



CONTRACT NO. PW 004/2022

**APPOINTMENT OF A SERVICE PROVIDER FOR
UPGRADING OF SAULSPOORT WATER TREATMENT
WORKS SECTION A: RAW WATER ABSTRACTION
POINT**

PROCUREMENT DOCUMENT

CLOSING DATE: 22 MARCH 2022

Name of Tenderer: _____

ISSUED BY:

Dihlabeng Local Municipality
9 Muller Street East
BETHLEHEM
9700

Tel : (058) 303 5732
Fax : (058) 303 4703

PREPARED BY:

RudNat Projects cc
P.O. Box 892
HARRISMITH
9880

Tel : (065) 619 1447
E-mail: decembermiya@gmail.com

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

NAME OF BIDDING ENTITY:

PHYSICAL STREET ADDRESS:	POSTAL ADDRESS:

TELEPHONE NUMBER :

FAX NUMBER :

E-mail ADDRESS :
.....

*BID PRICE :

*(Amount brought forward from the Form of Offer and Acceptance)

Signed by authorised representative of Bidding Entity:

SIGNATURE :

DATE :

Note: should any discrepancy occur between the above amounts and those stated in the Form of Offer and Acceptance, the latter shall take precedence and apply.

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INVITATION TO TENDER DIHLABENG LOCAL MUNICIPALITY

Bid Name	Bid No.	Compulsory Briefing Session	CIDB Grading	Evaluation and Adjudication Criteria and Preference Points	Closing Date	Enquiries
Appointment of a service provider for Upgrading of Saulspoort water treatment works section A: Raw water abstraction point. Compulsory requirements: please note that local content stipulated minimum threshold is applicable on some of the items/products.	PW004/2022	Municipal Side Hall, corner of Muller and High Streets, on the 25 th February 2022 at 10:00	6EP, 5ME & 2CE or higher	Bids will be evaluated on: • Stage 1: Responsiveness • Stage 2: Functionality • Stage 3: Financial Offer and Preference Evaluation (80/20 Scoring Points) Stage 4: Risk Analysis	22 th March 2022	Mr. L Ramulwela Tel.: 058 303 5732 lawrencer@dihlabeng.co.za

Bid documents will be available from **12:00** on **Wednesday, 16th February 2022**, upon payment of a cash non-refundable document fee of R1 000,00 per set at the Dihlabeng Local Municipality, 9 Muller Street, Bethlehem, 9700.

Please note that tender document can also be accessed/download for free on the Dihlabeng Local Municipality website <http://www.dihlabeng.gov.za/strategic-documents/bid-documents>. And on eTender Portal.

Bids are to be completed in accordance with the conditions and bid rules contained in the bid documents and must be sealed together with supporting documents and externally endorsed **WITH THE CONTRACT NUMBER AND DESCRIPTION** and placed in bid box, on the Ground Floor, Dihlabeng Local Municipality, 9 Muller Street, Bethlehem, 9700 not later than **12:00 on or before the date stipulated above.**

Bidders' attention is specifically drawn to the provisions of the bid rules and evaluation criteria (including Functionality) which are included in the bid documents. The highest or any bid will not necessarily be accepted and the Council reserves the right not to consider any bid not suitably endorsed or comprehensively completed. Bids completed in pencil will be regarded as invalid bids. Bids may only be submitted on the documentation provided by the Dihlabeng Local Municipality.

The compulsory documents stated in the document must be submitted together with the Bid Document.

With effect from 1 July 2016, Dihlabeng Local Municipality must use and verify suppliers registered on the Central Supplier Database - <https://secured.csd.gov.za/>.

Failure to register will result in Dihlabeng Local Municipality not being able to conduct business with your company/ entity.

Bids will be opened in public as soon as possible after the closing time. The municipality reserves the right to reject any and all bids at any time.

**B MOLATSELI
MUNICIPAL MANAGER**



9 Muller Street
PO Box 551
BETHLEHEM, 9700
Website: www.dihlabeng.gov.za
E-mail: info@bethlehem.org.za

T1.2 Tender Data

The conditions of Tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (see www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annex to this Tender Data.

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

The additional Conditions of Tender are:

Clause number	Tender Data
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F.1.1	The Employer is the Dihlabeng Local Municipality.
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F.1.2	The Tender document (Volume 1) issued by the Employer comprises:
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T1.1	Tender Notice and Invitation to Tender
T1.2	Tender Data
T2.1	List of returnable documents
T2.2	Returnable schedules

Part 1 : Agreements and contract data

C1.1	Form of offer and acceptance
C1.2	Contract data
C1.3	Form of Guarantee
C1.4	Adjudicator's appointment

Part 2 : Pricing data

C2.1	Pricing instructions
C2.2	Activity schedules / Bill of Quantities

Part 3 : Scope of work

C3	Scope of work
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Part 4 : Site information

C4	Site information
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VOLUME 2: Book of Drawings

The following documents also form part of the tender and contract, but must be purchased by the tenderer himself.

VOLUME 3: General Conditions of Contract for Construction Works (2nd Edition, 2010) issued by the South African Institution of Civil Engineering.

VOLUME 4: South African National Standards Standardized Specifications for Civil Engineering Construction (SANS 1200)

- F.1.3 The Employer's agent is :
Name : RudNat Projects cc
Address: P O Box 892, HARRISMITH,
9880 Tel : 065 619 1447
E-mail : decembermiya@gmail.com
- F.1.5 The lowest or any Tender will not necessarily be accepted. The Employer reserves the right to award the contract for different projects to different bidders.
- F.2.1 Only those bidders who are registered with the CIDB in a contractor grading designation equal to or higher than 6EP, 5ME & 2CE; and have adequate experience in the construction of water and/or sewer pipeline are eligible to tender.
- The tender is subjected to invitation only.
- F.2.7 The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender.
- Tenderers must sign the attendance list 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 No alternative Tender offers will be considered.
- F.2.13.3 Parts of each Tender offer communicated on paper shall be submitted as original, plus 0 copies.
- F.2.13.5 The Employer's address for delivery of Tender offers and identification details to be shown on each Tender offer package are:
- Location of Tender box: **Tender Box No: PW 004/2022, Dihlabeng Local Municipality, Bethlehem.**
- Physical address: **9 Muller Street East, Bethlehem.**
- Identification details: Sealed tenders endorsed: **Tender Reference Number, Title of Tender and the closing date and time of the Tender.**
- Postal address: **PO Box 551, Bethlehem, 9700**
- F.2.15.1 The closing time for submission of Tender offers is as stated in the Tender Notice and Invitation to Tender. Telephonic, telegraphic, telex, facsimile or e-mailed Tender offers will not be accepted.
- F.2.16 The Tender offer validity period is 120 Days. (Estimated construction start date: 1 May 2022)
- F.2.16.1 Add the following to the clause:
If the tender validity expires on a weekend or public holiday, the tender validity period shall remain open until the close of business on the next working day.
- F.2.23 The Tenderer is required to submit Certificates as required under Part 2 – Returnable Documents and Schedules.
- F.3.4 Tenders will be opened immediately after the closing time for bids at the Dihlabeng Local Municipality's offices in Bethlehem.
- F.3.5 The two-envelope system will not be followed for this Tender.
- F.3.7 Add the following to the clause:
Accept that failure to submit certificates stated in the Tender Data and failure to complete in

full the tender document shall result in tender being regarded as non-responsive.

- F.3.11 Tender offers will be evaluated on F.3.11.2 Method 2: Financial offer and preference, using Formula 2, option 1a (table F.1).

Stage 1 – Tender Responsiveness

The following submissions are the requirements for evaluating each bid for responsiveness.

The Bidder who failed to submit the following results in immediate disqualification:

- (a) Attach Proof of attendance of bid briefing and visit to site (Briefing Session Attendance Form). If applicable
- (b) Attach Company registration document (CK).
- (c) Attach Joint Venture Agreement and Power of Attorney, if applicable.
- (d) Attach proof of payment (municipal account/statement) of Municipal Services, which is not more than three (3) months old and not more than ninety (90) days in arrears. If Municipal Services are paid by the Lessee, a copy of municipal account/statement and a valid Lease Agreement (**indicating the municipal account payer and the validity period of the contract**) must be attached, in the case where the municipal services are paid by the Landlord/owner, a valid Lease Agreement (**indicating the municipal account payer and the validity period of the contract**) must be attached.
- (e) The document must be completely filled in **Black Ink** & corrections are countersigned.
- (f) Bill of Quantities **must** be completely filled with **black ink** not pencil
- (g) A rate/amount is to be entered against all items in the schedule of fees/Bill of Quantities, an item against which no rate/amount is entered will lead to immediate disqualification due to unfair price advantage.
- (h) The bidder completed and signed all prescribed and **compulsory** bid forms.
- (i) Attach Proof of CIDB Grading Compliant.
- (j) Attach Proof of CSD Registration Report which is **Valid/Compliant** from the date of availability of tender document.
- (k) Tenderer must provide a valid Quality Management System (QMS) that is currently in implementation.
- (l) Attach three years latest financial statements (2019, 2020, 2021)

- (m) **Local Content Declaration on MBD 6.2 with its Annexures C, D & E are fully completed. Supporting Declarations are required from suppliers on all applicable DTI designated and determined stipulated minimum threshold items. (MBD 6.2 & BOQ)**

A supporting letter from manufacturer / supplier stating whether their products conform to local content requirements must to be added to Schedule L –MBD 6.2 for verification purposes.

Should the templates not provide enough space, more clearly marked templates can be added as addendum to MBD 6.2

Stage 2 – Functionality

The functionality points will only be used to pre-qualify the bids before scoring for preferences and price points. **Please note that bids that score less than 60% of the maximum points allocated for functionality will automatically be qualified.** The maximum obtainable are 60 points (100%); however, a Bid will be disqualified should it fail to meet the maximum threshold for functionality per category/criteria and in total as prescribed in the following table. The minimum threshold required is 36 points (60%) and the minimum per category/criteria as indicated in the 'Min Pts. Required per criteria' column. The table below has reference and the points will be allocated as follow.

Stage 2 Evaluation: Minimum Threshold 60% (36pts)			
1. Experience; Attach appointment letters/orders from where services providers have conducted the work for the upgrading of mechanical, electrical and water concrete structures	(15)	(9)	
No appointment letters attached	0		
One appointment letter attached R3 000 000.00 and above	3		
Two appointment letters attached R 6 000 000.00 and above	10		
Three appointment letters attached R 10 000 000.00 and above	15		
2. Technical skill: The tenderer has the ability to construct, Mechanical, electrical and civil works on projects. Attach CV's with qualifications of qualified and experience personnel in water and waste water projects.	(15)	(9)	
No qualification	0		
Qualification at least a National Diploma in Civil, Mechanical and Electrical Engineering with less than 3 years' experience	5		
Qualification at least a B Tech in Civil, Mechanical and Electrical Engineering with less than 8 years' experience	10		
Qualification at least a B Tech in Civil, Mechanical and Electrical Engineering with 10 years or more experience	15		
3. Specific Plant and Equipment	(10)	(6)	
No details	0		
Attach registration certificates or letter of support from supplier of plant. Not well detailed and not indicating all key/ sufficient plant and equipment (Excavator, TLB, tipper truck and roller) required to execute the works.	5		
Attach registration certificates or letter of support from supplier of plant Well detailed and indicating all key / sufficient plant and equipment (Excavator, TLB, tipper truck and roller) required to execute the works.	10		

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

4. Specific Gantt Chart Programme	(10)	(6)
No programme	0	
Out of balance with other experienced practitioners have indicated and/or unrealistic with insufficient detail. (Only Gantt Chart Accepted)	5	
The work activities are clearly identified, time frames are realistic and in balance with what other experienced practitioners have indicated and demonstrate a clear understanding of the scope of works (Only Gantt chart Accepted).	10	
5. Public Liability cover; Provision of Public Liability Insurance to the value of R2M or a letter of intent from an approved provider is required.	(5)	(3)
No attachment	0	
A valid copy attached	5	
6. Quality Management System; Provision quality Management System (Schedule)	(5)	(3)
Not attached	0	
A valid copy attached	5	
Max points	60	36

Stage 3: Financial Offer and Preference Evaluation

Each Bid will be evaluated in terms of price and preference in accordance with the Preferential Procurement Regulations 2017 (Government Gazette No. 40553 dated 20 January 2017).

80/20 preference point system for acquisition of goods or services for Rand value equal to or above R30 000 and up to R50 million

- The following formula must be used to calculate the points out of 80 for price in respect of a tender with a Rand value equal to or above R30 000 and up to a Rand value of R50 million, inclusive of all applicable taxes:

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

Where

Ps = Points scored for bid or offer under consideration;

Pt = Price of bid or offer under consideration, and;

Pmin = Price of lowest acceptable bid or offer.

- The following table must be used to calculate the score out of 20 for BBBEE:

B-BBEE STATUS LEVEL OF CONTRIBUTOR	NUMBER OF POINTS
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

3. A tenderer must submit proof of its B-BBEE status level of contributor.
4. A tenderer failing to submit proof of B-BBEE status level of contributor or is a non-compliant contributor to B-BBEE may not be disqualified, but-
 - (a) may only score points out of 80 for price; and
 - (b) scores 0 points out of 20 for B-BBEE.
5. A tenderer may not be awarded points for B-BBEE status level of contributor if the tender documents indicate that the tenderer intends subcontracting more than 25% of the value of the contract to any other person not qualifying for at least the points that the tenderer qualifies for, unless the intended subcontractor is an EME that has the capability to execute the subcontract.
6. The points scored by a tenderer for B-BBEE in terms of sub-regulation (2) must be added to the points scored for price under sub-regulation (1).
7. The points scored must be rounded off to the nearest two decimal places.
8. Subject to sub-regulation (9) and regulation 11, the contract must be awarded to the tenderer scoring the highest points.
9. (a) If the price offered by a tenderer scoring the highest points is not market related, the organ of state may not award the contract to that tenderer.
 - (b) The organs of state may-
 - (i) negotiate a market-related price with the tenderer scoring the highest points or cancel the tender;
 - (ii) if the tenderer does not agree to a market-related price, negotiate a market-related price with the tenderer scoring the second highest points or cancel the tender;
 - (iii) if the tenderer scoring the second highest points does not agree to a market-related price, negotiate a market-related price with the tenderer scoring the third highest points or cancel the tender.
 - (c) If a market-related price is not agreed as envisaged in paragraph (b)(iii), the organ of state must cancel the tender.

Stage 4 – Risk Analysis

Risk analysis will be performed to ascertain if any of the following, as relevant, present an unacceptable commercial risk to employer.

Bid offer will only be accepted if:

- a) The Bidder has submitted, with the offer, all relevant documentation as required in stage 1
- b) The bidder or any of its directors is not listed on the register of Bid 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.
- c) The Bidder is not in arrears for more than 3 months with Municipal rates and taxes and Municipal Service Charges;
- d) The Bidder has not:
 - (i) Abused the Employer's Supply Chain Management System or
 - (ii) Failed to perform on any previous contract
- (e) Tenderer have provided a VALID CIDB grading certificate.
- (f) Tenderer have provided a valid Quality Management System.
- (g) Tenderer has completed all the relevant applicable forms.

F3.13.1 Tender offers will only be accepted if:

- a) the tenderer has in his or her possession a certified copy of a valid Tax Clearance Certificate issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations;
- b) the tenderer is registered with the Construction Industry Development Board with a grading of 6EP, 5ME & 2CE or higher;
- c) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- d) the tenderer has not:
 - i) abused the Employer's Supply Chain management system; or
 - ii) failed to perform on any previous contract and has been given a written notice to this effect; and
- e) the tenderer has completed the Compulsory Enterprise Questionnaire and there is no conflict 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 does not have arrears on municipal rates and levies exceeding 3 months.
- g) the tenderer has completed all forms.

F.3.17 The number of paper copies of the signed contract to be provided by the Employer is one.

The additional conditions of tender are:

All returnable schedules are to be completed and all relevant certificates attached where indicated.

ANNEX F: STANDARD CONDITIONS OF TENDER

(As published in Annex F of the CIDB Standards for Uniformity in Construction Procurement in Board Notice 136 of 2015 in Government Gazette No 38960 of 10 July 2015)

F.1 General

F.1.1 Actions

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

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

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

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

F.1.2 Tender Documents

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

F.1.3 Interpretation

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

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

F.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

- a) **conflict of interest** means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
 - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.
- b) **comparative offer** means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to be made between offers on a comparative basis
- c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the Employer or his staff or agents in the tender process; and

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

F.1.4 Communication and Employer's agent

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

F.1.5 Cancellation and Re-invitation of Tenders

F.1.5.1 An organ of state may, prior to the award of the tender, cancel a tender if –

- (a) due to changed circumstances, there is no longer a need for the service, works or goods requested; or
- (b) funds are no longer available to cover the total envisaged expenditure; or
- (c) no acceptable tenders are received.

F.1.5.2 The decision to cancel a tender must be published in the cidb website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.

F.1.6 Procurement procedures

F.1.6.1 General

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

F.1.6.2 Competitive negotiation procedure

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

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

F.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the Employer to make a fresh tender offer, based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

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

F.1.6.3 Proposal procedure using the two stage-system

F.1.6.3.1 Option 1

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

F.1.6.3.2 Option 2

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

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

F.2 Tenderer's obligations

F.2.1 Eligibility

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

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

F.2.2 Cost of tendering

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

F.2.2.2 The cost of the tender document charged by the Employer shall be limited to the actual cost incurred by the Employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

F.2.3 Check documents

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

F.2.4 Confidentiality and copyright of documents

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

F.2.5 Reference documents

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

F.2.6 Acknowledge addenda

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

F.2.7 Clarification meeting

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

F.2.8 Seek clarification

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

F.2.9 Insurance

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

F.2.10 Pricing the tender offer

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

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

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

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

F.2.11 Alterations to documents

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

F.2.12 Alternative tender offers

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

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

F.2.12.3 An alternative tender offer may only be considered in the event that the main tender offer is the winning tender.

F.2.13 Submitting a tender offer

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

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

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

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

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

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

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

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

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

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

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

F.2.15 Closing time

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

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

F.2.16 Tender offer validity

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

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

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

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

F.2.17 Clarification of tender offer after submission

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

F.2.18 Provide other material

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

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

F.2.19 Inspections, tests and analysis

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

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

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

F.2.21 Check final draft

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

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

F.3 The Employer's undertakings

F.3.1 Respond to requests from the tenderer

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

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

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

F.3.2 Issue Addenda

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

F.3.3 Return late tender offers

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

F.3.4 Opening of tender submissions

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

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

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

F.3.5 Two-envelope system

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

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

F.3.6 Non-disclosure

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

F.3.7 Grounds for rejection and disqualification

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

F.3.8 Test for responsiveness

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

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

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

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

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

F.3.9 Arithmetical errors, omissions and discrepancies

F.3.9.1 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:

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

F.3.9.2 The Employer must correct the arithmetical errors in the following manner:

- a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern.
- b) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
- c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.
- d) Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

F.3.10 Clarification of a tender offer

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

F.3.11 Evaluation of tender offers

F.3.11.1 General

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

F.3.11.2 Method 1: Price and Preference

In the case of a price and preference:

- 1) Score tender evaluation points for price
- 2) Score points for BBBEE contribution
- 3) Add the pointed scored for price and BBBEE.

F.3.11.3 Methods 2: Functionality, Price and Preference

In the case of a functionality, price and preference:

- 1) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality as stated in the Tender Data.
- 2) No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation.
- 3) Tenders that have achieved the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in paragraphs 4 and 5 below.

The 80/20 preference point system for acquisition of services, works or goods up to a Rand value of R1 million

- 4) (a)(i) The following formula must be used to calculate the points out of 80 for price in respect of tenders (including price quotation) with a Rand value equal to or above R30 000 and up to a Rand value of R50 million, (inclusive of all applicable taxes):

$$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where

Ps = Points scored for comparative price of tender under consideration;
 Pt = Comparative Price of tender under consideration, and;
 Pmin = Comparative Price of lowest acceptable tender.

(4)(a)(ii) An Employer of state may apply the formula in paragraph (a)(i) for price quotations with a value of less than R30 000, if and when appropriate.

(4)(b) Subject to subparagraph (4)(c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:

B-BBEE STATUS LEVEL OF CONTRIBUTOR	NUMBER OF POINTS
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

(4)(c) A maximum of 20 points may be allowed in accordance with subparagraph (4)(b)

(4)(d) the points scored by tender in respect of B-BBEE contribution contemplated in subparagraph (4)(b) must be added to the points scored for price as calculated in accordance with subparagraph (4)(a).

(4)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

The 90/10 preference point system for acquisition of services, works or goods up to a Rand value of R50 million

(5)(a) The following formula must be used to calculate the points out of 90 for price in respect of tenders (including price quotation) with a Rand value equal to or above R50 000 000 (inclusive of all applicable taxes):

$$P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where

Ps = Points scored for comparative price of tender under consideration;
 Pt = Comparative Price of tender under consideration, and;
 Pmin = Comparative Price of lowest acceptable tender.

(5)(b) Subject to subparagraph (5)(c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:

B-BBEE STATUS LEVEL OF CONTRIBUTOR	NUMBER OF POINTS
1	10
2	9
3	8
4	5
5	4
6	3

7	2
8	1
Non-compliant contributor	0

(5)(c) A maximum of 10 points may be allowed in accordance with subparagraph (5)(b)

(5)(d) The points scored by tender in respect of B-BBEE contribution contemplated in subparagraph (5)(b) must be added to the points scored for price as calculated in accordance with subparagraph (5)(a).

(5)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

F.3.11.6 Decimal places

Score price, preference and functionality, as relevant, to two decimal places.

F.3.11.7 Scoring Financial Offers

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

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

where: N_{FO} is the number of tender evaluation points awarded for the financial offer.

W_1 is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.

A is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

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

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

F.3.11.8 Scoring preferences

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences.

Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 Scoring functionality

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

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

$$N_Q = W_2 \times S_O / M_S$$

where: S_O is the score for quality allocated to the submission under consideration;

M_S is the maximum possible score for quality in respect of a submission; and

W_2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

F.3.12 Insurance provided by the Employer

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

F.3.13 Acceptance of tender offer

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

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

F.3.14 Prepare contract documents

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

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

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

F.3.15 Complete adjudicator's contract

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

F.3.16 Notice to unsuccessful tenderers

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

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

F.3.17 Provide copies of the contracts

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

F.3.18 Provide written reasons for actions taken

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

F.3.19 Transparency in the procurement process

F3.19.1 The CIDB prescripts require that tenders must be advertised and be registered on the i.Tender system.

- F3.19.2 The Employer must adopt a transparency model that incorporates the disclosure and accountability as transparency requirements in the procurement process.
- F3.19.3 The transparency model must identify the criteria for selection of projects, project information template and the threshold value of the projects to be disclosed in the public domain at various intervals of delivery of infrastructure projects.
- F3.19.4 The client must publish the information on a quarterly basis which contains the following information:
- (a) Procurement planning process
 - (b) Procurement method and evaluation process
 - (c) Contract type
 - (d) Contract status
 - (e) Number of firms tendering
 - (f) Cost estimate
 - (g) Contract title
 - (h) Contract firm (s)
 - (i) Contract price
 - (j) Contract scope of work
 - (k) Contract start date and duration
 - (l) Contract evaluation report
- F3.19.5 The Employer must establish a Consultative Forum which will conduct a random audit in the implementation of transparency requirements in the procurement process.
- F3.19.6 Consultative Forum must be an independent structure from the bid committees.
- F3.19.7 The information must be published on the Employer's website
- F3.19.8 Records of such disclosed information must be retained for audit purposes.

T2.1List of Returnable Documents

Bidders are required to submit the following returnable documents with their bids, neatly bound in a separate file.

Returnable Documents

- a) Certified valid tax clearance pin certificate (in terms of the Preferential Procurement Regulations, 2001 published in Government Gazette No 22549 dated 10 August 2001),
- b) Certified copy of Certificate of Incorporation (if Tenderer is a Company)
- c) Certified copy of Founding Statement (if Tenderer is a Closed Corporation)
- d) Certified copy of Partnership Agreement (if Tenderer is a Partnership)
- e) Certified copy of Identity Document (if Tenderer is a One-man concern),
- f) Joint venture agreement (if the Tenderer is a Joint Venture).
- g) Proof of CIDB Registration (main and sub-contractors)
- h) B-BBEE Status Level Verification Certificate (main and sub-contractors)

T2.2 List of Returnable Schedules

The bidder must complete the following returnable schedules:

1. Returnable Schedules required only for bid evaluation purposes

- Schedule A: Record of Addenda to Bid Documents
 - Schedule B: Proposed Amendments and Qualifications
 - Schedule C: Present Work Commitments
 - Schedule D: Proposed Subcontractors
 - Schedule E: Compliance with OHSA (Act 85 of 1993)
 - Schedule F: Authority of Signatory
 - Schedule G: Invitation to Bid (MBD 1)
 - Schedule H: Tax Clearance Requirements (MBD 2)
 - Schedule I: Declaration of Interest (MBD 4)
 - Schedule J: Declaration for procurement above R10 million (all applicable taxes included) (MBD 5)
 - Schedule K: Preferential Procurement Policy Framework Act, 05 of 2000 and Regulation of 2017 (MBD 6.1)
 - Schedule L: Declaration Certificate for Local Production and Content for Designated Sectors including its Annexures C, D & E (MBD 6.2)
 - Schedule M: Declaration of Bidder's past Supply Chain Management Practices (MBD 8)
 - Schedule N: Certificate of Independent Bid Determination (MBD 9)
 - Schedule O: Municipal Services, Rates and Taxes Clearance Certificate for Supply Chain Management Purposes
 - Schedule P: Certificate of Authority of an Entity
 - Schedule P1: Certificate of Registration of entity (CIDB and B-BBEE)
 - Schedule Q: Certificate of Bidder's attendance at Compulsory Clarification Meeting
 - Schedule R: Workmen's Compensation registration certificate
 - Schedule S: UIF Registration Certificate
 - Schedule T: Compulsory Enterprise Questionnaire
 - Schedule U: Affidavit of Good Standing that will be incorporated into contract.
 - Schedule V: Schedule of all work Provided for an organ of the state over the last 5 years
 - Schedule W: Banking Details
 - Schedule W1: Declaration of Financial Capacity
 - Schedule X: Schedule of the Tenders Experience
 - Schedule Y: Competency of Key Personnel
 - Schedule Z: Declaration of Available Plant and Equipment to execute the works
 - Schedule AA: Tender Programme
 - Schedule AB: Schedule of Labour Content
 - Schedule AC: Training Schedule
 - Schedule AD: Tax clearance Certificate
 - Schedule AE: Proforma forms to be completed by successful Tender
 - Schedule AF: National Treasury's Central Suppliers Database
 - Schedule AG: Declaration of Solvency or Liquidity
 - Schedule AH: Contract Participation Goals
 - Schedule AI: Public Liability Cover and Quality Management System
- Preferential Procurement Policy Framework Act, 05 of 2000 and Regulations of 2011

2. Other documents required only for bid evaluation purposes

- All returnable schedules will be incorporated into the Contract.

3. Returnable Schedules that will be incorporated into the contract

- The offer portion of the C1.1 Offer and Acceptance
- C1.2 Data provided by the Contractor
- C2.2 Schedule of Quantities
- C2.3 Summary of Schedules
- Part C3: Scope of Works

SCHEDULE A: RECORD OF ADDENDA TO BID DOCUMENTS

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

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

Attach additional pages if more space is required.

Signature

Date

Name

Position.....

Tenderer

| Bidder Initial:..... | Bidder Witness: | DLM initial: | DLM Witness: |

Should the Tenderer desire to make any departures from, or modifications to the General Conditions of Contract, Specifications, Bill of Quantities or Drawings, or to qualify his tender in any way; he shall set out his proposal clearly hereunder or alternatively state them in a covering letter attached to the tender, and referred to hereunder. Failing to comply with the aforesaid will deem the tender unqualified. If no departures or modifications are desired the Schedule hereunder is to be marked NIL and, in any case, signed by the Tenderer.

[illegible]

Tenderer

SCHEDULE C: PRESENT WORK COMMITMENTS

Consulting Engineer / Employer contact person and telephone number.	Description of works	Value of work inclusive of VAT (Rand)	Duration and completion date

Signature

Date

Name

Position.....

Tenderer

| Bidder Initial:..... | Bidder Witness: | DLM initial: | DLM Witness: |

SCHEDULE D: PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

If we are awarded a contract, we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

	Name and address of proposed Subcontractor	Nature and extent of work to be Subcontracted	Previous experience with Subcontractor or recent work executed by the Subcontractor.
1.			
2.			
3.			
4.			
5.			

Signature

Date

Name

Position.....

Tenderer

| Bidder Initial:..... | Bidder Witness: | DLM initial: | DLM Witness: |

SCHEDULE E: COMPLIANCE WITH OHSA (ACT 85 OF 1993)

Tenderers are required to satisfy the Employer and the Engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below:

1. Is the Tenderer familiar with the OHSA (Act 85 of 1993) and its regulations? **YES / NO**

2. Who will prepare the Tender's Health and Safety Plan (Provide a copy of the persons/s curriculum vitae/s or company profile).

3. Does the Tenderer have a health and safety policy? (If yes, provide a copy). **YES / NO**
How is this policy communicated to all employees?

4. Does the Tenderer keep records of safety aspects of each construction site? **YES / NO**
If yes, what records are kept?

5. Does the Tenderer conduct monthly safety meetings? **YES / NO**
If yes, who is the chairperson of the meeting and who attend these meetings?

6. Does the Tenderer have a safety officer in his employment, responsible for the overall safety of his company? **YES / NO**

If yes, please explain his duties and provide a copy of his CV. _____

7. Does the Tenderer have trained first aid employees? If yes, indicate who. **YES / NO**

8. Does the Tenderer have a safety induction training programme in place? **YES / NO**

If yes, provide a copy.

Signature

Date

Name

Position.....

Tenderer

SCHEDULE F: AUTHORITY OF SIGNATORY

We, the undersigned, hereby authorize Mr / Mrs acting in his/her capacity

as of the business trading as to sign all

documentation in connection with Tender

NAME OF MEMBERS / DIRECTORS	SIGNATURE	DATE

Note: If bidders attached a copy of their Authorised Signatory is it not necessary to complete this form

Signature

Date

Name

Position.....

Tenderer

MBD1

SCHEDULE G: INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DIHLABENG LOCAL MUNICIPALITY

BID NUMBER: PW 004/2022CLOSING DATE: 22 March 2022

CLOSING TIME: 12h00

**UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A
RAW WATER ABSTRACTION POINT**

THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM

DEPOSITED IN THE BID BOX SITUATED AT

DIHLABENG LOCAL MUNICIPALITY, 9 MULLER STREET EAST, BETHLEHEM, 9700

BIDDERS SHOULD ENSURE THAT BIDS ARE DELIVERED TIMEOUSLY TO THE CORRECT ADDRESS. IF THE BIDDER IS LATE, IT WILL NOT BE ACCEPTED OR CONSIDERED.

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

NB; NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (as defined in Regulation 1 of the Local Government: Municipal Supply Chain Management Regulations)

***THE FOLLOWING PARTICULARS MUST BE FURNISHED
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)***

NAME OF BIDDER:

POSTAL ADDRESS:

STREET ADDRESS:

TELEPHONE NUMBER:

CELLPHONE NUMBER:

FACSIMILE NUMBER:

E-MAIL ADDRESS:

VAT REGISTRATION NUMBER:

HAS AN ORIGINAL TAX CLEARANCE CERTIFICATE BEEN ATTACHED (MBD2) YES/NO

HAS A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE BEEN SUBMITTED (MBD6.1) YES/NO

IF YES, WHO WAS THE CERTIFICATE ISSUED BY?

AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA) ☐

A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN NATIONAL
ACCREDITATION SYSTEM (SANAS) ☐

A REGISTERED AUDITOR ☐

(Tick applicable box)

**(A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO
QUALIFY FOR PREFERENCE POINTS FOR B-BBEE)**

**ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE
GOODS/SERVICES OFFERED BY YOU? YES/NO
(IF YES INCLUDE PROOF)**

SIGNATURE OF BIDDER:

DATE:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

TOTAL BID PRICE:(INCL VAT)

ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:

**DIHLABENG LOCAL MUNICIPALITY
DEPARTMENT: FINANCE (SUPPLY CHAIN MANAGEMENT UNIT)
TEL: 058 303 5732**

ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:

**CONTACT PERSON: Mr December Miya
TEL: 065 619 1447
E-MAIL: decembermiya@gmail.com**

SCHEDULE H: TAX CLEARANCE CERTIFICATE REQUIREMENTS

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

- 1 In order to meet this requirement bidders are required to complete in full form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- 2 SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- 3 The certified copy of the Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4 In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.
- 5 Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.
- 6 Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.

Signature

Date

Name

Position.....

Tenderer

SCHEDULE I: DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.*.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
- 3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.
 - 3.1 Full Name of bidder or his or her representative:.....
 - 3.2 Identity Number:
 - 3.3 Position occupied in the Company (director, trustee, shareholder²):.....
 - 3.4 Company Registration Number:
 - 3.5 Tax Reference Number:.....
 - 3.6 VAT Registration Number:
 - 3.7 The names of all directors / trustees / shareholders / members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
 - 3.8 Are you presently in the service of the state? **YES / NO**
 - 3.8.1 If yes, furnish particulars.
 -
 - 3.9 Have you been in the service of the state for the past twelve months?**YES / NO**
 - 3.9.1 If yes, furnish particulars.....
 -
 - 3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?..... **YES / NO**

¹MSCM Regulations: "in the service of the state" means to be –

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

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

3.10.1 If yes, furnish particulars.

.....

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?

YES / NO

3.11.1 If yes, furnish particulars

.....

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?

YES / NO

3.12.1 If yes, furnish particulars.

.....

3.13 Are any spouse, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of the state?

YES / NO

3.13.1 If yes, furnish particulars.

.....

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract.

YES / NO

3.14.1 If yes, furnish particulars:

.....

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

Full Name	Identity Number	State Employee Number

Signature

Date

Name

Position.....

Tenderer

MBD 5

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

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

1 Are you by law required to prepare annual financial statements for auditing? ***YES / NO**

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

.....

2 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? ***YES / NO**

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

2.2 If yes, provide particulars.

.....

3 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? ***YES / NO**

3.1 If yes, furnish particulars

.....

4. Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? ***YES / NO**

4.1 If yes, furnish particulars

.....

* Delete if not applicable

CERTIFICATION

I, THE UNDERSIGNED (NAME)

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

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

Signature

Date

Name

Position.....

Tenderer

MBD 6.1**SCHEDULE K: PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 05 OF 2000 AND REGULATIONS OF 2017**

1. This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

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

1.2 The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the **80/20** system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution.

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	20
Total points for Price and B-BBEE must not exceed	100

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6. The purchaser reserves the right to require of a bidder, 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 purchaser.

2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9(1) of the Broad Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“price”** includes all applicable taxes less all unconditional discounts;
- (h) **“proof of B-BBEE status level of contribution”** means:
 - 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
 - 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (i) **“QSE”** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (j) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

$$\begin{array}{ccc}
 \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\
 P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) & \text{or} & P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)
 \end{array}$$

Where:

P_s = Points scored for comparative price of bid under consideration
 P_t = Comparative price of bid under consideration
 $P_{\min}$ = Comparative price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

- 4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	8	16
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5. BID DECLARATION

- 5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

- 6.1 B-BBEE Status Level of Contribution: = **20** (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level contributor).

7. SUB-CONTRACTING

- 7.1 Will any portion of the contract be sub-contracted?

(Tick applicable box)

Yes	☐	NO	☐
-----	--------------------------	----	--------------------------

- 7.1.1 If yes, indicate:

- (i) what percentage of the contract will be subcontracted?.....%
- (ii) the name of the sub-contractor?
- (iii) the B-BBEE status level of the sub-contractor?
- (iv) whether the sub-contractor is an EME or QSE?

(Tick applicable box)

Yes	☐	NO	☐
-----	--------------------------	----	--------------------------

- (v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at last 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of company /firm

8.2 VAT registration number :

8.3 Company registration number :

8.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
☐ One person business/sole propriety
☐ Close corporation
☐ Company
☐ (Pty) Limited

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

.....

.....

.....

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
☐ Supplier
☐ Professional service provider
☐ Other service providers, e.g., transporter, etc.

[TICK APPLICABLE BOX]

8.7 MUNICIPAL INFORMATION

Municipality where business is situated

.....

Registered Account Number

Stand Number

8.8 Total number of years the company/firm has been in business?

8.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBEE status level of contribution indicated in paragraph 4.1 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- (i) The information furnished is true and correct;
- (ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.
- (iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 1.4 and 1.6, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct.
- (iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution.

WITNESSES 1. 2.	 SIGNATURE(S) OF BIDDERS(S) DATE: ADDRESS
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**B-BBEE EXEMPTED AFFIDAVIT FOR EXEMPTED MICRO ENTERPRISES
(ISSUED IN TERMS OF AMENDED CONSTRUCTION SECTOR CODE)**

(Gazette Vol. 630 No. 41287)

Issued in terms of paragraph 3.6.2.4.1 (B)

I, the undersigned,

Full name & Surname	
Identity Number	

Hereby declare under oath as follows:

- The contents of this statement are to the best of my knowledge a true reflection of the facts.
- I am a member / director / owner of the following enterprise and am duly authorized to act on its behalf:

Enterprise Name			
Trading Name (If Applicable):			
Registration Number			
Physical Address			
Type of Entity (CC, (Pty) Ltd, Sole Prop etc)			
Nature of Construction Business: Indicate the applicable category with a tick	BEP (Built Environment Professional)	Contractor	Supplier
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians- Who are citizens of the Republic of South Africa by birth or descent; or who became citizens of the Republic of South Africa by naturalization before 27 April 1994; or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date.		
Definition of "Black Designated Groups"	"Black Designated Groups" means: - Unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; - Black people who are youth as defined in the National Youth Commission Act of 1996; - Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; - Black people living in rural and under developed areas; - Black military veterans who qualifies to be called military veteran in terms of the Military Veterans Act 18 of 2011.		

- I hereby declare under Oath that as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9(1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The enterprise is _____ % Black Owned;
- The enterprise is _____ % Black Female Owned;
- The enterprise is _____ % Owned by Black Designated Group (provide Black Designated Group Breakdown below as per the definition in the table above)
 - Black Youth % _____ %
 - Black Disabled % _____ %
 - Black Unemployed % _____ %
 - Black People living in Rural areas % _____ %
 - Black Military Veterans % _____ %

- Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____, the annual Total Revenue was less than the applicable amount confirmed **by ticking the applicable box below.**

BEP	R 1.8 million	
Contractor	R 3.0 million	
Supplier	R 3.0 million	

If the turnover exceeds the applicable amount in the table above then this affidavit is no longer applicable and an EME certificate must be obtained from a rating agency accredited by SANAS or when applicable a B-BBEE Verification Professional Regulator appointed by the Minister of Trade and Industry.

- Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% black owned	Level One (135% B-BBEE Procurement recognition)	
At least 51% black owned	Level Two (125% B-BBEE Procurement recognition)	
At least 30% black owned	Level Four (100% B-BBEE Procurement recognition)	
Less than 30% black owned	Level Five (80% B-BBEE Procurement recognition)	

- I know and understand the contents of this affidavit and I have no objections to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.
- The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature: _____

Date: _____

Commissioner of Oaths
Signature & Stamp

SCHEDULE L: 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, 2011 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. General Conditions

- 1.1 Preferential Procurement Regulations, 2011 (Regulation 9) makes provision for the promotion of local production and content.
- 1.2 Regulation 9.(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.
- 1.5 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:

$$LC = [1 - x / y] * 100$$

Where

is the imported content in Rand

is the bid price in Rand excluding value added tax (VAT)

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.

The SABS approved technical specification number SATS 1286:2011 is accessible on http://www.thedti.gov.za/industrial_development/ip.jsp at no cost

- 1.6 A bid may be disqualified if –
 - (a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and
 - (b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.

2. 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. 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:

Description of services, works or goods Stipulated minimum threshold

_____	 %
_____	 %
_____	 %

4. Does any portion of the services, works or goods offered have any imported content?

(Tick applicable box)

YES		NO	
-----	--	----	--

- 4.1 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.

The relevant rates of exchange information is accessible on

www.reservebank.co.za.

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

5. Were the Local Content Declaration Templates (Annex C, D and E) audited and certified as correct?

(Tick applicable box)

YES		NO	
-----	--	----	--

- 5.1 If yes, provide the following particulars:

- (a) Full name of auditor:.....
 (b) Practice number:
 (c) Telephone and cell number:.....
 (d) Email address:

(Documentary proof regarding the declaration will, when required, be submitted to the satisfaction of the Accounting Officer / Accounting Authority)

6. 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.

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/industrialdevelopment/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, (full names), do hereby declare, in my capacity as of (name of bidder entity), the following:

(a) The facts contained herein are 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 13 of the Preferential Procurement Regulations, 2011 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE:_____

DATE: _____

WITNESS No. 1: _____

DATE: _____

WITNESS No. 2: _____

DATE: _____

Annex C

Local Content Declaration - Summary Schedule

(C1)	Tender No.												Note: VAT to be excluded from all calculations
(C2)	Tender description:												
(C3)	Designated product(s)												
(C4)	Tender Authority:												
(C5)	Tendering Entity name:												
(C6)	Tender Exchange Rate:	Pula		EU		GBP							
(C7)	Specified local content %												

Calculation of local content								Tender summary			
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
								(C20) Total tender value	R		
Signature of tenderer from Annex B								(C21) Total Exempt imported content	R		
								(C22) Total Tender value net of exempt imported content	R 0		
								(C23) Total Imported content	R		
								(C24) Total local content	R		
Date:								(C25) Average local content % of tender			

Imported Content Declaration - Supporting Schedule to Annex C

(D6)	Tender Exchange Rate:
------	-----------------------

EU

GBP

A. Exempted imported content

Calculation of imported content

Summary

**This total must correspond with
Annex C - C 21**

B. Imported directly by the Tenderer

Calculation of imported content

Summary

Bidder Initial:..... Bidder Witness: DLM initial: DLM Witness:

Attach to this page all THE CONFIRMATION LETTERS FROM MANUFACTURER / SUPPLIER stating whether their products conform to local content requirements.

Should the templates not provide enough space, more CLEARLY MARKED templates can be copied and added as addendum to MBD 6.2.

SCHEDULE M: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's database as a company or person 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 National Treasury after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐

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

CERTIFICATION

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

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

Signature

Date

Name

Position.....

Tenderer

SCHEDULE N: CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids ¹ invited.
2. Section 4 (1)(b)(iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging)². Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38(1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD9) must be completed and submitted with the Bid:

¹ Includes price quotations, advertised competitive bids and proposals.

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

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

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

1. I have read and I understand the contents of this certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorised by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorised by the Bidder to determine the terms of, and to sign, the bid on behalf of the Bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organisation, other than the Bidder, whether or not affiliated with the Bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the Bidder and/or is in the same line of business as the Bidder.
6. The Bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraph 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation);
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.
6. In addition, there have been no consultations, communications with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

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

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

Signature

Date

Name

Position.....

