or more of the following methods:

(a) Retaining formwork in place

(b) Covering exposed surfaces with sacking or other approved material kept continuously wet

(c) Covering exposed surfaces with plastic sheeting

No-fines concrete placed during cold weather shall be adequately protected against frost for at least 3 days.

PC 07 MEASUREMENT AND PAYMENT

PC.01 Cast-in-situ no-fines concrete (state class) Unit: m^3

The provisions of subclause 8.1.3 of SANS 1200 G shall apply *mutatis mutandis*.

PEM ENVIRONMENTAL MANAGEMENT

Environmental Management Specification

Environmental Management Programme Report

APPENDIX C

OHSA (OCCUPATIONAL HEALTH AND SAFETY ACT, NO 85 OF 1993)

HEALTH AND SAFETY SPECIFICATION

APPENDIX D

APPENDIX E

APPENDIX F

PL HORIZONTAL DIRECTIONAL DRILLING

PL 01 SCOPE

This is a Particular Specification and covers the design, site establishment, services location, drilling, reaming and installation of pipes and sleeve pipes for cables using trenchless technology (horizontal directional drilling), surface reinstatement and de-establishment.

PL 02 INTERPRETATIONS

PL 02.1 Directional Drilling

A steerable method for the underground installation of pipes or conduits in a shallow arc using a surface-launched drilling rig. In particular, the term applies to large-scale crossings in which a fluid-filled pilot bore is drilled without rotating the drill string, and this hole is then enlarged by a washover pipe and back reamer to the size required for the product pipe.

Trenchless technology terminology used on this Contract has the meaning given in the definitions used by the International Society for Trenchless Technology (ISTT).

PC 03 MATERIALS

PL 03.1 Sleeve Pipe Material

The sleeve pipe material shall be HDPE, unless specified otherwise. The HDPE pipe shall comply with the requirements of SANS ISO 4427. The wall thickness shall be determined by the Contractor, taking into account the pulling forces applied during installation and the external load on the sleeve pipe.

PL 03.2 Drilling Fluid

The selected drilling fluid shall not be harmful to the environment. Waste oil and environmentally harmful non-bio-degradable polymers shall not be used.

PL 04 PLANT

Drilling rigs and navigation equipment with the capacity to install up to a 800 mm diameter sleeve pipe over a distance varying between 30 m and 400 m shall be used. The pulling force that the selected equipment must be capable of exerting shall be at least a minimum of 1.5 times the weight of the pipe to be installed.

The Contractor shall indicate what rock drilling and reaming equipment will be required. (Refer to Clause PL 09)

PL 05 CONSTRUCTION

PL 05.1 General Procedures

The Contractor shall:

a) Determine the drilling length and equipment pull strength for the type of soil and rock encountered.
b) Provide the method to control line and grade.
    i) Provide and maintain instrumentation that accurately locates the pilot hole.
    ii) Drill the pilot hole along the path within 100 mm tolerances.
    iii) Include electronic monitoring of the horizontal and vertical drilling head location. Obtain an accuracy range within 25 mm of the actual position of the pipeline. Record the position readings at a maximum of 3 m intervals.

iv) Upon the completion of the pilot hole drilling, furnish the Employer's Agent's Representative with tabulations of the horizontal and vertical alignment.

c) When water is encountered:
   i) Provide and maintain a dewatering system of sufficient capacity to remove water.
   ii) Keep the excavation free of water until the backfill operation is in progress.
   iii) Perform dewatering in such a manner that the removal of soil particles is kept to a minimum.

d) Maintain close observation to detect the settlement or displacement of surface and adjacent facilities.
   iv) Notify the Employer's Agent immediately if settlement or displacement is detected.
   v) Act to maintain safe conditions and prevent damage.

PL 05.2 Drilling Operation

The Contractor shall:

a) Apply drilling fluids as follows:
   vi) Maintain drilling fluid in the bore hole to increase the stability of the surrounding soil and reduce drag on the pulled pipe.
   vii) Dispose of the drilling fluid and other spoils at locations authorised by laws, ordinances, rules, and regulations.
   viii) Transport excess fluids and other spoil to an approved disposal site.
   ix) Minimise drilling fluid at locations other than entry and exit points. Immediately clean up any drilling fluids that inadvertently surface.
   x) Provide clean water for drilling.

b) Execute the pilot hole drilling as follows:
   i) Angle the entry hole so that the curvature of the pilot hole does not exceed the allowable bending radius of the HDPE pipe or drilling rods.
   ii) Be able to make a turn of up to 90° and maintain a curvature that does not exceed the allowable bending radius of the HDPE pipe.
   iii) Procedure in the event of alignment adjustment and restarts.

