

Documents may be obtained,
free of charge, in electronic format,
from the eTenders website.

Reference is to be made to
Clause F.1.2 of the
Tender Data.

ETHEKWINI WATER & SANITATION

WATER DESIGN & NON-REVENUE WATER

PROCUREMENT DOCUMENT

INFRASTRUCTURE

CONTRACT No.: WS7556

TITLE: Construction and replacement of Water Mains in the eThekweni Supply Area
Ward 48 & 110

Issued by:

ETHEKWINI WATER & SANITATION
WATER DESIGN & NON-REVENUE WATER

Date of Issue: October 2022

Document Version: 02/03/2022

NAME OF TENDERER:

INDEX

<u>PART</u>		<u>PAGE</u>
<u>TENDER</u>		
T1 TENDERING PROCEDURES		
T1.1 Tender Notice and Invitation to Tender	(white)	2
T1.2 Tender Data	(pink)	3
T1.2.1 Standard Conditions of Tender		
T1.2.2 Tender Data (applicable to this tender)		
T2 RETURNABLE DOCUMENTS		
T2.1 List of Returnable Documents	(yellow)	16
T2.2 Returnable Schedules, Forms and Certificates	(yellow)	18
<u>CONTRACT</u>		
C1 AGREEMENT AND CONTRACT DATA		
C1.1 Form of Offer and Acceptance	(yellow)	51
C1.1.1 Offer		
C1.1.2 Acceptance		
C1.1.3 Schedule of Deviations		
C1.2 Contract Data	(yellow)	55
C2 PRICING DATA		
C2.1 Pricing Assumptions / Instructions	(yellow)	65
C2.2 Bill of Quantities (with separate page numbering)	(yellow)	67
C3 SCOPE OF WORK		
C3.1 Project Description and Scope of Contract	(blue)	70
C3.2 Project Specifications	(blue)	72
C3.3 Standard Specifications	(blue)	82
C3.4 Particular Specifications	(blue)	134
C3.5 Contract and Standard Drawings	(blue)	135
C3.6 Annexures	(blue)	137
C3.7 Engineering	(blue)	138
C3.8 Procurement, Participation & Empowerment	(blue)	140
C3.9 Construction	(blue)	144
C3.10 Management of the Work	(blue)	149
C4 SITE INFORMATION		
C4.1 Locality Plan	(green)	155
C4.2 Conditions on Site	(green)	155
C4.3 Test Results	(green)	155

PART T1: TENDERING PROCEDURES
T1.1: TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited for the works to **replace existing water mains in Wards 48 and 102.**

(F.1.1.1) The Employer is the eThekweni Municipality as represented by **Bhavna Soni**

It is estimated that tenderers should have a CIDB contractor grading designation of **8 CE** (or higher).

(F.1.2) Documents can be obtained in electronic format, issued by the eThekweni Municipality:

- Electronically downloaded documentation is obtainable from the National Treasury's eTenders website or the eThekweni Municipality's Website. The entire document should be printed and suitably bound by the tenderer.

(F.2.7) There will be no compulsory clarification meeting. All queries are to be submitted via email to jb@riot.consulting by the 4th November 2022. E-mail questions and answers will be consolidated and posted on e-Tenders/Municipal website for the benefit of all Tenderers by 10th November 2022

(F.2.8) Queries relating to these documents may be addressed to the Employer's Agent's Representative whose contact details are: , 031-830 5113 , jb@riot.consulting

(F.2.13) Tender offers shall be delivered to the Municipal Building, 166 K.E. Masinga Road and placed in the tender box located in the ground floor foyer.

(F.2.15) Tender offers shall be delivered on or before Friday, 18th November 2022 at or before 11:00

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data

PART T1: TENDERING PROCEDURES**T1.2: TENDER DATA****T1.2.1 STANDARD CONDITIONS OF TENDER**

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (July 2015) as published in Government Gazette No 38960, Board Notice 136 of 2015 of 10 July 2015.

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

T1.2.2 TENDER DATA

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

F.1: GENERAL

F.1.1 The employer: The Employer for this Contract is the eThekweni Municipality as represented by: [Bhavna Soni](#)

F.1.2 Tender documents: The Tender Documents issued by the Employer comprise:

- 1) This procurement document.
- 2) Drawings, issued separately from this document on cloud link.
- 3) "General Conditions of Contract for Construction Works – 3rd Edition 2015" issued by the South African Institution of Civil Engineering (GCC 2015). This document is obtainable separately, and Tenderers shall obtain their own copies.
- 4) "South-African National Standards - Standardised Specification for Civil Engineering Construction (SANS 1200)" hereinafter referred to as the Standard Engineering Specifications or SANS 1200. This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections at their own expense.
- 5) "South-African National Standards – Construction Procurement (SANS 10845:2015)". This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections at their own expense.
- 6) In addition, Tenderers are advised, in their own interest, to obtain their own copies of the following acts, regulations, and standards referred to in this document as they are essential for the Tenderer to get acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and the participation of targeted enterprise and labour.
 - The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).
 - The Construction Industry Development Board Act No 38 of 2000 and the Regulations issued in terms of the Act (July 2013).
 - The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (January 2017).
 - SANS 1921:2004 – Construction and Management Requirements for Works Contract, Parts 1-3.
 - The Employer's current Supply Chain Management Policy.
 - Any other eThekweni Policy documents referenced in the Tender Documents.

Electronically downloaded documentation is obtainable from the National Treasury's **eTenders Website** or the eThekweni Municipality's **Website** at URLs:

- www.durban.gov.za; or
- <https://etenders.treasury.gov.za/>

The entire downloaded document should be printed and suitably bound by the tenderer.

F.1.4 The employer's agent: The Employer's agent is

- Nadas Thumbaya (Pr.Eng) of Naidu Consulting (Pty) Ltd.
- Tel: 031-265-6007
- Email: Terence.Thumbaya@NaiduConsulting.com

The tenderer's contact details as indicated in the Contract Data under Clause C1.2.2.2 "Data to Be Provided by Contractor" shall be deemed as the only applicable contact details for the tenderer for use in communications between the employer's agent and the tenderer after the closing time stated in the Tender Data.

F.2: TENDERER'S OBLIGATIONS

F.2.1 Eligibility: General

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

- (a) the Tenderer does not comply with the legal requirements as stated in the Employer's current SCM Policy that can be found here:

<https://www.durban.gov.za/pages/government/documents?d=Policy%20and%20Documents>

- (b) the Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.
- (c) In the event of a Compulsory Clarification Meeting:
- i) the Tenderer fails to attend the Compulsory Clarification Meeting for the full duration.
 - ii) the Tenderer fails to complete the online Attendance Register that will be provided at the Online Clarification Meeting. Thereafter a copy of the Certificate of Attendance will be distributed to the attendee who will complete the Certificate of Attendance and return to the Employer's Agent Representative within 3 working days for signature.
- (d) in the case of JV submissions, two or more JV entities have common directors / shareholders or common entities tendering for the same works.
- (e) at the time of closing of tenders, the Tenderer is not registered on the National Treasury Central Supplier Database (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture.

F.2.1.1 Eligibility: CIDB

Only those tenderers who are registered (as "Active") with the CIDB (at time of tender closing), in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a **CE** class of construction work, are eligible to have their tenders evaluated.

Joint ventures are eligible to submit tenders provided that:

- (a) Every member of the joint venture is registered (as “Active”) with the CIDB (at time of tender closing);
- (b) The lead partner has a contractor grading designation in the CE class of construction work and has a grading designation of not lower than one level below the required grading designation: and
- (c) The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations (2013) is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a CE class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

F.2.1.2 Eligibility: Tenderer’s Experience

Only those tenderers that can demonstrate experience, by the submission of the specified returnable document in Part T2.2 (duplicated for each experience submission), and supply the associated documentation/ information, in works of a similar nature, within the past 10 years, will be eligible to have their tenders evaluated in terms of Clause F.3.11.

The documentation/ information that is required is specified on **Table 1**: “Documentation / Information Requirements” (which includes the Notes below the table), and the experience requirement is as stated on **Table 2**: “Tenderer’s Experience Requirement”.

Tenderers may submit experience gained as Sub-Contractors but have to provide Main Contractor references to verify experience submitted. When submitting Tenderer Experience as a Sub-Contractor, only the work carried out by the Tenderer as a Sub-Contractor may be submitted. The Tenderer is to provide supporting documentation stipulated in Table 1: “Documentation / Information Requirements” to verify experience submitted. In addition to the documents stipulated in Table 1, a reference letter from the Main Contractor confirming the scope of works undertaken by the Tenderer must be submitted

Where works are still in progress the value of completed work as detailed on the most recent payment to the Contractor / Sub-Contractor will be used in the experience verification.

In the event of a Joint Venture (JV) tendering for this contract, experience gained by the separate entities making up the JV may be used as experience provided that the experience requirement, as stipulated in **Table 2**, is satisfied, and that the required documentation/ information is provided.

Returnable form “Experience of Tenderer” is included in Part T2. This form is to be duplicated for each experience submission, as may be required.

Table 1: Documentation / Information Requirements

Note: an “X” in this table indicates that the associated documentation must be provided, if applicable.	Proof of Sub-Contract Agreement	Letter of Award OR Form of Offer & Acceptance	Most recent Payment Certificate with Quantities summary	Final Payment Certificate with Quantities summary	Completion Certificate	NB Scope of Work
	Note 1	Note 2	Note 3	Note 4	Note 5	Note 6
Works as Sub-Contractor						
Current Contracts						
Completed Contracts	X			X		X
Works as Main Contractor						
Current Contracts						
Completed Contracts		X		X	X	X

NOTES	
Note 1	Must include the names of the parties, the managing entity's name, the effective dates, and the signature(s) page, all pertaining to the agreement.
Note 2	Issued by the Client / Employer.
Note 3	Proof of the most recent payment received from the Main Contractor or Client/ Employer, with a summary breakdown of quantities.
Note 4	Proof of the final payment received from the Main Contractor or Client/ Employer, with a summary breakdown of quantities.
Note 5	Issued by the Client/ Employer.
Note 6	<p>NB: Without this information the experience submission cannot be considered.</p> <ul style="list-style-type: none"> This submission must indicate how the works carried out, either as a Sub-Contractor or a Main Contractor, is similar (see Table 2: Tenderer's Experience Requirement) to the Scope-of-Work of this specific tender. If executed as a Sub-Contractor, the Scope-of-Work should be indicative of only the works carried out by the Sub-Contractor, and not the overall Scope-of-Work of the main contract. If executed as a Main Contractor, the overall contract Scope-of-Work is to be provided. The description of the Scope-of-Work is to be inserted into the returnable form in Part T2, or if available as a hard copy (max. 2 pages) attached to the form with the other relevant, associated, supporting documentation.
<p>Failure to submit the returnable form in Part T2.2, and provide the above supporting documentation/ information, for each submission of experience, will invalidate that experience submission</p>	

Table 2: Tenderer's Experience Requirement

Provision of Water Mains Replacement Works
<ul style="list-style-type: none"> Refer to Tenderer's Experience Table under Clause F3.11.9

Note: The failure to complete the relevant returnable form in Part T2.2 for each submission of experience AND supply the associated documentation (as specified on Table 1), will invalidate the experience submission.

F.2.2.2 The cost of the tender documents: Replace this paragraph with the following:

"Documents may be obtained, free of charge, in electronic format, from the National Treasury's eTenders website or the eThekweni Municipality's Wwebsite. The entire electronically downloaded document should be printed and suitably bound by the tenderer.

F.2.6 Acknowledge addenda: Add the following paragraphs to the clause:

"Addenda will be published, in electronic format, on the National Treasury's eTenders website (see F.2.2.2 above). Tenderers are to ensure that the eTenders website is consulted for any published addenda pertaining to this tender until three days before the tender closing time as stated in the Tender Data."

"Acknowledgement of receipt of the addenda will be by the return of the relevant completed, dated and signed portion of the addenda, to the address / fax number / email address as specified on the addenda. Failure of the tenderer to comply with the requirements of the addenda may result in the tender submission being made non-responsive."

F.2.7 Clarification meeting: There will be no compulsory clarification meeting. All queries are to be submitted via email to jb@riot.consulting by the 4th November 2022. E-mail questions and answers will be consolidated and posted on e-Tenders/Municipal website for the benefit of all Tenderers by 10th November 2022

In the event of a Compulsory Clarification Meeting, Tenderers must sign the attendance register in

the name of the tendering entity. Addenda will be issued to, and tenders will be received only from, those tendering entities appearing on the attendance list.

F.2.12 Alternative tender offers: No alternative tender offers will be considered.

F.2.13 Submitting a tender offer: Submissions must be submitted on official submission documentation issued by the eThekweni Municipality. Bidders are also required to submit a SOFT COPY of their complete tender submission scanned and saved onto a memory stick.

Identification details to be shown on each tender offer package are:

- Contract No. : [WS7556](#)
- Contract Title : [Construction and replacement of Water Mains in the eThekweni Supply Area Ward 48 & 110](#)

The Employer's address for delivery of tender offers is:

[the Municipal Building, 166 K.E. Masinga Road](#)

and placed in the **Tender Box** located in the ground floor foyer.

Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.

F.2.15 Closing time: The closing time for delivery of tender offers is:

- Date : [Friday, 18th November 2022](#)
- Time : [11:00](#)

F.2.16 Tender offer validity: The Tender Offer validity period is 12 weeks (84 Days) from the closing time for submission of tenders.

F.2.23 Certificates: Refer to [Part T2.1](#) for a listing of certificates that must be provided with the tender. All certificates must be valid at the time of tender closing.

CIDB Registration

Tenderers are to include with their submission a printout of their registration with the CIDB, obtained from the CIDB website (<https://registers.cidb.org.za/PublicContractors/ContractorSearch>).

The Joint Venture Grading Designation Calculator should be used when submitting as a Joint Venture (<https://registers.cidb.org.za/PublicContractors/JVGradingDesignationCalc>).

The date of obtaining the above printouts is to be indicated on the printout. Registration with the CIDB must be reflected as "Active" at time of tender closing.

Tax Clearance

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.

Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

B-BBEE Status Level of Contribution

The Amended Construction Sector Code (Government Gazette No.41287) is applicable to the B-BBEE compliance measurement of all entities that fall within the Construction Sector.

The requirements for measurement and verification of entities are contained in the "Amended Code Series CSC000: Framework for Measuring Broad Based Black Economic Empowerment in the

Construction Sector”, as published in Notice 931 of 2017, Government Gazette No.41287 of 01/12/2017.

The requirements are summarised in the following table:

Enterprise Type	Total Annual Revenue (R million)	Ownership and Annual Turnover
EME: Built Environment Professional	< R1.8m	May present an affidavit OR a certificate issued by the CIPC
EME: Contractor	< R3.0m	OR authorised B-BBEE verification certificate (as below)
Reference should be made to Cl.3.6.2.4.1 of the Amended Construction Sector Code regarding the above exceptions.		
EME: Built Environment Professional	< R6m	Must present an authorised B-BBEE verification certificate by a SANAS accredited Verification Agency
EME: Contractor	< R10m	
QSE: Built Environment Professional	≥ R6.0m and < R25m	
QSE: Contractor	≥ R10.0m and < R50m	
Large Enterprise	>R50m	

The requirements for measurement of Joint Ventures is described in Cl.2.8 of the Amended Construction Sector Code. The compilation of a consolidated verification certificate is required.

B-BBEE Verification Certificates must be from a Verification Agency accredited by the South African National Accreditation System (SANAS).

Central Supplier Database (CSD)

The entities (full) Registration Report, obtained from the National Treasury Central Supplier Database, is to be included in the tender submission (<https://secure.csd.gov.za>).

Separate CSD Registration Reports are required for each entity in a Joint Venture.

F.3: THE EMPLOYER'S UNDERTAKINGS

- F.3.1.1 Respond to requests from the tenderer:** Replace the words “five working days” with “three working days”.
- F.3.2 Issue addenda:** Add the following paragraph: “Addenda will be published, in electronic format, on the National Treasury’s eTenders website. In the event that the Clarification Meeting is compulsory, Addenda will only be issued to those tendering entities appearing on the Clarification Meeting Register.”
- F.3.4 Opening of Tender Submissions:** Tenders will be opened immediately after the closing time for tenders. The public reading of tenders will take place in the SCM Boardroom, 6th Floor, Engineering Unit Building, 166 KE Masinga Road, Durban.
- F.3.11 Evaluation of Tender Offers:** The procedure for evaluation of responsive Tender Offers will be in accordance with the Employer’s current SCM Policy, the Preferential Procurement Policy Framework Act (5 of 2000).

The procedure for the evaluation of responsive tenders is **Method 2** (Price and Preference with functionality).

The **90/10** preference points system will be used where the financial value (incl. VAT) of all responsive tenders received have a value in excess of R 50,000,000. The Formula used to calculate the **Price Points**, and the **Preference Points** that will be allocated, will be according to the specified PPPFA Regulations.

Only locally produced goods, services, or works, or locally manufactured goods, with a stipulated minimum threshold for Local Production and Content will be considered.

- F.3.11.9 The value of W_2 is 100. The Functionality criteria (and sub criteria if applicable) and maximum score in respect of each of the criteria are as follows:

	Functionality criteria (Sub-criteria)	Maximum Points Score
1	Tenderer's Experience in Similar Projects	40
2	Experience of Key Staff	30
3	Preliminary Programme (indicative of process and relating to methodology)	10
4	Construction Methodology, Project Approach, Participation Approach & Quality Control	10
5	Quality Assurance	10

Maximum possible score for Functionality (M_s) 100

The minimum number of evaluation points for Functionality is **70**. Only those tenderers who achieve the minimum number of Functionality evaluation points (or greater) will be eligible to have their tenders further evaluated.

Functionality shall be scored by not less than three evaluators and the scores of each of the evaluators will be averaged, weighted, and then totalled to obtain the final score for Functionality. Each evaluation criteria will be assessed in terms of the criterion tables provided below.

Evaluation criteria will be adjudicated according to submissions made in accordance with the following schedules, which are found in Part T2.2: Returnable Schedules:

Functionality Criteria	Returnable Schedules
Tenderer's Experience in Similar Projects	<ul style="list-style-type: none"> Experience of Tenderer
Experience of Key Staff	<ul style="list-style-type: none"> Proposed Organization and Staffing Key Personnel CVs with Experience of Key Personnel
Preliminary Programme (indicative of process and relating to methodology)	<ul style="list-style-type: none"> Preliminary Construction Programme
Construction Methodology, Project Approach & Participation Approach	<ul style="list-style-type: none"> Construction Approach & Methodology, Participation Approach Schedule of Proposed Subcontractors Plant and Equipment
Quality Assurance	<ul style="list-style-type: none"> Quality Assurance Plan/ISO Certificate
	<ul style="list-style-type: none">

Unless otherwise stated, evaluation criteria will be adjudicated with respect to the contract specific Scope of Work, as specified in Part C.3. In this regard the following definitions apply to the evaluation criteria prompts for judgement:

- **“successfully completed”** implies a project has been completed on time and to specification.
- **“similar nature”** implies replacement of watermains with a minimum of 100mm and larger for brownfields projects.
- **“experience”** implies experience on projects of a similar nature.
- **“accredited degree / diploma”** implies a minimum 3-year qualification within the built environment, from a registered University or Institute of Technology.

Criterion: Tenderer's Experience			
Note: Only completed brownfields projects similar to the Scope of Works in the last 10 years may be used, for which supporting documentation must be supplied as per TENDERER'S EXPERIENCE: PROFORMA CLIENT REFERENCE OF COMPARABLE BROWNFIELDS PROJECTS page in this document. Projects not successfully completed by the Tenderer will not be assessed in this evaluation.	Max Points		Tenderer's Self Score
	The Tenderer has failed to provide evidence of experience in the successful replacement of water mains 100mm diameter and larger i.e., ZERO km (0) successfully commissioned.	0 of 40	40 ____ / 40
	The Tenderer has replaced water mains 100mm diameter and larger with a total length in range of ONE km (1) to TWENTY-FIVE km (25).	10 of 40	
	The Tenderer has replaced water mains (100mm diameter and larger) with a total length in range greater than TWENTY-FIVE km (25) up to FIFTY km (50).	20 of 40	
	The Tenderer has replaced water mains (100mm diameter and larger) with a total length in range greater than FIFTY km (50) up to SEVENTY-FIVE km (75).	30 of 40	
	The Tenderer has replaced water mains (100mm diameter and larger) with a total length in range greater than SEVENTY-FIVE km (75) up to ONE HUNDRED km (100).	40 of 40	

Sub criteria	Prompts for Judgement-Key Expert Criteria	Max Points	Tenderer's Self Score	
Contracts Manager	National Diploma or Degree in Civil Engineering (Compulsory Requirement)			
	has less than FIVE (5) years post-qualification or no proof of evidence of experience.	0 of 10	10	_____/10
	FIVE (5) to NINE (9) years post-qualification of relevant project experience	5 of 10		
	TEN (10) OR MORE years post-qualification of relevant project experience	10 of 10		
Site Agent / Project Manager	National Diploma or Degree in Civil Engineering and NQF 5 (LIC) certified (Compulsory requirement)			
	has less than FIVE (5) years post-qualification or no proof of evidence of experience	0 of 10	10	_____/10
	FIVE (5) to NINE (9) years post-qualification of relevant project experience	5 of 10		
	TEN (10) OR MORE years post-qualification of relevant project experience	10 of 10		
Pipeline Foremen	Degree, National Diploma or NHD/ S4 in Civil Engineering			
	has less than FIVE (5) years post-qualification or no proof of evidence of experience	0 of 10	10	_____/10
	FIVE (5) to NINE (9) years post-qualification of relevant project experience	5 of 10		
	TEN (10) OR MORE years post-qualification of relevant project experience	10 of 10		
SUB-TOTAL		30	_____/30	

Sub criteria	Criterion: Construction Programme / Works Schedule	Max Points		Tenderer's Self Score
Preliminary Programme	No information provided; OR submission of no substance / irrelevant information provided	0 of 10	10	_____/10
	Programme does not cover all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).	2 of 10		
	Programme covering all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).	4 of 10		
	Programme covering all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion). Plus: shows critical path with logical linking of tasks/ activities.	6 of 10		
	Programme covering all the applicable individual activities which are in an acceptable sequence, with appropriate durations, is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion) and demonstrate that the tenderer clearly understand the Scope of Work. Plus: shows critical path with logical linking of tasks/ activities, shows detailed activity and resources breakdown, cashflow included.	8 of 10		

Sub criteria	Criterion: Construction Programme / Works Schedule	Max Points		Tenderer's Self Score
	Programme covers all the applicable individual activities which are in an acceptable sequence, with appropriate durations, is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion) and gives real confidence that the tenderer will add value to the project. Plus: shows critical path with logical linking of tasks/ activities, shows detailed activity and resources breakdown, cashflow included. Detailed plant and equipment resource breakdown included.	10 of 10		
SUB-TOTAL		10		_____/10

Sub criteria	Prompts for Judgement-Construction Methodology	Max Points		Tenderer's Self Score
Construction Methodology, Project Approach & Participation Approach	No information provided; OR submission of no substance/ irrelevant information provided	0 of 10	10	_____/10
	The technical approach / methodology, plant and equipment is poor and gives no relevant information in satisfying the projects objectives Quality control statement is poor with no relevant information	2 of 10		
	The technical approach and/or methodology is less than acceptable and unlikely to satisfy project objectives or requirements. Plant and equipment are unlikely to provide adequate protection of the works. Quality control statement is generic.	4 of 10		
	Brief overview of a site-specific methodology which encompasses all programmed activities in appropriate order and includes staff, plant and equipment resources, including subcontractors if applicable, a brief description of preparatory work, construction processes including finishing works for each activity. Quality control statements are site specific with statements covering required sampling and testing requirements for the programmed activities. Participation Approach: The tender has a general understanding of participation requirements and approach.	6 of 10		
	The methodology is specifically tailored to address specific project requirements. The methods and approach to managing risk etc. are specifically tailored to the critical characteristics of the project. The plant and equipment are specifically tailored to the project requirements and are sufficiently adaptable to accommodate changes that may be required during execution. Quality control statements are site specific covering required sampling and testing for programmed activities including site specific quality control checklist for programmed activities. Participation Approach: The tender has a very good understanding of participation requirements and approach but without innovative approaches mentioned.	8 of 10		
	Besides meeting the "above Level 4" rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has excellent knowledge of working in the projects environment and producing the required final product. Plant and equipment proposals and ownership/provision arrangements are most likely to ensure a satisfactory project outcome. Quality control statements are site specific covering required sampling and testing for all programmed activities including site specific quality control checklist for all programmed activities. Participation Approach: The tender has a very good understanding of participation requirements and approach with innovative approaches mentioned.	10 of 10		
SUB-TOTAL		10		_____/10

Sub criteria	Criterion: Quality Assurance	Max Points		Tenderer's Self Score
Quality Control/ Assurance	Contractor is not ISO 9001/2000/2009 accredited	0 of 10	10	_____/10
	The Contractor has attached his ISO 9001/2000/2009 accreditation	10 of 10		
SUB-TOTAL			10	____10

F.3.13 Acceptance of tender offer: In addition to the requirements of Clause F.3.13 of the Standard Conditions of Tender, tender offers will only be accepted if:

- (a) The tenderer submits a valid Tax Clearance Certificate OR Tax Compliance Status PIN, issued by the TCS System of the South African Revenue Services, or has made arrangements to meet outstanding tax obligations.
- (b) The tenderer is registered, and "Active", with the Construction Industry Development Board, at time of tender closing, in an appropriate contractor grading designation.
- (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 has not:
 - Abused the Employer's Supply Chain Management System; or
 - Failed to perform on any previous contract and has been given a written notice to this effect.
- (e) The tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.
- (f) The tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer.
- (g) The employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.
- (h) If this tender is subject to "Local Content and Production", the tenderer must complete and sign MBD 6.2 and attach Annexure C (of SATS 1286:2011).
- (i) The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound

to provide any quantities stipulated in the specification.

F.3.15 Complete adjudicator's contract: Refer to the General Conditions of Contract and the Contract Data.

F.3.17 Copies of contract: The number of paper copies of the signed contract to be provided by the Employer is ONE (1). Bidders are required to submit a SOFT COPY of their complete tender submission scanned and saved onto a memory stick.

The additional conditions of tender are:**ACT.1 Appeals**

In terms of Regulation 49 of the Municipal Supply Chain Management Regulations persons aggrieved by decisions or actions taken by the Municipality, may lodge an appeal within 14 days of the decision or action, in writing to the Municipality. All appeals (clearly setting out the reasons for the appeal) and queries with regard to the decision of award are to be directed to:

The City Manager
Attention Ms S. Pillay eMail: Simone.Pillay@durban.gov.za
P O Box 1394
DURBAN, 4000

ACT.2 Prohibition on awards to persons in the service of the state

Clause 44 of the Supply Chain Management Regulations states that the Municipality or Municipal Entity may not make any award to a person:

- (a) Who is in the service of the State.
- (b) If that person is not a natural person, of which a director, manager, principal shareholder or stakeholder is a person in the service of the state; or
- (c) Who is an advisor or consultant contracted with the municipality or a municipal entity.

Should a contract be awarded, and it is subsequently established that Clause 44 has been breached, the Employer shall have the right to terminate the contract with immediate effect.

ACT.3 Code of Conduct and Local Labour

The Tenderers shall make themselves familiar with the requirements of the following policies that are available on web address: <ftp://ftp.durban.gov.za/cesu/StdContractDocs/>:

- Code of Conduct.
- The Use of CLOs and Local Labour.

ACT.4 Mandatory Submission of Annual Financial Statements

The bidder will be required to submit Annual Financial Statement if the bidder is required by law to prepare annual financial statements for auditing, their audited annual financial statements for the past three years or for the past 3 years since their establishment if established during the past three years

Tenderers shall take note of the following and shall submit Audited Financial Statements

- Regulation 28 of the Companies Act deals with Categories of companies required to be audited and states that Close Corporations ("CC's") that are deemed to be in the public interest are now required to be audited, or at undergo an independent review.
- "Public interest" determination is done through a public interest score that is calculated against a set formula that takes into account the number of employees, annual turnover and the number of individuals who have a direct or indirect interest in the company's securities, to name a few criteria. The final score determines the type of review the CC's annual financial statements will have to undergo.

PART T2: RETURNABLE DOCUMENTS
T2.1: LIST OF RETURNABLE DOCUMENTS

T2.1.1 General

The Tender Document must be submitted as a whole. All forms must be properly completed as required, and the document shall not be taken apart or altered in any way whatsoever.

The Tenderer is required to complete each and every Schedule and Form listed below to the best of his ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the Schedules and Forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is not responsive.