Tenderer

**SCHEDULE O: MUNICIPAL SERVICES, RATES AND TAXES CLEARANCE CERTIFICATE
FOR SUPPLY CHAIN MANAGEMENT PURPOSES**

DIHLABENG LOCAL MUNICIPALITY



9 Muller Street East
Bethlehem
9700
Tel: 058 303 5732

PO Box 551
Bethlehem
9700
Fax: 058 303 4731

Enquiries : Supply Chain Management Unit

**MUNICIPAL SERVICES, RATES AND TAXES CLEARANCE CERTIFICATE FOR SUPPLY
CHAIN MANAGEMENT PURPOSE**

The purpose of this form is to obtain prove that municipal services, rates and taxes of the service provider are not more than three months in arrears with the relevant municipality / landlord in the municipal area where the service provider conducts his / her business. **This form is to be completed only if the service provider's rates and taxes are not in arrears for more than three months.**

PART A – to be completed by the relevant municipality in the case where the service provider is the registered owner of the site / owner pays for municipal services / tenant pays for municipal services

OR

PART B – to be completed by the landlord in the case where the service provider is renting the premises / rental paid by tenant include municipal services.

PART A (TO BE COMPLETED BY THE RELEVANT MUNICIPALITY)	
Name of the Municipality:	
Property Physical Address:	
Registered Name:	
Official's Name: _____ Signature : _____ Date: _____	Municipality Stamp Here
Please tick whether in arrears or up-to-date Rates and taxes : Up-to-date / in arrears for more than 3 months Water: Up-to-date / in arrears for more than 3 months Electricity: Up-to-date / in arrears for more than 3 months Refuse : Up-to-date / in arrears for more than 3 months Other services: Up-to-date / in arrears for more than 3 months	
PART B (TO BE COMPLETED BY THE LANDLORD)	
Name of the Landlord:	
Property Physical Address:	
Landlord Signature:	
Date: _____ here	Landlord's business stamp Or an Affidavit from SAPS (in the event the landlord does not have a business stamp)
Please tick whether up-to-date or in arrears Rental: Up-to-date / in arrears for more than 3 months Municipal services: Up-to-date / in arrears for more than 3 months	

SCHEDULE P1: CERTIFICATE OF AUTHORITY OF AN ENTITY

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

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

(I) CERTIFICATE FOR COMPANY

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

Signature of Chairman:

Signature of Signatory:

As Witnesses:

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

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

Date:

(II) CERTIFICATE FOR CLOSE CORPORATION

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

.....hereby authorise
Mr/Ms.....

acting in the capacity of, to sign all documents

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

Signature of Signatory:

As Witnesses:

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

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

Date:

NAME	ADDRESS	SIGNATURE	DATE

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

(III) CERTIFICATE FOR PARTNERSHIP

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

.....hereby authorise
Mr/Ms.....

acting in the capacity of, to sign all documents

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

Signature of Signatory:

As Witnesses:

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

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

Date:

NAME	ADDRESS	SIGNATURE	DATE

Note: *This certificate is to be completed and signed by all of the key partners upon who rests the direction of the affairs of the Partnership as a whole.*

(IV) CERTIFICATE FOR JOINT VENTURE

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize

Mr/Ms, authorized signatory of the company,

.....acting in the capacity of lead partner, to sign all documents in

connection with the tender offer for Contract Noand any contract resulting from it on our behalf.

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

Signature of Signatory:

As Witnesses:

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

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

Date:

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

Note: *This certificate is to be completed and signed by all of the key partners upon who rests the direction of the affairs of the Partnership as a whole.*

(V) CERTIFICATE FOR SOLE PROPRIETOR

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

Signature of Sole owner:

As Witnesses:

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

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

Date:

SCHEDULE P: CERTIFICATE OF REGISTRATION OF AN ENTITY (CIBD & B-BBEE)**ENTITY REGISTRATION:**

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

CIDB REGISTRATION:

Tenderers must also indicate their CIDB registration details in the space provided.
(If not registered, attach proof that the enterprise can be registered with the CIDB within 10 days).

Registered Name	Registration Number

B-B BEE CERTIFICATE

The Tenderer must also attach hereto a certified copy of their B-BBEE verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a sworn affidavit confirming annual turnover and level of black ownership in case of all EMEs and QSEs.

COMPANY REGISTRATION DOCUMENTATION

Tenders must attach their company registration documentation to this page.

Signature

Date

Name

Position.....

Tenderer

SCHEDULE Q: CERTIFICATE OF BIDDER'S ATTENDANCE AT THE COMPULSORY CLARIFICATION MEETING

A compulsory site inspection will be held on Friday, **25 February 2022**.

The meeting point for the site inspection will be at the Municipal Side Hall, corner of Muller and High Streets Bethlehem

Compulsory Site Inspection Certificate

It is hereby certified that I have attended the Compulsory Site Inspection and have satisfied myself of the conditions and circumstances which may influence the Works and the cost thereof.

This is to certify that I, (*Name in print*)

Representative of (Bidder)

Of (Address) _____

Telephone number _____

Fax number _____

Attended the Clarification Meeting on (date) _____

SIGNATURE OF BIDDER'S REPRESENTATIVE _____

SIGNATURE OF DIHLABENG LOCAL MUNICIPALITY REPRESENTATIVE

Signature: _____ Date: _____

SCHEDULE R: WORKMEN'S COMPENSATION REGISTRATION CERTIFICATE

Attach original (or certified copy) of the Workmen's Compensation Letter of Good Standing to this page. When applicable the option to submit an original or certified copy of the letter from the Agent authorized by the Workmen's Compensation Commissioner will be accepted.

NOTE: Failure to do so will lead to your tender being disqualified.

Signature Date

Name Position.....

Tenderer

SCHEDULE S: UIF REGISTRATION CERTIFICATE

[The Tenderer's Unemployment Insurance Fund (UIF) Registration Certificate to be inserted here]

SCHEDULE T: COMPULSORY ENTERPRISE QUESTIONNAIRE

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

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIBD registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number *	Personal income tax number *

*Complete only if sole proprietor or partnership and attach separate page if more than 6 partners.

Section 5: Particulars of companies and close corporations

Company registration number	
Close corporation number	
Tax reference number	

Attach a certified copy of valid CIPC Certificate to this page.

Section 6: Record of service of the state

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

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

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

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

* insert separate page if necessary

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

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

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

Name of 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

The undersigned, who warrants that he/she is duly authorized 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) confirm that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;

-
- iv) confirms that I/we are not associated, linked or involved with any other Tendering entities submitting Tender offers and have no other relationship with any of the Tenderers or those responsible for compiling the scope of works 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.

Signature Date

Name Position.....

Tenderer

SCHEDULE U: AFFIDAVIT OF GOOD STANDING THAT WILL BE INCORPORATED INTO THE CONTRACT

The Tenderer hereby certifies that neither it nor any of the principals of the enterprise is 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. The Tenderer further certifies that none of its principals have ever been convicted of fraud.

DECLARATION *(to be signed in the presence of a Commissioner of Oaths)*

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the firm, confirms that the contents of this Affidavit are within my personal knowledge, and save where stated otherwise to the best of my belief both true and correct.

Signature:

Duly authorized to sign on behalf:

Address:

.....

.....

Telephone:

Signed and sworn to before me at on

this the day of by the Deponent, who

has acknowledged that he/she knows and understands the contents of this Affidavit, that its true and correct to the best of his/her knowledge and that he/she has no objection to taking the prescribed oath, and that the prescribed oath will be binding on his/her conscience.

Commissioner of oaths

NOTE: This affidavit comprises one (1) page all of which must be initialled by both the Deponent and the Commissioner of Oaths

**SCHEDULE V: SCHEDULE OF ALL WORK PROVIDED FOR AN ORGAN OF THE STATE
OVER THE LAST FIVE YEARS**

[Tenderers are to attach a schedule detailing the name of each project, the organ of state for which the project was undertaken and the date the project was completed. If not complete list the project as “current”]

SCHEDULE W: BANKING DETAILS

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

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

Signature Date

Name Position.....

Tenderer
.....

SCHEDULE W1: DECLARATION OF FINANCIAL CAPACITY

The following particulars must be furnished in support of the preceding returnable to test financial capacity.

- No bid will be accepted from persons who cannot prove adequate financial capacity to execute the contract according to the specifications and scope of work and within the stipulated timeframe.
- In order to prove financial capacity, the tenderer must attach the following:
 - a) A letter from the bank with bank stamp confirming that the tenderer has an active bank account.
 - b) Proof of bank account and letter of good standing with a credit rating.
 - c) If the tenderer is unable to demonstrate sufficient credit facility available, the tenderer must at least provide written undertaking/proof of guarantee or financial capacity from a reputable and accredited financial service provider/lender.

CERTIFICATION

I, THE UNDERSIGNED (NAME):

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT. I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THE DECLARATION PROVE TO BE FALSE.

Signature Date

Name Position.....

Tenderer
.....

SCHEDULE X: SCHEDULE OF THE TENDERER'S EXPERIENCE

Tenderers are to provide references for **FIVE (5)** other recent projects (last five years) of a similar nature with which the company has been involved.

The information provided here will be used to evaluate the Tenderer's eligibility to undertake the contract. It is important that the Tenderer ensure that sufficient and legible information is provided to enable the Employer to evaluate the criteria noted in the table in F3.11.2.

Name and Telephone Number of Client	Project	Name and Telephone Number of Consulting Engineer / Implementing Agent	Details of service provided

Signature Date

Name Position.....

Tenderer

.....

SCHEDULE Y: COMPETENCY OF KEY PERSONNEL

Tenderers shall provide details of the Contracts Manager, Construction Manager, Construction Supervision and Construction Health & Safety Officer's experience in work of a similar nature to that for which their tender is submitted.

a) Contracts Manager

CONTRACTS MANAGER		NAME:	
NB: • Attached a detailed CV and Proof of Qualification and Proof of Professional Registration • Qualification, Professional Registration and Experience must be of same caliber as proposed during pre-qualification to panel of contractors of better			
CLIENT & NATURE OF WORK	POSITION HELD	VALUE OF WORK	PROJECT DURATION

CONSTRUCTION MANAGER		NAME:	
NB: - Minimum Qualification shall be National Diploma in Civil Engineering - Attach proof of Qualification - Attach a detailed CV indicating training and promotion through the ranks up to the position of Construction Manager			
CLIENT & NATURE OF WORK	POSITION HELD	VALUE OF WORK	PROJECT DURATION
Empty space for data entry			

c) Construction Supervisor – To be appointed in line with 8(7) of the Construction Regulations, 2014

CONSTRUCTION SUPERVISOR (Foreman)		NAME:	
NB: • Attach a detailed CV • The experience must be of same caliber as proposed during pre-qualification to panel of contractors of better			
CLIENT & NATURE OF WORK	POSITION HELD	VALUE OF WORK	PROJECT DURATION

CONSTRUCTION HEALTH & SAFETY OFFICER		NAME:	
CLIENT & NATURE OF WORK	POSITION HELD	VALUE OF WORK	PROJECT DURATION

Tenderer

SCHEDULE Z: DECLARATION OF AVAILABLE PLANT AND EQUIPMENT TO EXECUTE THE WORK

The bid of any bidder may be rejected if that bidder fails to provide surety within 14 days of intention to award, either owned or hired plant and equipment as may be required to fully execute the works:

This Clause is applicable even after the bid is awarded.

The undersigned bidder, declare that they will fully provide all plant and equipment as may be required before the work can be awarded to them, failing within the contract intention or after award may be terminated.

No	Name of Available Plant & Equipment	Owned by the Bidder	Hired by the Bidder
		(Tick appropriate column)	

DECLARATION

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the enterprise and hereby declare that, the bidder of this bid PW/ , will make all necessary plant and equipment available within 14 days of intention to award of this contract, failing within the contract intention or after award, this contract may be terminated.

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

NAME:.....

SIGNATURE:.....DATE:

.....

Duly authorized to sign on behalf of (Bidder Name):.....

NOTE: This declaration comprises one (1) page all of which must be also initialed.

SCHEDULE AA: TENDER PROGRAMME

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

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

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

[Attach Gantt Chart Programme to this page to claim points under Functionality.]

SCHEDULE AB: SCHEDULE OF LABOUR CONTENT

The tenderer must complete a standard table reflecting the labour force anticipated to be employed on this contract, including labour employed by sub-contractors. The Specified target value is 15%

Type of Labour	Man-Days	Minimum Wage Rate per unit	Total Wage Cost (Excl. VAT)
Permanent Staff			
Temporary Staff			
SMME/HDEs Labour			
		Total	
		Percentage	

Notes to Tenderer:

Labour is defined as hourly paid personal

The penalty for non-compliance during the contract or fraudulent disclosure is discussed in contract data (item 5.13.2) .

The minimum Labour Content for this Project shall be 15 % calculated as the amount spend on labour wage divided by the total value of the project. The minimum job creation targets on the project shall be:

	Total	Women	Youth	Disabled
Work Opportunities	35	10	10	1
Person Days	3 500	1 000	1 000	150
Training Days	3	3	3	3

SCHEDULE AC: TRAINING SCHEDULE

Name of Training Institution :

Name of Programme :

Trainers Name	Qualification	Subject

Note to tenderer:

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

SCHEDULE AD: TAX CLEARANCE CERTIFICATE

IMPORTANT NOTES:

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

"Tax clearance certificate

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

SARS has implemented a new Tax Compliance Status (TCS) system in terms of which a taxpayer is now able to authorise any 3rd party to verify its compliance status in one of two ways: either through the use of an electronic access PIN, or through the use of a Tax Clearance Certificate obtained from the new TCS system. Respondents are required to provide the following to Dihlabeng in order to enable it to verify their tax compliance status:

Tax reference number: _____

Tax Clearance Certificate & TCC Number: _____ **and PIN:**

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

TAX CLEARANCE CERTIFICATE

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

SCHEDULE AE: PROFORMA FORMS TO BE COMPLETED BY SUCCESSFUL TENDERER

- PERFORMANCE GUARANTEE
- DISCLOSURE STATEMENT
- ADJUDICATION BOARD MEMBER AGREEMENT
- PRO FORMA NOTIFICATION FORM IN TERMS OF OHSA 1993 CONSTRUCTION REGULATIONS 2014

PRO FORMA PERFORMANCE GUARANTEE

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

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address:

“Employer” means:

“Contractor” means:

“Engineer” means:

“Works” means:

“Site” means:

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

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

Amount in words:

“Guaranteed Sum” means: The maximum aggregate of R

Amount in words:

“Expiry Date” means:

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

1. The Guarantor’s liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor’s period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 3.2 its obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor’s maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

- 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
- 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
- 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
 - 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
 - 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. The Employer shall have the absolute right to arrange his/her affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his/her release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

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

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

PRO FORMA DISCLOSURE STATEMENT

(Please note that words in italics within brackets are items which should be stated)

Date:

Contract: **UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT**

Contractor:

Employer: **Dihlabeng Local Municipality**

Engineer: RudNat Projects cc

Dear Sirs

I am willing and available to serve as ad-hoc Adjudication Board Member in the abovementioned Contract.

In accordance with the General Conditions of Contract for Construction Works Adjudication Board Rules relating to disclosure statements by selected or nominated persons to the adjudication, I hereby state that:

- I shall act with complete impartiality and know of nothing at this time, which could affect my impartiality.
- I have had no previous involvement with this project.
- I do not have any financial interest in this project.
- I am not currently employed by the Contractor, Employer or Engineer.
- I do not have any financial connections with the Contractor, Employer or Engineer.
- I do not have or have had a personal relationship with any authoritative member of the Contractor, Employer or the Engineer which could affect my impartiality.
- I undertake to immediately disclose to the parties any changes in the above position which could affect my impartiality or be perceived to affect same.

Should there be any deviation from the foregoing statements, details shall be given.

I further declare that I am experienced in the work which is carried out under the Contract and in interpreting contract documentation.

Name in full:

Signature:

PRO FORMA ADJUDICATION BOARD MEMBER AGREEMENT

(Please note that words in italics within brackets are items which should be stated)

This Agreement is entered into between:

Adjudication Board Member: *(Name, physical address, postal address, email address, fax number, telephone number and mobile number)*.

Contractor: *(Name, physical address, postal address, email address, fax number, telephone number and mobile number)*.

Employer: *(Name, physical address, postal address, email address, fax number, telephone number and mobile number)*.

The Contractor and the Employer will hereinafter be collectively referred to as the Parties.

The Parties entered into a Contract for *(name of project)* which provides that a dispute under or in connection with the General Conditions of Contract for Construction Works, Third Edition, 2015, must be referred to *(ad-hoc adjudication/standing adjudication)*.

The undersigned natural person has been appointed to serve as Adjudication Board Member and together with the undersigned Parties agree as follows:

1. The Adjudication Board Member accepts to perform his/her duties in accordance with the terms of the Contract, the General Conditions of Contract for Construction Works Adjudication Board Rules and this Agreement.
2. The Adjudicator undertakes to remain independent and impartial of the Contractor, Employer and Engineer for the duration of the Adjudication Board proceedings.
3. The Adjudication Board Member agrees to serve for the duration of the Adjudication Board proceedings.
4. The Parties may at any time, without cause and with immediate effect, jointly terminate this Agreement.
5. Unless the Parties agree, the Adjudication Board Member shall not act as arbitrator or representative of either Party in any subsequent proceedings between the Parties under the Contract. No Party may call the Adjudication Board Members as a witness in any such subsequent proceedings.
6. The standing Adjudication Board's duties shall end upon the Adjudication Board Member(s) receiving notice from the Parties of their joint decision to disband the Adjudication Board.
7. The Adjudication Board Member shall be paid in respect of time spent upon or in connection with the adjudication including time spent travelling:
 - a. A monthly retainer of *(amount)* for *(number)* of months, and /or
 - b. A daily fee of *(amount)* based on a *(number)* hour day, and/or
 - c. A hourly fee of *(amount)*, and/or
 - d. A non-recurrent appointment fee of *(amount)* which shall be accounted for in the final sums payable.
8. The Adjudication Board Member's expenses incurred in adjudication work shall be reimbursed at cost.

Upon submission of an invoice for fees and expenses to the Parties, the *(Contractor/Employer*)* shall pay the full amount within 28 days of receipt of the invoice and he shall be reimbursed by the other party by half the amounts so that the fees and expenses are borne equally by the Parties. Late payment of such invoice shall attract interest at prime plus 3% points compounded monthly at the prime rate charged by the Adjudication Board Member's bank.

This Agreement is entered into by:

Contractor's signature:
 Contractor's name:
 Place:
 Date:

Employer's signature:
Employer's name:
Place:
Date:

Adjudication Board Member's signature:
Adjudication Board Member's name:
Place:
Date:

**Delete the inapplicable party*

PRO FORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993, CONSTRUCTION REGULATIONS 2014

[This form must be completed and forwarded, prior to commencement of work on site, by all Contractors that qualify in terms of Regulation 4 of the Construction Regulations 2014, to the office of the Department of Labour]

NOTIFICATION OF CONSTRUCTION WORK

- 1(a) Name and address of Principal Contractor: _____
- 1(b) Name and telephone number of Principal Contractors contact person: _____
- 2 Principal Contractors compensation registration number: _____
- 3(a) Name and postal address of Client: _____
- 3(b) Name and telephone number of clients contact person or agent: _____
- 4(a) Name and postal address of Designer/s of this project: _____
- 4(b) Name and telephone number of the Designer/s contact person: _____
- 5 Name and tel. no. of Principal Contractor's Construction Manager on site appointed in terms of Construction Regulation 8(1): _____
- 6 Name/s of Principal Contractor's Construction Supervisor on site appointed in terms of Construction Regulations 8(7): _____
- 7 Exact physical address of construction site or site office: _____
- 8 Nature of construction work: _____
- 9 Expected commencement date: _____
- 10 Expected completion date: _____
- 11 Estimated maximum number of persons at the construction site:
Total: _____ Male: _____ Female: _____
- 12 Planned number of contractors on the construction site accountable to Principal Contractor: _____
- 13 Name/s of contractors already chosen: _____

Principal Contractor

Date

Client's Agent (where applicable)

Date

Client

Date

SCHEDULE AF: NATIONAL TREASURY'S CENTRAL SUPPLIER DATABASE

Tenderers are required to self-register on National Treasury's Central Supplier Database (CSD) which has been established to centrally administer supplier information for all organs of state and facilitate the verification of certain key supplier information. Dihlabeng is required to ensure that price quotations are invited and accepted from prospective bidders listed on the CSD. Business may not be awarded to a Tenderer who has failed to register on the CSD. Only foreign suppliers with no local registered entity need not register on the CSD. The CSD can be accessed at <https://secure.csd.gov.za/>. Tenderers are required to provide the CSD summary form and the information below to Dihlabeng in order to enable it to verify information on the CSD:

Supplier Number: _____ Unique registration reference number:
_____.

[PLEASE ATTACH THE RESENT CERTIFICATE TO THIS PAGE. IT MAY NOT BE OLDER THAN THREE MONTHS]

SCHEDULE AG: DECLARATION OF SOLVENCY OR LIQUIDITY

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

- a. Under liquidation
- b. Sequestration
- c. Insolvency.

This Clause is applicable even after the bid is awarded.

We, the undersigned directors, declare that they are not under liquidation, sequestration or insolvent.

No	Name of Director	ID number	Signature

➤ **DECLARATION OF SOLVENCY/ LIQUIDITY**

- All tenderers attention is drawn to this Form (declaration of Solvency or Liquidity of the tenderer).
- All tenderers are therefore required to complete It.
- Failure to complete the form or attempt to falsify or hide this information may render the tender non-responsive.

SCHEDULE AH: CONTRACT PARTICIPATION GOALS

CONTRACT PARTICIPATION GOALS – CONSTRUCTION

1. Objective

The objective of Dhlabeng Local Municipality's B-BBEE policy is to bring about meaningful transformation in the built environment construction industry through the following:

- Meaningful economic participation;
- Local economic development;
- Transfer of technical, management and entrepreneurial skills; and
- Creation of sustainable large black owned enterprises

2. Contract Participation Goals

Contract Participation Goal (CPG) – the **final** value of services paid to the CPG Partner/s are based on the **Final Contract Value**.

At the time of awarding the contract the 20% minimum CPG amount will be based on the **Contract Award Value** exclusive of the following:

- The Contingencies, CPA and VAT.

During contract implementation, adjustments relating to Provisional Sums and Contingencies linked to the CPG allocation will be agreed upon between the parties to the contract, as and when the need arises.