- Follow the pipeline alignment on the Drawings within the tolerances specified herein. Before adjustments, request the Employer's Agent's approval.
- Notify the Employer's Agent when the forward motion of the operation is obstructed.
- Abandon in place with drilling fluid, unless the Employer's Agent directs otherwise.
- Upon the Employer's Agent's approval, attempt a second installation at an approved location or excavate at the point of difficulty and install the HDPE pipe by the open trench method.
- Exercise caution when discovering and locating unknown services. The exact location of such service shall be confirmed prior to any adjustment or restart of the pilot hole drilling.
- Keep the number of boring pits to a minimum, unless otherwise approved by the Employer's Agent. Equipment shall be capable of boring in a single bore.

PL 05.3 Installing HDPE Pipe

The Contractor shall:

a) Provide a swivel to the reaming assembly and pull section of the pipe to minimise tensional stress on the pull section after drilling the pilot hole.

b) Hold the reaming diameter to 1.5 times the outside diameter of the HDPE pipe being installed.

c) Protect the pull section as it proceeds during pull back so that it moves freely and is not

damaged.

d) Pull the detection wire along with the HDPE pipe. Extend the wire into the locator station at each end of the HDPE pipe.
e) When connecting to the adjacent pulled or non-pulled section of the HDPE pipe, allow the pull section of the pipe to extend past the termination point. Make the tie-ins the next day after the pullback of the HDPE pipe.
f) Test the pit pipe installation to verify horizontal and vertical alignment at the Employer's Agent's direction.
g) Replace those portions of the pipeline that do not comply with the Contract Documents at the Employer's Agent's direction.

PL 06 SUNDRY ITEMS

PL 06.1 Environmental Management

The management and operation of the sites shall comply with the requirements of the environmental specifications and Environmental Management Plan.

PL 06.2 Occupational Health and Safety

The management and operation of the sites shall comply with the requirements of the occupational health and safety specification.

PL 07 TOLERANCES

PL 07.1 Alignment and Grade

The deviation from the specified line and level of the sleeve on the agreed bore plan shall not exceed 100 mm in any direction. The specified dimensions of the pipe sleeve shall be such that the cable or pipe may be laid in the sleeve within the tolerances specified.

PL 08 TESTING

The Contractor shall prove that the pipe or cable sleeve is clean and watertight.

An air test shall be done on the installed pipe or cable sleeve, witnessed by the Employer's Agent's representative to prove the water tightness of the pipe.

PL 08.1 Air Test

a) Installed pipe or cable sleeve above the water table:

An approved air testing machine shall be used to raise the gauge pressure in the section of the installed pipe or cable sleeve under test first to 3.75 kPa. After a 2-minute stabilisation period, the pressure shall be reduced to 2.5 kPa. The machine shall then be switched off and the time taken for the pressure to drop from 2.5 kPa to 1.25 kPa shall be recorded. The time taken shall be at least the applicable of the following values:

Nominal diameter of pipe, mm	**Minimum time (in minutes) taken for pressure to drop from 2.5 kPa to 1.25 kPa**
100	2
150	3
200	4
250	4.5
300	6

b) Installed pipe or cable sleeve below the water table:

An approved air testing machine shall be used to raise the gauge pressure in the section of the installed pipe or cable sleeve under test to 2.5 kPa above the static water pressure. After this pressure has been attained and the machine stopped, any change in pressure shall be noted. There shall be no discernible loss for a period of at least 5 minutes.

PL 08.2 Proof of Roundness and Cleanliness

Two cable draw wires or lines shall be provided in the cable sleeve. One shall be used to pull a testing cylinder through the sleeve in the presence of the Employer's Agents representative to prove that the sleeve is round and that it is free of obstructions to install the cables.

PL 09 DESIGN

HDPE cable sleeves with a nominal internal diameter as indicated on the drawings need to be installed under the road or rail servitude using trenchless technology. The Contractor shall be responsible for the selection of the sleeve wall thickness and HDPE material class that suits the installation profile and drilling rig to be used at each site. The sleeve shall be installed with a minimum cover of 2 m, unless otherwise specified on the drawings or in the way leave requirements.