T2.1.2 Returnable Schedules, Forms and Certificates

Company Specific

Certificate of Attendance at Clarification Meeting	19
Certificate of Authority	20
Declaration of Municipal Fees	21
Compulsory Enterprise Questionnaire	22
Tax Compliance Status PIN / Tax Clearance Certificate	24
B-BBEE Status Level of Contribution Certificate	25
CSD Registration Report	26
Contractor's Health and Safety Declaration	27

Eligibility

Verification of CIDB Registration and Status	29
----------------------------------------------	----

Consolidated MBD Documents

MBD2: Tax Clearance Certificate Requirements	30
MBD4: Declaration of Interest	
MBD5: Declaration for Procurement Above R10 Million (if applicable)	
MBD6.1: Preference Points Claim Form ITO the Preferential Regulations	
MBD6.2: Declaration Certificate for Local Production and Content (if applicable)	
MBD8: Declaration of Bidder's Past SCM Practices	
MBD9: Certificate of Independent Bid Determination	

Technical and Evaluation

Experience of Tenderer	38
Proposed Organisation and Staffing	40
Key Personnel	41
Experience of Key Personnel	42
Preliminary Programme	43
Construction Approach, Methodology, and Quality Control	44
Schedule of Proposed Subcontractors	46
Plant and Equipment	47
Contractor's Health and Safety Plan	Error!

Bookmark not defined.

Contractual

Joint Venture Agreements (if applicable)	48
------------------------------------------	----

Record of Addenda to Tender Documents	49
Amendments, Qualifications and Alternatives	50
Form of Offer	51
Bill of Quantities	67

T2.1.3 Preferential Procurement Schedules and Affidavits

In the event of the Tenderer not being registered with the eThekweni Municipality, the tenderer must register on the internet at www.durban.gov.za by following these links:

- eThekweni Municipality
 - City Government
 - Administration
 - Administrative Clusters
 - Finance
 - Supply Chain Management
 - Accredited Supplier and Contractor's Database.

NOTES

- (a) The information for registration as in the possession of the eThekweni Municipality will apply.
- (b) It is the Tenderer's responsibility to ensure that the details as submitted to the Municipality are correct.
- (c) Tenderers are to register prior to the submission of tenders.

T2.2: RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

The returnable schedules, forms, and certificates as listed in T2.1.2 can be found on the pages [19](#) to [27](#).

CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING / SITE INSPECTION – NOT APPLICABLE

This is to certify that:

(tenderer name)

of (address)

.....

was represented by the person(s) named below at the Clarification Meeting held for all tenderers, the details of which are stated in the Tender Data (F.2.7).

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

Particulars of person(s) attending the meeting:

Name:

Name:

Signature:

Signature:

Capacity:

Capacity:

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

Name:

Signature:

Date:

CERTIFICATE OF AUTHORITY

Indicate the status of the tenderer by ticking the appropriate box hereunder.

COMPANY		CLOSE CORPORATION		PARTNERSHIP		JOINT VENTURE		SOLE PROPRIETOR	
Refer to Notes at the bottom of the page									

I / We, the undersigned, being the Chairperson (Company), Member(s) (Close Corporation), Partners (Partnership), Sole Owner (Sole Proprietor), Lead Partner (JV), in the company / business trading as:

.....

hereby authorise Mr/Mrs/Ms

acting in the capacity of

to sign all documents in connection with the tender for **Contract No. WS7556** and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

Notes

The following documents must be attached to the back inside cover to this procurement document:

If a Company : a "Resolution of the Board" in this regard.

If a Joint Venture : a "Power of Attorney" signed by the legally authorised signatories of all the partners to the Joint venture.

DECLARATION OF MUNICIPAL FEES

I, the undersigned, do hereby declare that the Municipal fees of

(full name of Company / Close Corporation / partnership / sole proprietary/Joint Venture)

(hereinafter referred to as the TENDERER) are, as at the date hereunder, fully paid or an Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in instalments.

The following account details relate to property of the said TENDERER:

Account

Account Number: to be completed by tenderer.

Consolidated Account No.

[illegible]

Electricity

[illegible]

Water

[illegible]

Rates

[illegible]

JSB Levies

[illegible]Other[illegible]Other[illegible]

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears. ATTACHED, to the back inside cover of this document, please find copies of the above account's and or agreements signed with the municipality.

- Where the TENDERER'S place of business or business interests are outside the jurisdiction of eThekweni municipality, a copy of the accounts/agreements from the relevant municipality must be attached (to the back inside cover of this document).
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or official letter to that effect is to be attached (to the back inside cover of this document).

NAME :

(Block Capitals)

SIGNATURE :

DATE:

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

COMPULSORY ENTERPRISE QUESTIONNAIRE

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

- 1) **Name of enterprise:**
- 2) **VAT registration number, if any:**
- 3) **CIDB registration number, if any:**
- 4) **Particulars of sole proprietors and partners in partnerships**

Full Name	Identity number*	Personal income tax number *

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

- 5) **Particulars of companies and close corporations**

Company registration number, if applicable:

Close corporation number, if applicable:

Tax Reference number, if any:

- 6) **Record in the service of the state**

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

- | | |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| <input type="checkbox"/> a member of any provincial legislature | |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | |
| <input type="checkbox"/> an official of any municipality or municipal entity | <input type="checkbox"/> an employee of Parliament or a provincial legislature |

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

Insert separate page if necessary

7) **Record of spouses, children and parents in the service of the state**

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

- | | |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| <input type="checkbox"/> a member of any provincial legislature | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> an employee of Parliament or a provincial legislature |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | |
| <input type="checkbox"/> an official of any municipality or municipal entity | |

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

Insert separate page if necessary

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

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

Signed Date

Name Position

Enterprise Name

TAX COMPLIANCE STATUS PIN / TAX CLEARANCE CERTIFICATE

Reference is made to F.2.23 of the Conditions of Tender.

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.

Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

Tenderers are to attach to this page a printout of their Tax Compliance Status PIN (TCS PIN) OR an original Tax Clearance Certificate.

NAME : (Block Capitals)

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

B-BBEE STATUS LEVEL OF CONTRIBUTION CERTIFICATE

Reference is made to F.2.23 of the Conditions of Tender.

The Amended Construction Sector Code (Government Gazette No.41287) is applicable to the B-BBEE compliance measurement of all entities that fall within the Construction Sector.

The requirements for measurement and verification of entities are contained in the "Amended Code Series CSC000: Framework for Measuring Broad Based Black Economic Empowerment in the Construction Sector", as published in Notice 931 of 2017, Government Gazette No.41287 of 01/12/2017.

The requirements are summarised in the following table:

Enterprise Type	Total Annual Revenue (R million)	Ownership and Annual Turnover
EME: Built Environment Professional	< R1.8m	May present an affidavit OR a certificate issued by the CIPC
EME: Contractor	< R3.0m	OR authorised B-BBEE verification certificate (as below)
Reference should be made to Cl.3.6.2.4.1 of the Amended Construction Sector Code regarding the above exceptions.		
EME: Built Environment Professional	< R6m	Must present an authorised B-BBEE verification certificate by a SANAS accredited Verification Agency
EME: Contractor	< R10m	
QSE: Built Environment Professional	≥ R6.0m and < R25m	
QSE: Contractor	≥ R10.0m and < R50m	
Large Enterprise	>R50m	

The requirements for measurement of Joint Ventures are described in Cl.2.8 of the Amended Construction Sector Code. The compilation of a consolidated verification certificate is required.

Tenderers are to attach to this page an affidavit, or a B-BEEE certificate issued by an authorised SANAS accredited Verification Agency.

NAME : (Block Capitals)

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


CSD REGISTRATION REPORT

Reference is made to F.2.23 of the Conditions of Tender.

Clause F.2.1 of the Conditions of Tender – “Eligibility”, requires a tenderer to be registered at the time of tender closing on the National Treasury Central Supplier Database (CSD) as a service provider.

Tenderers are to attach to this page a printout of their CSD Registration Report, as obtained from the National Treasury's CSD website <https://secure.csd.gov.za/Account/Login>. The date of obtaining the printout is to be indicated on the printout.

The following is an example of the beginning of the printout obtained from the above website.

 CENTRAL SUPPLIER DATABASE FOR GOVERNMENT	Report Date:
	Report Ran By:

CSD REGISTRATION REPORT			
-------------------------	--	--	--

SUPPLIER IDENTIFICATION			
Supplier number		Have Bank Account	
Is supplier active?		Total annual turnover	
Supplier type		Financial year start date	
Supplier sub-type		Registration date	
Legal name		Created by	
Trading name		Created date	
Identification type		Edit by	
Government breakdown		Edit date	
Business status		Restricted Supplier	
Country of origin		Restriction Last Verification Date	
South African company/CC registration number			

NAME : (Block Capitals)

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

CONTRACTOR'S HEALTH AND SAFETY DECLARATION

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

In terms of Clause 5(1)(h) of the OHS Act 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Principal Contractor may only be appointed to perform construction work if the Client is satisfied that the Principal Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHS Act 1993 Construction Regulations 2014.

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

Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHS Act 1993 Construction Regulations 2014.
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
3. I propose to achieve compliance with the Regulations by one of the following:

Tenderers are
to Circle Applicable

- | | |
|-------------------------------------------------------------------------------------------------------------------------|---------------|
| (a) From my own competent resources as detailed in 4(a) hereafter: | YES NO |
| (b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter: | YES NO |
| (c) From outside sources by appointment of competent specialist Subcontractors as detailed in 4(c) hereafter: | YES NO |

4. Details of resources I propose:

(Note: Competent resources shall include safety personnel such as a construction supervisor and construction safety officer as defined in Regulation 8, and competent persons as defined in Regulations 9, 10, 11, 12, 13, 14, 16, 17, 20, 21, 22, 23(1), 24, 25, 26, 27, 28 and 29, as applicable).

- (a) Details of the competent and qualified key persons from my company's own resources, who will form part of the contract team:

NAMES OF COMPETENT PERSONS	POSITIONS TO BE FILLED BY COMPETENT PERSONS

(b) Details of training of persons from my company's own resources (or to be hired) who still have to be trained to achieve the necessary competency:

(i) By whom will training be provided?

(ii) When will training be undertaken?

(iii) List the positions to be filled by persons to be trained or hired:

.....
.....

(c) Details of competent resources to be appointed as subcontractors if competent persons cannot be supplied from own company:

Name of proposed subcontractor:

Qualifications or details of competency of the subcontractor:

.....
.....

5. I hereby undertake, if my tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 7(1) of the Construction Regulations, which plan shall be subject to approval by the Client.
6. I confirm that copies of my company's approved Health and Safety Plan, the Client's Safety Specifications as well as the OHSA 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Principal Contractor's personnel, the Client's personnel, the Employer's Agent, visitors, and officials and inspectors of the Department of Labour.
7. I hereby confirm that adequate provision has been made in my tendered rates and prices in the Bill of Quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2014, and that I will be liable for any penalties that may be applied by the Client in terms of the said Regulations (Regulation 33) for failure on the Principal Contractor's part to comply with the provisions of the Act and the Regulations.
8. I agree that my failure to complete and execute this declaration to the satisfaction of the Client will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2014 and accept that my tender will be prejudiced and may be rejected at the discretion of the Client.

NAME : (Block Capitals)

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

ELIGIBILITY: VERIFICATION OF CIDB REGISTRATION AND STATUS

Reference is made to F.2.23 of the Conditions of Tender.

Clause F.2.1.1 of the Conditions of Tender – “Eligibility”, requires a tenderer to be registered, as “Active”, with the CIDB (at time of tender closing), in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a CE class of construction work.

Tenderers are to attach to this page a printout of their registration with the CIDB, as obtained from the CIDB website <https://registers.cidb.org.za/PublicContractors/ContractorSearch>. The date of obtaining the printout is to be indicated on the printout.

The following is an example of a printout obtained from the above website.

Home

Contractor Detail Print

Contractor Detail

CRS Number: _____ Type of Enterprise: _____

Contractor Name: _____ Registration Date: _____

Trading Name: _____ Expiry Date: _____

Status: _____

Contractor Grades

Grade: _____

Back

Copyright © cidb 2011. All rights reserved
[Website technical enquires contact](#)

01/01/2017

NAME : (Block Capitals)

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

CONSOLIDATED MUNICIPAL BIDDING DOCUMENTS

The following **SECTIONS** are required to be completed as part of this procurement document

<u>Section</u>	<u>Description</u>	<u>Required?</u>
A	General Enterprise Information	Yes
B	MBD2: Tax Clearance Certificate Requirements	Yes
C	MBD4: Declaration of Interest	Yes
D	MBD5: Declaration for Procurement Above R10 Million	Yes
E	MBD6.1: Preference Points Claim Form ITO the Preferential Regulations	Yes
F	MBD6.2: Declaration Certificate for Local Production and Content for Designated Sectors.....	Yes
G	MBD8: Declaration of Bidder's Past SCM Practices	Yes
H	MBD9: Certificate of Independent Bid Determination	Yes
I	Confirmations, Authorities, Certifications, Acknowledgements and Signatures	Yes

NOTES

- MBD4. 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 enterprise;
 - (c) an official of any municipality or municipal enterprise;
 - (d) an employee of any national or provincial department, national or provincial public enterprise or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
 - (e) a member of the accounting authority of any national or provincial public enterprise; or
 - (f) an employee of Parliament or a provincial legislature.
- "Shareholder"** means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.
- MBD9. 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.

<u>Ref</u>	<u>Description</u>	<u>Complete or Circle Applicable</u>
------------	--------------------	------------------------------------------

SECTION A: GENERAL ENTERPRISE INFORMATION

- 1.0 Full Name of bidder or his or her representative
- 1.1 ID Number of bidder or his or her representative
- 1.2 Position occupied in the enterprise
- 2.0 Name of enterprise:
- 2.1 Tax Reference number, if any:
- 2.2 VAT registration number, if any:
- 2.3 CIDB registration number, if any:
- 2.4 Company registration number, if applicable:
- 2.5 Close corporation number, if applicable:
- 2.6 eThekweni Supplier Database:
Reference number (PR), if any:
- 2.7 South African Revenue Service:
Tax Compliance Status PIN:
- 2.8 National Treasury Central Supplier Database
Registration number
- 2.9 Department of Labour:
Registration number
- 2.10 Department of Labour:
Letter of Good Standing Certificate number

- 3.0 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted

Full Name	Identity No.	State Employee No.	Personal income tax No. *
Use additional pages if necessary			

Ref	Description	Complete or Circle Applicable
-----	-------------	----------------------------------

SECTION B: MBD 2: TAX CLEARANCE CERTIFICATE REQUIREMENTS

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

- 1.0 In order to meet this requirement bidders are required to complete the TCC 001: "Application for a Tax Clearance Certificate" form and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- 2.0 SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- 3.0 The original Tax Clearance Certificate must be submitted together with the bid (attached to the inside back cover of this procurement document). Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4.0 In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.
- 5.0 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.
- 6.0 Applications for the Tax Clearance Certificates 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.
- 7.0 Notwithstanding Clauses 1.0 to 6.0 above: Since 18 April 2016, SARS has introduced a new Tax Compliance Status System (TCS). As part of this enhanced system, tenderers can now submit a Tax Compliance Status PIN instead of an original Tax Clearance Certificate (TCC). This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status. This number, if available, is to be entered in Item 2.7 of Section A of these consolidated Municipal Bidding Documents.
For further particulars please contact your nearest SARS branch, or call the SARS Contact Centre on 0800 00 7277, or log onto SARS e-Filing.

SECTION C: MBD 4: DECLARATION OF INTEREST

No bid will be accepted from persons "in the service of the state". Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

1.0	Are you presently in the service of the state? If yes, furnish particulars:	YES	NO
2.0	Have you been in the service of the state for the past twelve months? If yes, furnish particulars:	YES	NO
3.0	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? If yes, furnish particulars:	YES	NO
4.0	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? If yes, furnish particulars:	YES	NO
5.0	Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? If yes, furnish particulars:	YES	NO
6.0	Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? If yes, furnish particulars:	YES	NO
7.0	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 ? If yes, furnish particulars:	YES	NO
8.0	The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers are indicated in SECTION A of these Consolidated Municipal Bidding documents .		

Ref	Description	Complete or Circle Applicable	
SECTION D: MBD 5: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)			
For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire.			
1.0	Are you by law required to prepare annual financial statements for auditing? If YES, you will be required to submit audited annual financial statements (on request during the tender evaluation period) for the past three years or since the date of establishment if established during the past three years.	YES	NO
2.0	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? If NO, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days. If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document).	YES	NO
3.0	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? If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document).	YES	NO
4.0	Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document).	YES	NO

SECTION E: MBD 6.1: PREFERENCE POINTS CLAIM ITO THE PREFERENTIAL REGULATIONS	
Preference points for this tender shall be awarded as per the Tender Data and the Preferential Procurement Regulations (2017). Failure on the part of a tenderer to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Sworn Affidavit for an EME, or sworn affidavit for a QSE (in line with the revised BBBEE codes of Good Practice), together with the bid will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed. The Employer reserves the right to require of a tenderer, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the Employer.	
1.0	B-BBEE Status Level of Contribution claimed:
	Will any portion of the contract be sub-contracted?
	YES
	NO
	If YES, indicate:
	(i) what percentage of the contract will be subcontracted?
	(ii) the name of the sub-contractor?
	Name:
	(iii) the B-BBEE status level of the sub-contractor?
	YES
	NO
2.0	(iv) whether the sub-contractor is an EME?
	YES
	NO
The undersigned, certify that the B-BBEE status level of contribution indicated in paragraph 1.0 above qualifies the company / firm for preference points and acknowledges that the remedies as per Clause 14 of the Preferential Procurement Regulations (2017) shall apply.	

SECTION F: MBD 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS
This Municipal Bidding Document (MBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably). Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017 and the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

- 1.0 General Conditions
- 1.1 Preferential Procurement Regulations, 2017 (Regulation 8) makes provision for the promotion of local production and content.
- 1.2 Regulation 8.(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for bids referred to in paragraph 1.2 above, a two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

Ref	Description	Complete or Circle Applicable								
1.5	<p>The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:</p> $LC = [1 - x / y] * 100$ <p>Where: x is the imported content in Rand y is the bid price in Rand excluding value added tax (VAT).</p> <p>Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as required in paragraph 4.1 below.</p> <p>The SABS approved technical specification number SATS 1286:2011 is accessible on http://www.thedti.gov.za/industrial development/ip.jsp at no cost.</p>									
1.6	<p>A bid may be disqualified if –</p> <p>(a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and</p> <p>(b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.</p>									
2.0	Definitions									
2.1	“bid” includes written price quotations, advertised competitive bids or proposals;									
2.2	“bid price” price offered by the bidder, excluding value added tax (VAT);									
2.3	“contract” means the agreement that results from the acceptance of a bid by an organ of state;									
2.4	“designated sector” means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;									
2.5	“duly sign” means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).									
2.6	“imported content” means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;									
2.7	“local content” means that portion of the bid-price which is not included in the imported content, provided that local manufacture does take place;									
2.8	“stipulated minimum threshold” means that portion of local production and content as determined by the Department of Trade and Industry; and									
2.9	“sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.									
3.0	<p>The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:</p> <table border="1"> <thead> <tr> <th>Description of services, works or goods</th> <th>Stipulated minimum threshold</th> </tr> </thead> <tbody> <tr> <td>.....</td> <td>..... %</td> </tr> <tr> <td>.....</td> <td>..... %</td> </tr> <tr> <td>.....</td> <td>..... %</td> </tr> </tbody> </table>	Description of services, works or goods	Stipulated minimum threshold % % %	
Description of services, works or goods	Stipulated minimum threshold									
..... %									
..... %									
..... %									
4.0	Does any portion of the services, works or goods offered have any imported content?	<table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> </table>	YES	NO						
YES	NO									
4.1	<p>If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by the SARB for the specific currency at 12:00 on the date of advertisement of the bid.</p> <p>The relevant rates of exchange information is accessible on www.reservebank.co.za.</p> <p>Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):</p> <p>US Dollar: <input type="text"/> Pound Sterling: <input type="text"/> Euro: <input type="text"/> Yen: <input type="text"/> Other: <input type="text"/></p> <p>NB: Bidders must submit proof of the SARB rate (s) of exchange used.</p>									
5.0	Were the Local Content Declaration Templates (Annex C, D and E) audited and certified as correct?	<table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> </table>	YES	NO						
YES	NO									
5.1	<p>If yes, provide the following particulars:</p> <p>(a) Full name of auditor:</p> <p>(b) Practice number: (c) Telephone number: Cell number:</p> <p>(d) Email address:</p> <p>(Documentary proof regarding the declaration will, when required, be submitted to the satisfaction of the Accounting Officer / Accounting Authority)</p>									
6.0	Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the Accounting Officer / Accounting Authority provide directives in this regard.									

LOCAL CONTENT DECLARATION**(REFER TO ANNEX B OF SATS 1286:2011)**

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (Close Corporation, Partnership or Individual)

IN RESPECT OF BID No:

ISSUED BY: (Procurement Authority / Name of Municipality / Municipal Entity)

NB 1 - The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

NB 2 - Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on [http://www.thedti.gov.za/industrial development/ip.jsp](http://www.thedti.gov.za/industrial%20development/ip.jsp). Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below. Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned in Section H of these Consolidated MBD returnable questionnaires (comprising 8 pages), do hereby declare the following:

- (a) The facts contained herein fall within my own personal knowledge.
- (b) I have satisfied myself that:
- (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
 - (ii) the declaration templates have been audited and certified to be correct.
- (c) The local content percentages (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C;

• Bid price, excluding VAT (y)	R
• Imported content (x), as calculated in terms of SATS 1286:2011.....	R
• Stipulated minimum threshold for local content (paragraph 3 above)	%
• Local content %, as calculated in terms of SATS 1286:2011.....	%

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- (d) I accept that the Procurement Authority / Municipality /Municipal Entity has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SECTION G: MBD8: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

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

- a) abused the municipal entity's supply chain management system or committed any improper conduct in relation to such system.
 - b) been convicted for fraud or corruption during the past five years.
 - c) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- In order to give effect to the above, the following questions must be answered.

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

4.0	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? If yes, furnish particulars:	YES	NO
5.0	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? If yes, furnish particulars:	YES	NO

SECTION H: MBD9: CERTIFICATE OF INDEPENDENT BID DETERMINATION

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

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.

The following 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.

In order to give effect to the above, the following Certificate of Bid Determination must be completed and submitted with the bid. The undersigned, in submitting the accompanying bid, in response to the invitation for the bid do hereby make the following statements that I certify to be true and complete in every respect:

- 1.0 I have read and I understand the contents of this Certificate;
- 2.0 I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
- 3.0 I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
- 4.0 Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
- 5.0 For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - a) has been requested to submit a bid in response to this bid invitation;
 - b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
- 6.0 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding. (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.
- 7.0 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;
 - f) bidding with the intention not to win the bid.
- 8.0 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.
- 9.0 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 10.0 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.

SECTION I: CONFIRMATIONS, AUTHORITIES, CERTIFICATIONS, ACKNOWLEDGEMENTS and SIGNATURES

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

- 1.0 Confirms that the contents of these Consolidated MBD returnable questionnaires (comprising 8 pages) fall within my personal knowledge and are to the best of my Knowledge and belief, both true and correct.
- 2.0 Confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercise, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- 3.0 Confirms that no partner, member, director or other person, who wholly or partly exercise control over the enterprise, has within the last five years been convicted of fraud or corruption;
- 4.0 Confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- 5.0 Certify that the B-BBEE status level of contribution indicated in Section E.1: Item 1.0 qualifies the enterprise for preference points and acknowledges that the remedies as per Clause 14 of the Preferential Procurement Regulations (2017) shall apply. In the event of a contract being awarded as a result of points claimed, the enterprise may be required to furnish documentary proof to the satisfaction of the employer that the claims are correct;
- 6.0 Accept that, in addition to cancellation of a contract, action may be taken against me should these declarations prove to be false.

Signed Date

Name Position

EXPERIENCE OF TENDERER

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

The following is a statement of works of a similar nature (in relation to the scope of works) recently (within the past 10 years) executed by me / ourselves./ us.

Tenderers are referred to Table 1: Documentation / Information Requirements under Section F.2.1.2: Eligibility – Tenderer's Experience for details of returnables to support his experience.

It is a mandatory requirement of the Tenderer to complete the summary table below which implies that all notes have to be marked as "Y" to be considered for evaluation, whether submitting as sub-contractor or as main contractor **as well as the TENDERER'S EXPERIENCE: PROFORMA CLIENT REFERENCE OF COMPARABLE PROJECTS Document as provided on the next page.**

TENDERER'S EXPERIENCE: SUMMARY TABLE				
PROJECT NAME	VALUE OF WORK (VAT inclusive)	LENGTH OF MAINS COMPLETED	SUPPORTING DOCUMENTS	
			Supporting Documents as Sub-Contractor to the project – fill in columns below	
			Note 1: - Compulsory sub-contract agreement submitted	Y / N
			Note 4: - Compulsory final payment certificate with quantities summary submitted	Y / N
			Note 6: - Compulsory scope of work submitted	Y / N
			Supporting Documents as Main Contractor to the project – fill in columns below	
			Note 2: - Compulsory letter of award OR form of offer & acceptance	Y / N
			Note 4: - Compulsory final payment certificate with quantities summary submitted	Y / N
			Note 5: - Compulsory Completion Certificate submitted	Y / N
			Note 6: - Compulsory scope of work submitted	Y / N
Note 1: - Compulsory sub-contract agreement submitted	Y / N			
Note 4: - Compulsory final payment certificate with quantities summary submitted	Y / N			
Note 6: - Compulsory scope of work submitted	Y / N			
Supporting Documents as Main Contractor to the project – fill in columns below				
Note 2: - Compulsory letter of award OR form of offer & acceptance	Y / N			
Note 4: - Compulsory final payment certificate with quantities summary submitted	Y / N			
Note 5: - Compulsory Completion Certificate submitted	Y / N			
Note 6: - Compulsory scope of work submitted	Y / N			

Attach additional pages if more space is required

NAME :

(Block Capitals)

SIGNATURE :

DATE:

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

TENDERER'S EXPERIENCE: PROFORMA CLIENT REFERENCE OF COMPARABLE PROJECTS

The Tenderer shall provide details on each of the previously completed projects listed as "Pipe Replacement Experience" in a brown field's environment. The Client Reference Proforma below must be completed by the respective Clients for each of the completed projects as claimed in the Tenderers Experience Summary Table on the previous page.

PROFORMA REPORT ON THE TENDERER'S/TENDERING PARTY'S COMPETENCE AND PERFORMANCE ON A SIMILAR COMPLETED PROJECT FOR TENDER RECOMMENDATION PURPOSES

The following is to be completed and signed by the Tendering Party's project Client for each completed project.

Relevant Field considered for the pipe replacement project in brown-fields environment	Details provided by Tendering Party's Client
Project Name	
Client Name Completing This Form and Evaluating service of Tendering Party:	
Value of relevant pipe replacement work in brown-fields environment as per completion certificate (excluding VAT)	
Length of watermain replaced under the project (100mm diameter and larger) – state the value in km	
Contract Duration – State the value in months	
Contract Completion Date	
Any remarks considered necessary to assist in evaluation of the Tendering Party with respect to the replacement of watermain in a brown-fields	

NOTE TO PREVIOUS CLIENT COMPLETING THIS FORM: The project had to be successfully completed within required specifications and quality to qualify for the evaluation. If this has not been the case, do not submit the form.

Client of Tendering party – Contact Person Full Names: _____

Telephone number of Contact Person: _____

Client Contract Person Signature: _____

Date on which this evaluation form was completed: _____

PROPOSED ORGANISATION and STAFFING

Refer to Clause F3.11.9 for Functionality Points evaluation prompts.

The tenderer should propose the structure and composition of their team i.e., the main disciplines involved, the key staff member / expert responsible for each discipline, and the proposed technical and support staff and site staff.

The roles and responsibilities of each key staff member / expert should be set out as job descriptions. In the case of an association / joint venture / consortium, it should, indicate how the duties and responsibilities are to be shared.

The tenderer must attach his / her organization and staffing proposals to this page. (this is to include both the on-site and off-site staffing resources used for this project)

In addition to any lists, this information should also be shown in an organogram format (flow chart) clearly indicating the staff hierarchy and reporting lines, again for on- and off-site resources.

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

NAME : (Block Capitals)

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

KEY PERSONNEL

Refer to Clause F3.11.9 for Functionality Points evaluation prompts.

The Tenderer shall list below the personnel which he intends to utilize on the Works, including key personnel (Contract's Manager, Site Agent, and Foremen) which may have to be brought in from outside if not available locally.

CATEGORY OF EMPLOYEE	NUMBER OF PERSONS	
	KEY PERSONNEL, PART OF THE CONTRACTOR'S ORGANISATION	KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY
Contracts Manager		
Site Agent		
Pipeline / General Foreman		

Note: CVs of key personnel may be requested during the contract period.