CPG Partner/s – Service provider/s are to be selected from Dhlabeng Local Municipalities Supply Chain Management (SCM) Enterprise Development Database (available upon request). However, should the database not contain suitable CPG Partner/s, the tenderer may propose suitable CPG Partner/s for consideration, the approval of which will be at the sole discretion of Dhlabeng Local Municipality.

A CPG Partner must be an EME or QSE which is at least 51% owned by black people.

Dhlabeng Local Municipality requires a minimum of 20% Contract Participation Goals (CPG) of the value of goods, services and works paid to one or more targeted enterprises to comply with the 2017 Regulations pertaining to the Preferential Procurement Policy Framework Act (PPPFA).

- 20% excludes the Contingencies, CPA and VAT.
- The tenderer will be required to achieve the actual Rand value committed for CPG, adjusted according to the following:
 - Variation Orders – Each VO will be evaluated by Dhlabeng Local Municipality and the Employer's Agent to determine whether it should be counted, in its entirety or partially, as part of the CPG or not.
 - Provisional Items (including CPA, Contingencies, and provisional sums) – Each provisional item change will be evaluated by the Dhlabeng Local Municipality and the Employer's Agent to determine whether it should be counted as part of CPG or not.

Within 14 days of the award of contract, the tenderer will be required to submit a cash flow projection for the main contractor and the CPG Partner/s.

3. Applicability

The CPG target may be applicable to all contracts over R10 million and will be adjudicated through Dihlabeng Local Municipalities procurement process and shall be achieved through the following mechanisms: CPG Partner/s selection is concluded **after** adjudication of tenders and **before** contract award is made.

- The CPG Partner/s shall be selected according to the following criteria:
 - CPG Partner/s are to be obtained from Dihlabeng Local Municipalities Enterprise Development Database specifically earmarked for CPG purposes.
 - In the event of services where Dihlabeng Local Municipality does not have an applicable service provider on its database, the tenderer may propose a suitable CPG Partner/s for consideration, the approval of which will be at the sole discretion of Dihlabeng Local Municipality.
- The Tenderer may propose a suitable CPG Partner/s, but Dihlabeng Local Municipality reserves the right to provide or arrange a CPG Partner/s to work with the successful company.
- The Tenderer may propose suitable works for the CPG Partner/s, but Dihlabeng Local Municipality reserves the right to identify suitable works for the CPG Partner/s to be undertaken under the main Contract.
- The Tenderer will need to successfully complete CPG negotiations with Dihlabeng Local Municipality prior to the signing of the Contract.
- Value of the work to be undertaken by CPG Partner/s shall be a minimum of 20% (to a maximum of 30%) of the total contract value excluding the procurement of the o-PVC pipes, Contingencies, CPA and VAT.
- CPG Partner/s are to be assigned work in accordance with their particular CIDB Code and Grading. Works assigned may not exceed 20% of the maximum applicable CIDB grading without written approval from Dihlabeng Local Municipality. This is will aid in the sharing of the CPG works value in targeted areas.
- In terms of Clause 4.4.3 of GCC 2015 the Contractor shall be liable for the acts, defaults and negligence of any subcontractor, his agents or employees as fully as if they were the acts, defaults or negligence of the Contractor.
- Furthermore, in terms of Clause 4.4.4 of GCC 2015 the contractual relationship between the Contractor and any subcontractors selected by the Contractor in consultation with the requirements of and a procedure set out in the Scope of Works, shall be the same as if the Contractor had appointed the subcontractor in terms of Clause 4.4.3.
- Furthermore, in terms of Clause 4.4.5 of GCC 2015 any appointment of a subcontractor in accordance with Clause 4.4.4 shall not amount to a contract between the Employer and the subcontractor, or a responsibility or liability on the part of the Employer to the subcontractor and shall not relieve the Contractor from any liability or obligation under the Contract.
- The Contractor thus remains fully liable for his CPG subcontractors and no claims for extension of time and/or costs will be entertained due to poor workmanship, defective materials, or delays caused by his CPG subcontractors.
- Sub-contracting works to the CPG Partner/s at least the same rate / price that the tenderer would have offered to Dihlabeng Local Municipality whilst making profit margins consistent to the profit margins that the main contractor would have made under normal trading processes.
- The main contractor is to pay applicable P&G's to the CPG Partner/s in proportion to the value of works executed by their CPG Partner/s consistent with the main contractors P&G's / rate pricing strategy.
- CPA is payable to the CPG Partner/s as per the indices stipulated in the contract document.
- The work allocated to the CPG Partner/s shall be performed by the CPG Partner/s directly and may not be allocated or sub-contracted out to other contractors/consultants/service providers.

- The main contractor shall not substitute any CPG Partner/s without the written approval of Dihlabeng Local Municipality.
- The working capital arrangements between the main contractor and the CPG Partner/s must be agreed upon between the two parties prior to commencement of works to ensure that the CPG Partner/s does not have cash flow challenges during contract implementation.
- The Main Contractor may free issue construction material to the CPG Partner/s at the same purchase price including all discounts as procured by the Main Contractor.
- The Main Contractor may hire out plant and machinery to the CPG Partner/s at the same rate as tendered including all discounts.
- Skilled staff may be seconded by the Main Contractor to the CPG Partner/s at the same rate as tendered including associated overheads and discounts.

4. Enterprise Development Support, Mentoring and Skills Transfer to Targeted Enterprise/s

It is envisaged that such mechanisms/approaches will involve one or more entities, one or more being a targeted enterprise(s).

A Targeted enterprise is defined as an EME (Exempted Micro Enterprise) or QSE (Qualifying Small Business Enterprise) with at least 51% Black-ownership, selected from Dihlabeng Local Municipalities Enterprise Development Database. A targeted enterprise must be registered with the CIDB for the nature and value of construction works to be undertaken. Targeted enterprises, which will undertake construction works, are differentiated from other CPG Partner/s which may play more of a supportive role on the construction contract such as providing security, PPE or portable toilet hire etc. Both may still count towards the CPG target spend.

Eligibility criteria for Targeted Enterprise:

- Developed enterprise must not have equity holding exceeding 20%, either directly or through a flow-through principle
- CIDB registration ≥ 1 to ≤ 5
- SARS registration and tax clearance
- CIPC registration
- Registered on the CSD
- Must be at least 51% Black-owned as an EME (Exempted Micro Enterprise) or QSE (Qualifying Small Business Enterprise).

The intention is for skills to be transferred from the developed enterprise to the targeted enterprise hence joint ventures formed by two or more targeted enterprises are not desirable. Engaging sub-contractors will be a preferred method.

The contractor shall perform a needs analysis on all targeted enterprises and provide internal mentorship which improves the targeted enterprise's performance in at least two development areas. Such development areas should be guided by the requirements of the CIDB Best Practice Contractor Recognition Scheme as well as the NCDP exit requirements for accreditation contractors and may include but are not limited to:

- 1) Management of labour skills transfer
- 2) Establishment of administrative systems
- 3) Establishment of cost control systems
- 4) Establishment of construction management systems and plans (health and safety, quality and environmental)
- 5) Planning, tendering and programming skills transfer
- 6) Business skills transfer with emphasis on entrepreneurial and negotiation skills
- 7) Technical skills transfer with the emphasis on innovation
- 8) Legal compliance
- 9) Procurement skills transfer
- 10) Establish credit rating/history
- 11) Establish financial loan capacity/history
- 12) Contractual knowledge transfer

The needs analysis shall be mutually agreed upon between the contractor and the targeted enterprise.

5. Invoicing and Payment

The monthly measurement and payment to be submitted to the Employers Agent by the 25th of each month and shall will be according to the following guideline:

- The submission of payment certificate to the Employer's Agent by the Contractor shall include the signature of the CPG Partner/s indicating agreement with the measurements and rates applicable to the work undertaken by the CPG Partner/s.
- The CPG Partner/s must be paid within reasonable time but no later than 3 working days after the Main Contractor has been paid by Dihlabeng Local Municipality; and
- The submission from the Contractor must include a schedule in Dihlabeng Local Municipality standard format (available upon request) that clearly shows the following:
 - Total Contract Sum
 - Total amount payable to CPG Partner/s excluding current month
 - Amount payable to CPG Partner/s for current month
 - % split of Total amount payable to Main contractor and CPG Partner/s
- Dihlabeng Local Municipality reserves the right to request proof of payment to CPG Partner/s.

6. Monitoring and Reporting on CPG

- The agreement/s between the main contractor and CPG Partner/s to be submitted within 14 days from date of award, clearly detailing the work packages to be performed.
- Tracking of CPG targets including proof of payments, as described in section 5 above, is to be reported on monthly.
- The Contractor is include in their monthly progress report updated information on enterprise development support, mentoring and skills transfer.
- Dihlabeng Local Municipality will monitor CPG implementation on site. This may include direct contact with CPG Partner/s on site for verification purposes.
- The CPG Partner/s shall be in agreement with the measurement and payment for work completed, for the purposes of submitting payment certificates, as determined by the Contractor. Should disagreements arise, Dihlabeng Local Municipality reserves the right to intervene to resolve the disagreement.
- CPG Partner/s shall attend all contractual meetings relevant to their scope of work including contract award negotiations, monthly contract site progress and technical meetings.

7. Penalties for not achieving the minimum CPG or finishing late

In the event that the principal contractor fails to substantiate that any failure to achieve the 20% Contract Participation Goal expenditure was due to reasons beyond the contractor's control which may be acceptable solely at the discretion of the employer, the following shall apply.

In the case where the minimum CPG expenditure of 20% is not achieved, the Contractor may be penalized as follows:

- The CPG expenditure amount not achieved in Rands will be multiplied by a factor of 0.7. The factored amount in Rands will be deducted from the Contractor's final payment certificate.

8. Eligibility Criteria

For tenders where the CPG target is applicable, those that do not offer a **minimum** CPG participation of **20%** according to the requirements mentioned above, will be deemed **ineligible**.

DECLARATION REGARDING CONTRACT PARTICIPATION GOALS

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by: **DIHLABENG LOCAL MUNICIPALITY** do hereby make the following declaration and certify the statements contained herein to be true and complete in every respect:

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

1. I have read and I understand the contents of this Declaration and the fully completed bid document accompanying this declaration;
2. I understand and declare that the accompanying bid will, and must, be disqualified if this Declaration is found not to be true and complete in every respect;
3. I understand and declare that in the event that this bid is successful, I will be required to, and shall, fully implement the commitments that are submitted with this bid, in particular regarding the Bidder's contract participation goals and commitments towards the allocation of certain portion of the contract to qualifying targeted enterprises. Failure to implement such commitments as outlined in the bid document and or failure to provide the relevant information within the prescribed period as determined in the Letter of Intention to Award the Bid, shall automatically disqualify this bid from further consideration and the Employer has the right to, and must, then award the bid to the next highest ranked bidder; and as a result I or the bidder or any of its directors shall have no recourse against Dihlabeng Local Municipality.
4. I understand and declare that I shall remain fully liable for my appointed CPG subcontractors and no extension of time and/or costs will be claimed due to poor workmanship, defective materials, or delays caused by my CPG subcontractors.
5. I am authorized by the bidder to sign this Declaration, and to submit the accompanying bid, on behalf of the bidder;
6. 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;
7. I understand and accept that although I may propose a suitable CPG Partner/s, Dihlabeng Local Municipality reserves the right to provide or arrange a CPG Partner/s to work with the successful company and I understand and accept that the signing of this Contract is contingent upon the completion of successful CPG negotiations with Dihlabeng Local Municipality.
8. I am aware that, and do consent to, the disqualification of my or the bidder's future bids with Dihlabeng Local Municipality in the event of the commitments made herein are not fulfilled and that such non-fulfilment amounts to abuse of Dihlabeng Local Municipality's supply chain policies and procedures and/or empowerment objectives, which must be penalized, over and above the contractual sanctions as agreed to in line with the contract signed with Dihlabeng Local Municipality, with a sanction of restricting me and or my company (the bidder) and or any of its directors from conducting business with Dihlabeng Local Municipality for a period not exceeding five (5) years.
9. I consent that should my company (the Bidder) deviate from the commitments and the spirit of the CPG objectives as agreed to, shall amount to a repudiation of the contractual arrangement between the two parties (Dihlabeng Local Municipality and the Bidder); and Dihlabeng Local

Municipality has the right to terminate the contract following prior notice and reasonable time given to remedy the breach. Furthermore, should my company (the Bidder) fail to meet the CPG financial targets as agreed to, Dihlabeng Local Municipality has the right to institute penalties as set out in Section 7.

Full Names & Surname
(Duly Authorised)

Signature

Date

Position

Name of Bidder

Witness 1

Full Names & Surname

Signature

Date

Witness 2

SCHEDULE AI: PUBLIC LIABILITY COVER AND QUALITY MANAGEMENT SYSTEM

PUBLIC LIABILITY COVER

Provision of Public Liability Insurance to the value of R 2 million or a letter of intent from an approved provider is required. Please attach documentation to this page in order to obtain points under the functionality criteria.

QUALITY MANAGEMENT SYSTEM

Provision of a Quality Management system is required. Please attach relevant certification to this page in order to obtain points under the functionality criteria.

VOLUME 2: CONTRACT

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Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

C1 AGREEMENTS AND CONTRACT DATA

C1.1 FORM OF OFFER AND ACCEPTANCE

OFFER

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of the Contract No: PW 004/2022 Upgrading of Saulspoort water treatment works section A: Raw water abstraction point.

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

By the representative of the Tenderer, deemed to be duly authorised, signing this part of this form of offer and acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

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

.....

.....Rand (Print clearly In words)

R..... (in figures)

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

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

Name: (of signatory in capitals):

Capacity: (of Signatory):

Name of Tenderer: (organisation):

Address:

.....

Telephone number: **Fax number:**

Witness:

Name / Signature:

Date:

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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ACCEPTANCE

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

The terms of the contract are contained in:

- Part C1 Agreements and contract data, (which include this agreement)
- Part C2 Pricing data
- Part C3 Scope of work
- Part C4 Site information

Drawings and documents or parts thereof, which may be incorporated by reference into the above listed parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the 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 authorized representative(s) of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, 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 working days of the date of such receipt notifies the Employer **in writing** of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

For the Employer:

Signature:

Name: (in capitals)

Capacity:

Name of Employer : DIHLABENG LOCAL MUNICIPALITY

Address: 9 Muller Street, Bethlehem, 9700

Witness:

Name / Signature:

Date:

Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the tender documents issued by the Employer before the tender closing date is limited to those permitted in terms of the Conditions of Tender.
2. A Tenderer's covering letter shall not be included in the final contract document. Should any further matter in such letter, which constitutes a deviation as aforesaid becomes the subject of agreements reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here.
3. Any other matter arising from the process of Offer and Acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the parties becomes an obligation of the contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the contract.

1. **Subject:**
Details:

2. **Subject:**
Details:

3. **Subject:**
Details:

4. **Subject:**
Details:

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

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

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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For the Tenderer:

For the Employer:

Signature

Name

Capacity

Name and address of organisation:

Name and address of organisation:

Witness Signature

Witness Name

Date

CONFIRMATION OF RECEIPT

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

the _____(day)

of _____(month)

20 _____(year)

at _____(place)

For the Contractor:

.....
Signature

.....
Name

.....
Capacity

**Signature and Name
of Witness:**

.....
Signature

.....
Name

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

The General Conditions of Contract for Construction Works Third Edition 2015 published by the South African Institution of Civil Engineering are applicable to this contract. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805 5947 and www.saiice.org.za).

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

Each item of data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works (3rd Edition 2015) to which it mainly applies.

VARIATIONS TO THE GENERAL CONDITIONS OF CONTRACT**PART 1: DATA TO BE PROVIDED BY THE EMPLOYER**

REF. CLAUSE NO.	DATA BY EMPLOYER
1.1.13	The Defects Liability Period is: 12 months
1.1.1.15	The name of the Employer is: Dihlabeng Local Municipality
1.1.1.26	The Pricing Strategy is: Re-measurement
1.2.1.2	The address of Employer:
	<u>Physical</u> <u>Postal</u> :
	9 Muller Street P O Box 551
	BETHLEHEM, 9700 BETHLEHEM, 9700
	Telephone No: (058) 303 5732 Fax No: (058) 303 4703
1.1.1.16	Name of Engineer RudNat Projects cc
1.2.1.2	Address of Engineer:
	<u>Physical</u> : <u>Postal</u> :
	92 Warden Street P O Box 892
	HARRISMITH, 9880 HARRISMITH, 9880
	Telephone No : (065) 619 1447..... e-mail: decembermiya@gmail.com

Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

REF. CLAUSE NO.	DATA BY EMPLOYER
5.3.1	The documentation required before commencement with Works execution are:
	• Health and Safety File, approved by the Safety Agent (Refer to Clause 4.3) • Initial programme (Refer to Clause 5.6) • Performance Guarantee (Refer to Clause 6.2) • Insurance (Refer to Clause 8.6) • Letter of Good Standing with Compensation Commissioner • Construction Notice with the Department of Labour
5.3.2	The time to submit the documentation required before commencement with Works execution is: 14 Days
	Non-working days are: Sundays
5.8.1	The special non-working days are: Public holidays and the year-end break which commences on the first working day after 15 December and ends on the first Tuesday after 5 January of the next year; and statutory public holidays.
5.13.1	The penalty for failing to complete the Works is: the lesser of R2500 or 1/20 of 1% of the offered total of prices excluding VAT per calendar day.
5.16.3	The latent defect period is: 10 years
	The percentage allowances to cover overhead charges:
6.5.1.2.3	• 10% of the gross remuneration of workmen and foremen actually engaged in the daywork; and • 7.5% on the net cost of materials actually used
6.8.2	The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: The value of "x" is 0.1 The values of the coefficients are: A = 0.30 B = 0.10 C = 0.55 D = 0.05 Base Date = February 2022
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is: 80% provided a cession in favour of the Employer is provided from both the supplier and the Contractor.
6.10.3	The retention money: The percentage retention on the amounts due to the Contractor is 10% up to a limit of 5% of the contract value with 50% being released on issuing of Certificate of Completion.
6.10.5	The defects Liability Period is specified as being 12 Months.
8.6.1	INSURANCE EFFECTED BY THE EMPLOYER NIL INSURANCE EFFECTED BY THE CONTRACTOR a) The Contractor and Sub-contractor shall where applicable provide as a minimum the following:

Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

	i) CONTRACT WORKS AND SASRIA SPECIAL RISKS Insurance - which will provide cover against accidental physical loss or damage to the Works, Temporary Works and materials intended for incorporation in the Works. ii) PUBLIC LIABILITY Insurance - which will provide indemnity against legal liability in the event of accidental death of or injury to third persons and/or loss of or damage to third party property arising directly from the execution of the contract and occurring during the period of insurance with a limit of indemnity of R2 000 000.00 in respect of all claims arising from any one occurrence or series of occurrences consequent on or attributable to one source or original cause. iii) Insurance of Construction Plant and Equipment (including tools offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement; iv) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act (COIDA) Act No 130 of 1993; v) Employers Common Law Liability Insurance with a limit of indemnity of not less than R 1 000 000.00; vi) Motor Vehicle Liability Insurance comprising (as a minimum) "balance of Third Party" Risks including Passenger Liability indemnity of not less than R 1 000 000.00 (one million Rand) ; and vii) Where the Contract involves manufacturing and/or fabrication of the Works or parts thereof at premises other than at the Contract Site the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such Works during manufacture or fabrication then such interest shall be noted by the endorsement to the relevant Policies of Insurance. b) The insurance to be provided by the Contractor and his Sub-contractor shall be effected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and shall be maintained in force for the duration required (including any period of maintenance). The Contractor shall within fourteen (14) days of commencement of the contract produce to the Employer the relevant Policies of Insurance. c) If the Contractor fails to effect and keep in force the insurances referred to then the Employer may effect and keep in force any such insurances and pay such premiums as may be necessary for that purpose and from time to time deduct the amount paid by the Employer from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor..
8.6.1.1.3	R Nil
10.4	Dispute resolution by amicable settlement.
10.5.3	The number of Adjudication Board Members to be appointed is: Nil

Bidder Initial:.....

Bidder

Witness:

DLM initial:

DLM Witness:

PART 2 : DATA TO BE PROVIDED BY CONTRACTOR

REF. CLAUSE No	DATA BY CONTRACTOR				
1.1.1.9	Name of Contractor:				
1.2.1.2	Address of Contractor:				
	<u>Physical:</u> <u>Postal:</u>				
					
					
	<u>e-mail:</u>				
	<u>Telephone No:</u> <u>Fax No:</u>				
1.1.1.14	Time for achieving Practical Completion of the whole of the Works is:(Max 10 months)				
6.2.1	The security to be provided by the Contractor shall be one of the following: <i>VAT is to be excluded from the Contract Sum/ value of Works for calculating the percentages</i>				
	<table border="1"> <tr> <th>Type of Security</th><th>Contractor's choice Indicate "Yes" or No"</th></tr> <tr> <td>Performance guarantee of 10% of the Contract Sum</td><td></td></tr> </table>	Type of Security	Contractor's choice Indicate "Yes" or No"	Performance guarantee of 10% of the Contract Sum	
Type of Security	Contractor's choice Indicate "Yes" or No"				
Performance guarantee of 10% of the Contract Sum					

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

DATE:

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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C1.2.2 AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993

THIS AGREEMENT is made between
 (hereinafter called the Employer) of the one part, herein represented by:

 in his capacity as:..... ;
 AND:
 (hereinafter called the Contractor) of the other part, herein represented by

 in his capacity as:
 duly authorized to sign on behalf of the Contractor.