Prior to the commencement of the installation of the sleeve at each site, the following working drawings and a method statement describing in detail the proposed method and entire operation shall be submitted for approval by the Employer's Agent:

a) Size, capacity and arrangement of equipment.
b) Location and size of drilling and receiving pits (bore plan).
c) Dewatering method and method of removing spoil material.
d) Method of installing detection wire and pipe.
e) Type, location and method of installing locator station.
f) Method of welding HDPE pipe segments and type of equipment.
g) Removal of weld bead.
h) Type of cutting head.
i) Method of monitoring and controlling line and grade.
j) Detection of surface movement.
k) Drilling fluid if required:

i) Product information, material specifications, and handling procedures.
ii) Material safety data sheet and special precautions required.
iii) Method of mixing and application.

The Contractor shall refer to the geotechnical information provided in the Contract Documents and the cross-sections provided in the Drawings.

PL 10 MEASUREMENT AND PAYMENT

The rates tendered under this section shall not include for the general obligations of the main Contractor and work deemed to be covered by the items in the Bill of Quantities in the Preliminary and General.

The following payment items are applicable

PL.10.01 Design and site establishment Unit: Sum

This item shall be inclusive of all design, documentation, services location and site establishment cost as well as the cost of all insurance and health and safety and environmental requirements to be provided by a

specialist directional drilling sub-contractor. All other costs necessary for the complete installation of the pipe or sleeve not covered by items PL.10.02 to PL.10.04 shall be included under this item.

PL.10.02 Temporary works for directional drilling Unit: Sum

This item shall cover the cost of all temporary works required for the installation of the pipe or cable sleeve. It shall include for the launching and receiving of pit excavations, all plant and labour required for the steering, dewatering and handling of drilling fluid, all incidental charges, traffic accommodation, where necessary, and the disposal of displaced material to the nearest approved spoil site.

PL.10.03 Directional drilling and installation of pipe or cable sleeve Unit: m

The tendered rate shall include for set-up distances and the additional pipe material required over these distances outside the stated servitude width. The rate shall also be for a depth of cover of minimum 2 m over the sleeve along the length of servitude. The rate shall include for drilling, reaming and supply, the installation and testing of HDPE pipes or sleeves using trenchless technology (horizontal directional drilling) in all materials, the transportation of excess fluids and other spoil to an approved disposal site and the provision of clean water for drilling.

The rate is inclusive of the cost for welding the HDPE sleeve pipes and removing the weld bead. The rate also covers the supply and removal of all drilling fluid.

The cost of withdrawals, abandonments, and restarts shall be for the Contractor's account if the reason for restart is due to an action or omission by the Contractor.

The cost of replacing portions of the pipeline that do not comply with the Contract Documents, as instructed by the Employer's Agent shall be for the Contractor's account.

PL.10.04 De-establish equipment on site Unit: Sum

The rate shall be inclusive of all costs for the surface reinstatement and de-establishment associated with the specific site. The rate shall include for all costs associated with the recovery of any equipment that may get stuck during the installation process.

PL.10.05 Extra over for unforeseen rock/ boulders where required (Provisional) ..... Unit: m

The rate shall be taken to include all additional costs incurred (that are not already covered under item PL 10.03) to successfully drill through encountered, unforeseen, hard rock or boulders. This rate shall also be taken to include for required grouting or stabilising of weak areas to successfully complete a drilling operation through the affected zone. This rate is provisional and shall only be claimed upon approval by the Employer's Agent.

PL.10.06 Standing time..... Unit: hr

The rate shall be taken to include all additional costs incurred due to standing time that arises for any unforeseen cause which is not in any way the fault of the Contractor. This rate shall only be claimed upon approval by the Employer's Agent.