NAME : (Block Capitals)

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

EXPERIENCE OF KEY PERSONNEL

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

The experience of assigned staff member in relation to the Scope of Work will be evaluated from three different points of view:

- 1) General experience (total duration of professional activity), level of education and training and positions held of each discipline specific team leader.
- 2) The education, training, skills and experience of the Assigned Staff in the specific sector, field, subject, etc which is directly linked to the scope of work.
- 3) The key staff members' / experts' knowledge of issues which the tenderer considers pertinent to the project e.g., local conditions, affected communities, legislation, techniques etc.

A CV of the contract manager, Site Agent(s) and pipeline / General Foreman of not more than 2 pages should be attached to this schedule:

Each CV should be structured under the following headings:

- a) Personal particulars
 - name
 - date and place of birth
 - place (s) of tertiary education and dates associated therewith
 - professional awards
- b) Qualifications (degrees, diplomas, grades of membership of professional societies and professional registrations)
- c) Skills
- d) Name of current employer and position in enterprise
- e) Overview of postgraduate / diploma experience (year, organization and position)
- f) Outline of recent assignments / experience that has a bearing on the scope of work

NAME : (Block Capitals)

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

PRELIMINARY PROGRAMME

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

The Tenderer shall detail below or attach a preliminary programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this Contract. The programme shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of his Tender.

PROGRAMME														
ACTIVITY	WEEKS / MONTHS													

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

NAME : (Block Capitals)

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

CONSTRUCTION APPROACH, METHODOLOGY, PARTICIPATION APPROACH AND QUALITY CONTROL

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

Construction Approach, Quality and Methodology

The construction approach and methodology must respond to the Scope of Work and outline the proposed approach to undertake the work showing a detailed programme including health and safety aspects, the use of plant and resources for this Project.

Quality Control

The quality control statement must discuss what tests and control measures are to be employed on site to attain the specified results and is to cover the program associated activities.

Participation Approach

Refer to Section 3.8 – Procurement, Participation & Empowerment of this document for details regarding sub-contracting goals.

The tenderer must attach his / her Construction Methodology and Quality Control information to this page.

NAME : (Block Capitals)

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

ISO CERTIFICATE (PROOF OF)

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

The tenderer must attach his / her ISO 9001 certificate here.

NAME : (Block Capitals)

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

The following firms have been identified as possible subcontractors for work in this contract.

[illegible]

Attach additional pages if more space is required

NAME : (Block Capitals)

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

PLANT and EQUIPMENT

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

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

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

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

Attach additional pages if more space is required

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

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

Attach additional pages if more space is required

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

NAME : (Block Capitals)

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

JOINT VENTURES AGREEMENTS

Joint Venture agreement and Power of Attorney Agreements to be attached here (if applicable).

RECORD OF ADDENDA TO TENDER DOCUMENTS

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

ADDENDUM No	DATE ISSUED	TITLE OR DETAILS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

NAME :

(Block Capitals)

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

DATE:

AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

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

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

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

(1) Amendments to the General and Special Conditions of Contract are not acceptable.

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

(b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

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

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

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

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

(1) The Tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced.

NAME :

(Block Capitals)

SIGNATURE :

DATE:

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

PART C1: AGREEMENT AND CONTRACT DATA**C1.1: FORM OF OFFER AND ACCEPTANCE****C1.1.1: OFFER**

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

Contract No: **WS7556**

Contract Title: **Construction and replacement of Water Mains in the eThekweni Supply Area Ward 48 & 110**

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:**

R..... (In words
.....)

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

For the Tenderer:

* **Name of Tenderer** (organisation) :

* **Signature** (of person authorized to sign the tender) :

* **Name** (of signatory in capitals) :

Capacity (of Signatory) :

Address :

:

Telephone :

Witness:

Signature : **Date** :

Name(in capitals) : :

Notes:

* Indicates what information is mandatory.

Failure to complete the mandatory information and sign this form will invalidate the tender.

C1.1: FORM OF OFFER AND ACCEPTANCE**C1.1.2: FORM OF ACCEPTANCE****This Form will be completed by the Employer**

By signing this part of the 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 : Agreement and Contract Data, (which includes this Agreement)
- Part C2 : Pricing Data, including the Bill of Quantities
- Part C3 : Scope of Work
- Part C4 : Site Information

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

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

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

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

Signature (*person authorized to sign the acceptance*) :

Name (*of signatory in capitals*) :

Capacity (*of Signatory*) :

Name of Employer (*organisation*) :

Address :

Witness:

Signature : **Date** :

Name(*in capitals*) : :

C1.1: FORM OF OFFER AND ACCEPTANCE**C1.1.3: SCHEDULE OF DEVIATIONS****This form will be completed by THE EMPLOYER and ONLY THE SUCCESSFUL TENDERER**

1. **Subject** :
- Details** :
- :
2. **Subject** :
- Details** :
- :
3. **Subject** :
- Details** :
- :

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

FOR THE TENDERER**FOR THE EMPLOYER**

.....	Signature
.....	Name (<i>in capitals</i>)
.....	Capacity
.....	Name and Address of
.....	Organisation
.....	
.....	
.....	Witness Signature
.....	Witness Name
.....	Date

C1.2: CONTRACT DATA**C1.2.1 CONDITIONS OF CONTRACT****C1.2.1.1 GENERAL CONDITIONS OF CONTRACT**

The Conditions of Contract are the General Conditions of Contract for Construction Works (2015 3rd Edition), (GCC 2015) published by the South African Institution of Civil Engineering. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805-5947, Fax: 011-805-5971, E-mail: civilinfo@saice.org.za).

The Contract Data (including variations and additions) shall amplify, modify, or supersede, the GCC 2015 to the extent specified below, and shall take precedence and shall govern.

Each item of data given below is cross-referenced to the clause in the GCC 2015 to which it mainly applies.

C1.2.2 CONTRACT DATA**C1.2.2.1 DATA TO BE PROVIDED BY THE EMPLOYER**

1.1.1.13 The **Defects Liability Period**, from the date of the Certificate of Completion, is **1 Year**.

1.1.1.14 **"The time for achieving Practical Completion**, from the Commencement Date is **560**. The period as stated in 5.3.2, and the 37 days referred to in 5.3.3, are included in the above time for achieving Practical Completion.

The special non-working days as stated in 5.8.1(b) are included from the above the above time for achieving Practical Completion.

Calendar days for a potential two builders breaks have been included in the 560 days and would be re-measured should only one builders breaks realize during the time to complete Practical completion.

1.1.1.15 The Employer is the eThekweni Municipality as represented by:
ETHEKWINI WATER & SANITATION : Bhavna Soni .

1.2.1.2 The address of the Employer is:
Physical: Water & Sanitation Unit, 3 Prior Road, DURBAN, 4001
Postal: Water & Sanitation Unit, PO Box 680, DURBAN, 4000
Telephone: 031-311-8602
Fax: 031-311-8549
E-Mail: Bhavna.Soni@durban.gov.za

1.1.1.16 The **name of the Employer's Agent** is Nadas Thumbaya (Pr.Eng) of Naidu Consulting (Pty) Ltd.

1.2.1.2 The address of the Employer' Agent is:
Physical: No 5 The Boulevard, Westway Office Park, Westville, 3635
Postal: N/A
Telephone: 031-265-6007
Fax: 031-265-6011
E-Mail: Terence.Thumbaya@NaiduConsulting.com

- 1.1.1.26 The **Pricing Strategy** is by **Re-measurement Contract**.
- 3.2.3 The Employer's Agent shall obtain the **specific approval of the Employer** before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract:
- 6.3: Council approval in order to authorize any expenditure in excess of the Tender Sum plus **15%** contingencies.
- 4.11.1 To carry out and complete the works, the Contractor shall employ a competent Contracts Manager, Site Agent and Foreman as part of the key staff. It is a requirement for the Contractor's Contract Manager, Site Agent and Foreman to meet the requirements as set out in the functionality criteria. The CVs of the Contract Manager, Site Agent and the Foreman should be submitted to the Employer's Agent's Representative for acceptance by the Employer.
- Note:
- i) "similar nature" implies projects that were of a value of at least 70% of this tender's value and had a comparable Scope of Work in terms of technical requirements and operations.
 - ii) "experience" implies experience on projects of a similar nature.
 - iii) "accredited degree / diploma" implies a minimum 3-year qualification within the built environment, from a registered University or Institute of Technology.
- 5.3.1 The **documentation required** before commencement with Works' execution are:
- Health and Safety Plan (refer to Clause 4.3)
 - Initial Programme (refer to Clause 5.6)
 - Security (refer to Clause 6.2)
 - Insurance (refer to Clause 8.6)
 - CV(s) of Key Site Staff (refer to Clause 4.11.1)
 - CPG Implementation Plan
- 5.3.2 The **time to submit the documentation** required before commencement with Works is **21 Days**.
- 5.3.3 Add the following paragraph:
- "If a construction work permit, in terms of Clause 3(1) of the Construction Regulations (2014), is applicable, the instruction to commence carrying out of the works may only be issued once the construction work permit has been obtained by the Employer's Agent. If a construction work permit is applicable, the contractor shall allow for a minimum period of 37 days, after the submission (or re-submission) of the documentation referred to in Clause 5.3.1., for the issuing of the construction work permit."
- 5.4.2 The access and possession of the Site shall not be exclusive to the Contractor but as set out in the Site Information.
- 5.8.1 The **non-working days** are **Saturdays and Sundays**.
- (5.1.1) The **special non-working** days are:
- a) All statutory holidays as declared by National or Regional Government.
 - b) The year-end break:
 - Commencing on the first working day after 15 December.
 - Work resumes on the first working day after 5 January of the next year.
- 5.8.1 Delete the words "sunset and sunrise" and replace with "17:00 and 07:00".
- 5.12.2.2 **Abnormal Climatic Conditions (Rain Delays)** - The numbers of days per month, on which work is expected not to be possible as a result of rainfall, for which the Contractor shall make provision, is given in the table below. During the execution of the Works, the Employer's Agent's

Representative will certify a day lost due to rainfall only if at least 75% of the work force and plant on site could not work during that specific working day.

Extension of time as a result of rainfall shall be calculated monthly being equal to the number days certified by the Employer's Agent's Representative as lost due to rainfall, less the number of days allowed for as in table below, which could result in a negative figure for certain months. The total extension of time for which the Contractor may apply, shall be the cumulative algebraic sum of the monthly extensions. Should the sum thus obtained be negative, the extension of time shall be taken as NIL.

<u>Month</u>	<u>Days Lost</u>	<u>Average Rainfall</u>	<u>Month</u>	<u>Days Lost</u>	<u>Average Rainfall</u>
January	4*	134	July	1	39
February	3	113	August	2	62
March	3	120	September	2	73
April	2	73	October	3	98
May	2	59	November	3	108
June	1	28	December	1*	102
TOTAL	27	1009mm	* = The number of working days lost allows for the annual statutory Construction holiday in December and January of each year.		

5.13.1 The **penalty for delay** in failing to complete the Works is **R 5,000** (per Day).

5.14.1 The **requirements for achieving Practical Completion** will be determined by the Employer's Agent (in consultation with the Contractor) and recorded in the minutes of the first Site Meeting / Handover Meeting. (Refer to 1.1.1.24 for a generic definition.) The requirements are to be regularly reviewed with respect to any variations to the Contract.

5.16.3 The **latent defect liability** period is **10 Years**.

6.2.1 **Security (Performance Guarantee):** Delete the word "selected" and replace it with "stated".

The liability of the Performance Guarantee shall be as per the following table:

Value of Contract (incl. VAT)	Performance Guarantee Required
Less than or equal to R 1m	Nil
Greater than R 1m and less than or equal to R 10m	5% of the Contract Sum
Greater than R 10m	10% of the Contract Sum

6.5.1.2.3 The **percentage allowance** to cover overhead charges for daywork are as follows:

- **50%** of the gross remuneration of workmen and foremen engaged in the daywork.
- **15%** on the net cost of materials used in the completed work.
- **10%** on the net cost of plant used in the completed work.

No allowance will be made for work done, or for materials and equipment for which daywork rates have been quoted at tender stage.

6.8.2 **Contract Price Adjustment Factor:** The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule (GCC 2015 - page 86) with the following Indices / Descriptions / Coefficients:

- The proportion not subject to adjustment: **x = 0.10**.
- The base month will be the month prior to the month in which tenders close.
- The Index for Labour, Plant, and Materials shall be based on **December 2021 = 100**.
- The Index for Fuel shall be based on **December 2020 = 100**.

	STATS SA Statistical Release	Table	Description	Coefficient
• "L" is the "Labour Index"	P0141	Table A	Geographic Indices. CPI per Province. Kwa-Zulu Natal	a = 0.28
• "P" is the • "Contractor's Equipment Index"	P0151.1	Table 4	Plant and Equipment	b = 0.28
• "M" is the "Materials Index"	P0151.1	Table 6	Civil Engineering Material (excluding bitumen)	c = 0.38
• "F" is the "Fuel Index"	P0142.1	Table 1	Coke, petroleum, chemical, rubber and plastic products. Coal and petroleum products. Diesel	d = 0.06

6.8.3 Price adjustments for **variation in the cost of the special material(s)** listed below, will be allowed.

Bitumen - escalation will be calculated using the "Rise and Fall" method as determined by the Employer. The base price for bitumen on this contract shall be the ruling price of 50/70 grade bitumen based on the "Shell Wholesale List Selling Price for Penetration Grade Bitumen", seven (7) days prior to the closing date of tenders.

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

6.10.3 **Retention Money:** Delete the word "selected".

The percentage retention on the amounts due to the Contractor is 10%.

The limit of "retention money" is 5% of the Contract Sum.

Should the Contract Price exceed the Contract Sum then the limit of "retention money" is 5% of the Contract Price.

Interest will not be paid on retention withheld by the Employer.

8.6.1.1.2 The **value of Plant and materials** supplied by the Employer to be included in the insurance sum: **Not Required**.

8.6.1.1.3 The **amount to cover professional fees** for repairing damage and loss to be included in the insurance sum: **R 7,500,000**.

8.6.1.2 **SASRIA Coupon Policy** for Special Risks to be issued in joint names of Council and Contractor for the full value of the works (including VAT).

8.6.1.3 The limit of indemnity for **liability insurance**: **R 40,000,000**

8.6.1.4 Ground Support Insurance:

- Minimum amount for any one occurrence, unlimited as to the number of occurrences, against any claim for damages or loss caused by vibration and / or removal of lateral support: **R 5,000,000**
- Maximum first excess: **R 50,000**

8.6.1.5 Furthermore, the insurance cover effected by the Contractor shall meet the following requirements:**Third Party Insurance (Public Liability)**

- Minimum amount for any one occurrence, unlimited as to the number of occurrences, for the period of the contract, inclusive of the maintenance period: **R 20,000,000**.
- Consequential loss to be covered by policy: **Yes**
- Liability section of policy to be extended to cover blasting: **Nil**
- Maximum excess per claim or series of claims arising out of any one occurrence: **R 25,000**

Principal's own surrounding Property Insurance

- Minimum amount for any one occurrence unlimited as to the number of occurrences against any claim for damage which may occur to the Council's own surrounding property: **R 5,000,000**
- Maximum first excess: **R 15,000**

Insurance of Works

- Insurance of the Works: Value of the Works
- Minimum amount for additional removal of debris (no damage): **R 500,000**.
- Minimum amount for temporary storage of materials off site, excluding Contractor's own premises: **R 500,000**
- Minimum amount for transit of materials to site: **R 500,000**

8.6.5 Approval by Employer: At the end of the sub-clause, add the following paragraph:

"Except where otherwise provided in the Special Conditions of Contract, the insurance cover effected by the Contractor in terms of this clause shall not carry a first loss amount greater than those set out below:

Contract Price	First Loss
Less than R 100,000	R 5,000
R 100,000 to R 500,000	R 10,000
R 500,000 to R 1,000,000	R 20,000
R 1,000,000 to R 2,000,000	R 30,000
R 2,000,000 to R 4,000,000	R 40,000
Greater than R 4,000,000	R 50,000

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."

10.5.1 Dispute resolution shall be by adhoc adjudication.**10.7.1** Failing ad-hoc adjudication, the determination of disputes shall be by arbitration.

C1.2.2.2 DATA TO BE PROVIDED BY CONTRACTOR

1.1.1.9 The legal name of Contractor is:

.....

.....

.....

.....

1.2.1.2 The Physical address of the Contractor is:

.....

.....

.....

The Postal address of the Contractor is:

.....

.....

.....

The contact numbers of the Contractor are:

Telephone:

Fax:

The E-Mail address of the Contractor is:

.....

C1.2.3 ADDITIONAL CONDITIONS OF CONTRACT**C1.2.3.1 COMMUNITY LIAISON OFFICER**

The Ward Councillor(s) in whose ward(s) work is to be done will, collectively, identify a community liaison officer (CLO) for the project and make the person known to the Contractor within two days of being requested to do so. The Contractor will be required to enter a written contract with the CLO that specifies:

- The hours of work and the wage rate of the CLO (200% of the Civil Engineering Industry minimum wage).
- The duration of the appointment.
- The duties to be undertaken by the CLO which could include:
 - Assisting in all respects relating to the recruitment of local labour.
 - Acting as a source of information for the community and councillors on issues related to the contract.
 - Keeping the Contractor advised on community issues and issues pertaining to local security.
 - Assisting in setting up any meetings or negotiations with affected parties.
 - Keeping a written record of any labour or community issue that may arise.
 - Any other duties that may be required by the Contractor.

Responsibility for the identification of a pool of suitable labour shall rest with the CLO, although the Contractor shall have the right to choose from that pool. The Contractor shall have the right to determine the total number labourers required at any one time and this may vary during the contract.

The Contractor shall have the right to replace labour that is not performing adequately. Should such occasion arise, it must be done in conjunction with the CLO.

Payment: The CLO will be reimbursed from the PC Sum item in the Preliminary & General Section of the Bill of Quantities.

C1.2.3.2 EMPLOYMENT OF LOCAL LABOUR

It is a condition of contract that the contractor will be required to employ local labour as specified in eThekweni Council Policy "The use of CLOs and Local Labour". The contractor will be required to ensure that a minimum of 50% of the labour force is made up of local labour. For the purposes of this contract, "Local labour" will be deemed to be any **persons** who reside within Ward 48 & 110 or within 5km of the ward boundary. The contractor will be required to provide proof of authenticity of local labour. Signed confirmation by the appointed two CLO will suffice for this.

No additional costs will be entertained due to this Particular Specification. The contractor will remain responsible for providing proper supervision of all labour and will be responsible for the quality of work produced.

C1.2.3.3 CONTRACTOR PARTICIPATION GOAL (CPG)

It is a condition of contract that the contractor must allow for a minimum of **30%** of the contract value (excluding PC Sum items and Fixed Cost allowances) to be subcontracted to contractors procured in line with the SCM Policy Section 52(24)(1) and the provisions of Section 3.8 – Procurement, Participation & Empowerment of this document.

The penalty for not achieving the specified CPG will be 0.5% of the contract value (excluding PC Sum items and Fixed Cost allowances) for every 1% of CPG not achieved.

C1.2.3.4 FTE (Full Time Equivalent) EMPLOYMENT INFORMATION

It is a condition of contract that the Contractor supplies the Employer's Agent's Representative with information in respect of the employment of all foremen, artisans and labour (skilled and unskilled) employed to work on this contract. The information required is:

- Initials (per ID doc)
- Last Name (per ID doc)
- ID Number
- Disability (y / n)
- Education Level

Level 1 Unknown	Level 2 No Schooling	Level 3 Grade 1-3	Level 4 Grade 4	Level 5 Grade 5-6
Level 6 Grade 7-8	Level 7 Grade 9	Level 8 Grade 10-11	Level 9 Grade 12	Level 10 Post Matric

- Category of Employment

Category A: Employed as Local Labour for this contract only Category B: Temporarily employed by the Contractor Category C: Permanently employed by the Contractor

In addition, the following information is required in respect of each person listed above, on a monthly basis:

- Number of days worked during the month.
- Daily wage rate.
- Number of training days during the month.

The information is to be forwarded in a format acceptable to the Employer's Agent's Representative, but preferably in the form of an emailed EXCEL file (an original file, to be used as a template, will be issued to the Contractor). Contractors without computer facilities will be required to submit a hard copy of the information in a format as agreed to between the Contractor and the Employer's Agent's Representative.

In addition to the tax invoice, to be submitted by the Contractor with his monthly statement, mentioned in Clause 6.10.4 of GCC 2015, the Employer reserves the right to withhold payment until the monthly FTE information has been forwarded to the Employer's Agent's Representative. No additional payment for complying with the above will be made and the Contractor is to make allowance for complying through the time related P & G items (sum) under Part AA: Preliminaries, of the Bill of Quantities.

C1.2.3.5 PERFORMANCE MONITORING OF SERVICE PROVIDERS

The Contractor shall be subjected to "Performance Monitoring" assessments in terms of the applicable Section of the Employer's Supply Chain Management Policy.

Key Performance Indicators (KPIs) are specified in the Part C3: Scope of Works or will be discussed and agreed with the Contractor before commencement of the contract.

C1.2.3.6 EMPOWERMENT STRATEGIES

For contracts above R30m, SCM Policy Section 52(24)(1) requires tenderers, where it is feasible, to subcontract a minimum of 30% of the value of the contract to the following designated groups:

- (a) an EME or QSE.

- (b) an EME or QSE which is at least 51% owned by black people.
- (c) an EME or QSE which is at least 51% owned by black people who are youth.
- (d) an EME or QSE which is at least 51% owned by black people who are women.
- (e) an EME or QSE which is at least 51% owned by black people with disabilities.
- (f) an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships.
- (g) a cooperative which is at least 51% owned by black people.
- (h) an EME or QSE which is at least 51% owned by black people who are military veterans; or
- (i) more than one of the categories referred to in paragraphs (a) to (h).

Refer to section C1.2.3.3 – Contractor Participation Goal for the requirement of sub-contracting.

C1.2.3.7 EXCEPTED RISKS (Clause 8.3)

Pursuant to Clause 8.3 of the Conditions of Contract (GCC 2015), the Employer shall not be liable for the payment of standing time costs as a result of the occurrence of any of the “Excepted Risks” as defined under Clause 8.3.

However, the Employer shall reimburse the Contractor in respect of plant de-establishment and re-establishment costs as a result of “Excepted risks” when a written instruction to de-establish is issued to the Contractor.

C1.2.3.8 SPECIAL SUBCONTRACTING AND SUBCONTRACTOR PAYMENT ARRANGEMENTS

Add Clause 4.4.8:

Before the Employer’s Agent in terms of Clause 6 hereof issues any certificate that includes any payment in respect of work done or goods supplied by any sub-contractor, he shall be entitled to call upon the Contractor to furnish reasonable proof that all payments (less retention moneys) included in previous certificates in respect of the work or goods of such sub-contractors have been made or discharged by the Contractor, in default of which, unless the Contractor:

- 4.4.8.1 Informs the Employer’s Agent in writing that he has reasonable cause for withholding or refusing such payment, and
- 4.4.8.2 Submits to the Employer’s Agent reasonable proof that he has so informed such sub-contractor in writing,

The Employer shall be entitled to demand that a cession agreement be executed as per clause 6.6.5 below.

Add Clause 6.6.5:

Where work is done in relation to a provisional sum by a sub-contractor, the Contractor shall upon demand from the Employer, in respect of a certificate issued by the Employer’s Agent in accordance with Clause 6.10, specifically for an amount due to be paid by the Contractor to the subcontractor, enter into a cession agreement with the Employer and the sub-contractor to whom the amount is due to be paid.

The cession shall be substantially in the format as supplied by the Employer, in terms whereof the rights arising from the payment certificate, including the right to demand payment from the Employer, will be ceded to the sub-contractor, thereby facilitating direct payment for that amount from the Employer to the sub-contractor.

The Employer has the right to demand the cession in terms of this clause at any time; entirely in its sole discretion and does not need to furnish reasons for his decision to invoke or not invoke this clause to any of the parties or any third parties. For avoidance of doubt the procedure in

clause 4.4.8 is not a prerequisite nor do the circumstances referred to in Clause 4.4.8 need to be present before a cession can be demanded.

The completed cession agreement shall be deemed as the written consent for the cession of the specific obligation ceded as required by Clause 2.5.1.

C2.1: PRICING ASSUMPTIONS / INSTRUCTIONS

C2.1.1 GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents (refer to F.1.2 of the Tender Data).

C2.1.2 PRICING INSTRUCTIONS AND DESCRIPTION OF ITEMS IN THE SCHEDULE

Measurement and payment shall be in accordance with the relevant provisions of Clause 8 of each of the Standard Engineering Specifications referred to in the Scope of Work. The Preliminary and General items shall be measured in accordance with the provisions of C2.1.8.

The descriptions of the items in the Bill of Quantities are for identification purposes only and comply generally with those in the Standard Engineering Specification.

Clause 8 of each Standard Engineering Specification, read together with the relevant clauses of the Scope of the works, set out what ancillary or associated work and activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standard Engineering Specification, or the Scope of the works, conflict with the Bill of Quantities, the requirements of the Standard Engineering Specification or Scope of the work, as applicable, shall prevail.

C2.1.3 QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to re-measuring during the execution of the work. The Contractor shall obtain the Employer's Agent's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured

net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

C2.1.5 MONTHLY PAYMENTS

Unless otherwise specified in the Specifications and Project Specifications, progress payments in Interim Certificates, referred to in Clause 6.10.1 of the General Conditions of Contract, in respect of "sum" items in the Bill of Quantities shall be by means of interim progress instalments assessed by the Employer's Agent and based on the measure in which the work actually carried out relates to the extent of the work to be done by the Contractor.

C2.1.4 PROVISIONAL SUMS / PRIME COST SUMS

Where Provisional Sums or Prime Cost sums (PC Sum) are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 6.6 of the General Conditions of Contract. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Any unauthorized changes made by the Tenderer to provisional items in the schedule, or to the provisional percentages and sums in the Summary of the Bill of Quantities, will be treated as arithmetical errors.

C2.1.6 PRICING OF THE BILL OF QUANTITIES

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to

be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

Each item shall be priced and extended to the "Total" column by the Tenderer, with the exception of the items for which only rates are required (Rate Only), or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

All rates and amounts quoted in the Bill of Quantities shall be in Rands and Cents and shall include all levies and taxes (other than VAT). VAT will be added in the Summary of the Bill of Quantities.

C2.1.7 "RATE ONLY" ITEMS

The Tenderer shall fill in rates for all items where the words "Rate Only" appear in the "Total" column. "Rate Only" items have been included where:

- (a) an alternative item or material is contemplated.
- (b) variations of specified components in the make-up of a pay item may be expected; and
- (c) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For "Rate Only" items no quantities are given in the "Quantity" column, but the quoted rate shall apply in the event of work under this item being required. The

Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

C2.1.8 PRELIMINARY AND GENERAL

The Preliminary and General Section is provided to cover the Contractor's expenses incurred in complying with the requirements of the tender documents and consists of the following parts:

- Part AA: Preliminaries
- Part AB: General Specifications
- Part AH: Occupational Health and Safety

Fixed Charge Items: Each item should be priced separately and, subject to the Engineer certifying in terms of **Clause 6.7 of the General Conditions of Contract** that the work has been done, payment will be made as follows:

- (i) the total amount due when the certified value fixed charge items in this section is less than 5% of the net contract price.
- (ii) when the certified value of fixed charge items in this section is greater than 5% of the net contract price, payment will be limited to 5% of the net contract price. The remainder will be paid when the value of the work done under the contract, excluding the value of fixed charge items in this section, is greater than 50% of the net contract price, excluding the value of fixed charge items in this section.

Time Related Items: Any Time Related items not priced shall be deemed to be covered by the prices of other items in the section.

Payment of Time Related items in this section will be made throughout the contract period, the amount per month being the value of the item divided by the completion in months or, if specified in weeks, the equivalent number of months, in terms of **Clause 5.5 of the General Conditions of Contract**. The final monthly increment will only be paid upon the issue of a completion certificate.