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

CONTRACT NO: PW 004/2022: UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

for the construction, completion and maintenance of the works;

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

NOW THEREFORE the parties agree as follows:

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

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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Thus signed at..... for and on behalf of the **CONTRACTOR**
on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Thus signed at..... for and on behalf of the **EMPLOYER** on this
the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

C1.3 FORM OF GUARANTEE**PRO FORMA PERFORMANCE GUARANTEE**

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

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address

“Employer” means:

“Contractor” means:

“Engineer” means:

“Works” means:

“Site” means:

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

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

Amount in words:

“Guaranteed Sum” means: The maximum aggregate of R

Amount in words:

“Expiry Date” means “date of Practical Completion”

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

15. The Guarantor’s liability shall be limited to the amount of the Guaranteed Sum.

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

17. The Guarantor hereby acknowledges that:

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

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

Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

-
18. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
- 18.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
- 18.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
- 18.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
19. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
- 19.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
- 19.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
- 19.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
20. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
21. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
22. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
23. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
24. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
25. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
26. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

 Bidder Initial:.....

 Bidder

Witness:

DLM initial:

DLM Witness:

27. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
28. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

C.2 PRICING DATA

C2.1 PRICING INSTRUCTIONS

C2.1.1 Scope

The Bill of Quantities comprises items covering the measurement and payment of the Contractor's costs of general liabilities, the construction of temporary and permanent works, defects correction (when specified) and profit.

The Conditions of Tender or Requirements for Tendering (as applicable), Conditions of Contract, Specifications (including the Project Specification) and the Drawings are to be read in conjunction with the Schedule of Quantities.

C2.1.2 Method of Measurement and Payment

The Bill of Quantities has been drawn up generally in accordance with the methods and procedures applicable to the category of work concerned as set out in SANS 1200 "Standardized Specification for Civil Engineering Construction" and in "Civil Engineering Quantities" (published by the South African Institution of Civil Engineering), and current at the time of the Tender.

The measurement and payment clause of each Section of the Standard and Particular Specification, read together with the relevant clauses of the Project Specification, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirement of the measurement and payment clause(s) of the applicable Standard Specification, or the Particular Specification or the Project Specification conflict with the terms of the Bill of Quantities or, when relevant, with "Civil Engineering Quantities", the requirement of the Standard, Particular or Project Specification, as applicable, shall prevail.

C2.1.3 The following words, listed at the top of the schedule tables, shall have the meanings hereby assigned to them:

Unit	The unit of measurement for each item of work in terms of the SANS Specifications and the Project Specifications;
Quantity	The number of units of work for each item;
Rate	The payment per unit of work at which the Tenderer tenders to do the work;
Amount	The product of the quantity and the rate tendered for an item; and
Lump Sum	An amount tendered for an item, the extent of which is described in the Bill of Quantities, the Specifications and the Project Specifications, but the quantity of work of which is not measured in any units.

Reference shall be made to the General and Special Conditions of Contract regarding Provisional and Prime Costs Sums.

C2.1.4 Description and Directions

Directions and descriptions of materials to be used and works to be executed given in the Bill of Quantities, are for identification purposes only, are abbreviated and are not necessarily complete. Reference shall be made to the Conditions of Contract, Specifications and the Drawings for the full information.

C2.1.5 References

Where cross references are given in the Bill of Quantities to clauses in other contract documents in which items are mainly described, such references are not necessarily complete. The Tenderer shall notify the Employer's Agent in writing, upon becoming aware of incorrect referencing. References to sections of and clauses in other contract documents and to the drawings will

normally be abbreviated and prefixed as follows:

Document	Prefix
Conditions of Tender or Requirements for Tendering	T
Conditions of Contract	C
Scope of Works	SW
Particular Specification	P
Standardized SANS 1200 Specification Series	Not prefixed
Civil Engineering Quantities	SEQ
Contract Drawing	D

The prefixes are followed by the relevant section and/or clause number or drawing number, as applicable.

C2.1.6 Rates and Prices

The rates and prices to be inserted in the Bill of Quantities are to be the full inclusive prices to be paid by the Employer for the work described under the several items. Such rates and prices shall cover all costs and expenses that may be required in and for the construction of the work, described, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is to be based.

The Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill of Quantities and his attention is drawn to the fact that the Contractor has the right, under various circumstances, to payment for additional works carried out, and that the Employer's Agent is obliged to base his assessment of the rates or prices to be paid for such additional work on the rates inserted in the Schedule of Quantities by the Contractor.

A rate/amount is to be entered against all items in the schedule of fees/Bill of Quantities, an item against which no rate/amount is entered will lead to immediate disqualification due to unfair price advantage.

C2.1.7 Value Added Tax, Surcharges and Levies

All rates and prices tendered shall be exclusive of Value Added Tax (VAT) and provided for as a lump sum in the Summary of the Bill of Quantities.

All rates and prices tendered including rates for Daywork items shall be inclusive of any statutory surcharges and levies by the Regional Services Council payable by the Contractor on all items to which these apply at the time of the closing of the Tender.

C2.1.8 Nett Measurement

Unless otherwise stated, all items shall be measured nett in accordance with the Drawings and as specified. When relevant, prices and rates are to allow for waste of whatever nature, for all straight cutting (notwithstanding any trade customs to the contrary), and for overbreak in excavations.

C2.1.9 Bill of Quantities

The quantities set out in the Bill of Quantities are the estimated quantities of the Works, but the Contractor will be required to undertake whatever quantities may be directed by the Employer's

Agent from time to time. The Contract Price for the completed Contract shall be computed from the actual final agreed quantities of work done, valued at the relevant unit rates and prices.

The Bill of Quantities will form the basis for the re-measurement of the Works, the evaluation of interim progress payments, referred to in Clause 6.10 of the GCC 2015, and the valuation of any additional or substituted work ordered by the Employer's Agent. The Schedule will, however, not be adjusted on the grounds of factors or items not taken into account by the Contractor.

The quantities of work and material stated in the Schedule shall not be considered as limiting or extending the amount of work to be executed or material to be supplied by the Contractor.

The Bill of Quantities is not intended for use in ordering materials, and the Contractor is advised

to obtain his own information from the Specifications and Drawings and to consult the Employer's Agent before the ordering of materials.

C2.1.10 Provisional Quantities and Items

Provisional quantities and items may be scheduled in the Bill of Quantities in respect of which:

- a) the relevant quantity cannot be calculated from the tender drawings; or
- b) where it is anticipated that the quantities calculated from the tender drawings may be subject to variation.

Where Provisional sums and/or Prime Cost sums are provided for in the Bill of Quantities, payment for the work executed under such items shall be made in accordance with Clause 6.6 of the GCC 2015. The Employer reserves the right, during the execution of the Works, to adjust the stated amounts according to work actually executed under the stated items, or omit, without affecting the validity of the Contract.

The Tenderer shall, under no circumstances, delete or amend any sums stated as Provisional or Prime Cost inserted under the "Amount" column of the Bill of Quantities unless ordered or authorised in writing by the Employer before Tender closure.

If quantities are schedule twice for the same item of work, the one item being designated in the Bill of Quantities as a Provisional Quantity, the Tenderer is at liberty to enter rates which he deems appropriate, and the rates shall be based on the assumption that measurement and payment shall only be effected under the pay item designated as Provisional, once the quantity under the other pay item has been fully measured.

C2.1.11 Inscriptions

The Tenderer must do all his entries in the Bill of Quantities in legible black ink.

C2.1.12 Corrections of Entries made by Tenderer

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

C2.1.13 Rejection of Tender

A tender may be rejected if the rates or prices for some of the items in the Bill of Quantities are, in the opinion of the Employer, obviously unreasonable or out of proportion or not in consistence with other rates or prices in the Schedules and the Tenderer fails, within a period of seven days after having been notified in writing by the Employer or the Employer's Agent to adjust and/or amend the rates or prices of such items, to make the adjustment(s) and/or amendments(s) required.

A tender may be rejected if the Bill of Quantities is not completed in black ink.

C2.1.14 Arithmetical Errors

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication and/or additions, will be corrected by the Employer's Agent at evaluation stage, as stated in the Conditions of Tender.

C2.1.15 Units

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

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1000kg)
m ²	=	square metre	no.	=	number
m ² .pass	=	square metre pass	sum	=	lump sum
ha	=	hectare	MN	=	mega Newton
m ³	=	cubic metre	MN.m	=	mega Newton-m
m ³ .km	=	cubic metre-kilometre	PC sum	=	Prime Cost sum
l	=	litre	Prov sum	=	Provisional sum
kl	=	kilolitre	%	=	Per cent
MPa	=	mega Pascal	kW	=	kilowatt

BILL OF QUANTITIES**SECTION 1: PRELIMINARY AND GENERAL**

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
1		PRELIMINARY AND GENERAL				
1.1		PRELIMINARIES AND GENERALS IN ACCORDANCE TO THE SCOPE OF WORK AS REFERENCE				
1.2	C3.7.15	Supply and delivery of Instrumentation	Sum	1,0		
1.3	SANS 1921	Drawings and documentation for handover and detailed design	Sum	1,0		
1.4		Operation and instruction manuals and maintenance program	Sum	1,0		
1.5		Pre-commissioning and commissioning procedures	Sum	1,0		
1.6		Training Operations for maintenance personnel	Sum	1,0		
1.7		Skills development , workshops and training as specified	Sum	1,0		
1.8	PS.3.10	Submission of 3 Project record books on completion of the project	Sum	1,0		
1.9	PS.3.4	Submission of 3 sets As built drawings after project completion	Sum	1,0		
1.10	PA	Compliance to safety requirements as per scope and in accordance to Occupational Health and Safety Act 85, 1993	Sum	1,0		
1.11	SANS 1921	Submission of quality control procedures and adherence to quality requirements	Sum	1,0		
1.12	PS.3.8	Compliance to Environment Management Plan and Environmental Management Act	Sum	1,0		
1.13	PSAB PS.3.6 PSAB.1.2	Site establishment for duration of the project.	Sum	1,0		
	PSAB.1.5	Site Office, Sanitary Facilities, Telecommunications, Project Sign board, Storage Area, Transport, Food, Site Security				
1.14		Plant	Sum	1,0		
1.15		COVID-19 REGULATIONS COMPLIANCE				
TOTAL CARRIED FORWARD TO SUMMARY						

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
1.15.1		BROUGHT FORWARD Allowance for covering all Covid 19 requirements under the Level 4 restrictions in accordance with Government Regulations. SUMS STATED PROVISIONALLY BY ENGINEER	Sum	1,0		
1.16		Provide fittings and equipment to be Installed.	Sum	1,0	35 000.00	35 000.00
1.17		COMMUNITY LIASION OFFICER				
1.17.1		Allowance for R60 000 for CLO Reimbursement.	PC	1,0	60 000.00	60 000.00
1.18		EPWP CONSUMABLES & TRAINING				
1.18.1		Allowance of R 150 000 for the Extended Public Works compliance consumables and Accredited Training.	PC	1,0	150 000.00	150 000.00
CARRIED FORWARD TO SUMMARY						

SECTION 2: UPGRADING OF RAW WATER PUMP STATION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
2.		ELECTRICAL EQUIPMENT				
2.1	C3.3.5.4, C3.3.5.3, C3.3.5.2, C3.4.24	Replace existing MCC with a new one that comprises with the following protective devices. 1. Incomer breaker 6000A, 50KA adjustable. Moulded case micro logic 2.0 master compact with drawable cradle. It must come with 5 x 400kw heavy star/delta starter 400kw and 5 x 1000A C/B, 5 x 35KA adjustable C/B. The enclosures must be IP 65. All the wiring shall be done in accordance with latest code of practice. All starters will be operated remotely and manually. The incomer panel will also feature metering circuit and protection circuit. e.g. Phase loss protection, under voltage, overvoltage protection and phase sequence. It must come with small power DB for lighting point and LV systems. The MCC must come with complete bus bars that can carry maximum load current. The earthing of the MCC shall be done as per SANS Standard.	No	1,0		
2.2	C3.3.5.4	Test and commission new MCC, and DB and issue COC.	No	1,0		
2.3		Supply and install electrical safety notices and danger signage as required per the OHS Act.	No	1,0		
2.4	C3.4.27	Provide and hand over manuals, test results, log books, etc. for MCC, instrumentation and 400V equipment	No	1,0		
2.5		Provide training for Personnel for a period of 10 days	No	1,0		
2.6		GENERAL				
2.7		Provision of Operational and Maintenance Manuals	No	1,0		
2.8		Provision of as-built drawings	m	1,0		
2.9	C3.3.5.6	Quality Control and Testing	No	1,0		
		LOCAL CABLE				
		* (DTI's stipulated minimum threshold percentage for local production and content for different types of electrical and telecom cables is 90%)				
CARRIED FORWARD						

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		BROUGHT FORWARD				
2.10	C3.3.9.2, C3.3.10	Upgrade existing 70mm ² , 4 core SWA Cable with 95mm ² , 4 core SWA cable complete with termination from 400V MCC to 5 x 400kw electrical motors including cable termination.		370,0		
2.11	C3.3.9.2, C3.3.10	Upgrade existing 70mm ² , 4 core SWA Cable with 95mm ² , 4 core SWA cable complete with termination from Substation DB to 400V AC MCC including cable termination.	m	300,0		
2.12	C3.3.9.2, C3.3.10	Supply and install 2,5mm ² , 4 core SWA cable complete with termination from 400V MCC to emergency stop buttons	No	370,0		
2.13	C3.3.9.2, C3.3.10	Supply and install 2,5mm ² , 4 core SWA cable complete with termination from 400V MCC to Pumps	No	185,0		
2.14	C3.3.13.1	Supply and install earth wire 4mm ² connecting suction pump		50,0		
2.15	C3.3.13.1	Supply and install earth wire 2,5mm ² connecting suction pump		50,0		
2.16		CABLE SUPPORT SYSTEM				
2.17		Supply and install new cable galvanized racks complete with all accessories.	No	6,0		
2.18		Supply and Install 90 degree 300mm cable rack bend complete with accessories	No	6,0		
		MECHANICAL EQUIPMENT				
		PUMPS				
		The DTI has designated and determined a stipulated minimum threshold for Pumps, Medium voltage motors for local production and content as specified to various categories of 70 %)				
2.19	C3.3.1.3, C3.3.1.5, C3.3.1.4, C3.3.1.5.1.1, C3.3.1.1	Supply and install 40-45ml/day centrifugal pump preferably KSB ETA 300.35 with a flow rate of 1600m ³ /h or any other approved brand complete with drive electric motor of plus/minus 400kw, 400V, Speed 1450 rpm, complete with a base stand coupled together. Replace existing inlet and outlet pipe with new inlet and outlet pipes to suit the new pump. Supply and install coupling house fenner type. Also fit a new gut.	No	4,0		
CARRIED FORWARD						

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		BROUGHT FORWARD				
2.20	C3.4.27	Provision of Operational and Maintenance Manuals	No	1,0		
2.21		Provision of as-built drawings	No	1,0		
2.22	C3.3.5.6	Quality Control and Testing	No	1,0		
		The DTI has designated and determined a stipulated minimum threshold for Pumps, Medium voltage motors for local production and content as specified to various categories of 70 %)				
2.23	C3.3.1.3, C3.3.1.5, C3.3.1.4, C3.3.15.1.1, C3.3.1.1	Supply and install 40-45ml/day centrifugal vertical booster pump preferably KSB ETA 300.35 with a flow rate of 1600m3/h or any other approved brand complete with drive electric motor of plus/minus 400kw, 400V, Speed 1450 rpm, complete with a base stand coupled together. Replace existing inlet and outlet pipe with new inlet and outlet pipes to suit the new pump. Supply and install coupling house fenner type. Also fit a new gut.	No	1,0		
		GENERAL				
2.24	C3.4.27	Provision of Operational and Maintenance Manuals	No	1,0		
2.25		Provision of as-built drawings	No	1,0		
2.26		Quality Control and Testing	No	1,0		
2.27		Supply, Install, Test and Commission 3kw suction raw water pump including one level switch	No	2,0		
		GENERAL				
2.28	C3.4.27	Provision of Operational and Maintenance Manuals	No	1,0		
2.29		Provision of as-built drawings		1,0		
2.30		Quality Control and Testing	No	1,0		
2.31		De-commission existing 315kw vertical pump set installed in the pump station	No	1,0		
		EMERGENCY STOP BOX				
2.32		Supply and install emergency stop push surface mounted button 2NC, IP 65	No	7,0		
CARRIED FORWARD						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		BROUGHT FORWARD				
		VALVES *(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70%)				
2.33	C3.3.3.2	Replace existing 400NP/16 Valve with similar type	No	8,0		
2.34	C3.3.3.3	Replace existing 400NP/16 non-return valve with similar type	No	4,0		
		BOLTS AND NUTS FOR VALVES The DTI has designated and determined a stipulated minimum threshold for steel products and components for construction for local production and content as specified to various categories of 100%)				
2.35	C3.3.2.6	Supply and Install M20 x 75mm bolts, Nuts and Washers	No	1 202,0		
		STEEL PIPES The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70%)				
2.36	C3.3.2, C3.732.1	Replace existing 300mm inlet pipe to 400mm. All water pipe will be painted in accordance with relevant standards.	m	24,0		
		FLOOD LIGHTING The DTI has designated and determined a stipulated minimum threshold for street lighting steel poles for local production and content as specified to various categories of 100%)				
2.37	C3.3.11.1, C3.3.11.2	Supply and Install Linear LED IP65 Surface mounted 400w light fitting complete with galvanized steel pole and provision for solar must be made.	No	3,0		
CARRIED FORWARD						

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
2.38		BROUGHT FORWARD				
2.39	C3.3.2.6	Supply and Install concrete plinth for lighting pole with 30MPA	m ³	45,0		
2.40		Supply and Install Traded rods M20	No	3,0		
2.41		Supply and Install Centre steel plate	m ²	0,2		
2.42	C3.3.9.2, C3.3.10	Supply and Install lighting 12 way DB in the pump station	No	1,0		
2.43		Supply and Install 2,5mm ² x 4core cable	m	250,0		
2.44		Replace the existing fluorescent lights with LED Fluorescent lights for pump station building	m	7,0		
2.45		EXCAVATION				
2.46		Nature of ground and classification of materials to be excavated including backfill for electrical installations				
2.47		Earth	m ³	4,0		
2.48		Soft Rock	m ³	4,0		
2.49		Hard Rock	m ³	4,0		
2.50		WELDING PLUG				
2.51	C3.3.7.1	Replace existing 220V Welding Plug inside the pump station	No	1,0		
2.52		CROLL BEAM				
2.53		Replace existing lifting beam with upgraded 3ton beam. Installation of the beam must be done in accordance with lifting devices procedure. On completion you are required to provide load test certificate and signage shall be put up including hoist.	No	2,0		
2.54		Supply and Install 300mm x 300mm x 200mm enclosure box for overhead crane	No	1,0		
2.55		EXTRACTOR FAN				
2.56		Replace existing extractor with new similar type.	No	2,0		
CARRIED FORWARD						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
2.51	C3.3.16.1, C3.3.15	BROUGHT FORWARD TELEMETRY Supply and Install full automated telemetry system including monitor screen. Supply and install complete telemetry system with HMI (Human Interface Display). Telemetry must be fully automated with water plant. E.g. to display faults, status of the plant, run, stop, auto and manual. They must be able to start and stop operations from the plant and the pump station.	No	1,0		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
3.		UPGRADING OF SUBSTATION				
3.1		MANUFACTURER, SUPPLY, DELIVER, INSTALL, TEST (ON SITE AND OFF SITE) AND COMMISSION THE FOLLOWING EQUIPMENT AND WORKS AS PER SCOPE OF WORK AND DRAWINGS				
		The DTI has designated and determined a stipulated minimum threshold for Transformers, Shunt Reactors and associated equipments for local production and content as specified to various categories of 90 %)				
3.2	C3.3.12	Supply, deliver, Install, Test and Commission, TRANSFORMER, 1 MVA, / 11kV/400V, 3 phase, 50Hz, Oil-immersed outdoor/indoor, ONAN Cooling, copper double wound, 1100v nominal, 50Hz Frequency, +/-5% voltage variation, +/- 3% frequency variation, delta/star windings, Dyn 11 vector symbol, core type, Carlit insulation.	No	2,0		
		The DTI has designated and determined a stipulated minimum threshold for instrument transformers, busbars, housing, switching devices for local production and content as specified to various categories of 50%)				
3.3	C3.3.12 , C3.3.14	Supply, Install, Test and Commission INDOOR 11kV SWITCHGEAR, Metal clad, 11kV, 630/1050 A, 50Hz, complete with withdrawable SF6 circuit breakers, Intelligent Electronic Devices (IEDs), Protection CTs in cable compartment as specified, Metering CTs as specified, VTs, Man Machine Interface, I/O modules, switches, push buttons, LED status indication, voltage indication, contactors, fuses, MCBs, metering, protection test block, interlocking mechanisms, gland plates, rating plates, labels and constructed and tested to IEC 62771				
3.4		Incomer, 1050 A with VT's	No	3,0		
3.5		Bus Section - 1050A	No	2,0		
3.6		Feeder - 630A	No	4,0		
		BTU				
3.7		Supply and Install Battery Charging system, 110VDC Output, 230VAC input compete with indications and alarms as specified. The battery system shall be integrated with the existing.	No	1,0		
CARRIED FORWARD						