Part C4: SITE INFORMATION

C4.1 GEOTECHNICAL INVESTIGATION

C4.2 RAINFALL DATA

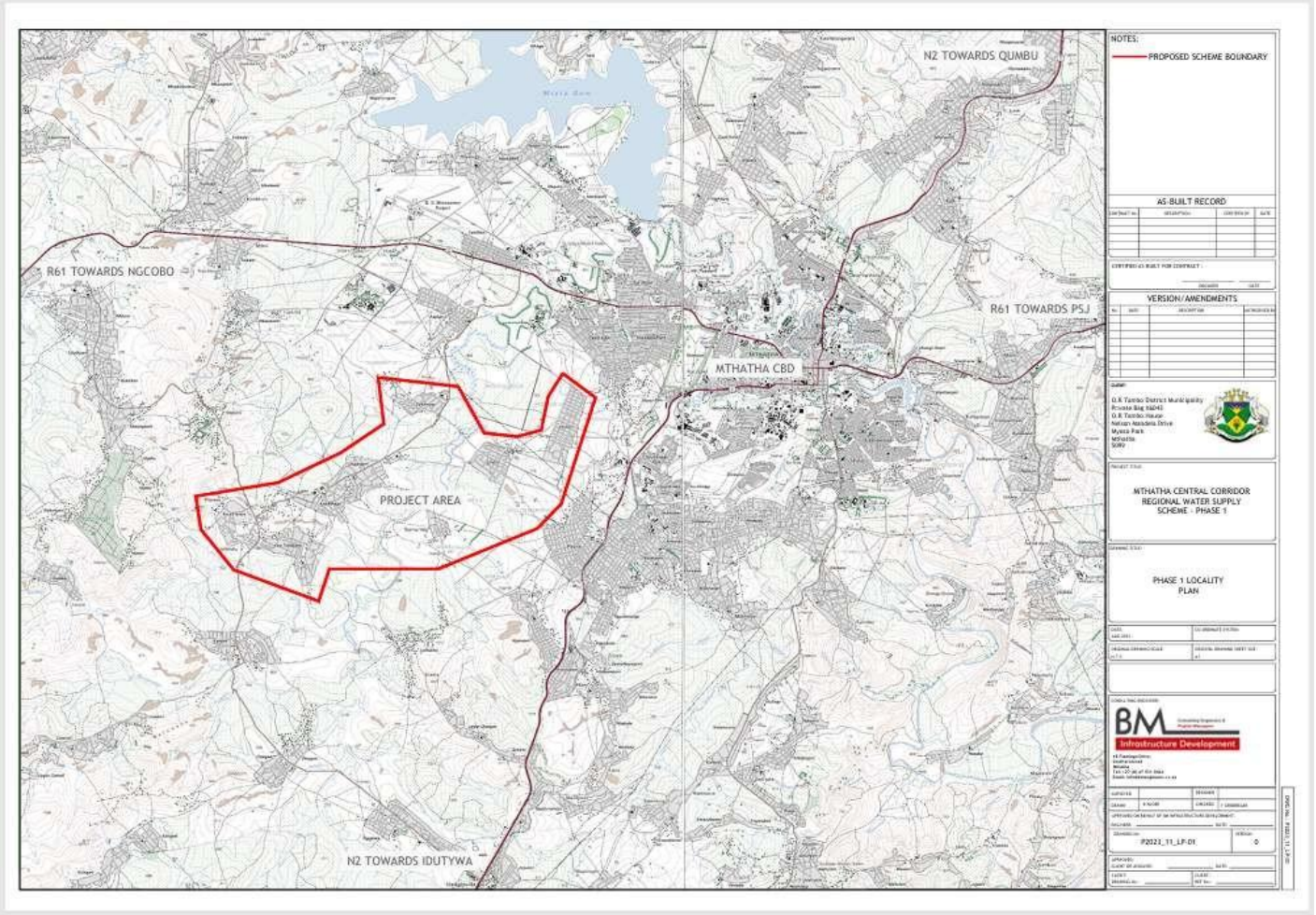
Mthatha Rainfall Data between 2000 to 2020 was used for this project. For Rainfall Data see **Appendix H**.