C2.2: BILL OF QUANTITIES

The Bill of Quantities follows and comprises of 40 pages. The pages are numbered 1 to 40

PART C3: SCOPE OF WORK

	<u>PAGE</u>
C3.1 PROJECT DESCRIPTION AND SCOPE OF CONTRACT	70
C3.2 PROJECT SPECIFICATIONS	72
PS.1 Programme, Method of Work, and Accommodation of Traffic	
PS.2 Services	
PS.3 Watermains	
PS.4 Sewers	
PS.5 Stormwater	
PS.6 Electrical Plant	
PS.7 Telkom S.A. Limited / Neotel Plant	
PS.8 CCTV Plant	
PS.9 Management of the Environment	
PS.10 Occupational Health and Safety	
C3.3 STANDARD SPECIFICATIONS	82
C3.3.1 Listing of the Standard Specifications	
C3.3.2 Amendments to the Standard Specifications	
C3.4 PARTICULAR SPECIFICATIONS	134
C3.4.1 Part AH - OHS 1993 Safety Specification (26 Pages)	
C3.4.2 eThekwin Municipality Project Specific Health and Safety Specification - WS7555 (27 Pages)	
C3.4.3 eThekwin Municipality – Water Mains Replacement – WS7555 Baseline Risk Assessment (42 Pages)	
C3.4.4 Standard Environmental Management Plan for Civil Engineering Construction Works (24 Pages)	
C3.4.5 eThekwin Municipality's (City of Durban) Standard Engineering Specifications Part S Reinstatement) (8 Pages)	
C3.4.6 Trenchless construction works Part TT3: Horizontal Directional Drilling (33 Pages)	
C3.4.7 eThekwin Municipality Project Specifications – Excavation and Reinstatement of trenches and roads and sidewalks in the EMA Areas Revision 23 October 2020 (11 Pages)	
C3.5 CONTRACT AND STANDARD DRAWINGS	135
C3.5.1 Contract Drawings / Details	
C3.5.2 Standard Drawings	
C3.6 ANNEXURES	137
C3.6.1 Locality Map (Download Link provided)	
C3.6.2 Tender Drawings (Download Link provided)	

C3.6.3	Particular Specifications (Download Link provided)	
C3.7	ENGINEERING	138
C3.7.1	Design Services and Activity Matrix	
C3.7.2	Employer's Design	
C3.7.3	Contractor's Design	
C3.7.4	Drawings	
C3.8	PROCUREMENT, PARTICIPATION & EMPOWERMENT	140
C3.8.1	Preferential Procurement / Targeted Enterprises / Participation Empowerment	
C3.8.2	Subcontracting & Sub-Contracting Procedures	
C3.8.3	Mentorship Requirements	
C3.8.4	Performance Monitoring	
C3.8.5	Record Keeping and Reporting	
C3.8.6	Attendance on Sub-Contractors and Targeted Enterprises	
C3.9	CONSTRUCTION	144
C3.9.1	Site Establishment	
C3.9.2	Construction Equipment	
C3.10	MANAGEMENT OF THE WORK	149
C3.10.1	Planning and Programme	
C3.10.2	Claims and Certificates	
C3.10.3	Reporting	
C3.10.4	Management Meetings	
C3.10.5	Documentation Control	
C3.10.6	Completion	
C3.10.7	Environmental Management	
C3.10.8	Quality Assurance	
C3.10.9	Contractor Key Performance Indicators	

C3.1: PROJECT DESCRIPTION AND SCOPE OF WORKS**C3.1.1 Description of Works**

The objective of this contract is to assist the Municipality in its long-term objective to replace approximately 2% of existing water mains year on year in critical reservoir zones within the eThekweni Municipal area of supply.

The expected outcome of this programme is that the budget provided in respect of each financial year will be spent on replacing water mains in accordance with the critical reservoir zones identified in the programme.

The contractor is to replace or install water mains, associated fittings and valves within existing serviced areas (brownfields environments) per Critical Reservoir Zone, as per construction drawings to be issued by the Employer's Agent.

The works will include but are not limited to the following:

- Proving of existing services
- Accommodation of traffic
- Clearing of pipeline route
- Trench excavations
- Supply of material, pipes, fittings and valves
- Recovery and/or disposal of existing pipes and fittings
- Temporary rider mains, water connections and access to properties
- Installation of new water mains in trenches along new and existing alignments
- Installation of water mains in bridge decks or attached to bridges
- Installation of new fittings and valves
- Horizontal directional drilling for selected road crossings
- Pressure testing and disinfection of pipes
- Construction of new pressure management
- Refurbishment of existing pressure management infrastructure
- Reinstatement of road crossings and other affected infrastructure and surrounds
- Surveying, measuring and providing as-built information

The works shall be performed for the following critical reservoir zone as indicated on the drawings:

- **Contract WS7556 (total 21km)**
 - Phoenix 1 Reservoir Zone
 - Sub Zone 37D – 21 km of water mains and associated fittings

Attention is to be given to the following (but not limited to):

- Proving and protection of existing underground services
- Traffic accommodation in busy roads and at peak times
- Maintaining health and safety requirements and procedures
- Disposal of asbestos cement pipe (AC Pipe)
- Reinstatement of road crossings and other infrastructure affected by the works
- Preservation of topsoil and reinstatement of verges
- Design and maintenance of rider mains and temporary water connections
- Maintaining accesses to properties over trench excavations

The works consists of various work packages.

Contract	Package	Description	Weeks	Completion Date
Contract WS7556	Package 1	Phoenix 1, Sub-zone 37D	560 days	560 days after commencement date

C3.1.2 Description of Site and Access

Refer to Item Part C4 – Site Information.

C3.1.3 Nature of Ground and Subsoil Conditions

Refer to Item Part C4 – Site Information.

C3.2: PROJECT SPECIFICATION**PREAMBLE**

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

C3.2.1 GENERAL**PS.1 PROGRAMME, METHOD OF WORK, AND ACCOMMODATION OF TRAFFIC**

This Clause is to be read in conjunction with the provisions and obligations as contained in SANS 1921-1 and SANS 1921-2.

PS.1.1 Preliminary Programme

The Contractor shall include with his tender a preliminary programme on the prescribed form (see Part T2.2: Preliminary Programme) to be completed by all Tenderers. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

The Contractor shall be deemed to have allowed fully in his tendered rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions (refer to Clause 5.12.2.2) and special non-working days (refer to Clause 5.1.1.1) as specified in the in the Contract Data.

PS.1.2 Programme in Terms of Clause 5.6 of the General Conditions of Contract

It is essential that the construction programme, which shall conform in all respects to Clause 5.6 of the General Conditions of Contract, be furnished within the time stated in the Contract Data (refer to Clause 5.3.1/2).

The preliminary programme to be submitted with the tender shall be used as basis for this programme.

The Tenderer's attention is drawn to the fact that a number of factors will affect the programming of and method of carrying out the works. The more important of these are:

[Detail any factors which may affect the programming of the project]

- (1) Time required for service relocations.
- (2) Time allowances to be made for the ordering of special items.
- (3) Notification required by service organisations.
- (4) Any special sequence in which work must be carried out. Must certain areas of work be finished before work commences on others?
- (5) If delays are anticipated with service relocations the contractor should be asked to allow time.
- (6) Is work required out of normal hours? (eg. to accesses).

- (7) Vehicular access to private property is to be maintained.
- (8) Traffic restrictions.

Those known, existing services in the area of the works have been depicted on the contract drawings. It is evident, however, that the status of existing service records as far as can be ascertained might not reflect the actual situation in the field. As such, due allowance has been made in the Bill of Quantities for the proving of services where directed by the Engineer.

PS.1.3 Requirements for Accommodation of Traffic

PS.1.3.1 General

Accommodation of traffic, where applicable, shall comply with SANS 1921-2: 2004: Construction and Management Requirements for Works Contracts, Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor. The Contractor shall obtain this specification from Standards South Africa if accommodation of traffic will be involved on any part of the construction works.

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

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

PS.1.3.2 Basic Requirements

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

The Contractor is to be aware that the sites are bordered by busy roads and streets which are subject to increase traffic volumes during peak hours. Interference with usual traffic flow is to be kept to a minimum for the duration of the contract.

If any such interference is unavoidable, for example, during the supply or installation of any materials, then the Contractor shall provide all necessary traffic control materials, equipment and personnel in compliance with the prevailing Council Legislation and Bylaws.

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

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

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

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

PS.1.3.3 Traffic Safety Officer

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

PS.1.3.4 Payment

The Contractor's tendered rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered.

PS.1.3.5 Pedestrian movement

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

PS.1.3.6 Temporary Reinstatement

Provided always that if in the course or for the purpose of the execution of the works or any part thereof any road or way shall have been broken up, then notwithstanding anything herein contained:

- (a) if the permanent reinstatement of such road or way is to be carried out by the appropriate authority or by some person other than the contractor (or any subcontractor to him), the contractor shall at his own cost and independently of any requirement of or notice from the Engineer be responsible for the making good of any subsidence or shrinkage or other defect, imperfection or fault in the temporary reinstatement of such road or way, and for the execution of any necessary repair or amendment thereof from whatever cause the necessity arises, until the end of the period of maintenance in respect of works beneath such road or way until the authority or other person as aforesaid shall have taken possession of the site for the purpose of carrying out permanent reinstatement (whichever is the earlier), and shall indemnify and save harmless that Council against and from any damage or injury to the Council or to third parties arising out of or in consequence of any neglect or failure of the Contractor to comply with the foregoing obligations or any of them and against and from all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.
- (b) where the authority or person as aforesaid shall take possession of the site as aforesaid in sections or lengths, the responsibility of the contractor under paragraph (a) of this sub-clause shall cease in regard to any such section or length at the time possession thereof is so taken, but shall during the continuance of the said period of maintenance continue in regard to any length of which possession has not been taken and the indemnity given by the contractor under the said paragraph shall be construed and have effect accordingly.

PS.2 SERVICES

This Clause is to be read in conjunction with the provisions and obligations as contained in **SANS**

1921-1 and SANS 1921-2.

PS.2.1 Existing Services

The Tenderer's attention is drawn to the numerous existing services in the area. Although every effort has been made to depict these services accurately the positions shown must be regarded as approximate.

It should be noticed that large diameter water mains (trunk mains) are present within the project footprint and may impact/affect the proposed construction works. Care shall be taken to not damage any of these trunk mains at any time.

PS.2.2 Proving Underground Services

This clause must be read in conjunction with Clause 5.4 of SANS 1200 A, the requirements of which shall be extended to cover all earthworks operations whether for trenching or bulk earthworks, in the vicinity of underground services.

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

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

The cost of the proving trenches is to be included in the work covered by Clause 8.8.4 of SANS 1200 A.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Employer's Agent who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly. The cost of this additional searching shall be to the Employers cost and shall be paid for under 8.8.4 of SANS 1200 A.

Should any service be damaged by the Contractor in carrying out the works and should it be found that the procedure as laid down in this clause has not been followed then all costs in connection with the repair of the service will be to the Contractor's account.

When electrical cables are not in the positions shown on drawings of eThekweni Electricity and cannot be found after proving trenches have been put down, assistance may be obtained by calling an official of the Works Branch on Telephone No. 031-311-1111 during office hours, or by contacting Control on Telephone No. 031-305-7171 after hours. Any unknown services shall be deemed to become a known service after it has been located by the contractor on site or repaired by the contractor.

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

Proving of services shall be completed at least two weeks in advance of the actual programmed

date for commencing work in the area. The position of these services located must be co-ordinated and levelled by the Contractor, and the information given in writing to the Employer's Agent's Representative.

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

PS.2.3 New Services and Relocation of Existing

This clause shall be read in conjunction with Clause PS.1.

New services are either to be installed by the Contractor as part of the contract or by others during the contract period. In the latter case excavation and subsequent backfilling of the trench from the top of the bedding layer shall generally be carried out by the Contractor.

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

Generally, work shall only commence on the installation of new services once the bulk earthworks have been completed and roughly trimmed to level along a substantial portion of the services route. In addition, no sidewalk, verge, median or island shall be surfaced or topsoiled until all work on the services has been completed.

Services affected by the contract are described as follows:

- PS.3: Watermains
- PS.4: Sewers
- PS.5: Stormwater
- PS.6: Electrical Cables / Lighting
- PS.7: Telecommunications and Fibre Services
- PS.8: CCTV

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

PS.2.4 Accommodation of Services

Further to Clauses PS.1 and PS.2 of this specification, tenderers are to note that allowance must be made under this item and / or the appropriate rates, for all costs incurred as a result of complying with these clauses. It shall also cover liaison with the services organisations and accommodation of their work gangs / contractors on site.

PS.3 WATERMAINS

PS.3.1 General

Tenderer's attention is drawn to the following points regarding the watermains to be installed as

part of this contract.

Quality of material.

- mPVC and HDPE pipes shall comply with the relevant SANS specifications and manufacturers of the material are affiliated with are SATAS and SAPPMA approved.
- The Employer or Employers Agent can at any time request material samples identified by the Employer or his Agent to be tested by a SANAS accredited laboratory of his choice.

PS.3.2 Water Main Valve Access

Due to the dangerous situation occurring when water main valves are covered over, the Contractor shall maintain access to all water main valves at all times. During asphalt layer work, after each pass by the paving machine, the valves shall be exposed, and access maintained in a safe condition.

Whatever method the Contractor chooses to use for this work, the cost of raising the valves from existing level to ultimate level shall be paid only once, irrespective of the number of times the valve is uncovered. Spacer rings required for the height adjustment of valve covers shall be supplied by the Water and Sanitation Unit. Tolerances on valve cover levels shall be as follows: The difference in level between the frame and the finished paved surface level adjacent to the frame shall not exceed -

- 2 mm in a roadway
- 3 mm in a footway

Before final setting in position of valve covers the Contractor shall liaise with the Employer's Agent regarding the direction in which covers shall be placed.

PS.3.3 Restriction on Compaction Equipment

The Contractor is to note that existing watermains traverse the site of the works and special care is to be taken in close proximity to these mains and connections. The existing mains and connections shall be proved on site by the Contractor prior to any construction work commencing in the vicinity of the watermains.

Under no circumstances will heavy road-making equipment, other heavy plant or vibratory compaction equipment be permitted to operate within 800 mm vertically or horizontally of the existing mains or connections. The permissible compaction plant within this restricted area shall be the equivalent of a "Bomag 90" under static compaction, or similar approved plant. When the roadworks is far enough advanced to provide a minimum of 800 mm cover to the existing mains, the above restriction will fall away.

The Contractor is to take cognisance of the above requirements when entering rates in the Bill of Quantities and in the programming of the works. No claim for additional payment based on the inability to use plant as a result of the requirements of this clause will be accepted. The Contractor will be held liable for any costs should the watermain or electrical cables be damaged during construction of the road.

PS.4 SEWERS

PS.4.1 Blockage of Foul Water Sewers

The Contractor shall be responsible for ensuring that cementitious sludge, sand and rubble from

the works do not enter the foul water reticulation system. The Contractor shall be liable for any costs incurred by the Council or others as a result of blockages in the reticulation system attributed to failure to comply with the above requirement.

PS.5 STORMWATER

PS.5.1 Blockage Stormwater Sewers

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

PS.6 ELECTRICAL PLANT

No construction/repair work to any electrical cabling is envisaged. Tenderers' attention is however drawn to the fact that electrical cables (low, medium and high voltage) are existing in the project area and great care should be taken when working close to these. All applicable health and safety measures should be in place prior to working close to any electrical cables.

PS.6.1 General

Various types of electrical cables including high voltage, medium voltage and low voltage, street lighting and domestic connection cables are affected by the contract. The laying, relocation and jointing of all cables will be carried out by eThekweni Electricity's work gangs, or agents appointed by them, whilst the excavation and backfilling forms part of this contract. Close liaison will therefore be necessary with eThekweni Electricity throughout the contract.

PS.6.2 Street Lighting

The existing lighting will be removed in stages and replaced in the centre median / intersection corners. Relocation will take place during this contract and be executed by eThekweni Electricity or their agents. It is a requirement that the street lighting be operational at all times.

PS.6.3 MV / LV Cables

Certain MV / LV cables are to be replaced within the contract area (see Drawing DM0226-ACMRP-01). The actual cable work associated with this relocation and / or replacement of these cables will be carried out by eThekweni Electricity and it is stressed that the two-week period referred to in Clause PS.2 is the minimum period required to enable eThekweni Electricity to be on site timeously.

PS.6.4 Relocation of Existing Services

Should it be necessary to adjust the line, level and / or position of any service not catered for in the contract to enable the construction to proceed the Contractor shall on no account effect such adjustment himself but shall notify the Engineer who will arrange for the work to be carried out at no cost to the Contractor.

PS.7 TELECOMMUNICATION AND FIBRE SERVICES

No work to any telecommunications and fibre plant is envisaged. The tenderers attention is drawn to the fact that various telecommunication and fibre services are present in the project area.

PS.8 CCTV PLANT

No work to CCTV Plant is envisaged, but the tenderers attention is drawn to the fact that CCTV cables and fibre optic cables are existing in the contract area.

PS.9 MANAGEMENT OF THE ENVIRONMENT

The Contractor shall pay special attention to the following:

PS.9.1 Natural Vegetation

The Contractor shall confine his operation to as small an area of the site as may be practical for the purpose of constructing the works.

Only those trees and shrubs directly affected by the works and such others as the Employer's Agent may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

PS.9.2 Fires

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

PS.9.3 Environmental Management Plan

In addition to the above, all requirements according to the Environmental Management Plan as detailed in C3.4: Particular Specifications, will be adhered to.

PS.10 OCCUPATIONAL HEALTH AND SAFETY

PS.10.1 General Statement

When considering the safety on site the Contractor's attention is drawn to the following:

- Site clearance with risk of using improper tools or risk of snake bites
- Transportation and stacking of material on site, risk of material falling on people or damaging property
- Open trench excavations with the risk of falling.
- Attaching watermains to bridge decks or structures or laying watermains inside bridge decks or bridge walkways
- Construction or rehabilitation of new/existing PRV chambers, both pipework and brick structures
- Working inside trenches with the risk of collapsing trench walls.
- Location of services, striking electrical cables, risk of being electrocuted

- Traffic alongside construction activities in public roads with the risk of running over construction workers and pedestrians.
- Moving construction machinery and vehicles like excavators and tipper trucks.
- Falling into open water areas and risk of drowning
- Welding and flame cutting, the risk of inhalation of toxic fumes

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHS Act 1993 Construction Regulations 2014 issued on 7 February 2014 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of Section 37(2) of the Occupational Health and Safety Act.

PS.10.2 Health and Safety Specifications and Plans to be submitted at tender stage

PS.10.2.1 Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in Part C3.4: Particular Specifications.

PS.10.2.2 Tenderer's Health and Safety Plan

At tender stage only a brief overview of the tenderer's perception on the safety requirements for this contract will be adequate. This will be attached to Part T2.2: Contractor's Health and Safety Plan.

Only the successful Tenderer shall submit a separate Health and Safety Plan as required in terms of Regulation 7 of the Occupational Health and Safety Act 1993 Construction Regulations 2014 and referred to in Part T2.2: Contractor's Health and Safety Plan.

The detailed safety plan will take into consideration the site-specific risks as mentioned under PS.10.1 and must cover at least the following:

- (i) A proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 29.
- (ii) Pro-active identification of potential hazards and unsafe working conditions.
- (iii) Provision of a safe working environment and equipment.
- (iv) Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 7*).
- (v) Monitoring health and safety on the site of works on a regular basis and keeping of records and registers as provided for in the Construction Regulations.
- (vi) Details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 8 and other applicable regulations; and
- (vii) Details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014.

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

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

A generic plan will not be acceptable.

PS.10.3 Cost of compliance with the OHSA Construction Regulations

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract. Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

Items that may qualify for remuneration will be specified in the Employer's Health and Safety Specification.

PS.11 SITE SECURITY

The Contractor shall, for the duration of the contract, provide sufficient security and watchmen to adequately ensure the safety and protection of the works on a 24-hour basis, the Contractor's staff, including local labour and subcontractors, and all site plant and construction equipment required for the works.

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

Payment for this item shall be made under Section 1, Part AB of the Bill of Quantities.

PS.12 PERFORMANCE MONITORING OF SERVICE PROVIDERS

The performance of service providers will be measured in terms of the performance of the watermains system once replaced. The performance of the system is measured by calculating the Infrastructure Leakage Index (ILI) that is basically a measure of how well the system perform compared to a perfect system.

The ILI consider the leakage measured from the zone through physical flow measurement at pre-defined nodes corresponding to the same nodes used pre-construction to identify the DMA/zone as a zone for watermains replacement.

Please refer to section C3.10.9 Contractor Key Performance Indicators for further details on performance monitoring.

C3.3: STANDARD SPECIFICATIONS**C3.3.1 Standard Specifications**

The Specifications on which this contract is based are the "South African National Standards - Standardised Specification for Civil Engineering Construction (SANS 1200)". This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections.

Part	Description	Date of Issue
A	General	1986
C	Site clearance	1982
DB	Earthworks (Pipe trenches)	1989
DA	Earthworks (Small works)	1988
GA	Concrete (Small Works)	1982
L	Medium-Pressure Pipelines	1983
LB	Bedding (Pipes)	1983
LE	Storm water drainage	1982

C3.3.2 Amendments to the Standard Specifications

Introduction

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

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

PS – SECTION	Description
PSC	Site Clearance
PSDA	Earthworks (Small Works)
PSDB	Earthworks (Pipe Trenches)
PSGA	Concrete (Small Works)
PSL	Medium Pressure Pipelines
PSLB	Bedding (Pipes)
PSLE	Stormwater Drainage
PSMK	Kerbing and Channelling

PSA: GENERAL (Applicable to SABS 1200 A – 1986)**PSA 3 MATERIALS****PSA 3.1 Quality**

Add to the Sub-Clause:

No used or recycled material may be used in the Works unless expressly authorised by the Employer's Agent.

Samples of concrete aggregates are to be delivered to an approved laboratory.

PSA 4 PLANT**PSA 4.2 Contractor's Office, Stores and Services (Refer SANS 1921-1 Clause 4.14)**

Add to the Sub-Clause:

Neither housing nor shelters are available for the Contractor's employees, and the Contractor shall make his own arrangements to house his employees off-site and transport them to site.

The Employer may place an area of ground at the disposal of the Contractor at the works site to enable him to erect his site offices, workshops and stores if required. The temporary facilities and ablution facilities shall comply with the requirements of the Local Authority.

The following points are noted:

- 1) Water-borne sewerage reticulation is not available in the area.
- 2) Water and electricity services are available in the area. The Contractor shall be responsible for making all arrangements for the necessary connections to these services. The cost of providing these services is deemed to be included in the tendered rates. See contract data "C3.4.1.2 Facilities provided by the contractor".
- 3) Existing services may traverse the site. Care shall be exercised to avoid damage to these services.
- 4) The site shall be completely fenced in accordance with the specification and to the approval of the Employer's Agent.
- 5) On completion of the contract, the site shall be fully reinstated to its original condition inclusive of placing of topsoil and planting of grass, all to the satisfaction of the Employer's Agent.
- 6) The Contractor shall provide at his own cost and in an approved location both at the site camp and at the working front/s, adequate sanitary accommodation for the use of his employees engaged in the Works. Such conveniences which shall comply with the Local Authority's regulations, shall be maintained in a clean and hygienic condition and shall be properly secluded from public view and their use shall be strictly enforced. On removal of such conveniences the sites thereof shall be left in a clean, sanitary and tidy condition.

PSA 4.3 Facilities for Engineer (New Clause)

Add new Sub-Clause:

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 Representative (as applicable), the facilities as set out in the Bill of Quantities which include furnished offices and name boards. These 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.

The Contractor shall erect and maintain the two contract name boards at such positions and locations as are directed by the Employer's Agent. The Contractor shall before ordering or manufacturing any such Contract name boards, obtain the Employer's Agent's written approval in respect of all names and wording to appear on the Contract name boards.

The offices shall be sited in a position decided upon by the Engineer. Each office shall be weatherproof, shall have a wooden boarded floor that is at least 150 mm above ground and shall be provided with a ceiling and lining to the walls or equivalent insulation, with an approved type of door with a secure lock and 4 keys and two opening windows of glazed area at least 3 m². Each office shall be well ventilated and shall be insulated to provide comfortable working conditions.

The Contractor shall supply toilet facilities for the exclusive use of the Engineer and his representatives. The facilities shall include a suitable drinking water supply, a water closet toilet or other acceptable toilet facilities should sewerage not be available within 20 m of the proposed office site, a wash hand basin, soap and towel. The Contractor shall provide for the duration of the contract period proper maintenance of the offices and toilets and their approaches and arrange for the daily cleaning of the offices and toilets which shall be completed by 08:00. The Contractor, upon completion of the contract, shall arrange for the complete removal of the office and toilets together with the disconnection of all services.

The furnished office shall be of minimum size 3 m x 6 m with a minimum of height to ceiling of 2,5 m. It shall be provided with an air conditioner whose capacity is acceptable by the Engineer as reasonably adequate for the size of office provided and shall have adequate fluorescent lighting. It shall be furnished with one desk having a top size of at least 1,5 m x 0,9 m with one lockable drawer, 6 (six) suitable chairs, a notice board minimum size 2 m long x 1 m high, a 4-drawer filing cabinet and an angled smooth-topped plan table of minimum size 1,8 m long x 0,9 m wide with suitable provision underneath for the storage of plans.

All electricity supply to the Engineers office(s) and laboratory (if applicable), whether provided by the Contractor by way of a reticulated supply from a local authority or other authorised electricity supply, or by way of on-site generators, shall be regulated by the Contractor to within limits such as to prevent damage due to fluctuations in the electrical current supply that may occur to any electrical plant and equipment provided by the Contractor or the Engineer.

The Contractor shall be liable for and pay to the Engineer on demand, all costs that the Engineer may incur in the repair or replacement of any electrical equipment provided by the Engineer on the Site. Reliance by the Contractor on the regulation of the electrical supply by the supplier or on current regulators fitted to generators shall not absolve the Contractor of his liabilities in terms of this Sub clause and, where appropriate, the Contractor shall provide and install at his own cost, all such electrical current-regulating equipment as is necessary to prevent damage to the said equipment.

The Employers Agent office shall have a floor area of at least 18m². In addition, the offices

shall be fitted with:

- Correctly sized air conditioning units.
- Refrigerator of 100l capacity
- 4 No 15 Amp earther power plug points reticulated within the offices for computer powering and other office equipment.
- An approved stand and holders for 20 vertically hung A0 drawings.
- An approved colour printer and scanner to print and scan A3 documents adequate printer cartridges shall be provided throughout the contract duration
- A lockable cabinet
- 3 desks and 3 chairs
- A drawing table shall be supplied to each office, capable of spreading an A0 drawing satisfactorily.
- 4 carports shall be provided for exclusive use of the Employers Agent and the Employer. The carports shall have suitable roof cladding and be covered on 3 sides

The offices must comply with the requirements of Clause 3.2 of SANS 1200AB and must be located in a shady area or be protected from the sun by shade cloth suspended over its roof. In addition to the above comfortable, air-conditioned accommodation shall be made available for holding regular site meetings. This accommodation must comfortably cater for up to 15 persons seated around a table.

Time Related charges of R1000 per month shall be included for airtime for use by the Engineer for the duration of the Contract.

A wireless internet service is to be provided at the site offices with minimum 50GB data access per month for Employers Agent and Employer's use.

PSA 5 CONSTRUCTION

PSA 5.1.2 Preservation and Replacement of Beacons and Pegs subject to Land Survey Act (Refer SANS 1921-1 Clause 4.15)

Add to the Sub-Clause:

- The Employer's Agent will arrange for any pegs that are missing to be replaced at the Contractor's expense.
- All survey reference marks shall be clearly marked and protected by the erection of three fencing standards.
- All plot boundary pegs shall be marked with fencing droppers and shall be painted.

PSA 5.7 Safety (Refer SANS 1921-1 Clause 4.18)

Add to the Sub-Clause:

All work and particularly work carried out in the proximity of buildings, bridges, tanks or other structures shall be carried out in conformance with the regulations framed under the Occupational Health and Safety Act, 1993 and the Minerals Act, Act 50 of 1991, including shoring where

necessary, to ensure the safety of structures that are at risk.

The Contractor shall make available for the duration of the contract safety helmets, gumboots and any other necessary safety equipment for sole use by the Employer's Agent and his representative(s).

PSA 6 TOLERANCES

PSA 6.2 Degrees of Accuracy

Add to the Sub-Clause:

Degree of Accuracy II shall be applicable to the whole of the Works.

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.2.1 Fixed Charge Items

Add the following:

The amount, if any, by which the sum of the fixed-charge items exceeds three percent (3%) of the net total tendered amount (excluding allowances for contingencies and price escalation) shall be regarded for payment purposes as time-related items and will be paid in accordance with Clause 8.2.2.

PSA 8.2.2 Time-related Items

Delete the third and fourth lines and substitute the following:

"..... incremental amounts (calculated by the division of the remainder of the tendered sum by the number of the remaining months of the duration of construction as assessed by the Employer's Agent) will be....."

Add to the Sub-Clause:

Notwithstanding the provisions of Sub-Clause 8.2.2, an approved extension of time will not entitle the Contractor to receive any payment for that portion of fixed-charge and value-related items which have become regarded as "time-related" items in terms of PSAA 8.2.1.

PSA 8.8.2 Accommodation of Traffic and re-use or removal of temporary traffic control facilities

New Sub-Clause:

The rate for traffic accommodation will be per metre (m) of traffic accommodation along the centreline of pipe trench. Any section of the works may only be measured once for the duration of the contract. Refer to Project specification PS.1.3

The Contractor is to be aware that the sites are bordered by busy roads and streets which are

subject to increase traffic volumes during peak hours. Interference with usual traffic flow is to be kept to a minimum for the duration of the contract.