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		BROUGHT FORWARD				
3.8		Supply and Install 110VDC, 200AH Battery Bank installed in a battery box.	No	1,0		
3.9		Supply and Install INDOOR MIMIC PANEL for remote switching, selection and indication for the 11kV system.	No	1,0		
3.10		Supply and Install INDOOR CONTROL AND RELAYING PANEL FOR MCC 400VAC panel board , floor mounted complete with IEDs, indications, switches, push buttons complete with MCBs as per single line, voltage reading, voltage selector switch, meter reading, indication, contactors and main MCB shunt tripping constructed with 3mm thick 3CR12 mild steel and coated with epoxy powder. MCC with 5 x 400kw	No	1,0		
3.11		Supply and install INDOOR METERING PANEL, wall mounted complete with tariff meters, software's and connection cables for downloads.	No	1,0		
3.12		Supply and MANUAL AND REMOTE RACKING DEVICES for the 11kV switchgear	No	2,0		
3.13		Supply and install TOOLS for commissioning, operations and maintenance	No	1,0		
3.14		RECOMMENDED 3 YEAR SPARES in line with best practices	No	1,0		
3.15		Supply and install MV POWER CABLES, XLPE 150mm ² x 3core 11KV , STRANDED COPPER	m	72,0		
3.16	C3.3.12	Supply and Install 70mm ² earth wire	m	54,0		
3.17		Supply and Install 120mm ² armoured four core cable for connecting from power transformer to the 400V MCC including termination	m	210,0		
3.18		Supply and Install 70mm ² earth wire	m	210,0		
3.19		Supply and install 95mm ² armoured three core cable for connecting from the 11kV structure to the transformer including termination	m	40,0		
CARRIED FORWARD						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		BROUGHT FORWARD				
		LV Power Cables, 1KV, Stranded Copper				
3.20	C3.3.9.2, C3.3.10	Supply and install 16mm ² 4 core non armoured cable for connecting from the closest 6 substation light to 400VAC DB to form a ring circuit including termination	m	10		
3.21	C3.3.9.2, C3.3.10	Supply and Install 16 Way Flush DB, 63A Earth leakage, 40A C/B, 29 CB, 10A CB, lighting protection, 4 x 1.2 earth spike	No	1		
3.22	C3.3.9.2, C3.3.10	Supply and Install 16mm ² , 4 core non armoured cable for connecting from 400VAC DB to battery charger including termination	m	15		
3.23	C3.3.9.2, C3.3.10	Supply and Install 2,5mm ² 3 core non armoured cable for connecting from battery charger to 110VDC DB and between battery banks and 110VDC battery banks to 110VDC DB including termination	m	16		
3.34		Supply and Install 6mm ² 3 core non armoured cable for connecting from 400VAC DB to utility socket outlets in the switchyard including termination	m	6		
3.34		Supply and Install 4mm ² x core non armoured cable for connecting from 110VDC DB to various equipment including termination	m	20		
		GP Wiring, 1KV, Stranded Copper				
3.35		Supply and install 4mm ² installed in conduits each colour	m	100		
3.36		Supply and install 2.5mm ² ,installed in conduits	m	100,0		
		Multi Core Control Cables, Non Armoured 1KV, Stranded Copper				
3.37		Supply and install 4mm ² x 20 core installed in trenches and cable trays	m	70,0		
3.38		Supply and install 4mm ² x 10 core installed in trenches and cable trays	m	70,0		
3.39	C3.3.9.2, C3.3.10	Supply and install 4mm ² x 6 core installed in trenches and cable trays	m	70,0		
CARRIED FORWARD						

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
3.40	C3.3.9.2, C3.3.10	BROUGHT FORWARD Supply and install 2.5 mm ² x 10 core installed in trenches and cable trays	m	70,0		
3.41	C3.3.9.2, C3.3.10	Supply and install 2.5mm ² x 6 core installed in trenches and cable trays	m	70,0		
3.42	C3.3.9.2, C3.3.10	Supply and install 2.5mm ² x 2 core installed in trenches and cable trays	m	70,0		
		Indoor DC And AC Panel Boards				
3.43		Supply and install 400VAC panel board complete with MCBs constructed with 3mm thick 3CR12 mild steel and coated with epoxy powder.	No	1,0		
3.44		Supply and install Floor standing, 110VDC panel board complete with 5kA MCBs as per single line, voltage reading, voltage selector switch, meter reading, indication, contactors and main MCB shunt tripping constructed with 3mm thick 3CR12 mild steel and coated	No	1,0		
		Socket Outlets And Lighting				
3.45		Supply and install Indoor 16A, 220V, 3 pin socket outlets installed in wall box	No	2,0		
3.36		Supply and install Weather-proof 16A, 220V, 3 pin socket outlets installed on station	No	2,0		
3.37		Supply and install Indoor 63A 3 pin welding socket outlets installed in wall boxes	No	2,0		
3.38		Supply and install Weather-proof 63A 3 pin welding socket outlets installed on a station	m	2,0		
3.39		SIGNAGE, EQUIPMENT & CABLE LABELLING as per Electrical Machinery Regulations and as directed by ENGINEER	No	1,0		
3.40		CABLE TRAYS, 300mm wide, galvanized, heavy duty, perforated complete with mounting, tees, bends.		18,0		
		Drawing Desk And Drawing Rack And File Cabinet				
3.40		Drawing Desk	No	1,0		
3.41		Drawing Cabinet	No	1,0		
CARRIED FORWARD						

UPGRADING OF SAULSPOORT WATER TREATMENT WORKS SECTION A: RAW WATER ABSTRACTION POINT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
3.42		BROUGHT FORWARD File Cabinet	No	1,0		
3.43		LAPTOP complete with software for meter reading and IED programming. The laptop shall have the operating system compatible with latest application software for meter reading and IED programming. The laptops shall be from a recognized brand (Dell, HP, Lenovo) and shall be core i7 or higher, 1TB SSD hard drive and 16GB RAM.	No	1,0		
3.44		11KV CABLE TERMINATION STRUCTURE, for terminating 3core MV cables complete with support structure, 3 way link disconnecting bonding box, bolts, nuts, clamps but without the surge arrestor and associated support bar. (3 per set)	No	2,0		
3.45		Supply and install 95mm sq. 11KV ALUMINUM XLPE CABLE, 3 CORE installed in excavated trench, provided with concrete cap, danger warning tap, and terminated at the Municipality substations including terminations		2,0		
3.46		Excavation in soft soil for installation of the cable above	m ³	400,0		
3.47	SANS 1200	Supply 25-38mm, depth 100mm depth yard stone including 100mm chamfer at 45 degrees	m ³	50,0		
3.48	SANS 1200	Transformer plinth concrete strength at 28 days at 25MPa and bearing capacity of foundation of 75kpa	m ³	10,0		
3.49		Shattering area	m ²	6,0		
3.50		Excavation volume	m ³	12,5		
		SPECIALIST/PROFESSIONAL ITEMS				
3.51		IED programming by specialist	Prov. Sum	1,0	400 000.00	400 000.00
3.52	C3.3.13 .1	Earthing and lightning protection	Prov. Sum	1,0	250 000.00	250 000.00
3.53		Supply and install 21m steel galvanized pole with 4x400W luminaires	sum	1,0		
TOTAL CARRIED FORWARD TO SUMMARY						

		SECTION 4: CIVIL WORKS				
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
4	SANS1 200	CIVIL WORKS				
4.1		Guard house at Raw Water Abstraction Works, including gate complete refer to Dwg No RN181/100/01 (Including excavations)	Sum	1		
4.2		Access walkway between Substation and Pump station	Sum	1		
4.3		Construction of Substation Building at Raw Water Abstraction Works				
4.3.1		Demolition of existing structure	Sum	1		
4.3.2		Substation Building complete refer to Dwg No RN181/100/04 (Including excavations)	Sum	1		
4.3.3		Construction of Clearvu, or similar approved, 2,4m High security fence 6m electrical sliding gate and pedestrian gate	m	110		
4.3.4		Construction of gravel access road to Substation, complete	Sum	1		
4.4	SANS 1200	Construction of Access Road to Raw Water Pump Station (Refer to Drawing 181/100/02)				
4.4.1		Demolish existing concrete access road	Sum	1,0		
4.4.2	SANS1 200DM	Earthworks				
4.4.2.1		150mm C4 Stabilized Subbase compacted to 95% MOD AASHTO	m ³	32,0		
4.4.3		Steel reinforcement in concrete:				
4.4.3.1		10mm wire mesh	m ²	200,0		
4.4.4	SANS1 200 GA	Concrete				
4.4.4.1		Cast in situ concrete edge and intermediate beams, class 25/19	m ³	5,0		
		Cast concrete road, class 30/19	m ³	20,0		
		Side drain, class 25/19	m ³	3		
TOTAL CARRIED TO SUMMARY						

C2.2 BILL OF QUANTITIES**SUMMARY OF BILL OF QUANTITIES**

Section	Description	Amount (R)
1	SECTION 1: PRELIMINARY AND GENERAL	
2	SECTION 2: UPGRADING OF RAW WATER PUMP STATION	
3	SECTION 3: UPGRADING OF ELECTRICAL SUBSTATION	
4	SECTION 4: CIVIL WORKS	
Sub-Total A		
Add 10% for Contingencies on Sub-Total A		
Sub-Total B		
Add 15% VAT on Sub-Total C		
Contract Price Carried Forward to Form of Offer		

Time for Completion of the Contract (Months) (Max 18 Months)

SIGNED ON BEHALF OF TENDERER:

C3 SCOPE OF WORK

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C3.2 PROJECT SPECIFICATIONS

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C3.1 STANDARD SPECIFICATIONS

The standard specifications on which this contract is based are the **SABS 1200 Standardized Specifications**.

Although not bound in nor issued with this Document, the following Parts of the SABS 1200 Standardized Specifications shall apply:

SABS 1200 A:	General (1986)
SABS 1200 AB:	Engineers Office (1986)
SABS 1200 C:	Site Clearance (1980)
SABS 1200 DA:	Earthworks (Small Works) (1988)
SABS 1200 DB:	Earthworks (Pipe Trenches) (1989)
SABS 1200 DK:	Gabions and Pitching (1996)
SABS 1200 GA:	Concrete (Small Works) (1982)
SABS 1200 HB:	Cladding and Sheet piling (1985)
SABS 1200 L:	Medium Pressure Pipelines (1983)
SABS 1200 LB:	Bedding (1983)
SABS 1200 LE:	Stormwater drainage (1982)

Variations and additions to the various SABS 1200 Standardised Specifications are given in Portion B of the Project Specifications

The following SANS specifications are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

SANS 10396:2003:	Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures
SANS 1914-1 to 6 (2002):	Targeted Construction Procurement
SANS 1921-1 (2004):	Construction and Management Requirements for Works Contracts Part 1: General Engineering and Construction Works and where accommodation of traffic is involved:
SANS 1921-2 (2004):	Construction and Management Requirements for Works Contracts; Part 2: Accommodation of Traffic on Public Roads Occupied by the Contractor.

C3.2 PROJECT SPECIFICATIONS

C3.2.1 PROJECT DESCRIPTION

The project comprises the following:

Upgrading of mechanical, electrical and civil works at Saulspoort abstraction point with the following view:

- Increase the treatment capacity of pump station by refurbishing and upgrading the Pumps, motors, panels, clarifiers, substation, civil works, etc.
- Improve the hydraulic integrity of the pumping main to water treatment works.
- Address the reliability of supply issues and shortages in the area being supplied from.
- Lower the risk of water restrictions in the by ensuring that the plant operate optimally.
- Improve operational efficiency by increasing capacity and modernising infrastructure.
- Enable the reliable supply of water to the water treatment plant.

:

C.3.3 EQUIPMENT SPECIFICATIONS

PART C3.3: EQUIPMENT SPECIFICATIONS

MECHANICAL WORKS

C3.3.1 SELF-PRIMING NON-CLOGGING PUMP

All pumps shall be supplied, delivered, installed and commissioned as per the Standard Particular Specification, Design, Manufacture and Supply of Pumps. The following amendments and additional clauses will also apply (these amendments and additional requirements will prevail in case of ambiguity between specifications):

PART 1 - GENERAL

C3.3.1.1 Performance Criteria

The pump manufacturer must be ISO 9001:2000 revision certified, with scope of registration including design control and service after sales activities.

Pumps must be designed to handle raw unscreened domestic sanitary sewage or industrial waste. Pumps shall have 3" suction connection, and 3" discharge connection. Two duty pumps, installed in parallel, are required under this contract. The pumping system with both pumps operating shall perform under following operating conditions:

Parameter	#
Capacity (LPS)	25
Total Dynamic Head (m)	33
Total Dynamic Suction Lift (m)	2.5

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Maximum Repriming Lift (m)	3.0
Maximum Static Suction Lift (m)	3.0
Total Discharge Static Head (m)	25
Minimum Submergence Depth (m)	N/A

The control of the pumps will be done using capacitive probes installed in the pump sump. Three levels will govern the operation.

- Level 1 Starting of 1 pump. Pump will be operating at lower RPM using a VSD to ensure operation at a N efficiency higher than 50 %;
 - Level 2 Starting of second pump and operating both pumps at duty as specified above,
 - Level 3 Stopping of both pumps (low level condition)
- C3.7.1.1.1 Pump Performance Certifications

Solids Handling Capability

All internal passages, impeller vanes, and recirculation ports shall pass a 60 mm spherical solid. Smaller internal passages that create a maintenance nuisance or interfere with priming and pump performance shall not be permitted. Upon request from the engineer, manufacturer's certified drawings showing size and location of the recirculation port(s) shall be submitted for approval.

Reprime Performance

Consideration shall be given to the sanitary sewage service anticipated, in which debris is expected to lodge between the suction check valve and its seat, resulting in the loss of the pump suction leg, and siphoning of liquid from the pump casing to the approximate center line of the impeller. Such occurrence shall be considered normal, and the pump must be capable of automatic, unattended operation with an air release line installed.

During unattended operation, the pump shall retain adequate liquid in the casing to insure automatic repriming while operating at its rated speed in a completely open system. The need for a separate suction check valve or external priming device shall not be required.

Pump must reprime 2.3 vertical meter at the specified speed and impeller diameter. Reprime lift is defined as the static height of the pump suction above the liquid, while operating with only one-half of the liquid remaining in the pump casing. The pump must reprime and deliver full capacity within five minutes after the pump is energized in the reprime condition. Reprime performance must be confirmed with the following test set-up:

A check valve to be installed downstream from the pump discharge flange. The check valve size shall be equal to (or greater than) the pump discharge diameter.

A length of air release pipe shall be installed between pump and the discharge check valve. This line shall be open to atmosphere at all times duplicating the air displacement rate anticipated at a typical pump installation fitted with an air release valve.

No restrictions in the pump or suction piping will prevent the siphon drop of the suction leg. Suction pipe configuration for reprime test shall incorporate a 500 mm minimum horizontal run, a 90° elbow and vertical run at the specified lift. Pipe size shall be equal to the pump suction diameter.

Impeller clearances shall be set as recommended in the pump service manual.

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Repeatability of performance shall be demonstrated by testing five consecutive reprime cycles. Full pump capacity (flow) shall be achieved within five minutes during each cycle.

Liquid to be used for reprime test shall be water.

Upon request from the engineer, certified reprime performance test results, prepared by the manufacturer, and certified by a registered professional engineer, shall be submitted for approval prior to shipment.

C3.3.15.1.1 Manufacturer's Warranty

The pump manufacturer shall warrant the pump equipment to be of quality construction, free of defects in material and workmanship. A written warranty shall include specific details described below.

All equipment, apparatus, and parts furnished shall be warranted for five (5) years, excepting only those items that are normally consumed in service, such as oils, grease, packing, gaskets, O-rings, etc. The pump manufacturer shall be solely responsible for warranty of the pump equipment and all components.

Components failing to perform as specified by the engineer, or as represented by the manufacturer, or as proven defective in service during the warranty period, shall be replaced, repaired, or satisfactorily modified by the manufacturer without cost of parts or labour to the owner.

It is not intended that the pump manufacturer assume liability for consequential damages or contingent liabilities arising from failure of any vendor supplied product or part which fails to properly operate, however caused. Consequential damages resulting from defects in design, or delays in delivery are also beyond the manufacturer's scope of liability.

The warranty shall become effective upon the acceptance by the purchaser or the purchaser's authorized agent, or sixty (60) days after installation, or ninety (90) days after shipment, whichever occurs first.

PART 2 - PRODUCT

C3.3.1.2 **Manufacturers**

The pump manufacturer must be ISO 9001:2000 revision certified, with scope of registration including design control and service after sales activities.

The specifications depict equipment and materials manufactured by the Gorman-Rupp and Cornell Pump Companies which are deemed suitable for the service anticipated. It is not intended, however, to eliminate other products of equal quality and performance. The contractor shall prepare his bid based on the specified equipment for purposes of determining low bid. Award of a contract shall constitute an obligation to furnish the specified equipment and materials.

After execution of the contract, the contractor may offer substitutions to the specified equipment for consideration. The equipment proposed for substitution must be superior in construction and performance to that specified in the contract, and the higher quality must be demonstrated by a list of current users of the proposed equipment in similar installations.

In event the contractor obtains engineer's approval for equipment substitution, the contractor shall, at his own expense, make all resulting changes to the enclosures, buildings, piping or electrical systems as required to accommodate the proposed equipment. Revised detail drawings illustrating the substituted equipment shall be submitted to the engineer prior to acceptance.

It will be assumed that if the cost to the contractor is less for the proposed substitution, then the contract price shall be reduced by an amount equal to the savings.

C3.3.1.3 **Pump Design**

Pump shall be horizontal, self-priming centrifugal type, designed specifically for handling raw unscreened domestic sanitary sewage or industrial waste. Pump solids handling capability

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and performance criteria shall be in accordance with requirements listed under PART 1 - GENERAL of this section.

Materials and Construction Features

Pump casings shall be cast iron Class 30 or ductile iron with integral volute scroll. Casing shall incorporate following features:

Mounting feet sized to prevent tipping or binding when pump is completely disassembled for maintenance.

Fill port cover plate, 85 mm" diameter, shall be opened after loosening a positive lock clamp bar assembly. In consideration for safety, capscrew threads must provide slow release of pressure, and the clamp bar shall be retained by detente lugs. A non-metallic gasket shall prevent adhesion of the fill port cover to the casing while assuring a reliable seal.

Lower casing drain plug shall be at least 1 1/4" NPT to insure complete and rapid draining.

Liquid volume and recirculation port design shall be consistent with performance criteria listed under PART 1

- GENERAL of this section.

Cover plates shall be cast iron Class 30 or ductile iron ASTM-A536. Design must incorporate the following maintenance features:

Retained by hand nuts for complete access to pump interior. Cover plate removal must provide ample clearance for removal of stoppages, and allow service to the impeller, seal, wear plate or check valve without removing suction or discharge piping.

Replaceable wear plates secured to the cover plates by weld studs and nuts shall be AISI 1015 HRS. Wear plates shall be self-cleaning design ensuring that debris is cleared away and does not collect on the impeller vanes.

In consideration for safety, a pressure relief valve shall be supplied. Relief valve shall open at 75-200 PSI. Two O-rings of Buna-N material shall seal each cover plate to pump casings.

Pusher bolt capability to assist in removal of cover plates. Pusher bolt threaded holes shall be sized to accept same retaining capscrews as used in rotating assemblies.

An easy-grip handle shall be mounted to the face of each cover plate.

Each rotating assembly, which includes impeller, shaft, mechanical shaft seal, lip seals, bearings, seal plate and bearing housing, must be removable as a single unit without disturbing the pump casing or piping. Design shall incorporate the following features:

- Seal plates and bearing housings shall be cast iron Class 30 or ductile iron ASTM-A536.

Anti-rotation ribs shall be cast into the seal plates to reduce internal wear and maximize component life. Separate oil filled cavities, vented to atmosphere, shall be provided for shaft seal and bearings. Cavities must be cooled by the liquid pumped. Three lip seals will prevent leakage of oil.

- Each bearing cavity shall have an oil level sight gauge and fill plug check valve. The clear sight gauge shall provide easy monitoring of the bearing cavity oil level and condition of oil without removal of the

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fill plug check valve. The check valve shall vent the cavity but prevent introduction of moist air to the bearings.

- Each seal cavity shall have an oil level sight gauge and fill/vent plug. The clear sight gauge shall provide easy monitoring of the seal cavity oil level and condition of oil without removal of the fill/vent plug.
- Double lip seals shall provide an atmospheric path providing positive protection of bearings, with capability for external drainage monitoring.
- Impellers shall be ductile iron, two vane, semi-open, non-clog, with integral pump out vanes on the back shroud. Impellers shall be statically or dynamically balanced. Impeller shall thread onto the pump shaft and be secured with a lockscrew and conical washer.
- Shafts shall be AISI 4140 alloy steel or ASNI1144 "LaSelle stress proof" unless otherwise specified by the engineer, in which case AISI 17-4 pH stainless steel shall be supplied.
- Bearings shall be anti-friction ball type of proper size and design to withstand all radial and thrust loads expected during normal operation. Bearings shall be oil lubricated from a dedicated reservoir. Pump designs which use the same oil to lubricate the bearings and shaft seal shall not be acceptable.
- Each shaft seal shall be oil lubricated mechanical type. The stationary and rotating seal faces shall be silicon carbide alloy or tungsten carbide. Each mating surface shall be lapped to within three light bands flatness (35 millionths of an inch), as measured by an optical flat under monochromatic light. The stationary seal seat shall be double floating by virtue of a dual O-ring design. An external O-ring secures the stationary seat to the seal plate, and an internal O-ring holds the faces in alignment during periods of mechanical or hydraulic shock (loads which cause shaft deflection, vibration, and axial/radial movement). Elastomers shall be viton; cage and spring to be stainless steel. Seal shall be oil lubricated from a dedicated reservoir. The same oil shall not lubricate both shaft seal and shaft bearings. Seals shall be warranted in accordance with requirements listed under PART 1 - GENERAL of this section.
- Pusher bolt capability to assist in removal of rotating assemblies. Pusher bolt threaded holes shall be sized to accept same capscrews as used for retaining rotating assemblies.

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1. Adjustment of the impeller face clearances (distance between impeller and wear plate) shall be accomplished by external means.
 - Clearances shall be maintained by external shimless cover plate adjustment, utilizing locking collar, using basic hand tools, and adjusting screw design for incremental adjustment of clearances by hand. Requirement of realignment of belts, couplings, etc., shall not be acceptable. Cover plates shall be capable of being removed without disturbing clearance settings.
 - There shall be provisions for additional clearance adjustments in the event that adjustment tolerances have been depleted from the cover plate side of the pump. The removal of stainless steel tabbed spacers from the rotating assembly side of the pump shall allow for further adjustment as described above.
 - Clearance adjustments which requires movement of the shaft only, thereby adversely affecting seal working length or impeller back clearance, shall not be acceptable.