Part C5: TENDER DRAWINGS

See **Appendix J** for following tender drawings:

DRAWING No	DESCRIPTION
P2024-06-LP-01	Locality
P2024_06_L-100	Tshemese - Layout plan
P2024_06_L-101	KwaMhaga, Lalini & Sigangeni- Layout plan
P2024_06_L-102	KwaTshatshu - Layout plan
P2024_06_L-103	Spring vale-Layout plan
P2024_06_L-104	Lindini-Layout plan
P2024_06_L-105	Master Layout plan
P2024_06_L-106	Rising main - Layout Plan
P2024_06_L-107	Bulk line -Layout plan
P2023_11_D-400	Scour valve chamber Details 1-2
P2023_11_D-401	Scour valve chamber fitting details 2-2
P2023_11_D-402	Break pressure tank detail 1-2
P2023_11_D-403	Reinforcement concrete details Break pressure tank detail 2-2
P2023_11_D-404	Fencing Details
P2023_11_D-405	Standpipe Details
P2023_11_D-406	Thrust Block
P2023_11_D-407	Airvalve Assembly detail 1-2
P2023_11_D-408	Airvalve Chamber detail 2-2
P2023_11_D-409	Gate valve detail 2-2
P2023_11_D-410	Gate valve detail 1-2
P2023_11_D-411	Pipe Marker
P2023_11_D-412	Road Crossing
P2023_11_D-413	River Crossing
P2023_11_D-414	Borehole Pump Statition

APPENDIX A: LOCALITY PLAN



APPENDIX B: MONTHLY REPORTING TEMPLATES

LABOUR MONTHLY SUMMARY SHEET

Name of Contractor
Project Name
Project Number
Applicable Month

No of Working Days: Maximum including training = 23 days per month

Number of workers	Surname	Initials	First Name	ID Number	Birth Date	(M)ale / (F)emale	(D)isabled	Rate per day	Number of days worked this month	Number of training days this month	Total amount paid to beneficiary	Course name	Course Code
1											0		
2											0		
3											0		
4											0		
5											0		
6											0		
7											0		
8											0		
9											0		
10											0		
11											0		
12											0		
13											0		
14											0		
15											0		
16											0		
17											0		
18											0		
19													
20											0		
											0		
20	Totals for month								0	0	0		

Signature Consultant

PAYMENT REGISTER

Contractor Name
Period
Project Number
Month:

Name and surname	ID Number	Contact no	Number of Workdays	Task Rate	Payment Due	Signature for Payment Received	Comments

Signature of CLO

Signature of Contractor to verify accuracy

Signature of Consultant

Signature of Contractor for receipt of monies

DAILY SITE ATTENDANCE REGISTER

Name of Contractor
Project Name

Project Number
Month:

1 = At Work A = Absent L = Leave SC = Site Closed
SL = Sick Leave P = Public Holiday 2 = Training

Validation: Cannot be more than 23 days per person per month.

	Surname	Initials	ID Number	Birth Date	Rate per day (R)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Work days	Total Training Days	Total work days & training days
1																																					0	0	0
2																																					0	0	0
3																																					0	0	0
4																																					0	0	0
5																																					0	0	0
6																																					0	0	0
7																																					0	0	0
8																																					0	0	0
9																																					0	0	0
10																																					0	0	0
11																																					0	0	0
12																																					0	0	0
13																																					0	0	0
14																																					0	0	0
15																																					0	0	0
16																																					0	0	0
17																																					0	0	0
18																																					0	0	0
19																																					0	0	0
20																																					0	0	0
20	**TOTALS**																													**TOTALS**							0	0	0

Signature of CLO

Week 1: Signature of Contractor

Week 2: Signature of Contractor

Week 1 -2: Signature of Contractor Organisation

Week 3: Signature of Contractor

Week 3-4: Signature of Contractor Organisation

Week 4: Signature of Contractor

Validation:		
	Total work days	0
	Total training days	0
	Total work days + training days	0
	Variance	0
	Variance must be 0	

BENEFICIARY LIST

Name of Contractor
Project Name
Project Number
Month:

Youth = 35yrs and less

Number of workers	Surname	Initials	Name	ID Number	Date of Birth	Male/Female	Has Disability (Y?N)	Is Youth (Y/N)	Education Level*	Date Start	Contact Number
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											

Signature of CLO

5. Actual EMPLOYMENT GENERATION

5.1. Actual Number of persons employed

Occupational Category			Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	Persons	Person Days	Persons	Person Days	Persons	Person Days	Persons	Person Days	Persons	Person Days	Persons	Person Days	Persons	Person Days
Clerical														
Labourer														
Managerial														
Semi-skilled														
Skilled														
Supervisor														
Total														

Please note: - The definition of youth is any person under the age of 35 years. (18-35 Years)
- Each person may only be counted once. If a person falls into more than one category, disabled persons take preference, then youth, then adults.
- Must include all occupational categories (Clerical, Labourer, Managerial, Semi-skilled, Skilled and Supervisor).