If any such interference is unavoidable, for example, during the supply or installation of any materials, then the Contractor shall provide all necessary traffic control materials, equipment and personnel in compliance with the prevailing Council Legislation and Bylaws.

The Contractor shall make provision for accommodating all pedestrian and vehicular movement in the area of the works. Allowance shall be made in the relevant rates for any barricades and signs required. Accommodation of traffic, where applicable, shall comply with the requirements of The South African Road Traffic Signs Manual - Volume 2: Roadworks Signing". The rate shall also include the provision of a traffic safety officer to monitor the traffic accommodation.

This Clause is to be read in conjunction with the provisions and obligations as contained in SANS 1921-1 and SANS 1921-2. (SANS 1921-1:2004 Construction and management requirements for works contracts:

Part 1: General engineering and construction works.

Part 2: Accommodation of traffic on public roads occupied by the contractor)

PSA 8.9 Security (unarmed) on site for the duration of the contract

Add new Sub-Clause:

The rate shall include the acquiring and managing of the services of a registered security company for unarmed security. The rate shall include the securing of the camp site as well as on any location on the site where there exists a risk of theft of materials and equipment as well as the security of personnel. The service shall be provided on a 24-hour basis.

PSA 8.10 Security (armed) on site for the duration of the contract

Add new Sub-Clause:

The rate shall include the acquiring and managing of the services of a registered security company for armed security. The rate shall include the securing of the camp site as well as on any location on the site where there exists a risk of theft of materials and equipment as well as the security of personnel. The services shall be provided on a 24-hour basis.

PSA 8.11 Daily Photographing and of works and Traffic Accommodation, including record keeping.

Add new Sub-Clause:

The rate shall include the camera/s, data storage devices, data back-up's, including any items deemed necessary for the daily photographing of the works and traffic accommodation. The Engineer or Employer may at any time request specific records of the photos which will be submitted to the Engineer or Employer in soft copy format within 24 hours. The photos will be date stamped.

PSA 8.12 Provision of "As-Built" information by professional surveyor

Add new Sub-Clause:

The rate shall include the surveying of newly installed infrastructure which shall include any valves, fittings and directional changes in pipe by a professionally registered surveyor. The as built record shall be submitted in DWG or DXF format as well as hard copy. The data will include the size and type of fittings and valves.

PSA 8.13 Community Liaison Officer (CLO)

Add new Sub-Clause:

Unit of measurement is Provisional Sum. The community liaison officer (CLO) will be paid monthly proportion of the total provisional sum under the contract as determined and instructed by the employer.

PSA 8.14 Provision of a full-time Enterprise Development Mentor for the duration on the contract

Add new Sub-Clause:

Unit of measurement is a Monthly Rate. The Enterprise Development Mentor will be paid a monthly rate under the contract as determined and instructed by the employer as set out in the scope of works.

PSA 8.15 Provide temporary access to properties over open trench excavation

Add new Sub-Clause:

Unit of measurement is Number (No.). The rate shall include the total number of temporary accesses provided to properties in the form of a crossing structure, irrespective of the duration of each temporary access provided. The structure will be designed by the Contractor and able to withstand the current and expected traffic loads to the respective property. The rate shall include the design, materials, construction and installation required for the accesses. The access will be sufficient to provide safe access to properties over open trenches, irrespective of the trench width.

PSA 8.16 Supply and use (or hire) of specialist equipment for the detection of underground services (Provisional)

Add new Sub-Clause:

Unit of measurement is Provisional Sum. The rate shall include the supply and use of the equipment to locate existing services as directed by the Employer or Engineer. The Contractor shall submit more than one quote to the engineer for the work which will be claimed as a proportion of the provisional sum.

PSA 8.17 As built / GIS field work and verification (Provisional)

Add new Sub-Clause:

Unit of measurement is Provisional Sum for field work to verify and correct existing as-built

information by an approved supplier.

PSA 8.18 Material and other tests ordered by the Employer or his representative

Add new Sub-Clause:

Unit of measurement is Provisional Sum. The rate will be for random selection of material samples, shipping to an approved testing facility, and reporting and certification of the sample. The Employer or his representative shall be present at the selection and loading of such material samples. The contractor shall provide proof of all cost incurred from the above.

Plastic Pipes will be partially tested according to SANS 966-2 and shall include the following tests:

Item Description

- | | |
|---|---------------------------------------------------------------------------------------------------------------------------|
| 1 | Vicat Softening Point SANS966-2 / ISO2507 |
| 2 | Tensile Properties ISO527-1 & 2 |
| 3 | Resistance to Dichloromethane ISO9852 |
| 4 | Hydrostatic Pressure Testing (pipes) – Pressure Testing at 60-degree C, 100 hours applied pressure (Clause 5.7, SANS130). |
| 5 | Hydrostatic Pressure Testing Resistance to end-socket assembly 1 hour at 20 degrees C |
| 6 | Endurance Test Fracture Toughness ISO11673 |
| 7 | Impact Test Impact at 20 degrees C |
| 8 | Visual Inspection (Workmanship) |

The contractor shall liaise with the testing facility on the sample requirements before shipping. The Class (Pressure Rating) of the sample shall be clearly indicated and the testing and test results shall only be valid for the respective class tested.

The Employer or his representative shall provide the Contractor with the contact details of the approved testing facility.

PSA 8.19 Leak detection on existing pipes by an approved specialist

Add new Sub-Clause:

Unit of measurement is Provisional Sum. The rate shall include the services of an approved leak detection specialist for leak detection on existing pipes, if such pipes did not pass the specified pressure test. The rate shall include all pipe diameters and any all locations within the site boundary. The leak detection shall include a detailed report with analysis results and recommendations compiled by the specialist.

PSA 8.20 Institutional and Social Facilitator rendered by sub-contractor as per clause 4.4.4 of the General Conditions of Contract.

Add new Sub-Clause:

Unit of measurement is Provisional Sum.

The ISD Consultant will be responsible for the following:

- Be responsible for identifying and engaging all stakeholders relevant to the guiding and supporting eThekweni Metro with regards to implementation of water services objectives.
- Ensuring that there are no work stoppages in the project that might emanate from the miscommunication of project information.
- Undertake a rapid mapping of all stakeholders that are affected by water services projects such as civil society organizations, business chambers, business forums, business associations, as well as other relevant government departments
- Support technical teams to gain access to communities and privately-owned properties where bulk water lines cut through multiple communities and/or properties
- Preparing relevant ISD reports
- Avoid at all cost any community protests that might be related to the project.

The quality of workmanship shall be to the standard required by this Department's Standard Specifications and executed to the satisfaction of the Employer's Agent or his representative. Where the quality of the workmanship appears to be sub-standard or not in compliance with the Departmental Specifications, the Consultant will be required to remedy the work at his/her own expense.

Two ISD Consultants / Managers / Experts with a relevant degree and sufficient experience in such Projects at a senior level (B.Ed in social science or similar and a qualification in Project Management) are available to do the work. The ISD Consultant / Manager will attend all project related meetings as directed by the Employer's Agent. The ISD Experts should be capable of managing and directing the activities as indicated under his responsibilities above.

All persons employed on this contract shall be fully qualified ISD Officers, in the particular field of work specified.

Because of the nature of the work and tasks to be completed by the ISD Consultant she/he may be required to work outside the contractual working hours or during weekends, or on Sundays or during public holidays as defined in the Public Holidays Act. No extra costs will be borne by the Municipality for working outside normal working hours by the ISD Consultant.

PSA 8.21 Management of CPG Contractors

Add new Sub-Clause:

Unit of measurement is Sum. The rate shall include the services for executing the Contract Participation Goal Plan (CPG Contractors). The rate to include for everything required by the Contractor to achieve the CPG Participation Goal Plan including, but not limited to, engaging with CPG contractors from start to finish, to assist in resolving conflicts and rates disputes, administering all payments to CPG Contractors for the successful completion of the project. The Tendered rate will include for the Management of a maximum of 10 CPG Contractors and the rate will be adjusted accordingly if the number of Contractors are less than the maximum

PSC: SITE CLEARANCE (Applicable to SABS 1200 C – 1980 As Amended 1982)**PSC 3 MATERIALS****PSC 3.1 Disposal of Material**

Add to this Sub-clause:

Material obtained from clearing must be disposed of off-site, at an approved site or authorised landfill by the Contractor at his expense. Evidence of disposal shall be provided to the Engineer upon request. The Contractor will be held responsible for observing the by-laws and regulations of the relevant local authority and for any injury to persons and damage to property caused by any fire starting on site, in his camp or a fire started for any reason by his employees, regardless of whether such injury or damage is the direct or indirect result of such fire. The Contractor shall indemnify the Employer against all claims or damages arising from this source. Burning of combustible material shall not be allowed.

PSC 5 CONSTRUCTION**PSC 5.2.3.2 Individual Trees**

Delete the second sentence of the Sub-Clause and substitute the following:

The amount of the penalty payable by the Contractor for the removal or damage by him of a tree designated for preservation shall be R500 for each tree having a girth of less than 1000mm and R1 000 for each tree having a girth of 1000mm or more.

PSC 5.3 CLEARING

Add to the Sub-Clause:

In the sixth line, add the following:

..or excavator with similar flywheel power.

Add to the Sub-Clause:

Clearing shall also include the following:

- In Roadways: the breaking up and complete removal of all asphalt layers, asphalt and concrete haunching and cement or lime stabilised layer work which would normally entail the use of mechanical break-out equipment as well as the breaking up and removal of concrete kerb and channel/haunching. Asphalt shall be saw-cut before removal.
- On Sidewalks and other Paved Areas: the breaking up and removal of concrete sidewalks, scoops, ramps, parapets, paving slabs, blocks, bricks, slasto, etc.
- Removal of fences and hedges.
- Removal of Fire Hydrants and associated material.
- Removal of Guard Rails and Posts
- Traffic signs, bollards and posts
- Removal of Brick Walls

PSC 5.4 Grubbing

In the fourth line delete "200mm" and substitute 300mm.

PSC 5.6 Conservation of Topsoil

And 8.2.10

Add to the Sub-Clause:

All topsoil shall be conserved for later use by stockpiling clear of the working area.

PSC 8 MEASUREMENT AND PAYMENT**PSC 8.2 Scheduled Items****PSC 8.2.10 Topsoil**

Add to the Sub-Clause:

The topsoil, where approved by the Employer's Agent, shall be conserved for later use by stockpiling clear of the working area.

PSC 8.2.11 Extra over for dismantling and removal of Asbestos Cement (AC) pipelines (not encased in concrete), including valves and fittings.

New Sub-Clause:

The unit of measurement will be linear meters (m). In the case of Asbestos Cement (AC) pipes, the rate shall include all the necessary precautions and measures to be taken for removal and disposal of AC pipes in the appropriate and safe manner and authorised disposal site as prescribed by the Occupational Health and Safety Act and Asbestos Regulations, 2001. Also refer to clause (ZZ) Asbestos regulation (AR) of the Health and Safety Specification (AH)

PSC 8.2.12 Recovering and stockpiling of re-useable material from clearing operation

New Sub-Clause:

The unit of measurement is ton (t) for the recovering of items from clearing operations such as valves, fittings, fire hydrants, paving blocks and any other material as directed by the employer or his representative. The rate shall include haulage to stockpile on site

PSC 8.2.13 Loading and Transportation of Re-usable Material to any Municipal Depot

New Sub-Clause:

The unit of measurement is ton for the loading and transportation of all re-usable materials that have been reclaimed to any Municipal depot or site specified by EWS.

PSC 8.2.14 Landscape preservation and conservation of Flora

New Sub-Clause:

The unit of measurement is square metres (m²) for the preservation and conservation of natural landscape and flora. The rate shall include all established flora from landscaped areas on public and private properties, including all indigenous flora. Clause 5.7 (SANS 1200 C) shall apply. The work shall include the replacement of topsoil and replanting of all grass, turf, flowers, gardens, etc., and the Contractor shall maintain and water the replanted areas until growth is properly established. The contractor could alternatively negotiate with property owners, a compensation fee. Upon completion of work in any property the Contractor shall obtain a written clearance from the owner or occupier of the property confirming that the property has been cleared and reinstated to their satisfaction.

PSC 8.2.15 Reinstatement topsoil from stockpile

New Sub-Clause:

The unit of measurement is cubic metres (m³) for placing and spreading (reinstating) topsoil from stockpile before grass and or any other relevant flora is reinstated. The rate shall include all haulage from and to stockpile.

PSC 8.2.16 Reinstatement topsoil by importation from commercial sources

New Sub-Clause:

The unit of measurement is cubic metres (m³) for placing and spreading (reinstating) topsoil from commercial sources before grass and or any other relevant flora is reinstated. The rate shall include all haulage from and to stockpile. The Contractor shall only import topsoil from commercial sources if approved by the employer or his representative.

PSC 8.2.17 Reinstatement existing fences

New Sub-Clause:

The unit of measurement is linear metres (m²) for the reinstatement of existing fences to its original state. The rate shall include all haulage, and any additional materials required for the reinstatement.

PSC 8.2.18 Reinstatement Guard Rails and Guard Rails Posts

New Sub-Clause:

The unit of measurement is linear metres (m) for the reinstatement of existing guard rails and guard rail posts to its original state. The rate shall include all haulage, backfilling of cavities, and any additional materials required for the reinstatement.

PSC 8.2.19 Reinstatement Traffic and street signs, bollards and posts

New Sub-Clause:

The unit of measurement is number of (No.) for the reinstatement of traffic and street signs, bollards and posts to its original state. The rate shall include all haulage, backfilling of cavities, and any additional materials required for the reinstatement.

PSC 8.2.20 Take down existing Pre-Cast walling, and Stockpile on site

New Sub-Clause:

The unit of measurement is square metre (m²) for taking down existing Pre-Cast walling, and stockpile on site. The rate shall include sorting, stacking, loading, haulage, and offloading of material.

PSC 8.2.21 Reinstate Pre-Cast walling

New Sub-Clause:

The unit of measurement is square metre (m²) for the reinstatement pre-cast walling from a stockpile to its original state. The rate shall include all haulage, backfilling of cavities, new foundations and any additional materials required for the reinstatement.

PSC 8.2.22 Construct New Pre-cast Walling

New Sub-Clause:

The unit of measurement is square metre (m²) for the construction of new pre-cast walling to match the existing. The rate shall include all haulage, backfilling of cavities, new foundations and any additional materials required.

PSC 8.2.23 Construct new double leaf brick wall

New Sub-Clause:

The unit of measurement is square metre (m²) for the construction of new double leaf brick walls (230 mm, plastered and painted) to match existing. The rate shall include all haulage, backfilling of cavities, new foundations and any additional materials required. Clauses 3.4.1 (Bricks), 5.5.3 (Brickwork) and 5.5.4 (Plaster) of SANS 1200 LE shall apply.

PSDA: EARTHWORKS (SMALL WORKS)
(Applicable to SABS 1200 DA - 1988 as amended 1990)

PSDA 2 INTERPRETATIONS

PSDA 2.3 Definitions

Delete the sentence headed "Restricted excavation" and substitute:

Restricted excavation - An excavation so restricted in area or width as to preclude removal of material by excavating machinery used for bulk excavation measured in terms of Sub-Clause 8.3.1(b). Restricted excavation may be carried out by smaller machinery or by hand, as selected by the Contractor. The extent of restricted excavation shall be as scheduled and/or shown on the drawings; all other excavation shall be regarded as bulk excavation.

PSDA 3 MATERIALS

PSDA 3.2.1 Embankments & Backfill

In third line delete "150 mm" and substitute "100 mm".

Embankment material shall be compacted to 90% modified AASHTO density.

PSDA 3.3 Material Suitable for Replacing Overbreak in Excavations for Foundations

Add new Sub-Clause:

Where, in excavations for foundations, the replacement of overbreak is required, Grade 10/40 concrete is to be used to fill all voids and to bring the excavated surface up to the correct level. No additional payment will be made for the cost of the additional excavation or for the cost of the mass concrete filling.

Any overbreak, in locations where concrete work is to be cast against excavated undisturbed surfaces (e.g., below restricted or bulk excavation) is to be refilled with Grade 10/20 concrete (refer Clause PSG 8.1.3.1(b)).

PSDA 3.4 Backfilling and Embankments

Add new Sub-Clause:

Sufficient material arising from excavations for structures, foundations, footings and the like and which is suitable for forming embankments and backfilling against finished structures shall be temporarily stockpiled in the vicinity of the structures. All other material from the excavations shall be disposed of off-site.

PSDA 4 PLANT

PSDA 4.3 Compaction Plant

Add new Sub-Clause:

The plant used for applying the dynamic load, controlling the moisture content and grading or mixing shall be capable of achieving the compaction specified using the materials available for the construction of the Works.

PSDA 5 CONSTRUCTION

PSDA 5.1.1.1 Barricading and Lighting

Delete the Sub-Clause and substitute:

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 is 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 orange "Haznet" fencing approved by the Employer's Agent. The fencing shall be stretched tightly between supports along both sides and ends of the excavation at levels approximately 0,45 m and 1,25 m above the ground. The supports shall consist of poles or iron standards securely planted in solid ground at not more than 10 m 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 a stout two-rail timber fence, at least 1 m high, consisting of 150 mm x 75 mm timber verticals set firmly into the ground, with 75 mm x 50 mm rails securely fastened to them. 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.

The Contractor shall include in his tendered rates for excavation all costs associated with complying with barricading.

PSDA 5.1.1.2 Safeguarding of Excavations

In sub clause a) delete the words "Machinery and Occupational Safety Act" in the third and fourth lines and substitute "regulations to the Occupational Health and Safety Act, 1993."

PSDA 5.1.1.3Explosives

Delete the last sentence and substitute:

The Contractor shall make good at his own expense any additional excavation necessitated by the shattering of rock in excess of an overbreak allowance of 200 mm as measured beyond the required outline of the structure and at right angles to it.

In the case of overbreak to surfaces where a blinding layer is indicated, or ordered, the 200 mm

overbreak allowance will be measured from the uppermost surface of the blinding layer and the concrete refilling shall take the place of the blinding layer and payment will be made under the item for concrete refilling and not for blinding.

PSDA 5.1.1.4 Excavation of rock by blasting

Add new Sub-Clause:

In addition to complying with the provisions of Sub-Clause 5.1.1.3, the Contractor shall record (for the information of the Employer's Agent) the spacing and loading of the charge in each blast and compliance with this requirement will not relieve the Contractor of any responsibility in terms of the said Sub-Clause. The Contractor shall not carry out blasting within 10 m of existing services (e.g. a water main or sewer) or within 10 m of any structure or building.

PSDA 5.1.3 Existing Services

Add to the Sub-Clause:

The Employer's Agent may order excavation by hand in order to search for and expose services. An item has been included in the Schedule of Quantities to cover the cost of such work if so ordered by the Employer's Agent.

Where a service is damaged because of the Contractor's negligence, he shall be liable for the costs involved in the repair of the service and any other costs consequent upon the interruption of the damaged service.

PSDA 5.1.4 Stormwater and Groundwater

Delete the third sentence and substitute:

Except where the use of tremies has been approved, foundation excavations for structures shall be kept free of water at all times until they have been inspected and approved and the concrete sub-structures, together with their related super-structures, have been completed.

PSDA 5.1.5 Excessive Pollution

Add the words "noise and", before the word "dust" in the first line.

PSDA 5.1.6 Excavated Material Not to Endanger or Interfere

Delete the last sentence and substitute:

"All material that is unsuitable or not required for backfilling shall be disposed of at the nearest available solid waste site for spreading by others. No additional payment will be made for these activities."

PSDA 5.1.8 Road Traffic Control

Delete from the third and fourth lines and words "and such barricades and warning lights as are ordered" and add:

"and shall accommodate all traffic at any point on the site by providing by-passes, temporary bridges or the like"

An item has been included in the Schedule of Quantities to cover all costs required to accommodate any and all traffic on site.

PSDA 5.2.1 Site Preparation

Delete the last sentence and substitute:

"Material so removed shall be disposed of by the Contractor to Sites designated by the Employer's Agent".

PSDA 5.2.2 Excavation

Delete paragraph (f) of the Sub-Clause and substitute:

(f) Borrow pits where and when ordered shall be so maintained that they do not become a danger to persons and livestock. The necessary access shall be constructed to each site. Topsoil and overburden shall be stockpiled temporarily and, on completion of the work, returned to and spread over the area of the borrow pit in such a manner that the sides are graded 1:2 and the floor is self-draining, or otherwise as directed. Any access constructed by the Contractor shall be scarified and the area reinstated.

Add to the Sub-clause:

(h) Where outside shuttering is ordered by the Employer's Agent, the excavations shall be carried out for an extra width of not more than 600 mm all around the structure, measured from the base of the face to be shuttered, to allow for the shuttering to be fixed, this extra excavation and refilling where necessary is to be measured and paid for under quantities allowed for this purpose in the Schedule. Outside shuttering shall be used for the construction of all major structures unless ordered otherwise by the Employer's Agent.

(i) Where permanent concrete is to be placed against an excavated face, the excavation shall be trimmed to ensure that there is no projection greater than 20 mm protruding into the excavation profile.

(j) The Contractor shall not spoil, waste or stockpile excavated material without approval.

PSDA 5.2.3.1 Embankments

In the thirteenth line delete "600 mm" and substitute "300 mm".

In the sixteenth line delete "300 mm" and substitute "150 mm".

Delete the nineteenth line and substitute the following:

Each layer shall be compacted to achieve 90% modified AASHTO density except where indicated otherwise on the Drawings.

PSDA 5.2.3.2 Restricted Backfill and Compaction at Structures

Delete the eighth and ninth lines and substitute:

not exceeding 200 mm and compacted by means of mechanical tampers to achieve a 90% modified AASHTO density except where indicated otherwise on the Drawings.

PSDA 5.2.3.3 Backfill of Unavoidable Over-Excavation in Boulder Formation

Add new Sub-Clause:

Upon completion of the excavation in boulder formation, the excavation is to be backfilled, in part or in total as instructed by the Employer's Agent, with approved material obtained from other excavations or from borrow pits or with selected sandy material stabilised with 4% (by volume) of cement and compacted with mechanical tampers in accordance with the requirements of Sub-Clause 5.2.3.2 so as to achieve a 95% modified AASHTO density at OMC before being re-excavated to the lines and levels shown on the Drawings. (See also Sub-clause 8.1.1).

PSDA 5.2.5.2 Top soiling

Delete the wording of Sub-Clause 5.2.5.2 and replace with the following:

Where scheduled, topsoil shall be placed on all surfaces and on embankments and shall be lightly compacted by wheeled vehicles or by tamping, and trimmed neatly to the required lines, grades and levels. The final thickness of topsoil after compaction shall be at least 100 mm. Prior to top soiling, the surfaces to be top soiled shall be prepared by pulling horizontal ruts into the soil with the tines of a front-end loader or other suitable method to retard erosion of the topsoil.

PSDA 5.2.5.3 Grass and other vegetation

Add to the Sub-Clause:

The surface of top soiled embankments, terraces and other designated areas are to be planted or seeded, fertilised and watered until the area is fully covered with grass.

PSDA 5.2.6.1 Freehaul

Delete the wording of Sub-Clause 5.2.6.1 and replace with the following:

All haul will be regarded as freehaul. No overhaul will be paid under this Contract.

PSDA 5.2.6.2 Overhaul

Delete the Sub-Clause.

PSDA 6 TOLERANCES

PSDA 6.1 Degree of Accuracy

Delete the Sub-clause and substitute:

The work shall, subject to Sub-Clause 6.2, be finished off within the limits of Degree of Accuracy

II as set out in Sub-Clause 6.1 of SABS 1200 D.

PSDA 6.2 Permissible Deviations

Add the following permissible deviations for work to Degree of Accuracy II:

Add the following permissible deviations for work to Degree of Accuracy II:

6.2(a)	1	± 300 mm
	2	± 100 mm
	3	± 50 mm
	4 From direction of slope	Nil
	Between 1/100 and 1/300	10%
	1/400 and flatter	5
6.2(b)	1	± 35 mm
	2	± 50 mm
	3	± 50 mm
	4	± 15 mm
6.2(c)	1	Read "-2% +1%" in place of "± 2%".

PSDA 6.3 Excavation by Mechanical Means

Add new Sub-Clause:

Where bulk excavation is carried out by earthmoving equipment, such excavation will only be allowed to within a level of 300 mm, or less as ordered by the Employer's Agent, above the general level to which the ground has to be reduced, the balance of the bulk excavation being carried out by hand or by other means approved by the Employer's Agent.

PSDA 7 TESTING

PSDA 7.2 Taking and Testing of Samples

Add to the Sub-Clause:

Determination of the standard of compaction achieved shall be carried out in accordance with Standard methods of testing road construction materials published by the Department of Transport Division of National Roads, Publication TMH.1.

PSDA 8 MEASUREMENT AND PAYMENT

PSDA 8.1.1 Basic Principles

Delete the third line of the first sentence and substitute:

"material in backfilling, forming embankments, etc., including any necessary additional offloading, stock-piling and reloading and the cost of disposal of any"

In the seventh line delete "Drawing DA-2" and substitute "Fig DA-2".

Add to the Sub-Clause:

Unavoidable over-excavation for structures located in boulder formation will be measured and paid for up to a maximum of 600 mm in Class A boulder formation and 300 mm in the case of Class B boulder formation, as applicable, as measured beyond the required outline of the structure and at right angles to it.

PSDA 8.1.2 Basic Principles

Delete the first line and substitute:

"Excavations which are required to be backfilled, or partially backfilled, will be measured as if taken out"

Delete the fifth and sixth lines and substitute:

"other such structures, the volume will be measured from the finished outline of the concrete, or the blinding to the concrete (as the case may be), as shown on the Drawings".

PSDA 8.1.3 Basic Principles

Delete the third line and substitute:

"will be measured as part of the bulk excavation or restricted excavation, as applicable.

PSDA 8.3.1(a) Excavation

Add to the Sub-Clause:

Where removal to greater depths is ordered, the area measured for payment will, unless otherwise scheduled, be increased pro rata to the average increase in depth.

PSDA 8.3.1(b) Excavation

"Drawing DA-1" in the third line to read "Fig DA-1".

Delete the third line of the second sentence and substitute:

"-action, offloading to stockpile, stockpiling and reloading as may be necessary, spreading or backfilling, compacting and watering.

PSDA 8.3.1(c) Excavation

"Drawing DA-1" in the last line to read "Fig DA-1".

PSDA 8.3.2(a) Restricted Excavation

"Drawing DA-2" in the fourth line to read "Fig DA-2".

PSDA 8.3.2(b) Restricted Excavation

Add to the Sub-Clause:

(3) Boulder excavation Class A Unit: m3

(4) Boulder excavation Class B Unit: m3

Delete the last two lines and substitute:

(a) above for any portion of the excavated material that is classified as intermediate, hard rock, boulder

Class A or boulder Class B as applicable.

PSDA 8.3.4 Importation of Materials

Delete the last five lines and substitute:

PSDA 8.3.4.1 for embankment construction

The rate shall cover the cost of royalties (if any) and acquiring suitable material, loading, transporting within free haul distance, unloading, spreading in layers not exceeding 150 mm thick, watering, compacting to 90% Mod AASHTO density, trimming slopes of embankment to required outline all in accordance with the Specifications. The rate shall also include for carrying out density testing and the disposal of any surplus material.

PSDA 8.3.4.2 for backfilling around structures

The rate shall cover the cost of royalties (if any) and acquiring suitable material, loading, transporting within free haul distance, unloading, spreading in layers not exceeding 150 mm thick, watering, compacting to 90% Mod AASHTO density and trimming upper surfaces to the required outline all in accordance with the Specifications.

PSDA 8.3.9 Additional Compaction

Add the following new Sub-Clause:

Where so scheduled additional compaction over that required to achieve 90% Mod AASHTO density in order to achieve the scheduled higher density shall be paid for by the volume so compacted Unit: m3

The rate shall include for all additional plant, labour and materials necessary to achieve the additional compaction scheduled.

PSDB: EARTHWORKS (PIPE TRENCHES)
(Applicable to SABS 1200 DB - 1989)**PSDB 3 MATERIALS****PSDB 3.3 Selected Granular Material**

Delete the Sub-Clause and substitute the following:

Selected granular material shall be material of a granular, non-cohesive nature that is singularly graded between 0,6 mm and 10 mm, is free-draining and has a compatibility factor (as determined by the test given in Section LB of Part 3 of SABS 0120) not exceeding 0,4.

PSDB 3.4 Selected Fill Material

Delete the Sub-Clause and substitute the following:

Selected fill material shall be a sandy clay material having a PI not exceeding 6 and that is free from vegetation and from uncrushable lumps and stones of diameter exceeding 20mm.