An externally removable suction check valve shall be molded Neoprene with integral steel and nylon reinforcement. A blow-out center shall protect pump casings from hydraulic shock or excessive pressure. Removal or installation of the check valve must be accomplished from the top of the lower pump casing without disturbing the suction piping or completely draining both casings. Sole function of check valve shall be to save energy by eliminating need to reprime after each pumping cycle. Pumps requiring a suction check valve to assist reprime will not be acceptable.

Serviceability

The pump manufacturer shall demonstrate to the engineer's satisfaction that consideration has been given to reducing maintenance costs.

No special tools shall be required for replacement of any components within the pump.

PART 3 –

EXECUTION

C3.3.1. Examination

A Contractor shall off-load equipment at installation site using equipment of sufficient size and design to prevent injury or damage. Immediately after off-loading, contractor shall inspect complete pump and appurtenances for shipping damage or missing parts. Any damage or discrepancy shall be noted in written claim with shipper prior to accepting delivery. Validate all pump serial numbers and parts lists with shipping documentation. Notify the manufacturer's representative of any unacceptable conditions noted with shipper.

C3.3.1.5 Installation

Install, level, align, and lubricate pump(s) as indicated on project drawings. Installation must be in accordance with written instructions supplied by the manufacturer at time of delivery.

Suction pipe connections are vacuum tight. Fasteners at all pipe connections must be tight. Install pipe with supports and thrust blocks to prevent strain and vibration on pump piping.

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Install and secure all service lines (level control, air release valve or pump drain lines) as required in wet well.

Check motor and control data plates for compatibility to site voltage. Install and test grounding prior to connecting line voltage to control panel.

Prior to applying electrical power to any motors or control equipment, check all wiring for tight connection. Verify that protective devices (fuses and circuit breakers) conform to project design documents. Manually operate circuit breakers and switches to ensure operation without binding. Open all circuit breakers and disconnects before connecting utility power. Verify line voltage, phase sequence and ground before actual start-up.

After all anchor bolts, piping and control connections are installed, completely fill the grout dam in the pump base with non-shrink grout.

C3.3.1.6 **Field Quality Control**

C3.7.15.6.1 Operational Test

Prior to acceptance by owner, an operational test of all pumps, drives, and control systems shall be conducted to determine if the installed equipment meets the purpose and intent of the specifications. Tests shall demonstrate that all equipment is electrically, mechanically, structurally, and otherwise acceptable; it is safe and in optimum working condition; and conforms to the specified operating characteristics.

After construction debris and foreign material has been removed from the wet pit, contractor shall supply clear water volume adequate to operate the pump through several pumping cycles. Observe and record operation of pump, suction and discharge gage readings, ampere draw, pump controls, and liquid level controls. Check calibration of all instrumentation equipment, test manual control devices, and automatic control systems. Be alert to any undue noise, vibration or other operational problems.

C3.3.1.7 **Commissioning**

Commissioning of equipment will be undertaken in two phases. In the first phase the Engineer must be present when a so called cold commissioning will be done to the equipment. This will be when all equipment will be tested and started. Once the Engineer is satisfied that all equipment are in working order, the commissioning phase will commence with the second phase. At the start of the second phase, a 5 day reliability run will start, and only after a successful reliability run, the completion certificate will be issued. The purpose of the reliability run is the proof of functional capability. Should the sum of all outages during the 5 day period exceed 2 hours, the reliability run will be considered to be interrupted and will start anew.

C3.3.1.8 **Measurement and Payment**

Self-Priming Non-clogging pump.....Unit: No

Measurement and payment will distinguish between supply/delivery and install/commissioning. The rate for supply and delivery shall include the design, manufacture of the pump including the motor, voltage surge and spike protection, anti-condensation heaters, rating plate and direction of rotation plate, suction and delivery pressure gauges, coupling, safety covers, anchor bolts and the painting of the pump and motor to be specified colour code. The rate tendered for installation and commissioning must include mounting on the baseplate, fully aligning the pumpsets, grouting in the anchor bolts and base, fixing, painting, marker plates and training of the Employer's operators.

C3.3.2 **PIPE WORK**

All steel pipework shall be supplied, delivered, installed and commissioned as per the Standard Particular Specification, Design, Manufacture and Supply of Steel Pipes, Specials and Fittings and Lining and Coating of Steel Pipes and Specials. The following amendments and additional clauses will also apply:

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C3.3.2.1 Pipe Work Cast into Water Retaining Structures

All pipe items which pass through water retaining walls and/or slabs must be cast into the wall at the time of casting the wall. The provision of box-outs will not be permitted. It is the Mechanical Contractor's responsibility to ensure that all pipes which will be cast into walls are available and positioned in the wall timeously.

C3.3.2.2 Pipe Linings and Coatings

Unless otherwise stated, all steel pipes are to receive "type C" coatings and linings (refer to note 9 on the pipe item schedules), which shall consist of an approved solvent free epoxy, (*Sigmaguard EHB*) or similar, applied strictly in accordance with the manufacturers specification to a minimum dry film thickness (DFT) of 250µm. All epoxy coatings are to be applied in accordance with SANS 1217:2001.

In order to minimise the risk of chipping the coating prior or during installation, all flanged pipes and valve must be fitted with plyboard or masonite blank flanges. Plain ends shall be protected with a rubber strip or other approved means. These protection devices must not be removed until the last possible moment during installation at which point the Engineer's Representative will inspect the pipe or valve lining for chipping.

C3.3.2.3 Testing of Pipe Linings and Coatings

All type "C" linings and coatings, refer to note #9 on pipe items schedules, are to be inspected at the factory for pinholes by an independent testing authority using a wet sponge pinhole detector with variable DC voltage and filtered with a sensitivity control. The wet sponge pinhole detector must be set to 90 volts at a calibration resistance of 10 MΩ. All pipes which are to be immersed in water must also be certified 100% pinhole free.

The thickness of all coatings must be tested at the factory by an independent testing authority in accordance with SANS 1200 HC, Clause 6.5. DFT readings must be taken at a rate of 1 reading per m2 of coated surface.

All test certificates must be fully documented and submitted to the Engineer before payment will be approved.

C3.3.2.4 Pipe Welding and Testing

All steel pipes are to be welded in accordance with API 1104. Class 40 pipework shall be manufactured to API 5L. All class 40 pipework welding, including Site welds, are to be 100% radio graphically tested by an independent SABS approved authority while testing in accordance with SANS 1200 L for all other pipework will suffice. All tests must be fully documented. Payment for the supply and delivery of pipework will not be approved until all test certificates have been received

C3.3.2.5 Pipe Markings

The pipe item number must be clearly stamped on the flange of each pipe and shall be clearly legible after the pipe is fully coated.

C3.3.2.6 Bolts

All bolts shall be of grade 4,6 mild steel, hot dipped galvanized to EN 10240 : 1997 and SANS ISO 1461 : 1999, except where periodically or permanently submerged in water in which case stainless steel bolts grade 316, are required. Stainless steel bolts are to be coated with Chesterton Nickel anti-rust compound (or similar approved). All bolts shall be fitted with washers manufactured of the same material as the bolt.

C3.3.2.7 Measurement and Payment

The rates offered under the supply and delivery of pipework must include the cost of manufacture, delivery, coating, protection of the coating during storage and installation, marking, all welding and coating inspections and documentation.

Steel Pipe items and specials as instructed by Engineer.....Unit: No

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Measurement and payment will distinguish between supply/delivery and install/commissioning. The rate for supply and delivery shall include the design, manufacture and delivery of the pipe items and specials in accordance with specification in this document. The rate tendered for installation and commissioning must include all gaskets, bolts etc. to render a functional product according to specifications in this document.

C3.3.3 VALVES

C3.3.2.1 General

All valves must be provided with state of valve indicators.

Handwheels shall have the words 'OPEN' and 'CLOSED' cast into it together with arrows indicating the open and closed direction.

The valve class must be stamped clearly on each valve together with the item number as listed in the pipe item list.

Gears, where required, shall be machine cut and enclosed in an IP 65 rate enclosure.

Any valve with an extended spindle of longer than 1m must have two universal joints fitted in the spindle to cater for any misalignment.

All valves are to be coated and lined with Sigamaguard EHB applied strictly in accordance with the manufacturer's specification to a minimum dry film thickness (DFT) of 250µm. All epoxy coatings are to be applied in accordance with SANS 1217:2001.

C3.3.3.2 Knife Gate Valves

Knife Gate Valves will be installed as isolation valves in sewage pumping station.

C3.3.3.3 Non-return Valves

All non-return or reflux valves shall be of the ball type.

C3.3.3.4 Measurement and Payment

Valves as instructed by Engineer.....Unit: No

Measurement and payment will distinguish between supply/delivery and install/commissioning. The rate for supply and delivery shall include the design, manufacture and delivery of the valves in accordance with specification in this document. The rate tendered for installation and commissioning must include all gaskets, bolts etc. to render a functional product according to specifications in this document.

C3.3.4 SUPPLY OF VALVES

C3.3.4.1 Scope

This specification covers the design, manufacture and supply of gate valves, butterfly valves, air valves, reflux valves and sleeve-type jet dispersion valves for use in pressure pipelines.

C3.3.4.2 General Requirements

C3.3.4.2.1 Design Pressure

Each valve is assigned a design pressure elsewhere in these documents and shall be tested in relation to these pressures as specified. The design pressure shall be hard stamped on the edge of a flange of each valve.

C3.3.4.2.2 Test Pressures

Valve bodies shall be subjected to closed-end tests at pressures of 1, 5 times the design pressure. Test pressures shall be maintained for not less than 5 minutes duration and valve

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bodies shall be watertight in all respects.

Complete valves shall be subjected to open-end tests at pressures of 1,5 times the design pressure for material strength and soundness. Drop tightness is not a requirement for this test.

Complete valves shall be subjected to open-end tests for drop tightness at pressures from zero (0) to 1, 0 times the design pressure. Valves shall be droptight over the complete range of pressures.

C3.3.4.2.3 Design Life

All valves and appurtenant fittings shall be designed for a useful life of 45 years under the operating conditions indicated elsewhere in the documents.

C3.3.4.2.4 Guarantee

All valves shall be guaranteed against faulty design, materials and workmanship for a period of 5 years from date of delivery. During this period the Contractor shall attend to and rectify at his own cost any defects which can be attributed to faulty design, materials and workmanship. Normal wear and tear shall be excluded. Welding on valve castings will not be allowed. Ultrasonic testing must be done on cast steel bodies.

C3.3.4.2.5 Flanges

Valves shall be flanged and drilled off-centre to B.S. 4504 or SANS 1123:2007, unless otherwise stated elsewhere. Flanges shall have flat joint faces machined in accordance with B.S. 4504 or SANS 1123:2007. All flange faces to have a gramophone finish.

Sufficient clearance shall be allowed between the body and the flange to enable flange bolts to be tightened. Tapped holes shall only be permissible where stiffening ribs interfere with bolting.

Should required flange size fall beyond the range of B.S. 4504 or SANS 1123:2007, mating dimensions shall be in accordance with ISO Standard 7005 with thicknesses adequate to withstand closed-end test pressures.

C3.3.4.2.6 Jointing Materials

Valves shall be supplied complete with bolts, nuts, washers and gaskets for joining up to adjacent mating flanges. Bolts shall be of sufficient length for at least 2 and maximum 4 screw threads to protrude outside nuts when assemblies are fully tightened. A washer shall be fitted under all bolt/screw heads and nuts. Only full-faced gaskets will be allowed.

C3.3.4.2.7 Contact between Dissimilar Metals

Suitable insulation materials shall be used on the contact faces between dissimilar metals of which the potential difference exceeds 0,3 volts.

C3.3.4.2.8 Painting of Valves

A pipe lining epoxy shall be used to coat all internal and external cast-iron, cast-steel and mild-steel components of valves in accordance with SANS 1217:2001 with the following provisions:

- (a) Only non-metallic abrasives shall be used for surface preparation:
 - It shall not be recycled after the first use.
 - All blow/deep holes in cast iron surfaces shall be drilled out and filled with a solvent free epoxy filler before applying the epoxy coating(s).
- (b) Minimum dry film thicknesses:
 - Internal 300 micrometres.

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- External 300 micrometres.
- Flange faces 125 micrometres.

(c) All internal surfaces

shall be pinhole free. C3.7.4.2.9

Valve Supports and

Lifting

Gate valves, butterfly valves and reflux valves of 400 mm NB and larger shall have supporting feet cast integrally with the valve body. Each valve over 300 mm NB in size shall have two eye bolts of the requisite strength securely attached so that the valve can be lowered into its correct position for bolting to the mating flanges.

C3.3.4.2.10 Inspection

The inspection of valves shall be carried out by the Engineer or his representative in the manufacturer's works. The Supplier or Manufacturer shall give at least 2 weeks prior notification to the Engineer of the dates of inspection.

The Manufacturer or Supplier shall provide all labour, materials and facilities required for inspection free of charge.

The Engineer's inspection shall in no way relieve the Supplier or Manufacturer from any of his obligations to design, manufacture and supply valves of superior quality and workmanship in accordance with the specification.

C3.3.4.3 **Gate Valves**

C3.3.4.3.1 Type

Valves shall be double flanged, wedge gate or RSV, internal (non-rising) spindle types of which gates shall be completely clear of the waterway in the fully open position.

C3.3.4.3.2 Standards

SANS 664:1999 and SANS 191:2008 shall apply as and where applicable and where not in contradiction to this specification.

C3.3.4.3.3 Opening and Closing

Closure of valves shall be by clock wise rotation of spindles or handwheels.

All gate valves shall be capable of being opened or closed under an unbalanced pressure equal to design pressure.

The effort required on handwheels opening or close valves under these conditions shall not exceed 250 N in the case of valves up to 300 mm NB and shall not exceed 400 N in the case of larger valves.

C3.3.4.3.4 By-Passes

Where indicated in the documents, valves shall be fitted with by-passes and by-pass gate valves. By-passes shall be bolted on to the body of the main valve where possible and not to the adjoining pipework. By-pass gate valves shall conform to this specification. Pipework and fittings shall be hot dip galvanized after fabrication.

C3.3.4.3.5 Materials

Valve bodies and gates shall be of cast-iron or cast-steel. Cast-iron shall conform to SANS 936:1969 grade SG38/SG42 or SANS 1034:1975 grade 300 minimum. Cast-steel shall conform to BS3100, BS1504-161 Gr 480 and SANS 1465-1:1988. Test specimens shall be submitted on request free of charge. No repair of cast components will be permitted, unless approved by the Engineer.

Spindles shall be of high strength stainless steel

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Body and gate sealing rings shall be of stainless steel, bronze or zinc-free gunmetal, unless otherwise specified because of the nature of the water.

Gate position indicators, i.e. marking plates and needles shall be of cast aluminium or cast brass.

Channel guides and shoes shall be in bronze or zinc-free gunmetal or stainless steel as specified in the Schedule of Quantities.

C3.3.4.3.

6 Construction Body

The body shall be of rugged design with substantial ribs to minimize distortion under pressure where necessary.

Where gearing is provided, bodies shall be designed and manufactured to withstand any additional stresses with an ample margin of safety.

Gate

One face of the gate shall be marked, corresponding to a similar mark on the body, to ensure correct replacement after removal.

The gate shall operate satisfactorily under the conditions specified. Sealing Faces

Body and gate seals shall be of design and construction such that would prevent seals becoming loose or water passing behind seals under all conditions of operation and test. This feature must be proved at tendering stage by suitable drawings and documentation.

The leading edges of sealing rings shall be slightly chamfered.

Channel Guides and Shoes

Channel guides with shoes shall be as deep and long as possible to support the gate during its travel.

Shoes shall be accurately fitted in the guides so as to ensure that sealing rings do not make contact before the gate is seated.

With the valve fully open at least half of the shoe shall be supported by the guides. Spindles and Handwheels

The spindle thrust collar shall bear against a ball thrust bearing of approved design, details of which shall be furnished at tendering stage.

Provision shall be made for glands to be repackable under pressure without shutting off the water. Unless otherwise specified all valves shall be fitted with caps complying with SANS 664:1999.

Position indicators

All valves of 300 mm NB and larger shall, except where otherwise specified elsewhere in the document, be fitted with mechanical indicators to show the position of the gate.

Marking plates shall be embossed to show clearly the fully open and closed positions and the 1/4, 1/2 and 3/4 intermediate open positions.

Indicators shall be of robust and rigid design and manufacture. Gearing

Gears shall be robust and machine cut and mountings shall be of substantial design and manufacture.

All gears with ratios 1:3 and higher shall be provided with easily replaceable shear pins to prevent damage to the valves if excessive force is applied. A spare pin shall be attached to each valve.

All lubricating points shall be fitted with nipples for grease-gun lubrication.

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C3.3.4.4 Reflux Valves

C3.3.4.4.1 Type

Valves shall be double flanged for horizontal installation in pipelines to minimize reflux action and to reduce water hammer in rising mains and shall be one of the following types as specified in the Schedule of Quantities.

- (a) Single sloping swingdoor for sizes up to 400 mm N.B.
- (b) Double sloping swingdoor for sizes larger than 400 mm N.B. up to 800 mm N.B.
- (c) Multiple sloping swingdoors for sizes larger than 800 mm N.B.
- (d) Tilting disc for all sizes up to 1 200 mm N.B. in rising mains where low hydraulic resistance is a requirement.
- (e) Recoil type for sizes up to 600 mm N.B. in rising mains in situations where abnormally rapid reversal flow is likely to occur.
- (f) A type consisting of a rubber annulus sealing on a perforated cone shall be acceptable in sizes up to 400 mm and to design pressures of 1 MPa in instances where clear water is to be conveyed. This type is however not covered by this specification.

C3.3.4.4.2 General Requirements

The valves shall have minimum hydraulic resistance, shall not be subject to gate or disc flutter and shall give rapid non-slam closure on reversal of flow. Preference shall be given to design which allows removal of doors or discs for inspection of doors or discs and seals without removal of the valve assembly from line.

Valves shall be free from external moving parts.

C3.3.4.4.3 By-passes

Where indicated in the documents, valves shall be fitted with by-passes and by-pass gate valves. By-passes shall be bolted on to the body of the main valve where possible and not to the adjoining pipework. By-pass gate valves shall conform to this specification. Piping and fittings shall be hot dip galvanized after fabrication.

C3.3.4.4.4 Materials

- (a) Valve bodies shall be of cast-iron or cast-steel. Cast iron shall conform to SANS 936:1969 grade SG38/SG42 or SABS grade 300 minimum. Cast-steel shall conform to BS 3100.
- (b) Doors and discs shall be of zinc-free gunmetal or cast-steel to the above requirements.
- (c) Test specimens shall be submitted on request, free of charge.
- (d) Swing door or disc hinge spindles shall be of high strength stainless steel conforming to A.I.S.I. 431 or equivalent.
- (e) Valve body seats and sealing faces on doors or discs shall be of stainless steel, zinc-free gunmetal or bronze or nickel.

C3.3.4.4.5 Construction

- (a) Body

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Bodies shall be of sound and robust design and shall be shaped to give the minimum change in waterway.

Designs of bodies and body seals shall be free from pockets to cause eddies or to accumulate debris. Special care shall be taken those foreign objects like bolts cannot lodge itself in pockets on the downstream side of body seats and thereby prevent doors from closing fully.

Access openings and covers shall be well designed and creation of stress raisers shall be prevented.

(b) Doors and Discs

Shall be cast as a unit with integral cast hinge lugs.

Doors and discs shall operate freely, but shall be restricted in its travel by the provision of substantial stops fitted with approved rubber facings to prevent wear due to metal contact. The rubber facings shall be vulcanized onto the metal and secured by corrosion resistant countersunk screws. Details shall be submitted with tenders.

The doors or discs shall have continuous hinge spindles which shall be supported at their ends in substantial bearings.

Each spindle is to be extended through a stuffing box on one side of the body only and a pointer is to be fitted to the extended spindle so that the open and closed positions of doors or discs are indicated on an embossed brass or cast-aluminium indicator plate.

(c) Sealing Faces

Sealing faces shall be securely fixed with corrosion resistant elements or shall be deposit welded with stainless steel.

Faces shall be accurately machined and finished to meet the requirements of Sub-clause 2.2.

(d) Bearings

Main bearings shall be external and accessible without emptying or removal from line of the valve body.

Bearings shall be of substantial design and shall be designed to take the unbalanced thrust on doors or discs in the open-ended test for material strength and soundness.

Bearings shall have a long life and retain a low coefficient of friction. Any possibility of bearings becoming tight during service or due to ageing shall be eliminated.

Where possible, bearings shall be water lubricated. Full particulars of type and construction of bearings shall be submitted at tendering stage.

C3.3.4.5 **Anti-shock Air Release and Vacuum Break Valves**

(a) Function

The required valves shall provide any of the functions, or combination of functions, described below and as specified in the schedule of quantities.

Pipeline Filling

Uninterrupted high volume air discharge through the large orifice.

Pipeline Draining or Column Separation

Uninterrupted high volume air intake through the large orifice.

Pipeline Full and Operating

Discharge of disentranced pressurized air through the small orifice.

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Rapid Filling/Column Separation

The valve must incorporate an integral surge alleviation mechanism which will automatically dampen surge pressure due to rapid air discharge or the subsequent rejoining of separated water columns.

All valve functions shall be housed in a single valve chamber.

(b) Construction and Design

The air release and vacuum break valve shall be of compact single chamber design with solid cylindrical high density polyethylene control floats housed in a tubular stainless steel with fusion bonded epoxy powder coated mild steel ends secured by means of stainless steel tie rods.

Hollow spherical floats are not acceptable.

The valve shall have an integral surge alleviation mechanism which shall operate automatically to limit transient pressure rise of shock induced by closure due to high velocity air discharge or the subsequent rejoining of separated water columns. The limitation of pressure rise must be achieved by deceleration of approaching water prior to valve closure. Relief mechanisms that act subsequent to valve closure cannot react in the low millisecond time span required and are therefore unacceptable.