5.2. Average daily wage per category

Please note that the totals are calculated averages for the number of records submitted per category.

Occupational Category	Category Average	Adult		Youth		Disabled	
		Women	Men	Female	Male	Female	Male
		Daily wage	Daily wage	Daily wage	Daily wage	Daily wage	Daily wage
Clerical							
Labourer							
Managerial							
Semi-skilled							
Skilled							
Supervisor							
Average of the Daily Wage							

6. TRAINING ACTIVITIES

6.1 Non-Accredited Training

Training Type	Totals		Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	Persons Trained	Training days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days
Administration														
Technical														
Lifeskills/ ISD														
Literacy & Numeracy														
Vocational Skills														
Business Skills														
Total Training														

6.2 Accredited Training

Training Type	Totals		Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	Persons Trained	Training days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days
Administration														
Technical														
Lifeskills/ ISD														
Literacy & Numeracy														
Vocational Skills														
Business Skills														
Total Training														

6.3 Categories of Accreditation

Training Type	If Accredited		
	NSB Number	NQF Level	ETQA/ CETA
Administration			
Technical			
Lifeskills / ISD			
Literacy &Numeracy			
Vocational Skills			
Business Skills			
Total Training			

Note:
NQF Level of Training
Level 1 – General Education and Training
Level 2,3,4 - Further Education and Training
Level 5 - Higher Education and Training

NSB Number:
NSB 01: Agriculture and Nature Conservation
NSB 02: Culture and Arts
NSB 03: Business, Commerce and Management Studies
NSB 04: Communication Studies and Language
NSB 05: Education, Training and Development
NSB 06: Manufacturing, Employer's Agenting and Technology
NSB 07: Human and Social Studies
NSB 08: Law, Military Science and Security
NSB 09: Health Science and Social Services
NSB 10: Physical, Mathematical, Computer and Life Sciences
NSB 11: Services
NSB 12: Physical Planning and Construction

7. SMME'S USED SINCE THE START OF THE PROJECT:

Please remember to include all the SMME's that worked on the project since it started. Then add all the person days and all the funds paid to each SMME since the start of the project, and only record the latest total in the table.
For example, if a SMME completed all their work during the first reporting period, the name and details of that SMME must be added to every subsequent report.

SMME	Information about the SMME. (If it is a subsidiary: provide information for whole group and not for the SMME only)		Information about the work on the PROJECT			
Name of SMME	No. of permanent employees	Turnover previous 12 months	Total no. of person days to date	Amount paid to SMME to date. (Total)	Person days locally sourced: 0-25% 26-50% 51-75% 75-100%	Total value of work: SMME Involvement

8. BEE ORGANISATIONS USED SINCE THE START OF THE PROJECT:

Note that Black Economic Empowerment (BEE) Organisations are referred to in the table below as Affirmable Business Enterprises (ABE's).
The definition of an ABE is as per the Department of Public Works definition: ***A sole trader, partnership or legal entity which adheres to statutory labour practises, is registered with South African revenue Services and is a continuing and independent enterprise for profit, providing a commercially useful function and for which at least two thirds (67%) is owned by one or more PDI's and whose management and daily business operations are in control of one or more PDI's who effectively own it, and provided that the annual average turnover excluding VAT, does not exceed the maximum values given for each respective ABE category.***

Please remember to include all the ABE's that worked on the project since it started. Then add all the person days and all the funds paid to each ABE since the start of the project, and only record the latest

ABE	Information about the ABE. (If it is a subsidiary: provide information for whole group and not for the ABE only)		Information about the work on the PROJECT			
Name of ABE	No. of permanent employees	Turnover previous 12 months	Total no. of person days to date	Amount paid to ABE to date. (Total)	Person days locally sourced: 0-25% 26-50% 51-75% 75-100%	Total value of work: SMME Involvement

APPENDIX C: PEM ENVIRONMENTAL SPECS

APPENDIX D: PHS OHS Specs

APPENDIX E: HIV/AIDS AWARENESS EDUCATION SPECIFICATION

APPENDIX F: BASELINE RISK ASSESSMENT

APPENDIX G: GEOTECHNICAL INVESTIGATION

APPENDIX H: RAINFALL DATA

APPENDIX J: BOOK OF DRAWINGS