PSDB 3.5(a) Backfill Material

In the third line delete "150mm" and substitute "100mm".

PSDB 3.5(b) Backfill Material

In the second line delete "PI not exceeding 12" and substitute "PI not exceeding 6".

PSDB 3.5(c) Cement Stabilised Backfill

Add the following new Sub-Clause:

Where scheduled, or directed by the Employer's Agent, backfill shall be stabilised with 5% cement by mass. The backfill material shall have a plasticity index not exceeding 10 and all material must pass through a sieve of aperture size not exceeding that specified in SABS 1200 LB, Sub-Clause 3.2, as amended.

The dry materials shall first be mixed in a concrete mixer where after sufficient water is to be added to produce the stiffest consistency available for placing and compacting with vibrators.

PSDB 3.7 Selection

Delete the second sentence and substitute the following:

The Contractor is not required to use selective methods of excavating but shall, if so, instructed by the Employer's Agent, screen or otherwise treat excavated material in order to produce material suitable for the bedding cradle or the bedding blanket.

PSDB 4 PLANT

PSDB 4.1 Excavation Equipment

In the first line delete "The Contractor" and substitute: "In sections deemed to be excavated by mechanical means, the Contractor".

Add to the Sub-Clause:

Should any portion of a pipe trench exceed the specified depth, the Contractor will be held responsible for any additional costs which may arise as a result of such over-excavation. Concrete filling or imported compacted fill may be ordered by the Employer's Agent to be placed below the bottom of the trench.

PSDB 5 CONSTRUCTION**PSDB 5.2 Minimum Base Widths**

Add to the Sub-Clause:

Trench sides shall be as near vertical as possible in order to minimise the quantity of backfill material required and to avoid possible difficulties where pipelines have to be installed parallel to existing services, fences, hedges, etc and to minimise the loading on the pipe.

The base width of trenches for cables, ducts and un-bedded flexible continuous piping, of external diameter less than 125mm laid at a depth not exceeding 1,5 m, shall be equal to the external diameter of the cable, duct or pipe, plus a side allowance of 200 mm on either side.

PSDB 5.5 Trench Bottom

Add to the Sub-Clause:

In waterlogged conditions and/or where so instructed by the Employer's Agent a 150 mm thick layer (See PSLB 5.2.5) of imported single sized stone (19 mm size unless otherwise instructed by the Employer's Agent) with a geo-fabric filter surround ("Bidim" Grade A4 or similar approved) shall be constructed under the bedding layer specified for the pipes.

PSDB 5.6.1 Backfilling - General

Add to the Sub-Clause:

Notwithstanding the requirements of Sub-Clauses 5.6.1 and 5.6.6, no pipe joint or pipe fitting shall be covered by either blanket or backfill material prior to the successful completion of the visual inspection and pressure testing of the relevant section of the pipeline.

All backfilling shall be carried out by hand and the Contractor must price his tender accordingly. No mechanical plant shall be used in backfilling without prior written consent of the Employer's Agent.

PSDB 5.6.2 Material for Backfilling

Delete fourth, fifth and sixth lines and substitute the following:

Hard rock material shall not be used for, or incorporated into, the backfill above the bedding layers without the Employer's Agent's approval.

PSDB 5.6.3 Disposal of Soft Excavation Material

Add to the Sub-Clause:

Surplus material or unsuitable material shall be disposed of off-site by the Contractor.

PSDB 5.6.4 Disposal of Intermediate and Hard Rock Material

Add to the Sub-Clause:

Surplus intermediate and hard rock material from trench excavations shall be disposed of off-site by the Contractor.

PSDB 5.6.8 Transport for Earthworks for Trenches

Delete the Sub-Clause and substitute:

The requirements of Sub-Clause 5.2.6 of SABS 1200 DA as amended and as applicable shall apply.

PSDB 8 MEASUREMENT AND PAYMENT**PSDB 8.1.4 Basic Principles**

Delete Sub-Clause and substitute:

Except that the volume will be computed as specified in 8.2.3, the requirements of Sub-Clause 5.2.6.1 (Free haul) of SABS 1200 DA as amended and as relevant, shall apply to free haul.

PSDB 8.3.3.1 Deficiency in Backfill Materials

Payment for imported graded stone laid under pipelines in accordance with PSDB 5.5 shall be paid for under Sub-Clause 8.3.3.1(c) as scheduled.

PSDB 8.3.3.4 Overhaul

Delete the Sub-clause and substitute:

All haul will be regarded as free haul.

PSDB 8.3.5 Existing Services that Intersect or Adjoin a Pipe Trench

Add to the end of the Sub-Clause:

- (v) All work involved in locating the service by hand excavation
- (vi) Notifying and attending upon the proprietor of the service
- (vii) Supporting and protecting the service while the pipeline is installed, inspected, tested and backfilled.

PSDB 8.3.6.2 Grassing (New Sub-Clause)

Grassing Unit: m2

Instant lawn (*Cynodon dactylon*) shall be planted after top soiling has been completed. The planted area shall be neatly trimmed, fertilised and watered. The Contractor shall ensure that the planted areas are not permitted to dry out. Any grass that fails to grow shall be replaced by the Contractor, at his expense, with fresh grass, until satisfactory cover is obtained. The rate shall cover the supplying, planting and maintenance of grass, all in accordance with this specification.

PSGA: CONCRETE (SMALL WORKS)
(Applicable to SABS 1200 GA - 1982)

PSGA 2 DEFINITIONS

PSGA 2.3(a) General

Add to the Sub-Clause:

Adverse weather: Cold weather or weather in which:

- (a) The ambient temperature is above 250C, or
- (b) The relative humidity is low, or
- (c) The wind velocity is high

or weather in which any combination of these three conditions occurs, and which tend to impair the quality of fresh or hardened concrete or otherwise causes the concrete to have abnormal properties.

PSGA 2.3(b)Quality

Add to the Sub-Clause:

Consistency: The extent, as measured by the slump test, to which fresh concrete resists flow or deformation.

PSGA 2.3(d)Exposure Conditions (New Sub-Clause)

Add new Sub-Clause:

Mild Conditions: Conditions under which the concrete is protected from the weather and exposed only to air.

Moderate Conditions: Conditions under which the concrete is:

- (a) sheltered from severe rain and is not subject to freezing when wet, or
- (b) buried in non-aggressive soil, or
- (c) continuously under fresh water

Severe Conditions: Conditions under which the concrete is exposed or subjected to any of the following:

- (a) Driving rain
- (b) Alternate wetting and drying out
- (c) Freezing when wet
- (d) Fresh water (at the waterline)
- (e) Splashing or spraying with fresh water
- (f) Corrosive fumes or heavy condensation of water
- (g) Aggressive soil
- (h) Salt-laden air

PSGA 3 MATERIALS**PSGA 3.2.1 Cement**

Add to the Sub-Clause:

Unless agreed to otherwise by the Employer's Agent, the cement used on the works shall be Ordinary Portland Cement complying with the requirements of SABS 471 (or the equivalent in accordance with SABS ENV 197-1).

PSGA 3.2.2 Cement Storage

Cement and other cementitious materials shall not be kept in storage for longer than two months without the Employer's Agent's permission.

PSGA 3.4.4 Admixtures (New Sub-Clause)

Add new Sub-Clause:

Unless approved by the Employer's Agent, neither admixtures nor air-entraining agents shall be used in any concrete.

PSGA 3.4.5 Sand (New Sub-Clause)

Add new Sub-Clause:

Sand from a source selected by the Contractor and approved by the Employer's Agent after testing will be used under this Contract.

PSGA 4 PLANT**PSGA 4.4.2 Finish**

The quality of the finished surface of the concrete shall be as scheduled.

PSGA 5 CONSTRUCTION**PSGA 5.1.2 Fixing**

Add to the Sub-Clause:

Welding reinforcement as a means of securing it against displacement will not be permitted.

PSGA 5.1.3 Cover

In second line of the Sub-Clause delete 30mm and add "(50 mm for strip footings and bases and 30 mm for columns and beams with a tolerance of +10 mm 0)", between "least", and "unless".

PSGA 5.2.1 Classification of Finishes

Delete the eighth and ninth lines of the Sub-Clause.

PSGA 5.2.1(a) Classification of Finishes

Add to the Sub-Clause:

The finish of the concrete is to be within the tolerances of Degree of Accuracy III as set out in Sub-Clause 6.4.

PSGA 5.2.1(b) Classification of Finishes

Add to the Sub-Clause:

The finish of the concrete is to be within the tolerances of Degree of Accuracy II as set out in Sub-Clause 6.4.

PSGA 5.2.3 Removal of Formwork

Add to the Sub-Clause:

The minimum times for removal of formwork from concrete containing blast furnace cement given in Table 1 of SABS 1200 GA apply also to members of concrete made from a blend of equal parts of Ordinary Portland Cement and other cementitious materials.

PSGA 5.2.5 Fixing Blocks for Reinforcing and Fixtures in Concrete (New Sub-Clause)

Add new Sub-Clause:

Fixing blocks for the attachment of fixtures may be embedded in concrete provided that the strength and other desirable features such as appearance of the member are not, in the opinion of the Employer's Agent impaired thereby.

PSGA 5.4.1.2 Consistency

Delete the third line and substitute the following:

Employer's Agent in respect of prescribed mix and/or strength concrete.

PSGA 5.4.1.4 Prescribed Mix Concrete

Delete the Sub-Clause and substitute the following:

The grades of prescribed mix concrete are designated Grades 30, 25, 20, 15 and 10 and are composed of cement, sand and stone, as specified hereinbefore, proportioned as follows:

Grade	Size of Stone (mm)	Cement (kg)	Sand (m³)	Stone (m³)
20/19	19	50	0.110	0.140
30/19	19	50	0.080	0.090
25/19	19	50	0.090	0.100
15/19	19	50	0.130	0.140
10/19	19	50	0.170	0.160

While the proportion of cement to the combined quantity of sand and stone must remain constant for each grade of concrete, as set out above, the relative proportions of sand and stone are to be adjusted, if required by the Employer's Agent, so as to obtain the most suitable consistency of concrete, due to allowance being made for the bulking of sand due to moisture.

The addition of water shall be regulated by the use of properly calibrated containers, only sufficient water being added as will, in the opinion of the Employer's Agent, afford a workable mix.

PSGA 5.4.1.6 Ready-mixed Concrete

Delete the Sub-Clause and substitute the following:

Concrete produced at a central concrete production facility other than at the site of the Works shall only be accepted for use in the Works with the prior and express approval of the Employer's Agent. When such approval has been given the Employer's Agent shall then decide whether or not to accept the test results obtained by the facility concerned.

PSGA 5.4.5.5 Adverse Weather Conditions (See PSGA 2.3(a)) (New Sub-Clause)

Add new Sub-Clause:

Under adverse cold weather conditions, effective measures shall be taken to ensure that the temperature of the concrete, from the time of placing until it has hardened (i.e. about 24 h), is maintained at not less than 5°C. If the atmospheric temperature in the vicinity of the concrete is below 2°C or is expected to fall below 2°C during the curing period (see Sub-Clause 5.4.7), water shall not be used for curing. All surfaces shall be protected from ice or frost damage.

When the ambient temperature is above 32°C, the temperature of the concrete when deposited shall not be allowed to exceed 32°C. Under adverse hot weather conditions, the Contractor shall take all reasonable steps to reduce to a minimum the placing temperature of the concrete. Stockpiles of aggregates and all metal surfaces in contact with aggregates and concrete shall be shielded from the direct rays of the sun or cooled by being sprayed with water, and windbreaks shall be erected, if necessary, to prevent the initial rapid drying-out of concrete which would otherwise occur before normal curing procedures can be undertaken.

Concrete shall not be placed during periods of heavy or prolonged rainfall.

PSGA 5.4.7 Curing and Protection

Add to the Sub-Clause:

- a) Continuously spraying the exposed surfaces with water.
- b) Covering the concrete with waterproof or plastic sheeting firmly anchored at the edges.

PSGA 5.4.8.2 Concrete Surfaces

Concrete surfaces shall be finished as indicated in the Schedule.

PSGA 6 TOLERANCES

PSGA 6.1.1 General

Read “Degree of Accuracy II” for “Degree of Accuracy III” in the third line.

PSGA 8 MEASUREMENT AND PAYMENT**PSGA 8.1.1.4 Formwork**

Add to the first line between the word’s “concrete” and “and” the following:

“including forming fillets or splays up to 20 x 20 mm”

PSGA 8.4.1 Prescribed Mix Concrete

Delete from the Sub-Clause all but the first sentence.

Add to the Sub-Clause:

Where scheduled the rate shall include for all shuttering and finishing.

PSL: MEDIUM-PRESSURE PIPELINES
(Applicable to SABS 1200 L - 1983)

PSL 2 INTERPRETATIONS

PSL 2.4 Abbreviations

mPVC: Modified Polyvinyl Chloride (SANS 966-2)
HDPE: High Density Polyethylene

PSL 3 MATERIALS

PSL 3.1 General

Add to the Sub-Clause:

The types of pipe materials called for under this Contract are:

mPVC
Appurtenant couplings, fittings, bends, valves and specials.

PSL 3.4 Steel Pipes, Fittings and Specials

PSL 3.4.1 General

Delete the Sub-Clause and substitute:

All permanent steel pipes, fittings and specials shall be to the dimensions and details shown on the drawings or schedule of quantities. All pipes, fittings and specials shall have their relevant item numbers painted onto the exterior surface prior to dispatch from the factory.

All steel pipework shall be API Schedule 40 steel pipes. All steel pipes shall be coated internally and externally with "Rilsan" or Plascoat PPA571 aqua with a minimum Dry Film Thickness of 300 microns and applied strictly in accordance with the manufacturer's instructions.

All flanges on flanged couplings shall be drilled in accordance with SANS 1123. Except for the matching flanges supplied by the Employer in respect of the valves, the Contractor shall supply all other flanges on pipes and specials, suitable for the welding of the pipes and specials in accordance with SANS 1123. Bolts and Nuts shall be in accordance with SABS 1700 unless otherwise approved by the Engineer and shall project two threads beyond the run-out of the nuts. All bolts and nuts and washers shall be hot dip galvanised. Electrolytic or other special corrosion protection methods are not required.

Alternative proposals (other than those scheduled) for jointing, lining and coating may be offered but the Bidder shall submit detailed specifications with his Bid. A sample of the alternative type of jointing or corrosion protection system proposed by the Bidder shall be submitted to the Employer's Agent's office within one week of the closing date of the Bid.

The sides of taper pieces shall diverge at an angle of not more than 11 degrees to each other. The Bidder shall be responsible for the provision of strengthening webs, crotch plates, gussets etc as may be necessary to prevent excessive deflection or deformation of fittings and specials

when subjected to hydraulic tests, and his rate for the work will be deemed to include for the design and provision of this reinforcing wherever necessary.

The pipe manufacturer shall obtain and make available to the Employer's Agent a certificate or certificates from the steel manufacturer covering all steel used, showing by which process the steel was made and giving the chemical analysis of the steel and its physical properties. A record shall be kept of pipe serial numbers and the cast numbers of the steel used.

The pipe manufacturer shall supply written confirmation that all hand welding was carried out by coded welders.

PSL 3.4.2 Pipes of Nominal bore up to 150 mm

Delete this Sub-Clause

PSL 3.4.3 Pipes of Nominal Bore over 150 mm

Delete this Sub-Clause

PSL 3.4.4 Fittings and Specials

Delete this Sub-Clause

PSL 3.4.5 Pipe Sizes and Lengths

Add new Sub-Clause:

The outside diameter, wall thickness and the end preparation of pipes to be supplied under this Contract are as follows: All pipes are PN12.

Nominal Bore	Outside Diameter	Wall Thickness	End Preparation
250 mm	273.1 mm	6.35 mm	As scheduled
200 mm	219.1 mm	6.35 mm	As scheduled
150 mm	168.3 mm	7.11 mm	As scheduled
100 mm	114.3 mm	6.02 mm	As scheduled
80 mm	88.9 mm	5.49 mm	As scheduled
50 mm	60.3 mm	3.91 mm	As scheduled

PSL 3.4.6 Welds

Add new Sub-Clause:

Pipes shall be manufactured from steel strips or plates continuously welded along the seams and the height of the inner weld reinforcement shall not exceed 1 mm. In the case of pipes to be used with couplings, the external weld reinforcement shall be ground flush with the outer wall of the pipe over a suitable distance from the end of the pipe. Pipes should preferably have a continuous helical seam, but nevertheless longitudinal and circumferential seams would be acceptable for this Contract.

PSL 3.4.7 Hydraulic Testing at Factory

Add new Sub-Clause:

Each pipe shall be hydraulically tested in accordance with SABS 719 Clause 7.3.

PSL 3.4.8 Fittings and Specials (Pipes over 150 NB)

Add new Sub-Clause:

PSL 3.4.8.1 General

All fittings and specials shall be manufactured from straight pipe specified elsewhere in this Specification. The pipe so used shall have satisfactorily passed the stipulated hydraulic pressure tests.

Fittings and specials shall be manufactured and tested in accordance with the specification for straight pipe and additionally with Section 8 of BS 534. The nominal dimensions of each fitting and special required are itemised in the Schedule of Quantities and 'exact length' tolerances shall be adhered to.

Bends shall generally be of the gusseted type having dimensions as given by Table 8 of BS 534 except where specified to the contrary in the Schedule of Quantities or where the Bidder can offer a price advantage for supplying even curvature bends.

The manufacturer shall be responsible for designing and providing strengthening webs, crotch plates, gussets, etc. as may be necessary to prevent excessive deflection or deformation of fittings and specials when subjected to hydraulic tests.

PSL 3.4.8.2 Closure Pipes

Closure pipes, which are to be cut on site to the exact lengths, required, shall have the diametrical tolerances specified for the pipe ends applied over the full length of the pipe. Closure pipes shall be supplied in standard lengths.

PSL 3.4.8.3 Puddle Collars (New Sub-Clause)

Puddle collars used as pipe anchorages shall be of the same dimensions as corresponding flanges but are to be undrilled. The collar shall be capable of transmitting a longitudinal force 33% greater than the internal hydraulic pressure to be applied when testing multiplied by the area of the bore; and under that condition the stress in the metal shall not exceed its yield stress.

PSL 3.4.9 Welding Tests at Factory

Add new Sub-Clause:

PSL 3.4.9.1 Qualification Tests for Welding Procedure

The qualification tests for welding procedure shall be carried out generally in accordance with the requirements of the American Petroleum Institute API 1104: The detailed procedure to be adopted during manufacture shall be established and the quality of the welds so produced shall be

determined by carrying out ONE transverse tensile weld test and TWO guided cold bend tests on suitable coupon plates.

The tests are to be carried out either before manufacture of the pipes to be supplied under this contract is commenced or before the manufacture of pipes in excess of a number previously agreed by the Employer's Agent is carried out.

The coupon plates shall be prepared either from plates of the same material as the pipe and welded in a similar manner to that to be used during production, or by cutting suitable specimens from a pipe selected at random by the Employer's Agent from the first production pipes. The coupon plate for the tensile weld test and those for the guided cold bend tests shall be prepared in accordance with the requirements of SABS 719.

The qualification tests shall be considered satisfactory if :

- (a) The weld has a joint efficiency greater than 95% of the minimum specified tensile strength of the parent metal and,
- (b) The bend test specimens are capable of being bent around a former with a diameter equal to six times the nominal thickness of the plate to an angle of 180 degrees without developing a crack, except at the arises of the specimen, of length or width greater than 3 mm.

Failure to pass the above qualification tests shall result in the rejection of any pipes welded with the procedure used and the preparation of a new qualification of procedure test.

Any changes in the electrode case type used or change of flux used shall require a qualification test before approval of the procedure is granted.

PSL 3.4.10 Radiographic Examination of Shop Welds

Add new Sub-Clause:

The Contractor shall include in his prices for the supply of pipes, fittings and specials, the cost of carrying out, under the supervision of the inspector appointed by the Employer, examination of shop welds on the following basis:

PSL 3.4.10.1 Pipes

- c) FIVE percent random radiographic examination of all welds deposited by an approved automatic process.
- b) TEN percent random radiographic examination of all welds deposited manually or semi-automatically, and repairs to welds done by an automatic process (should repairs exceed 25% of the tests the percentage of examination shall be increased to 20%).

PSL 3.4.10.2 Fittings and Specials

- a) ONE HUNDRED percent radiographic examination of all weld deposited manually or semi-automatically in fittings and specials which cannot be hydraulically tested prior to the fittings and specials being installed in the pipeline.

b) TEN percent radiographic examination of all welds deposited manually or semi-automatically in specials and fittings that are to be tested hydraulically prior to the fittings and specials being installed in the pipeline.

The Employer's Agent shall in all cases determine which welds are to be radiographed on the quantity basis specified above. All radiographs and records thereof made by the Contractor shall be made available to the Employer's Agent to enable him to determine whether the welds are acceptable or not and no lining or wrapping of pipes shall be permitted until the welds have been accepted by the Employer's Agent. To avoid unnecessary delay, at the option of the manufacturer, radiographs may be approved by the manufacturer's inspectors subject to them being subsequently approved by the Employer's Agent.

When a section of the weld is shown by radiography to be unacceptable and if the limits of the deficient weld are not defined by the radiograph, additional radiography shall be carried out at the Contractor's expense until the limits of the deficiency are determined.

Repairs shall be made to defective welds at the Contractor's expense. All repair welds shall be identified with a stamp marking, indicating which welder conducted the repair. Repaired welds shall be radiographed at the Contractor's expense but after any repair welder has had ten consecutive repairs approved, the extent of the radiography of the repairs conducted by the welder may be decreased by agreement between the Employer's Agent and the Contractor.

PSL 3.4.11 Production Testing of Welds

Add new Sub-Clause:

The Contractor shall also include in his prices for the supply of pipes, the cost of carrying out at the factory, non-destructive tests of shop production welds (additional to the qualification tests for welding procedure) on the following basis:

One pipe from each one hundred pipes produced shall be selected at random and specimens for two guided cold bend tests and one transverse tensile test shall be cut therefrom and tested in accordance with SABS 719, Section 7.

In the case of the guided cold bend tests, where welding is carried from one side only, bend specimens shall be tested with the rest of the bend in tension where welded from both sides the specimens shall be tested with the inner and outer welds in tension alternately.

Tensile tests shall be carried out as for the qualification tests.

The pipes from which successfully tested specimens have been taken shall be trimmed to the maximum possible length and shall be accepted by the Employer for payment purposes as full standard pipe lengths.

In the event of the welds of any pipe failing to reach the standard of acceptance, such pipe shall be rejected. Two further plate coupons shall be prepared from different pipes, selected at random by the Employer's Agent, for each specimen that has failed to reach the required standard. In the event of such additional tests proving to be satisfactory repairs to the pipe originally failing any test will be permitted by the Employer's Agent and such repairs and subsequent re-test shall be at the Contractor's expense. In the event of the additional tests also failing to reach the required standard, the Employer's Agent shall have the right to reject the entire batch of pipes from which

the coupon plates were cut.

PSL 3.7 Other Types of Pipes

PSL 3.7.1 mPVC Pipes

Delete the sub-clause and substitute the following:

mPVC pipes shall comply with SABS 966-2 and be of the types, classes and fitted with joint systems as scheduled.

PSL 3.7.2 Polyethylene Pipes

Add to this Sub-Clause:

HDPE pipes and fittings shall be manufactured in accordance with SANS ISO 4427. Pipes and fittings shall be manufactured from PE100 material with a design stress as scheduled. The HDPE piping shall be supplied in the maximum possible lengths in order to reduce the number of site welded joints or couplings. The handling of HDPE piping shall be in accordance with the manufacturer's standards and to the approval of the Employer's Agent.

PSL 3.7.2.1 Welding of the HDPE Pipe

The HDPE pipe shall be joined by means of heat fusion using approved butt-welding equipment and fully trained operators in accordance with the pipe manufacturer's code of practice. The Contractor shall advise the Employer's Agent of the welding parameters to be used and test welds shall be carried out, tested and approved before welding on site can commence.

Once welding of a joint has been completed, internal beads shall be removed by an approved method.

The Contractor shall ensure that the required gap spacing is constant over the total weld length and that the weld temperatures specified by the manufacturer are attained throughout the weld length.

PSL 3.8 Jointing Materials

PSL 3.8.2.1 Flexible Couplings

Delete the Sub-Clause and substitute the following :

Flexible couplings shall conform generally to Clause 15 of BS 534 for slip-on type couplings and shall be of approved manufacture. They shall be provided without a central register, except where scheduled to the contrary in the Schedule of Quantities. They shall be capable of being tightened and released without damaging or improperly distorting the rubber seating rings and shall be designed to prevent the rubber rings being blown out under pressure or sucked in under vacuum.

The steel used shall conform to the appropriate British Standard Specification and each coupling is to be capable of withstanding the test pressure applicable to the pipes with which they are to be used without exceeding a stress in the steel of 67% of the yield point.

Couplings shall be protected by an approved epoxy coating system such as "Cupon KSIR88"

within 4 hours of abrasive blast cleaning the metal surfaces of the coupling in accordance with Swedish Standard SIS 05 5900 Grade SA 2,5. Nuts, bolts and washers shall be electro-galvanised. The plain end of the steel pipe shall be properly prepared before corrosion protection so as to accept the flexible coupling. Special anchoring flexible adaptor joints ("Viking Johnson" or similar) for connecting plain ended steel pipes to flanged joints are to be supplied complete with electrogalvanized bolts and nuts for connecting flanged joint to anchoring flange situated approximately 300 mm from plain end of pipe.

PSL 3.8.3 Flanges

Add to the Sub-Clause:

The dimensions and drilling of flanges shall be in accordance with the requirements of SANS 1123: Table 1600, 2500 or 4000 as scheduled. All flanges shall be truly at right angles to the axis of the pipe or fitting and shall be drilled with bolt holes off centre.

Puddle flanges shall be of the same diameter and thickness as the end flanges and shall be undrilled.

Flanges cut from steel plate shall be machined flat on the front face, i.e., without a raised joint. No machining needs to be carried out on the back face (except where insulating flanges are to be installed) provided that face is sufficiently flat to ensure square bedding of the bolt heads and nuts and provided that all weld reinforcement is removed.

Cast or forged flanges shall be machined flat on the front faces and either spot faced at the bolt holes, or fully machined, on the back faces. Spot facing shall be at least 3 mm greater in diameter than the washers to be used, shall be truly parallel to the front face and the distance between the two faces shall be not less than the specified flange thickness.

PSL 3.8.4 Loose Flanges for Welding

Add to the Sub-Clause:

Flange jointing material, when installed in the complete pipeline, shall be capable of withstanding transient pressures of up to the specified field test pressure. Under this condition no damage shall be caused, or leakage occur through the joint. Bolts and nuts shall comply with SANS 135. All bolts, nuts and washers shall be electro-galvanised.

PSL 3.9 Corrosion Protection

PSL 3.9.3 Protection Against Electrolytic Corrosion

PSL 3.9.3.2 Insulation of fittings in contact with soil

All fittings shall be electrically insulated from contact with the bedding or backfill materials in accordance with the specifications set out elsewhere

PSL 3.9.3.4 Measurement and Payment for Coatings (New Sub-Clause)

The supply and application of coatings are not measured separately in the Schedule of Quantities and payment for the costs of meeting the requirements of this specification which includes for the

provision of all labour, plant, materials and testing necessary to carry out the complete coating and making good etc shall be included in the rates tendered for the supplying, laying and bedding of the pipeline as per Sub-Clauses 8.2.1 and 8.2.2 of SABS 1200 L.

PSL 3.9.4 Flexible Couplings

Delete the sub-clause and substitute:

All flexible ("Viking Johnson" or "Klamflex" type) couplings shall be lined and coated with epoxy as specified in Sub-Clause 3.9.2.2(b)(1) and PSL 3.8.2.1.

PSL 3.9.5 Jointing Material

Bolts and nuts shall conform to SANS 135 All bolts, nuts and washers shall be electro-galvanised. Gaskets shall be full-faced gaskets made of rubber materials.

PSL 3.9.6 Corrosion Protection to Couplings, Joints and Flanges (New Sub-Clause)

Each steel or cast-iron coupling, joint or flange and valve, where scheduled, shall be protected by an approved "Denso" or equal approved anti-corrosion system. See PSL 8.2.15

PSL 3.11 Manholes and Surface Boxes

PSL 3.11.1 Bricks

Delete the first sentence and substitute:

Bricks for manholes and surface boxes shall be engineering bricks type FBSE 30 or better, with a water absorption not exceeding 10% and complying with the applicable requirements of SABS 227.

PSL 3.11.5.1 Manhole Covers

Delete the Sub-Clause and substitute:

Manhole covers shall comply with SANS 558 for the types shown on the drawings and/or in the Schedule of Quantities.

PSL 3.11.7 Sand (New Sub-Clause)

Sand used for mortar (general purpose and for plaster (external)) shall comply with the applicable requirements of SABS 1090.

PSL 3.11.8 Cement (New Sub-Clause)

The cement used on the Works shall be Ordinary Portland Cement complying with the requirements of SABS 471 (or the equivalent in accordance with SABS ENV 197-1).

PSL 4 PLANT

PSL 4.4 Packing (New Sub-Clause)

Goods should be suitably packed in such manner as will ensure safe and efficient transport by road or rail, and the Contractor shall include in his prices for whatever packing may be necessary in this respect. Small items particularly liable to damage or loss in transit should be crated. All crates and packing material shall, after use, become the property of the Employer, unless distinctly specified otherwise, or if returnable, shall be so at the Contractor's expense.

PSL 4.5 Protection of Linings during Transportation (New Sub-Clause)

The ends of every pipe, fitting and special shall be fitted with suitable end closures as a precautionary measure against damage being caused to the lining material. The end closures shall be capable of preventing the ingress of dirt and at the same time allowing air to ventilate through the pipework which they protect but without drying the linings out (in the case of cement mortar lined pipes) so as to cause them to crack. They shall be secured in such a manner that they cannot be dislodged or damaged by normal pipe handling operations.

PSL 5 CONSTRUCTION

PSL 5.1 Laying

PSL 5.1.1 General

Add to the Sub-Clause:

The Contractor will be responsible for clearing the areas required for pipe storage that shall include the removal of rock, stones and all combustible material. He shall also be responsible for maintaining the area in a clean and tidy condition for the duration of the Contract.

Upon delivery of the pipes, fittings, specials and valves, these will be inspected jointly by the Employer's Agent's Representative and the Contractor. Any pipes, etc, found to be damaged shall be returned to the factory for repair or replacement; in which case the costs of additional transport, repair or replacement shall be borne by the Contractor.

The Contractor will be held fully responsible for the care and safety of all pipes and fittings, etc, on site, and shall bear the cost of all renewals, which may be necessary to make good losses, damages or breakages. Furthermore, he shall be fully responsible for handling and re-loading material at the storage areas and for transporting and offloading of all such materials to the Site of the Works.

PSL 5.1.1.1 Distribution of Material (New Sub-Clause)

Before commencing pipe laying, the Contractor shall properly distribute pipes, fittings and specials, along the trenches. Valves and couplings shall not be distributed until they are actually required for laying in their designed position.

PSL 5.1.1.2 Prevention of Fire Damage to Pipes (New Sub-Clause)

The Contractor shall be responsible for protecting pipes etc from fires at all times. He shall keep grass cut short in the vicinity of all unlaied pipework items.

PSL 5.1.1.3 Pipe laying Personnel (New Sub-Clause)

The laying of all pipework items shall be performed only by qualified and experienced persons or who are registered as artisans in the plumbing, pipefitting or drain laying trades or who are qualified by reason of having attended and passed the course on pipe laying of the Civil Engineering Industry Training Board.

PSL 5.1.1.4 Inundation of Pipe Trenches and Floating of Pipes (New Sub-Clause)

Should trenches be inundated by water, there is a risk of movement of the pipes by flotation. The Contractor shall ensure that trenches are not flooded by storm water and that pipes laid in the trench are backfilled as soon as possible after laying, except at joints made with couplings or flanges which must be kept visible until the pipeline has been satisfactorily tested.

Should movement of the pipes occur, the Contractor shall remove the pipes from the trench and thoroughly clean and relay the pipes. This work shall be carried out at the Contractor's expense.

PSL 5.2 Jointing Methods

PSL 5.2.2 Flanged Joints

Add to the Sub-Clause:

Before being brought together, the ends of the pipes, fittings, couplings and all flanges are to be inspected and cleaned to ensure that all parts forming the joint are undamaged and clean.

When jointing flanges, the faces shall be cleaned thoroughly and approved jointing material (rubber or similar approved), cut properly to size, is to be inserted immediately before bringing the two flanges together. Before closing the joints, the flanges must be parallel to each other, with all bolts inserted in the bolt holes. After the fittings have thus been aligned and well supported, the joint shall be bolted up to a uniform tightness. Jointing material shall be flush with, or protrude beyond, the outer circumference of the flange. On completion of the joint, the flanges and bolts shall be protected as described in Clause PSL 3.9.6.

PSL 5.2.3 Site Welded Joints

Add to the Sub-Clause:

Plain ended butt-welded steel pipes and the plain ends of corresponding pipes or specials are to be joined together by welding in accordance with American Standard API 1104:1964. The pipe ends are to be prepared in accordance with that Standard. Welding shall generally commence at the top of the joint and proceed downwards. In addition to the root weld, at least two further passes shall be made; none of which is to exceed 3mm in depth.

The Employer's Agent shall have the right to specify that Qualification Tests to be carried out (at the Contractor's expense) for each welder employed on the works. No welder shall be employed who has not passed such tests and for whom a recent pass certificate issued by a competent authority cannot be produced.

Site-welded butt joints are to be tested by radiographic examination and/or other approved method (e.g., dye penetration) as ordered by the Employer's Agent who will also make the necessary arrangements for such tests to be carried out.

Site welded fillet joints (for sleeved or "bell-end" pipes) are to be tested by dye penetration tests as ordered by the Employer's Agent who will make the necessary arrangements for such tests to be carried out.

In the event of any welded joint proving unsatisfactory when the pipeline is subjected to the radiographic, dye penetration or hydraulic tests, the Contractor shall be held responsible for all costs involved in repairing the joint or cutting it out and welding in a new section of pipe, as may be ordered by the Employer's Agent, thereafter, restoring the lining and wrapping, if these have become damaged, all to the satisfaction of the Employer's Agent.

After jointing and testing, the protective lining and wrappings are to be rendered continuous in the manner specified. Holiday detection tests shall be carried out in the field to ensure continuity of lining and wrapping.

PSL 5.2.5 Flexible Coupling Joints (New Sub-Clause)

Where ordered, steel flexible couplings are to be of the "Viking Johnson"/"Klamflex" or similar approved type without central registers, each comprising one centre collar, two special flanges, two rubber rings and electro-galvanised mild steel bolts.

Adaptor couplings shall be of a similar design, but one end shall be flanged to enable connection of plain ended pipes to flanged specials.

Steel couplings shall be assembled strictly in accordance with the manufacturer's instructions. On completion of testing and continuity bonding, the entire joint shall be protected as described in Clause PSL 3.9.6.

The tendered prices for laying and jointing are to include for the supply of all necessary materials, plant and labour to complete the joint.

PSL 5.2.6 Cut Pipes (New Sub-Clause)

Cut Pipes may be used where required as closure lengths. The cut ends shall be dressed square and to a smooth even finish which shall not be inferior to that of the ends of uncut pipes. The finished dimensions of ends cut at Site must be within the tolerances applicable to the ends of the particular types of pipe to be laid. The cost of cutting and trimming of pipes shall be included in the rates tendered for laying and jointing pipes.

PSL 5.3 Setting Valves, Specials and Fittings

Add to the Sub-Clause:

Valves are to be set correctly in the positions indicated and supported on concrete stools, except where not so required by the Employer's Agent. Valve spindle guide brackets and stays where provided shall be secured into position against concrete work and these must be set and carefully adjusted in order to give true vertical alignment of the spindle.

PSL 5.4 Concrete Casing

In the first and second lines delete "a strength 15 MPa/37,5 mm or such other strength as

scheduled" and substitute "concrete grade 20/19".

PSL 5.5 Anchor/Thrust Blocks and Pedestals

In the fourth line delete "15 MPa/37,5 mm" and substitute "20/19"

PSL 5.6 Valves and Hydrant Chamber

PSL 5.6.2 Delete the references to drawings L1, L2 and L3 and substitute "EWS Standard Drawings"

PSL 5.7.1 Manholes

Add to the Sub-Clauses:

Drawings showing details of the manholes are indicated on EWS standard drawings.

PSL 5.8 Brickwork in Chambers and Manholes

Delete the eleventh line and substitute the following:

Mortar for brickwork and plasterwork shall be composed of one part of cement to four part of sand.

Twelfth and thirteenth lines to be deleted.

Add to the Sub-Clause:

Plaster is to be applied in one coat not less than 12 mm in thickness.

PSL 6 TOLERANCES

PSL 6.2 Control Points

In the third line delete "+ 100 mm" and substitute:

± 50 mm provided that there shall be no reversal of gradients and provided that, in those areas where gradients shown on the drawings is less than 1%, the permissible deviation will be ± 25 mm.

PSL 6.3 Alignment (Plan and Level)

In the third line delete "+ 100 mm or + 20%" and substitute "+ 50 mm or + 10%".

In the fourth line delete "+ 20 mm" and substitute "+ 10 mm".

In the sixth line delete "+ 50 mm or + 10%" and substitute "+ 25 mm or + 5%"

PSL 7 TESTING

PSL 7.2.1 Dye-Penetrant Test

Add to the end of the third line of the Sub-Clause:

Every fillet weld in steel pipes and specials shall be subjected to a dye penetrant test as specified

below whilst all butt welds shall be subjected to radiographic examination, all of which shall be carried out by an approved firm of inspectors and approved inspection personnel.

PSL 7.2.2 Radiographic Examination

Add to the end of the Sub-Clause the words "as amended".

PSL 7.2.3 Radiographic Testing in the Field (New Sub-Clause)

10% of all butt welds and 30% of all fillet welds (if applicable) made in the field shall be tested radiographically by an independent specialist firm. The welds to be tested shall be selected by the Employer's Agent or his representative. The standard of acceptance shall be in accordance with API Standard 1104.

Should the welds so tested prove to be unacceptable, they shall be repaired by the Contractor and retested. In addition, the two nearest untested welds, one on each side of the unacceptable weld, shall also be tested radiographically. Should these welds also prove to be unsatisfactory, two further welds shall be tested. Such testing will be repeated until all welds are found to be acceptable.

The cost of testing up to a maximum of 12% of all field welds will be borne by the Employer, but the costs of testing and retesting over and above that percentage shall be borne by the Contractor.

PSL 7.3.1 Test Pressure and Time of Test

Delete second line of Sub-Clause 7.3.1.1 and substitute the following:

attained the strength specified in terms of Sub-Clause 5.5.

PSL 7.3.1.2 Delete this Sub-Clause

PSL 7.3.1.3 Delete the Sub-Clause and substitute the following:

The field test pressure applied to any section of the pipeline under test, taking differences in elevation along the pipeline into account, shall be such that the pressure at any point along the section under test shall not exceed the appropriate of the values set out in Sub-clause 7.3.1.4 and that the minimum pressure shall be not less than the design (working) pressure.

PSL 7.3.3 Permissible Leakage Rates (Sub-Clause 7.3.3)

Delete the title of Sub-Clause and substitute the following:

Permissible Make-up Water

PSL 8 MEASUREMENT AND PAYMENT

PSL 8.2.1 Supply, Lay and Bed Pipes Complete with Couplings

Delete the sub-clause and substitute:

"Supply, lay and bed pipes complete Unit: m or No

Pipes, bends, specials, fittings, valves, etc will be measured per metre or by number as scheduled.

The rates shall cover the cost of the provision of the pipes or bends or fittings, or valves or specials as scheduled complete with couplings or sleeves if applicable, coating and lining, handling, inspecting, marking fittings and specials with item numbers, transporting, holiday detection testing for steel pipes, forming joint holes in all materials, bedding, laying, welding, jointing, cutting, all testing and disinfecting and where relevant all welding and the completion of the internal and external corrosion protection (make good) and jointing materials (e.g. nuts, bolts, washers, gaskets, welding rods etc)."

PSL 8.2.11 Anchor/Thrust Blocks and Pedestals

Delete the last line and substitute the following:

formwork, concrete, reinforcement (if any), and screeding to top surfaces.

PSL 8.2.15 Corrosion Protection

Delete the Sub-Clause and substitute the following:

Payment for corrosion protection of joints shall cover the cost of the provision and fixing of the sheathing/wrapping in accordance with supplier's specification for buried fittings and the cost of any delay and inconvenience caused by the requirement to sheathe/wrap. Separate items will be scheduled for each type and size of joint to be protected Unit: No

Payment for corrosion protection of valves shall cover the cost of the provision and fixing of the sheathing/wrapping in accordance with supplier's specification for buried fittings and the cost of any delay and inconvenience caused by the requirement to sheathe/wrap. Separate items will be scheduled for each type and size of valve to be protected, and the rate shall include for protection of the whole of the valve body, all flanges integral to the valve, the connecting flanges to the valve (i.e., including the two flanges of the pipework connected to either side of the valve) and the packing of mastic (without tape or sheathing) over the gland adjusting bolts and nuts Unit: No

PSL 8.2.16 Cut Pipes (New Sub-Clause)

Extra over for cutting of pipe Unit: No

The rate shall cover the cost of the cutting of the pipe and all making good of lining and coating, welding, testing and forming joint holes in all materials.

PSL 8.2.17 Connecting to Existing Pipeline (New Sub-Clause)

"Connecting to existing pipeline Unit: No.

The rates for connecting to existing pipelines and proposed flanged connections shall cover the cost of exposing the existing pipeline (or blank flange), cleaning and preparing the pipe for cutting, cutting and preparing the pipe ends for jointing, jointing (or removing the existing blank flange and connecting the new pipework), testing and recommissioning the pipeline including all bedding and backfilling and making arrangements with the Employer's staff to temporarily shut off the existing pipeline whilst effecting the connection(s).

PSL 8.2.18 Extra-over for laying pipes through uPVC pipes Class 34 Solid wall (heavy duty) pipe sleeves at road crossings

Add new Sub-Clause:

The unit of measurement is per linear metre. The rate is an extra over rate to the supply and laying of pipes. The contractor shall lay all water pipes at road crossings inside a uPVC class 34 sleeve. The rate shall include the lay and all jointing of the pipes going into the sleeves.

PSL 8.2.19 Temporary house and property water connections, including rider main design and connection to existing mains.

Add new Sub-Clause:

The rate will be per temporary house connection and per size (diameter) of house connection, irrespective of the service duration per connection. The temporary house connections shall maintain the existing level of service prior to the temporary connection. The contractor will be responsible for the design, supply of pipes fittings and valves and any other material and equipment required for the temporary connection, and the connections itself. All pipework will be disinfected before connection. The contractor shall maintain the temporary connection until the permanent connections is restored. The rate will also include the temporary connection to mains and all the necessary arrangements with council for the temporary closing of valves and isolating of parts of the network.

Where no temporary house connections are applicable for a particular rider main and there no direct connections to be measured for payment purposes, the average number of house connections per meter of existing water main will be used to calculate the number of temporary connections for payment purposes.

PSL 8.2.20 House Connection

Add new Sub-Clause:

The rate will be per House connection number (No.) and per diameter. The house connection will include all the pipe work and fittings as per plan No 75 Rev A of the eThekweni Design branch. The rate will include the supply and installation of all pipework, fittings and valves as indicated on the drawings up and until the meter box and irrespective of the distance from the main line.

PSL 8.2.21 Recovered fittings and /or Valves from clearing operation

Add new Sub-Clause:

The rate is per number of fittings or valves (No.). The rate shall include the cleaning of fittings prior to installation, the installations of the fittings for all diameters and types. The rate will also include new gaskets where required and new nuts and bolts.

PSL 8.2.22 Pressure Testing and disinfection of existing pipe (in-situ)

Add new Sub-Clause:

The rate is per meter of pipe (m). The rate will include the pressure testing and disinfection of

existing pipes as per Clause 5.10 and 7.3. of SANS 1200 L.

PSL 8.2.23 CCTV inspection of pipes

Add new Sub-Clause:

The rate is per meter of pipe (m) for different diameters. The rate will include the supply and use of CCTV equipment and reporting on the condition and integrity of existing pipes.

PSL 9 DRAWINGS L-1, L-2 AND L-3

PSL 9.1 References to mortar mixes to read:

1 to 4 mortar

PSLB: BEDDING (PIPES) (Applicable to SABS 1200 LB - 1983)

PSLB 2.3 DEFINITIONS

Main fill:

Delete "150mm" in second line and substitute "300mm".

PSLB 3 MATERIALS

PSLB 3.1 Selected Granular Material

In the second line delete "19mm" and substitute "10mm".

Add to the Sub-Clause:

The maximum compatibility factor shall be 0,4.

PSLB 3.2 Selected Fill Material

In the second line delete "30mm" and substitute " 20mm".

PSLB 3.3 Bedding

Add to the Sub-Clause:

All pipes under this Contract will be considered as being rigid pipes and the bedding shall be of Class C (Drawing LB-1) except that joint holes (pockets) shall be provided in the bedding, as per Drawing LB-2, at each pipe joint or coupling. No sharp-edged stones shall be allowed to come into contact with either the pipes or the couplings (joints). No extra payment will be made for forming joint holes (pockets).

PSLB 3.4 Selection

PSLB 3.4.1 Suitable Material available from Trench Excavation

Delete the Sub-Clause and substitute the following:

The excavation of a pipe trench shall comply with the requirements of Sub-Clause 5.4 of SABS 1200 DB and the provisions of Sub-Clause 3.7 of SABS 1200 DB shall apply.

PSLB 5 CONSTRUCTION

PSLB 5.1 General

Add to the Sub-Clause:

All pipelines are to be bedded and protected in accordance with the details described in PSLB 3.3 except in certain sections where Class A bedding or stone bedding (as a drainage layer) or concrete encasing is to be provided where ordered by the Employer's Agent.

PSLB 5.1.2 Details of Bedding

Add to the Sub-Clause:

The pipelines are to be laid on the class of bedding indicated in the Bill of Quantities and/or on the drawings.

PSLB 5.1.4 Compacting

Delete the second line and substitute:

top of the pipeline) shall be 100% of Proctor maximum density.

PSLB 5.1.5 Testing (New Sub-Clause)

All joints shall be left exposed with a minimum of 100 mm clearance around the bottom of the pipe during hydraulic pressure testing of the pipe.

PSLB 5.2 Placing and Compacting Rigid Pipes

PSLB 5.2.2 Class 'C' Bedding

Delete the third, fourth and portion of the fifth lines and substitute the following:

The pipes shall be bedded on a layer of compacted granular bedding material on which a 25 mm thick layer of uncompacted granular bedding material has been placed and spread. Loose granular bedding material lying next to the pipe shall be placed into the haunch area and compacted with suitable hand tools, and additional selected granular material shall be added and compacted in layers until levels for the bedding cradle as shown on Dwg LB - 1 (c) are reached. The remainder of the bedding i.e. the selected fill blanket, shall be placed in layers up the sides of the pipe, each layer being compacted until levels are reached as shown on Dwg LB-1 (c).

PSLB 5.2.5 Stone Bedding (New Sub-Clause)

In areas where waterlogged conditions exist or where ordered by the Employer's Agent, special

drains consisting of a 150 mm thickness (See PSDB 5.5) of single sized stone with a geo-fabric filter surround ("Bidim" Grade A4 or similar approved) extending the full width of the trench shall be provided below the bedding to the pipes. The excavation for these drains will be measured in cubic metres at the contract rate applying to unsuitable excavation below the bottom of the trench. The stone filling will be paid for per cubic metre and the geo-fabric filter will be paid for per square metre. All measurements in this connection will be to a width equal to the base widths and depths ordered.

PSLB 5.2.6 Rock fill (Pioneering layer) (New Sub-Clause)

In areas where waterlogged conditions exist or where ordered by the Employer's Agent, a special fill layer shall be placed at the trench bottom consisting of rock with a maximum size of 100 mm, extending the full width of the trench shall be provided below the bedding to the pipes. The excavation for these drains will be measured in cubic metres at the contract rate applying to unsuitable excavation below the bottom of the trench. The rock fill layer will be paid for per cubic metre. All measurements in this connection will be to a width equal to the base widths and depths ordered.

PSLB 5.3(b) Selected Fill Blanket

Delete "200 mm" from title.

PSLB 6 TOLERANCES

PSLB 6.1 Moisture Content and Density

Add to the Sub-Clause:

The permissible deviations applicable are to be those for Degree of Accuracy II class of work.

PSLB 8 MEASUREMENT AND PAYMENT

PSLB 8.1.3 Volume of Bedding Materials

Add to the Sub-Clause:

(c) The volume of bedding material shall be measured net i.e. the volume of the pipe is to be deducted.

PSLB 8.1.6 Free haul

Delete the Sub-Clause and substitute the following:

All haul will be regarded as free haul. No overhaul will be paid for under this Contract.

PSLB 8.2.2.3 Provision of Bedding from commercial sources

Including for screening and/or other treatment:

- | | | |
|-----|----------------------------|----------|
| (a) | Selected granular material | Unit: m3 |
| (b) | Selected fill material | Unit: m3 |

- | | | |
|-----|----------------------------|----------|
| (c) | Stone bedding (PSLB 5.2.5) | Unit: m3 |
| (d) | Rock fill (PSLB 5.2.6) | Unit: m3 |

The rates shall cover the cost of acquiring, loading, transporting, offloading, screening or otherwise treating excavated material in order to produce bedding that complies with the relevant specification, delivering it to points alongside the trench spaced to suit the Contractor's methods of working and of disposing of displaced material.

NOTE: The rate for the supply and laying of pipelines covers the cost of handling the bedding material from alongside the trench, placing it under the pipeline, forming joint holes and completing the bedding around and over the pipeline.

PSLE: STORMWATER DRAINAGE
(Applicable to SABS 1200 LE - 1982)

PSLE 8 MEASUREMENT AND PAYMENT

PSLB 8.2.14 Join subsoil drains to existing storm water manholes and repair (New sub-clause)

The unit of measurement shall be number of connections to existing manholes (No.). The rate shall include the tie-in into existing manholes, and neatly repairing the manholes around the tie-in with bricks and grouting. Clause PSL 5.8 shall apply.

PSMK: KERBING AND CHANNELING
(Applicable to SABS 1200 MK - 1983)

PSMK 8 MEASUREMENT AND PAYMENT

PSMK 8.2.1 Concrete Kerbing

Delete the following:

“a) Straight and curved kerbing will be measured separately”

C3.4: PARTICULAR SPECIFICATIONS

In addition to the Standardized and Project Specifications the following Particular Specifications / Policies shall apply to this contract and are available on web address:

<ftp://ftp.durban.gov.za/cesu/StdContractDocs/>:

- C3.4.1 Part AH - OHSA 1993 Safety Specification
(26 Pages)
- C3.4.2 eThekweni Municipality – Project Specific Health and Safety Specification – WS7555
(27 Pages)
- C3.4.3 eThekweni Municipality – Water Mains Replacement – WS7555 – Baseline Risk Assessment
(42 Pages)
- C3.4.4 Standard Environmental Management Plan for Civil Engineering Construction Works
(24 Pages)
- C3.4.5 eThekweni Municipality's (City of Durban) Standard Engineering Specifications Part S
(Reinstatement) (8 Pages)
- C3.4.6 Trenchless construction works Part TT3: Horizontal directional drilling (33 Pages)
- C3.4.7 eThekweni Municipality Project Specifications – Excavation and Reinstatement of trenches
and roads and sidewalks in the EMA Areas – Revision 23 October 2020 (11 Pages)

C3.5.2 Standard Drawings

The Standard Drawings to which these Standard Engineering Specifications refer are listed below.

No	Description	Date of Issue	
#6	Precast Spacer Ring	July	2005
#17	Connection Detail (no ball valve)	June	2022
#20B	Double Hydrant	January	2009
#26B	110 mm Ø Hydrant	January	2009
#27	Precast Concrete Valve Marker	November	2004
#28	No 5B Valve Cover	---	---
#39	mPVC Thrust Blocks	March	2005
#67	22.5-degree mPVC Bend	January	2006
#68	45-degree mPVC Bend	January	2006
#69	90-degree mPVC Bend	January	2006
#70	22.5 degree "AQUALOK" Socketed Bend	January	2006
#71	45 degrees "AQUALOK" Socketed Bend	January	2006
#72	90 degree "AQUALOK" Socketed Bend	January	2006
#73	Equal Tee	May	2006
#74	End Cap	January	2006
#74	Saddle	January	2006
#76	Hydrant Tee – Various pipe sizes	January	2006
#77	Flange Adaptor	January	2006
#78	Universal Flange Adaptor	May	2006
#79	"AQUALOK" Step-fit Coupling	September	2006
#80	Taper Flanged	May	2006
#81	Universal Coupling	September	2006
72056	50 mm Consumer Meter Connection – REV-A	January	2008
72056	80 mm Consumer Meter Connection – REV-A	January	2008
72056	100 mm Consumer Meter Connection – REV-A	January	2008
72056	150 mm Consumer Meter Connection – REV-A	January	2008
72056	200 mm Consumer Meter Connection – REV-A	January	2008
043718	100mm PRV, Meter and Brick Kiosk – REV4	December	2004
043719	150mm PRV, Meter and Brick Kiosk – REV4	June	2000
38577	Kerbing Details	December	1995
SANRAL	TD-D-SD-1002-V1 Type A (Outlet Structure details)	June	2015
SANRAL	TD-D-RD-1001-V1 Type E (V-drain details)		
SANRAL	TD-D-SD-1001-Subsurface Drainage	June	2015
#200	HDPE Road Crossing Detail (HDPE sleeve & pipe)	May	2022
#201	HDPE to PVC Connection	February	2022
#202	Hydrant Tee Thrust Block Detail	February	2022

C3.6: ANNEXURES

C3.6.1 Locality Map (Download Link provided)

[WS7556 Tender Annexures](#)

C3.6.2 Tender Drawings (Download Link provided)

[WS7556 Tender Annexures](#)

C3.6.3 Particular Specifications (Download Link provided)

[WS7556 Tender Annexures](#)

C3.7 ENGINEERING

C3.7.1 Design Services and Activity Matrix

The following table indicates the design responsibility for the relevant components of the works:

<i>Item / Component of Works</i>	<i>Design Responsibility</i>
Concept, feasibility and overall process	Employer
Basic Engineering and detail layouts to Tender stage	Employer
Final design to approval for construction	Employer
Temporary works <ul style="list-style-type: none"> Rider main and temporary water connections Access to properties over trenches 	Contractor Contractor
Compilation of as-built information (survey, GIS and marked up drawings)	Contractor
Preparation of as-built drawings	Employer

The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.

The Contractor is responsible for the design of the temporary Works and their compatibility with the construction sequencing and permanent Works; and The Contractor shall supply all details necessary to assist the Employer's Agent in the compilation of the as-built drawings including co-ordinates of position, invert and cover levels, dimensions, materials (especially valves and fittings) etc.

C3.7.2 Employer's Design

The Employer has procured the services of Naidu Consulting (Pty) Ltd. to undertake design and preparation of construction documentation, and as-built drawings on their behalf. The construction drawings will be issued in accordance with the contract and relevant specifications.

The works are designed in accordance with the relevant eThekweni Water and Sanitation Design Guidelines and the relevant supporting Codes, National Standards and Bylaws.

C3.7.3 Contractor's Design

The design of Temporary Works by the Contractor shall include working drawings supported by a Professional Engineer's design certificate. They shall also include a method statement describing the construction process and removal thereof where necessary, mitigation measures and safety.

The Contractor is required to sequence the construction activities. Earthworks must commence with the removal and stockpiling/spoil of topsoil. Trench excavations are to be carried out so as to make best use of the excavated materials. Suitable surplus material from trench excavation may be used as fill for other trench excavations with the prior approval of the Employer's Agent. The contractor will need to programme for lead time in supplies (e.g., valves from local suppliers). The contractor is further responsible to design rider mains for temporary water supply to customers during the installation of water mains. Rider mains are defined as temporary mains that are laid, generally parallel to existing mains earmarked for replacement, to allow the functionality of maintaining the supply from Point A to Point B while the existing water main is being replaced in position by a new line. The rider main will typically have multiple temporary customer connections connected to it which will be transferred back to the new line once constructed and commissioned. The rider main may in certain circumstances have no customer connections as well, where it is required to replace a watermain section that may not have any existing customer off-takes

C3.7.4 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 instructed by the Employer's Agent. The

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

The Drawings prepared by the Employer for the permanent Works are listed under Section C3.5.1. The drawings are for tender purposes only and the Employer reserves the right to issue construction drawings and/or additional drawings which may be amended during the Contract.

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, valves and fittings shall be given by co-ordinates. The information required in the material as-builts must be supplied to the Employer's Agent. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Employer's Agent's Representative on a regular basis.

All information in possession of the Contractor, required by the Employer's Agent and/or the Employer's Agent's Representative to complete the as-built drawings, must be submitted to the Employer's Agent's Representative as a hard copy drawing as well as electronic drawings and records of the relevant survey information, before a Certificate of Completion will be issued.

C3.8 PROCUREMENT, PARTICIPATION & EMPOWERMENT**C3.8.1 Preferential Procurement / Targeted Enterprises / Participation & Empowerment****C3.8.1.1 Preferential Procurement**

The Contractor shall ensure, to the best of his ability, that: all Plant, Materials and Equipment purchased or hired in respect of this contract is purchased or hired from enterprises as local to the vicinity of the work (project) as practically possible.

The Contractor shall report details of all expenditure in respect of preferential procurement as required by the contract, specifications or instruction of the Employer's Agent, in the formats and at the intervals required by the Employer's Agent.

C3.8.1.2 Participation and Empowerment / Targeted Enterprises

The participation of targeted enterprises in this contract shall be in accordance with the requirements of the Employer and are detailed below.

Targeting Data	Data
Essential Data	
The employer's representative is	As set out in Part C1.2 Contract Data, item 1.1.1.16
Targeted enterprise	<p>For 30% of the total participation goal in 3.1: A sole trader, partnership or legal entity which is a continuing and independent enterprise for profit, and which is:</p> <ul style="list-style-type: none"> (i) an EME or QSE which is at least 51% owned by black people; or (ii) an EME or QSE which is at least 51% owned by black people who are youth; or (iii) an EME or QSE which is at least 51% owned by black people who are women; or (iv) an EME or QSE which is at least 51% owned by black people with disabilities; or (v) an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships; or (vi) a cooperative which is at least 51% owned by black people; or (vii) an EME or QSE <p>AND which is based in the eThekweni Municipal Ward within which the contract is being performed (Wards 48 and 110); provided that: if this cannot be achieved due to insufficient entities being based in the Ward concerned then any such entity from the list that resides or is registered within the boundary of the eThekweni Metro.</p>
The targeting strategy is	Targeting Strategy, A Item (b) requires a contractor to achieve a minimum specified goal in the performance of a contract
The contract participation goal is	30%
A contractor may achieve the contract participation goal by	Method 3 By engaging one or more targeted enterprises to perform commercially useful functions in the performance of the contract.
The targeted enterprise declaration and letters of undertaking shall be submitted within	6 weeks of the commencement date of the contract or before the first submission for payment, whichever is earlier.

Targeting Data	Data
Supporting documentation shall be delivered to the employer's representative	On a monthly basis, as instructed by the employer's representative and in any case prior to each submission for payment
Additional Clauses	
Sanctions	The penalty for not achieving the target CPG will be 0.5% of the contract value (excluding PC Sum items and Fixed Cost allowances) for every 1% of CPG target not achieved.

A key strategic objective of this project is the **maximization of the project spend within the target areas, by utilizing people and business enterprises which reside in the target areas**. Accordingly, in addition to its normal function and duties, the Contractor is expected to undertake, inter alia, the following tasks:

- Recruitment of targeted enterprises and people, utilizing a structured, fair, transparent and equitable process.
- Verification of permanent residential addresses of local labour to be employed on the project.
- Verification of statutory compliance of targeted enterprises in respect of Company Registration, Fair Labour Practices, Compensation Commissioner, OHS Compliance, SARS, CSD Registration, B-BBEE Status, etc. including ongoing compliance monitoring.
- Setting up of steering committees incorporating the local councillors, municipal officials, CLO, etc. as may be required by the Employer or Employer's Agent or otherwise by this contract.
- Acting as the secretariat for the steering committees including the provision of the venue for steering committee meetings.
- Any other task deemed necessary to ensure success in respect of achieving the CPG Targets
- The Contractor will be awarded 2% CPG participation if he advertises for CPG partners in the local wards where the construction work under this project will be undertaken.

C3.8.2 Subcontracting & Subcontracting procedures

All sub contacting shall be in accordance with the Conditions of Contract

The terms of sub-contract agreements shall be no more onerous than the terms set out in this Contract, except where this is naturally required by the Contract / Sub-contract arrangements (for example, the period for response in the sub-contract may be suitably shorter than the period for response required by this contract).

All matters pertaining to subcontractors and the work executed by them shall be dealt with directly between the Employer's Agent and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Employer's Agent will not liaise directly with any subcontractors, nor will he issue instructions concerning the subcontract works directly to any subcontractor. All matters arising from the subcontract agreements shall be dealt with directly between the Contractor and the subcontractors and the Employer's Agent will not become involved.

The procedure for selection of subcontractors per clause 4.4.4 of the General Conditions of Contract, shall be that the Employer shall select one or more appropriate sub-contractors for the work concerned and the Contractor shall select and appoint the subcontractor from the resulting list. The contractor will still be liable for all subcontractors as per clause 4.4.5 of the General Conditions of Contract. The Contractor can also add an appropriate sub-contractor to the list providing that the proposed sub-contractor fulfils the requirements as set out below.

The requirements for subcontractors to be selected per clause 4.4.4 shall be that the subcontractors shall be able to undertake the work concerned in accordance with the standards and specifications applicable to that work. If the employer has reasonable cause

that a sub- contractor proposed by the Contractor does not fulfil the requirements, he may exclude the sub-contractor from the list at his own discretion.

C3.8.3 Mentorship Requirements / Construction Mentor

The Contractor shall appoint or have in his employ a Construction Mentor. The Contractor shall ensure that the Construction Mentor is available for a minimum of 2 days per week to assist the targeted enterprise(s) and undertake mentorship activities as required by the Contract.

The Contractor shall ensure that all targeted enterprises appointed as subcontractors are supported, mentored and developed in accordance with the following requirements:

- Contractual understanding and management, particularly the GCC 2015 and the sub-contract.
- Financial management and handling of contractual and construction financial affairs, including cash flow, procurement, claim, invoicing and payment processes and similar.
- Understanding of construction related costing and pricing, including rate makeup and determination of costs and rates in accordance with the requirements of the subcontract(s).
- Construction and site management of general construction activities, particularly with a view to efficiency improvements and cost-effective operations.
- Management and operations in respect of Health and Safety and Environmental requirements.
- Management and business operations in respect of staffing and the appointment of appropriate and relevant staff to meet the subcontract requirements.
- Understanding of the specific scope, procedures and specifications applicable to this project, the contract and sub-contract(s).

The Construction Mentor is additionally required to assist the targeted enterprises to:

- Register or re-register and/or update enterprise information with the CIDB in the appropriate gradings and categories.
- Register or re-register or ensure registration and/or enterprise information is up to date with SARS in all relevant aspects (e.g., VAT, PAYE)
- Register or re-register or ensure registration is up to date with the Department of Labour (e.g., COID etc.)
- Ensure that all relevant works insurances, bonds and guarantees are in place relating to the performance of the subcontract(s).

C3.8.4 Performance Monitoring

The Contractor is required to monitor the performance of each appointed sub-contractor (targeted enterprise) and report the performance to the Employer's Agent in formats and details as will be indicated from time to time by the Employer's Agent.

C3.8.5 Record Keeping and Reporting

The Contractor shall keep comprehensive records of all aspects relating to targeted enterprise sub-contracts. In addition to all requirements specified elsewhere in the Contract, Specifications and Scope, the Contractor shall keep records of:

- All mentoring activities undertaken
- Any financial arrangements made between the Contractor and sub-contractor, such as deductions made for provision of materials from the Contractor's stores or similar for assistance with Plant & Equipment, any advance payments, any amounts withheld for any reason etc.

The Contractor shall report this information to the Employer's Agent in formats and details as will be indicated from time to time by the Employers Agent.

C3.8.6 Attendance on subcontractors and targeted enterprises

All obligations and requirements in respect of the sub-contracting and targeted enterprise requirements are deemed to have been taken into account in the pricing of the Bill of Materials and no claim from the Contractor will be entertained in respect of any of the items above.

C3.9 CONSTRUCTION**C3.4.1 Site Establishment****C3.9.1.1 Services and facilities provided by the Employer****C3.9.1.1.1 Services**

The Employer will provide the Contractor with no services. The Contractor is to obtain the services from the relevant service authorities, and all necessary costs shall be included in the Preliminary and General items listed in the Bill of Quantities, as well as in the rates tendered by the Contractor for the various items in the Bill of Quantities which require the use of any of the services.

C3.9.1.1.2 Area for Contractor's Site Establishment

The contractor shall identify and arrange an area for establishment of site which is in close proximity of the works. The Contractor shall use this area only for the purposes of erecting his site offices, workshops, stores and other facilities required for the execution of the Contract. The Contractor shall not use the area nor allow it to be used for any purposes not directly associated with the execution of the Contract. The Contractor shall be responsible for arranging, at his own cost, for the provision of all services he may require in the area, as well as elsewhere on the Site.

C3.9.1.2 Facilities provided by the Contractor**C3.9.1.2.1 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 necessities 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.

C3.9.1.2.2 Electricity

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

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

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

C3.9.1.2.3 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 Employer's Agent and the responsible health authorities in the area of the Site. Septic tanks are permitted provided they are outside of the wetland and flood line buffer strips.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this sub clause and the costs thereof shall be deemed to be included within the Contractor's tendered Preliminary and General Items.

C3.9.1.3 Site usage

The contractor will not have exclusive use and access of the site and it will remain open to the general public. Provisions have been made in the Bill of Quantities for the accommodation of traffic and maintaining access to properties, as well as providing for all relevant Health and Safety obligations.

It is noted that the site may at times also be occupied by other contractors. For example (but not limited to), telecommunication providers may have contractors in the same area undertaking fibre network installation or the Employer may have his own contractors working on road infrastructure. The Contractor shall practically and reasonably work together with these contractors in order to ensure that any conflicts are speedily resolved and appropriately managed.

C3.9.1.4 Features requiring special attention

C3.9.1.4.1 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.

C3.9.1.4.2 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 acceptance 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" 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.

Additional testing required by the Employer's Agent

In addition to the provisions of sub clause C3.9.1.4.2 (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 or independent laboratory specified by the Employer or the Employer's Agent to carry out any such tests, additional to those described in sub clause C3.9.1.4.2 (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.

(ii) Costs of testing

(b) Tests in terms of sub clause C3.9.1.4.2 (i)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of sub clause C3.9.1.4.2 (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 sub clause C3.9.1.4.2 (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 sub clause C3.9.1.4.2 (i): 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.

C3.9.1.4.3 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 (GCC 2015) 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. Provision has been made in the Bill of Quantities for temporary accesses over trench excavations.

Notwithstanding the foregoing, 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.

C3.9.1.4.4 Existing residential areas

Water supply interruptions in existing residential areas shall be kept to a minimum. The Employer's Agent's approval shall be obtained prior to such interruptions and residents shall

be notified in writing at least 24 hours but not more than 48 hours in advance. Supplies shall be normalised by 16:00 on the same day.

C3.9.1.4.5 Monthly statements and payment certificates

The statement to be submitted by the Contractor in terms of Clause 6.10 (GCC 2015) 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.

C3.9.1.4.6 Construction in restricted areas

Working space is sometimes restricted where a large number of existing services (mostly underground) is present in the vicinity of the water main to be replaced or replacement pipe to be laid. The construction method used in these restricted areas largely depends on the number of existing services where the Contractor may have to use alternative methods of construction. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used. Provision has been made in the Bill of Quantities for excavation in restricted areas.

C3.9.1.4.7 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.

C3.9.1.4.8 Workmanship and quality control

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

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

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

Where required by the Employer's Agent the contractor shall prepare detailed method statement detailing construction materials, plant, equipment labour, sequence of events and mitigation measures. Reference shall be made to the OHS and EMP conditions applicable to the site works.

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, measurements and levels to demonstrate the achievement of compliance with the Specifications.

C3.9.2 Plant and Materials

C3.9.2.1 Plant and materials supplied by the employer

The Employer shall not supply any plant or materials.

C3.9.2.2 Plant and materials supplied by the contractor

The Contractor shall ensure that the Works are constructed in accordance with and comply with the quality requirements of the technical specifications and drawings

The Contractor provides Plant and Materials for inclusion in the works in accordance with SANS1200, unless otherwise stated elsewhere in the Works Information provided by the Employer. All Plant and Materials are new, unless the use of old or refurbished goods and/or materials are expressly permitted as stated elsewhere in this Works Information or as may be subsequently instructed by the Employer's Agent or Employer's Agent Representative.

Where Plant and Materials for inclusion in the works originate from outside the Republic of South Africa, all such Plant and Materials are new and of merchantable quality, to a recognised national standard, with all proprietary products installed to manufacturers' instructions.

The Contractor replaces any Plant and Materials subject to breakages (whether in the Working Areas or not) or any Plant and Materials not conforming to standards or specifications stated and notifies the Employer's Agent and the Employer's Agent Representative on each occasion where replacement is required.

The Contractor's procurement of Plant and Materials shall be in accordance with the technical specifications.

The Employer reserves the right to instruct the Contractor to provide a certificate as proof of compliance to SABS or other stated standard, for all Plant and Materials used and to be incorporated into the Works.

The Contractor shall request in writing from the Employer's Agent the exact details as to how Plant and Materials should be marked if the Contractor proposes working outside of the Working Areas.

C3.9.2.3 Materials and samples

Materials or work which do 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 tests 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 7.4.4 (GCC 2015) of the Conditions of Contract, be for the Contractor's account.

C3.9.2.4 Requirements for equipment

The equipment used by the Contractor and any Sub-Contractors must conform to the relevant SANS standards and where relevant have the calibration certificates and be operated by trained staff (proof of training required).

C3.9.2.5 Equipment provided by the employer

The Employer shall not supply any construction equipment.

C3.10 MANAGEMENT OF THE WORKS**C3.10.1 PLANNING AND PROGRAMME****C3.10.1.1 GENERAL**

The Contractor's Programme to be submitted in terms of Clause 5.6 of the Conditions of Contract (GCC 2015) shall take into account 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.

C3.10.1.2 FORMAT

The Construction Programme to be submitted by the Contractor shall.

- (a) Be in the form of a GANTT chart
- (b) Clearly indicate the start and end dates and duration of all construction activities and identify the critical path
- (c) Include all requirements specified in Clause 31.2 of the conditions of contract
- (d) In addition to (c) above, include the following:
 - All activities with abnormal shift requirements, such as two shifts per day, six-day workweek, specified overtime, or work at times other than the normal working days or hours, clearly identified
- (e) Take full cognizance of all the Contractor's risks and obligations in terms of the Contract
- (f) Include a covering report containing the following information:
 - A summary of actual progress versus planned progress
 - A summary of deviations and the reasons for the same
 - A key milestone summary
 - An updated cash flow forecast
 - A critical actions items list

The Programme and all revisions thereto shall also be provided to the Employer and Employer's Agent in electronic digital format using the MS PROJECT software (version 2010 or later).

The Contractor shall use the Critical Path Method for time analysis, planning and scheduling of all activities required to complete the work, showing all necessary logic diagrams and clearly demonstrating the sequence of operations. All tasks and activities shown on any programme shall have properly linked and scheduled predecessors and successors, except for the starting and completion milestones, which shall only have successors and predecessors respectively. Scheduling details (such as relationships, duration and resources etc.) shall only be allocated to individual tasks – summary tasks may be summary tasks only and may not be utilized for programming/scheduling purposes.

The Employer's Agent will not accept any programme that uses float suppression techniques such as preferential sequences, special lead/lag logic restraints, extended activity times, or imposed dates, other than as required by the Contract.

The data provided in the Contractor Daily Reports/Dairies is the sole basis for updating the programme. For every in progress or completed activity the Actual Start and Finish dates and Remaining Durations on the Schedule must match the dates in the Contractor's Daily Reports/Dairy.

C3.10.1.3 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 to the Employer's Agent Representative and Employer's Agent details of how it intends to regain lost time to ensure completion of the Works before the Due Completion Date. The contractor shall indicate what resources and programme changes he intends to implement in order to remedy any activity that has fallen behind.

The approved Construction programme will be reviewed at the monthly site meetings where the contractor shall provide sufficient detail that will allow the comparison of completed work

per activity against the current programme. The Employer's Agent may demand from the contractor a major revision of the programme. Such a revision shall be submitted for comment within 14 days of the demand.

C3.10.1.4 SPECIFIC PROGRAMME REQUIREMENTS

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.

No construction activities will be permitted which require the complete shut-down of existing works and operations.

Facilities to Other Contractors

Pursuant to the requirements of the Conditions of Contract, the Contractor's programme shall make allowances for the presence of such other contractors on the Site as are described below. This may involve adapting the Contractor's programme to accommodate the work of such other contractors and ensuring access to their sites along prescribed routes over the Site of this Contract.

Additional Programme Requirements

In addition to the requirements above and elsewhere in the Contract Data, the programme of work shall include the following details:

- (i) A work breakdown structure that identifies all major activities.
- (ii) Monthly cash flow projections.
- (iii) Key dates in respect of information required or due delivery.
- (iv) The contractor's payment weekends; and
- (v) A risk assessment schedule with mitigating plans of issues that could prevent the due completion date being met.

C3.10.2 CLAIMS AND CERTIFICATES

C3.10.2.1 GENERAL

The Contractor may undertake multiple packages (reservoir sub-zones) simultaneously.

C3.10.2.2 PROCEDURE FOR CLAIMING AND CERTIFICATION

The Contractor shall, on a chosen date suitably prior to each assessment date prepare at his own cost a detailed schedule of all work undertaken up to the chosen date and submit this to the Employer's Agent Representative. This schedule will usually comprise an updated bill of quantities reflecting the scheduled quantity, total quantity completed to date, quantity completed this period, all extended to values using the rates in the bill of quantities, along with appropriate summary tables. The format of this schedule will be as prescribed by the Employer's Agent or his Representative and may vary from time to time.

The Employer's Agent Representative shall be responsible for certifying the accuracy and correctness of this schedule and shall return it so certified to the Contractor within a period agreed between the Contractor and Employer's Agent Representative and before the assessment date. Any communications and/or corrections to the claim schedule that may be required between the Employer's Agent Representative and Contractor shall be dealt with promptly by both the Contractor and Employer's Agent Representative, ensuring that the certified schedule is completed prior to the assessment date.

The Contractor shall submit to the Employer's Agent the Employer's Agent Representative certified schedules for each section of work, along with any supporting or back-up documentation as may be requested by the Employer's Agent from time to time. These submissions must be made in the formats and using both the hardcopy and electronic digital systems prescribed by the Employer's Agent, which may vary from time to time.

Any failure to submit the required, Employer's Agent Representative certified claim information by the agreed date will result in the assessment by the Employer's Agent being held over until the assessment interval following the correct submission of the required information. These assessments and certificates shall not be regarded as late, and interest shall not be applicable.

Only following receipt of the complete and properly certified claim, per Section of Work, will the Employer's Agent make his assessments and issue payment certificates in accordance with the conditions of contract.

C3.10.2.3 INVOICING

When the Employer's Agent certifies payment following an assessment date, the Contractor complies with the Employer's procedure and format for invoice submission, as may be indicated to the Contractor by the Employer's Agent from time to time.

Invoices may only be submitted to the Employer through the Employer's Agent

The invoice must correspond to the Employer's Agent's assessment of the amount due to the Contractor as stated in the payment certificate

C3.10.3 REPORTING

C3.10.3.1 GENERAL

The Contractor submits summary progress reports to the Employer's Agent Representative and Employer's Agent at weekly intervals in addition to the intervals for submission of revised programmes stated in the Contract Data.

The Contractor completes an assessment of all activities in progress and to completion to determine percentage complete, forecast completion dates, deviations from the Accepted Programme and proposes remedial actions to rectify deviations.

The reports shall indicate "progress this period" and "progress to date", along with any other requirements indicated in the Works Information, as well as key information that will be indicated by the Employer's Agent and/or the Employer's Agent Representative from time to time.

The Contractor's monthly programme narrative report is submitted a week before the last Friday of each month, or as required by the Employer's Agent. The report shall indicate "progress this period" and "progress to date" and shall include, but is not limited to, the following (for each Section of the works):

- Progress achieved during the reporting period
- Latest Accepted Programme
- Deviations from the current Accepted Programme and action plans to rectify
- Project Milestones table – planned verses actual and forecast
- Status and performance of operations on the Site and Working Areas
- Status and performance of operations outside the Working Areas
- Cash Flow Forecast Report
- Digital photographic record of the progress of the works
- Critical action items list (top 10).

C3.10.4 MANAGEMENT MEETINGS

C3.10.4.1 GENERAL

It is the Employer's specific intention that the parties and their agents use the techniques of partnering to manage the contract by holding meetings designed to pro-actively and jointly manage the administration of the contract with the objective of minimising the adverse effects of risks and surprises for both parties.

Regular meetings of a general nature may be convened and chaired by the Employer's Agent or Employer's Agent Representative and the Contractor's attendance will be required.

At these meetings the Contractor presents all relevant data including safety, health and environmental issues, progress, quality plans, subcontractor management, as may be required.

Meetings of a specialist nature may be convened by persons at times and locations to suit the Parties, the nature and the progress of the works. Records of these meetings shall be submitted to the Employer's Agent and/or Employer's Agent Representative as may be relevant by the person convening the meeting, within five days of the meeting.

All meetings shall be recorded in a register, using minutes prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the conditions of contract to carry out such actions or instructions.

C3.10.5 DOCUMENTATION CONTROL

C3.10.5.1 GENERAL

The Contractor submits all documentation in accordance with the Employer's Agent's document control procedure, as may be instructed from time to time.

C3.10.6 PRACTICAL COMPLETION

C3.10.6.1 GENERAL

The contractor is allowed to achieve Practical Completion as per Clause 5.14.1 of the GCC 2015.

On or before the Practical Completion Date, the Contractor shall have done everything required to provide the works which is to be done before the Completion Date for the whole of the works. The Employer's Agent cannot certify Practical Completion until all the work has been done and is also free of Defects, which would have, in his opinion, prevented the Employer from using the works and others from doing their work.

C3.10.6.2 WORK AFTER PRACTICAL COMPLETION

After the Completion, the Contractor shall carry out the rectification of minor defects (as per further written list) identified prior to the Completion Date.

C3.10.7 ENVIRONMENTAL MANAGEMENT

C3.10.7.1 GENERAL

The Contractor will be responsible for managing his activities so that damage to the environment is minimised, as per the Environmental Management Specification contained in C3.7.2

The Contractor performs the works and all construction activities within the Site and Working Areas in accordance with the provisions of the Environmental Specification and Construction Environmental Management Plan.

C3.10.8 QUALITY ASSURANCE

C3.10.8.1 GENERAL

The Contractor shall have, maintain and demonstrate its use to the Employer's Agent and/or the Employer's Agent Representative, a documented Quality Management System to be used in the performance of the works.

C3.10.8.2 SPECIFIC REQUIREMENTS

The Contractor's Quality Management System shall conform to International Standard ISO 9001 or a standard acceptable to the Employer's Agent

The Contractor submits his Quality Management System documents to the Employer's Agent Representative and Employer's Agent as part of his programme to include details of:

- Project Quality Plan (PQP) for the Contract.
- Quality Policy
- Index of Procedures to be used.
- A schedule of internal and external audits, and
- Inspections and Testing during the Contract

The Contractor's PQP includes or reference the quality plans of his Subcontractor(s).

The Contractor develops and maintains a comprehensive register of documents that will be generated throughout the Contract including all quality related documents as part of its PQP.

The Employer's Agent and/or Employer's Agent Representative indicates those documents required to be submitted for either information, review or acceptance and the Contractor indicates such requirements within his register of documents. The register shall indicate the dates of issue of the documents with the Employer's Agent and/or Employer's Agent Representative responding to documents submitted by the Contractor for review or acceptance within the period for reply prior to such documents being used by the Contractor.

The Project Quality Plan means the Contractor's statements, which outlines strategy, methodology, resources allocation, Quality Assurance and Quality Control co-ordination activities to ensure that the works meet the standards stated in the Works Information

Inspection and testing mean:

- Quality Control Plans
- Inspection Points
- Schedule of Inspections
- Field Inspection Checklists
- Inspection notification
- Inspection and testing
- Inspection release
- Special processes
- Welding Procedures
- Material traceability and certification

C3.10.9 Contractor Key Performance Indicators

The contractor is to be assessed based on the performance indicator ILI or litres/connection/day as indicated in Table 1 below. Incentives for performance based on this performance indicator are summarized in Table 2 below. Should the contractor achieve a system performance falling within the Target Level 1 range, they shall receive the full portion of the second half of the retention after the defects liability period for the particular DMA has lapsed.

Should the contractor achieve a system performance falling within the Target Level 2 range, he shall receive a portion of the second half of the retention that is proportional to his achieved performance indicator based on a linear sliding scale after the defects liability period for the particular DMA has lapsed.

Should the contractor achieve a system performance falling within the Target Level 3 range, they shall receive 0% of the second half of his retention.

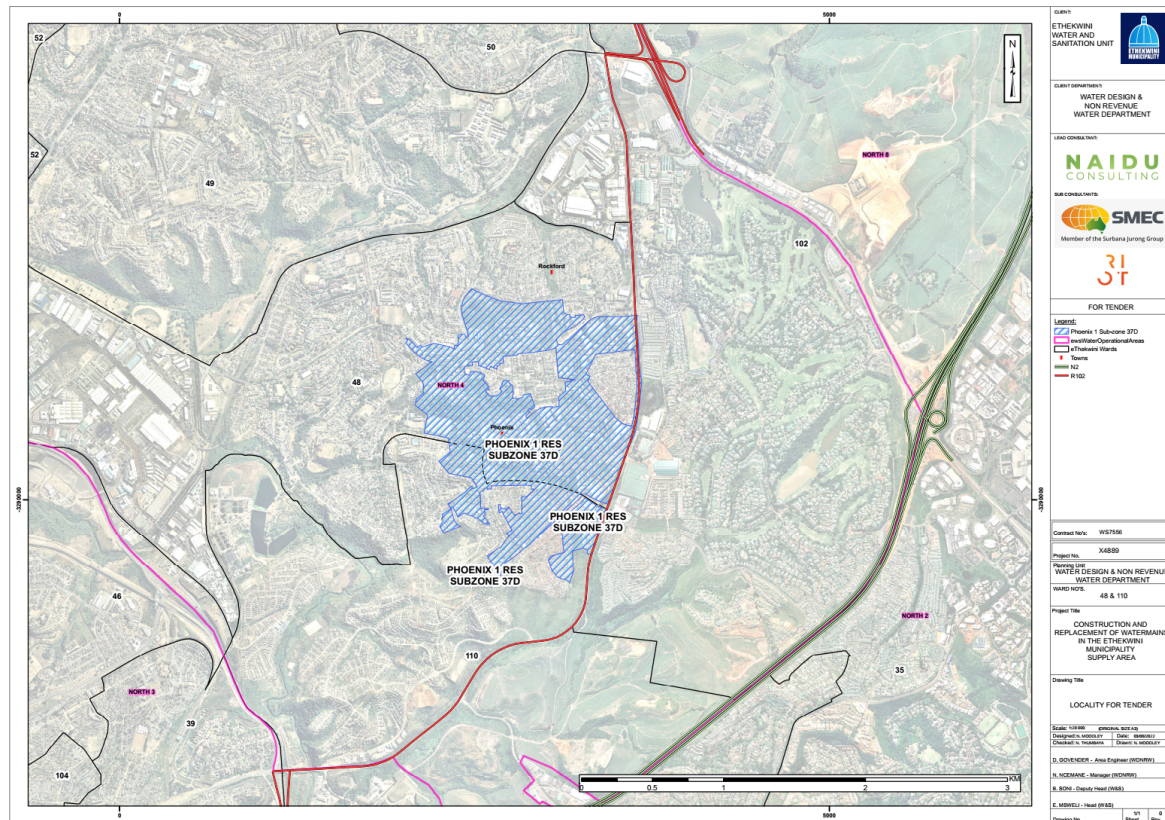
KPI's will be calculated based on actual pressure and flow logging data using calibrated equipment as approved by eThekweni. Logging will be undertaken over a period of 6 months during the defects liability period and will comprise a single or multiple logging periods of 7 days as directed and approved by EWS.

Table 1

DMA / Work Package	Real Losses (kL/day)	Number of Connections	Current Losses (L/connection/day)	Target Level 1 (L / Connection / day) Incentive: Full release of second half of retention	Target Level 2 (L / Connection / day) Incentive: Release of 100% to 0% of second half of retention	Target Level 3 (L / Connection / day) Release of 0% of second half of retention
SUBZONE 37D	3563	992	3597	≤125	>125 up to 250	>250

Table 2

DMA / Work Package	Current ILI	Real Losses (kL/day)	Length of mains (km)	Number of Connections	Average Zone Pressure (m)	Target Level 1 (L/Connection/day) Incentive: Full release of second half of retention	Target Level 2 (L/Connection/ day) Incentive: Release of 100% to 0% of second half of retention	Target Level 3 (L/Connection/day) Release of 0% of second half of retention
SUBZONE 37D	38.3	3563	37.8	992	59	≤2	>2 up to 4	>4

PART C4: SITE INFORMATION**C4.1 LOCALITY PLAN****C4.2 CONDITIONS ON SITE**

There is no specific geotechnical information or other site information.

C4.3 TEST RESULTS

There are no specific test results applicable at tender stage.