The performance of the integral surge alleviation mechanism must be substantiated by a reputable local third party test authority.

Large orifice sealing shall be affected by the flat face of the control float seating against a nitrile rubber "o" ring housed in a dovetail groove circumferentially surrounding the large orifice. The large orifice seal shall be of a dynamic type, adjusting automatically to the pressure exerted on it to reduce wear on the seal.

Discharge of pressurized air shall be controlled by the seating and unseating of a small orifice on a natural rubber seal affixed to the control float. Manufacturers offering any other small orifice arrangement shall substantiate the flow through the small orifice at pressures higher than 16 bar.

The intake/discharge orifice area shall be equal to the nominal size of the valve i.e., a 200mm (8") valve shall have a 200mm (8") intake/discharge orifice.

The valve construction shall be proportioned with regard to material strength characteristics, so that deformation, leaking or damage of any kind does not occur when it is tested to 1,5 times the designed working pressure.

The valve design shall incorporate an over pressure safety feature that will fail without an explosive effect, such as is normally the case when highly compressed air is released suddenly. This feature shall consist of easily replaceable components such as gaskets, seals or the like.

(c) Test Cock

Each air valve shall be manufactured with a 1/4" BSP female test cock connection to enable pressure measurements on the pipeline. The connection shall be fitted with a parallel brass nipple and a full way ballcock RB, with plastic coated mild steel lever handle, with female ends.

C3.3.4.6 **Sleeve-type Jet dispersion Valves**

(a) Type

Valves shall be of the sliding sleeve, inverted cone, jet dispersing type with acceptable reduction drive and hand wheel operation.

(b) General Requirements

- Valves shall generally be required to control scour outlets of high pressure pipelines.

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- Installation shall either be horizontally or shall be inclined at an angle of 45 degrees.
 - Valve operation shall be by a stainless steel screwed spindle, operated by handwheel and a thrust head mounted on a trunnion for horizontal mounting or where so indicated, cast into a wall, and operating the sleeve lever linkage with a watertight gland.
 - Where the gland is cast into the wall, the lever operating linkage shall be designed to accommodate movement restraints which might be due to casting in.
 - Where so indicated elsewhere in the documents valve operation shall be by controls integral with the valve body.
 - Valves and controls shall be exposed to the weather and sunlight and shall be non-operative for extended periods of time. Design shall allow for dependable operation under these conditions.
 - Valves shall close by clock-wise rotation of handwheels. Handwheels shall have arrows cast on them to indicate closing and opening directions of rotation together with the words "TO OPEN" and "TO CLOSE".
- (c) Materials and Construction
- The valve body shall be of cast-steel with a shrunk-on stainless steel sleeve on the portion of the body which does not contain the water ports and on which the sleeve slides. The water port web edges on which the sleeve slides should have machined weld-deposited stainless steel faces to prevent moisture getting between the facing and the webs and causing corrosion.
 - The sliding sleeve shall be of cast-steel with two (i.e. front and rear) renewable annular zinc-free bronze sliding surfaces and a stainless steel seal seating on to a renewable

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rubber ring. This end rubber sealing ring in the cone of the valve body must be out of the water-way and positively secured in position by stainless steel securing elements and the rubber seal must be readily replaceable on site.

- The back rubber water seal should also be replaceable on site and carried either in the sliding sleeve or in the case of seals relying on water pressure for water tightness, should be carried on the valve body.
- The valves shall be drop-tight when closed.
- Operating gear and linkage shall be of corrosion resistant materials. All lubricating points shall be provided with nipples for grease gun lubrication.

ELECTRICAL WORKS

C3.3.5 DETAIL SPECIFICATION: LOW VOLTAGE MOTOR CONTROL CENTRES (MCC'S)

C3.3.5.1 Scope of Work

This specification covers the supply requirements of new low voltage MCC's.

C3.3.5.2 Detail requirements of new MCC at the Raw water Pump station

There are currently to MCC's in the MCC room. These MCC's shall be disconnected, removed and replaced with a new MCC. The new MCC shall be supplied, delivered to site and installed in position in the MCC room. The work of removing the old MCC's shall be scheduled such that the plant operations are disrupted to a minimum. The Contractor shall make arrangements with the Supply Authority (Eskom) to switch power off and on at the pole when required. Hence, the Contractor shall plan this work and submit a proposal/programme to the Engineer for approval before commencing with this work

C3.3.5.3 MCC and motor starter Manufacturing

Refer to the general arrangement drawings, typical schematic diagrams and MCC schedules attached in the annexures for the construction details of the new MCC's.

C3.3.5.4 MCC Wiring

The motor starter circuits shall be wired according to the schematic drawings generated by the Contractor and shall be based on the typical schematic circuits attached in the annexures.

Terminal blocks shall be provided for each motor starter mounted on DIN rails in the respective wire way where all the incoming field cables and outgoing PLC I/O interfacing cables shall be wired to.

C3.3.5.5 Cubicle Identification Labels

Cubicle identification labels shall be as indicated in the MCC schedules.

C3.3.5.6 Quality Control

The MCC shall go through a quality inspection before being taken to site. This inspection shall include physical inspection of the structure and electrical conductors and general wiring.

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The quality inspection shall include general electrical tests of the power circuit phasing, control circuit wiring, and device electrical operation.

The MCC tiers shall go through a similar quality inspection upon arrival on the site and before physical interconnection with any site services.

The manufacturer shall use integral quality control checks throughout the manufacturing process to ensure that the MCC meets operating specifications. The manufacturer's quality control shall include hold points in order to allow the Engineer to do interim factory inspections when required.

C3.3.5.7 Drawings

The Contractor is required to produce the detailed individual wiring diagrams for each starter in AutoCAD format fully in compliance with the Engineer's requirements. All drawings are to be submitted for approval prior to the start of manufacture. The Contractor shall generate schematic drawings based on the typical schematic drawings attached in the annexures.

C3.3.5.8 Refurbishment of the Recycle Pump station MCC

The existing Recycle Pump station is currently partially functional. The Contractor is required to do fault finding on the MCC and return the MCC to full and complete function. A sum is allowed for in the BOQ for this work.

C3.3.6 DETAIL SPECIFICATION: LOCAL ISOLATOR/START/STOP pushbutton STATIONS

C3.3.6.1 Scope of Work

This specification covers the supply of the local isolator/e-stop pushbutton stations.

C3.3.6.2 Detail requirements of local isolator/start/stop pushbutton stations

The local isolator/start/stop pushbutton stations shall be manufactured in accordance with the requirements of the following particular specifications:

- Spec E-PIP: Local Stop/Start Pushbutton Isolator Station

C3.3.7 DETAIL SPECIFICATION: INDUSTRIAL WELDING PLUGS, SOCKETS AND COUPLERS

C3.3.7.1 Scope of Work

This specification covers the supply of the industrial welding plugs, sockets and couplers.

C3.3.7.2 Detail requirements of industrial welding plugs, sockets and couplers

The industrial welding plugs, sockets and couplers shall be manufactured in accordance with the requirements of the following particular specifications:

- Spec E POU - INDUSTRIAL WELDING PLUGS, SOCKETS AND COUPLERS

C3.3.8 DETAIL SPECIFICATION: CABLE RACKING

C3.3.8.1 Scope of Work

This specification covers the supply of cable racking. Refer to the Bill of Quantities for the requirements of the cables to be supplied.

C3.3.8.2 Detail requirements of low voltage cables

The low voltage cables shall be manufactured in accordance with the requirements of the following particular specifications:

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- SpecE PCI – Cables and Installation

C3.3.9 DETAIL SPECIFICATION: LOW VOLTAGE PVC INSULATED POWER AND CONTROL CABLES

C3.3.9.1 Scope of Work

This specification covers the supply of 600/1000V PVC insulated power and control cables. Refer to the Cable Schedule attached in the appendices and the Bill of Quantities for the requirements of the cables to be supplied.

C3.3.9.2 Detail requirements of low voltage cables

The low voltage cables shall be manufactured in accordance with the requirements of the following particulars/specifications:

- Spec E PCI – Cables and Installation

C3.3.10 DETAIL SPECIFICATION: LOW VOLTAGE CABLE INSTALLATION

C3.3.10.1 Scope of Work

This specification covers the installation requirements of electrical equipment under this contract.

C3.3.10.2 Detail requirements of Low Voltage Cable Installation

A low voltage cable installation and the additional requirements detailed below shall be supplied, installed and commissioned between the new circuits and the respective equipment by the Contractor.

The electrical installations shall be completed in accordance with the requirements of the following particulars/specifications:

- SpecE PCI – Cables and Installation

The Contractor shall supply and install all the low voltage power and control cables. Refer to the cable schedules attached in the appendices for the details of the cables to be supplied and installed.

C3.3.11 DETAIL SPECIFICATION: SMALL POWER AND LIGHTING

C3.3.11.1 Building Small Power and Lighting

Item	Description
1	Pump station Building
2	Administration Building and two (2) Staff Houses

The existing small power and lighting installation of the pump station building shall be removed entirely. The existing security flood lighting outside on the walls shall be reused where possible.

The existing small power and lighting installation of the administration building and the two (2) staff houses shall be brought to compliance by being tested and issued with CoC's. All remedial work required shall be covered under the Provisional Sum in the BoQ.

The new small power and lighting installations for all the existing buildings mentioned above shall be completed in accordance with the requirements of the following particular specification:

- Spec E-PIB: Industrial Building Electrical Installation

Detail drawings for the small power and lighting of the buildings shall be issued during the construction phase of the project (if required).

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C3.3.11.2 Refurbishment of the area/street lighting

The existing area/street lighting is partially functional. The bulkheads of some of the street lights are missing. Other street lights do not have power. Therefore the Contractor is required to do fault finding for the street lights, replace missing bulkheads and return the area/street lights to full and complete function.

C3.3.12 DETAIL SPECIFICATION: SUBSTATION BUILDING ACCESSORIES

Accessories shall be supplied, delivered and installed by the Contractor in the following new buildings:

- Raw water Pump station building

The contractor shall supply, deliver and install the following accessories:

- One (1) 4,5 kg carbon-dioxide fire extinguisher, mounted against the wall inside of building near the entrance door on a purpose-made bracket with the bottom end 800 mm above floor level and a red loss-paint-finished plastic rectangle, 1 000 mm high and 600 mm wide mounted behind the fire extinguisher.
 - Statutory plastic DANGER signs and caution boards prohibiting access to unauthorised persons, fixed on the outside of the switch-room doors by means of small round-head brass bolts.
 - Neat plastic signs, fixed on the inside of each switch-room, bearing the following:
 - i) A warning prohibiting unauthorized persons to tamper with equipment.
 - ii) First aid instructions for persons shocked through contact with electrical equipment.
 - iii) Fire-fighting instructions.
 - iv) Suitable notices on hard plastic or fibre board shall be provided bearing the words: DO NOT SWITCH ON, for use during the maintenance or inspection of equipment. The notice boards shall be provided with suitable means of attaching them to switches and motor starters. A suitable hook shall be provided in MCC rooms to store these notices when not in use.
 - One key cabinet adequately sized to the satisfaction of the Engineer, to accommodate the keys for key selector switches associated with the new MCC panel.

C3.3.13 DETAIL SPECIFICATION: EARTHING AND EARTH BONDING OF BUILDINGS AND STRUCTURES

C3.3.13.1 Earthing and Earth Continuity Bonding

The existing pump station building shall be earthed and the earth thereof shall be connected to the new MCC earth bar.

All new metallic parts, metallic structures and equipment are to be earth bonded to the new MCC's earth bar system to eliminate static build up.

Unless otherwise specified, earth continuity bonding shall be done by means of a 16 mm², green PVC insulated, hard drawn, stranded copper conductor and crimping lugs or ferrules.

The earth bar of the new MCC shall be connected to the earth of the bulk supply by means of a 70 mm², bare copper earth wire (BCEW).

The Pump station shall be earthed as follows:

- An earth ring comprising of a 70mm² BCEW shall be laid in a trench at a depth of 600mm in the ground. The earth trench shall be excavated one (1) meter away from the structure and shall cover the whole perimeter of the structure.
- Earth spikes shall be installed radially at all the points where the earth ring changes direction or at sharp corners. Refer to the drawings attached in the annexures for the

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earthing layout.

C3.3.13.2 Detail requirements of earthing and earth bonding

The earthing and earth bonding shall be done in accordance with the requirements of the following particularspecification: Specification E-PEP-Electrical Protection.

C3.3.14 DETAIL SPECIFICATION: GENERAL (REMOVAL OF OLD ELECTRICAL EQUIPMENT)

The contractor shall disconnect and remove old electrical equipment (MCC's, SP & L, cables, old instrumentation, etc) which shall become redundant under this contract. The old equipment shall be delivered to the Client's premises. The premises to which the old equipment shall be delivered shall be confirmed during the contract.

C3.3.15 INSTRUMENTATION INSTALLATION

The instrumentation installation shall be completed in accordance with the requirements of the followingparticular specifications:

- SpecC&I PLC - Programmable Logic Controllers
- SpecC&I PCPSP - Clean Power and Surge Protection
- SpecC&I PCAB - Instrumentation Cabling And Installation
- SpecC&I PFJBP - Field Junction Boxes
- SpecC&I PLM - Level Measurement
- SpecC&I PFM - Flow Measurement

C3.3.15.1 Clamp-on ultrasonic Flow Meters

The instrumentation work to be carried out at the Raw water Pump station comprises the following:

Supply and install clamp-on ultrasonic flow meters, complete with brackets, supports, instrument junction box, terminals, surge protection, etc. The junction box shall contain the transmitter, terminals, circuit breaker for local isolation, surge protection, etc. The junction box of the clamp-on ultrasonic flow meter shall comply with all the requirements of the attached particular specifications.

C3.3.15.2 Ultrasonic Level Meters

The instrumentation work to be carried out at the Chlorination Channel comprises the following:

Supply and install ultrasonic flow meter, complete with brackets, supports, instrument junction box, terminals,surge protection, etc. The junction box shall contain the transmitter, terminals, circuit breaker for local isolation, surge protection, etc. The junction box of the ultrasonic flow meter shall comply with all the requirements of the attached particular specifications.

C3.3.16 PLC'S INSTALLATION/SMART CONTROLLERS

Two (2) new Smart Controllers for pump application shall be installed in the new MCC of the Pump station. Smart controller No.1 shall control the " two (2) Industrial Pumps sets" and the Smart Controller No.2 shall control the "two (2) Domestic Pumps sets".

The installations shall be completed in accordance with the requirements of the following particularspecifications:

- SpecC&I PLC - Programmable Logic Controllers
- SpecC&I PCPSP - Clean Power and Surge Protection

C3.3.16.1 Smart Controllers (pump control)

The scope of work for the smart controllers at the Pump station MCC comprise in general, the following:

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The **Smart Controllers** shall be installed in dedicated cubicles in the MCC complete with a power supply, circuit breakers, surge protection, etc. The tenderer shall ensure that there is sufficient space for all terminals, fused terminals, circuit breakers, surge protection, etc in the Smart Controller cubicles. The smart controller installation shall comply with all the requirements of the attached particular specifications for PLC Panels. Smart Controllers to be supplied shall be from reputable brands offered in South Africa.

C3.3.16.1.1 Monitoring and Control of Motors

To monitor signals from motors (e.g. Auto selected, Tripped, etc.) and to perform start/stop controls, multi- core cables shall be supplied and installed between the Smart Controllers and the MCC. Also, the relevant signals from the pump station sump level switches (low level stop and high level start) shall be wired to the individual smart controllers. The cabling, installation and racking shall comply with all the requirements of the attached particular specifications.

C3.3.16.1.2 Smart Controller Software Development

The Smart Controllers programming shall be done by the contractor or the contractor's appointed software developer. The software development costs shall be allowed for in the tender.

PS.2 DESCRIPTION OF THE SITE AND ACCESS

PS.2.1 Location of Site

The site is located in Bethlehem Town, Eastern Free State (Site co-ordinates: (28°13'31.4" S 28°21'13.8"E).

PS.2.2 Access to Site

Access to site is per normal vehicle.

PS.2.3 Nature of the Ground and Subsoil Conditions

The contractor will be expected to make his own assessment in this regard and price the rates accordingly.

PS.3 CONSTRUCTION AND MANAGEMENT REQUIREMENTS

PS.3.1 General

The Contractor is referred to SANS 1921: 2004 parts 1, 2 and 3: Construction and Management Requirements for Works Contracts. These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

PS.3.2 Employment of Labour

It is the intention that this Contract should make the maximum possible use of the labour force available from within the target community and which is at present underemployed.

To this end the Contractor is to employ and train labour on this Contract.

The Contractor shall fill in the forms relating to Key Personnel and state how many key personnel he intends to employ in the various categories. The numbers stated in the above-mentioned form will be strictly controlled during the contract period and any changes in numbers shall be subject to the approval of the Engineer.

It is a condition of contract that the data sheets detailing the employment of human resources, expenditure and employment of SMMES as detailed in the tables below be submitted together with the monthly certificate timorously to the Engineer by the 10th of each month.

The definition of youth being of an age up to and including 35 years.

The unit of measurement is person days being the total number of persons in that category multiplied by the number of days worked by each person respectively.

Labour Rates

- 1. The awarded contractors will be expected to remunerate unskilled labourers at a rate of R250.00 per day / task plus deductions i.e UIF, WC etc**
- 2. A Community Liaison Officer (CLO) will be appointed and will / must receive a monthly salary of R 4000 plus R 500 airtime. The cost for a CLO was allowed for separately in the Bills of Quantities.**

The EPWP reporting data sheets need to be used and these data sheets must be submitted monthly irrespective of whether or not a payment certificate is submitted in terms of the latest cash flow.

PS.3.3 Construction Programme

(a) Preliminary Programme

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

The Contractor shall be deemed to have allowed fully in his tendered rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions and special non-working days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data.

(b) Programme in terms of Clause 12 of the General Conditions of Contract

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

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PS.3.4 Drawings (Read with SANS 1921 – 1: 2004 clauses 4.1.7; 4.1.11 and 4.1.12)

The following reduced drawings which form part of the tender documents shall be used for tendering purposes only.

The following reduced (A3) drawings are enclosed herewith:

Refer to C.5 at the end of the document

The contractor shall be supplied with three complete paper copies of the construction drawings free of charge. The Contractor shall at his own expense produce all further paper prints required for the construction of the work.

Any information which the Contractor has control over and which is required by the Engineer to complete the drawings of record shall be made available to the Engineer before the Completion Certificate is issued.

Only written dimensions may be used. Dimensions are not to be scaled from drawings unless ordered by the Engineer. The Engineer will supply all figures / dimensions which are not shown on the drawings. The levels or dimensions given on the drawings are subject to confirmation on site.

PS.3.5 Quality Assurance (QA) (Read with SANS 1921 – 1: 2004 clause 4.4)

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

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

PS.3.6 Site Establishment (Read with SANS 1921 - 1 : 2004 clause 4.14)

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

The Engineer will facilitate all communication with the target community.

(a) Water and Electricity

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

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

(b) Location of Site Office

Suitable sites at each location will be identified once work commences. The contractor will

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need to make all necessary allowances for his own security, fencing etc.

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

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

PS.3.7 Health and Safety (Read with SANS 1921 - 1: 2004 clause 4.18)

The Works will be constructed in an area inhabited by people including many children.

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to

hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2003 issued on 18 July 2003 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in Section C1.2.2

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

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

PS.3.8 Management of the Environment (Read with SANS 1921 - 1 : 2004 clause 4.19)

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

(a) Natural Vegetation

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

(b) Fires

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

(c) Environmental Management Plan

In addition to the above, all requirements of the Environmental Management Plan (EMP) as

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detailed in C3.3, Particular Specifications, will be adhered to.

PS.3.9 Abnormal Climatic Conditions

No extension of time for completion shall be granted for normal rainfall but extension of time shall be determined for abnormal rainfall or wet conditions in accordance with the formula given below separately for each calendar month or part thereof. It shall be calculated for the full period for completion of the contract plus any granted extension thereof:

$$(N_w - N_n) R_w / R_n \quad \text{if } (N_w - N_n) > 0$$

The symbols have the following meanings respectively:

V =	Extension of time in calendar days in respect of the calendar month under consideration.
N _w =	Actual number of days during the calendar month on which a rainfall of 10mm or more is recorded.
N _n =	Average number of days, as derived from existing rainfall records, on which a rainfall of 10mm or more has been recorded for the calendar month
R _w =	Actual rainfall recorded for the calendar month.
R _n =	Average rainfall for the calendar month under consideration as determined from existing rainfall records.

When calculating the extension of time for a part of a month pro rata values of R_n and N_n shall be used.

The factor R_w/R_n shall be deemed to be fair allowance for days on which wet conditions disrupted or prevented work but on which a rainfall of 10mm or more was not recorded. If the value of R_w/R_n exceeds 2,5 it shall be taken as 2,5.

If N_w for any month is smaller than N_n the formula to be used shall be:

$$V^1 = (N_n - N_w)$$

The total extension of time for completion shall be the sum of the values of

V minus the sum of the values of V¹.

Total extension of time = V - V¹.

The following are the most reliable values of N_n and R_n available and shall be used unless other values are mutually agreed upon beforehand:

Month	N _n	R _n
January	3	121.7
February	2	103.7
March	2	92.0
April	1	49.4
May	0	24.6
June	0	14.0
July	0	16.8
August	0	18.9
September	1	47.3
October	3	88.4
November	3	112.0
December	3	117.4

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Rainfall gauging will be taken and recorded by the Contractor at his Site Office and agreed with the Engineer on a daily basis.

b) Should an extension of time be granted by the Engineer the Contractor shall be reimbursed for his time related Preliminary and General items contained in the schedule of Quantities. The amount of reimbursement shall be calculated as follows:

<u>No of days extension of time granted</u>		
Total number of working days in the Contract	X	Total for time related P&Gs

S.3.10 Drawings of Record

Any information in the possession of the Contractor, which is necessary for the Engineer's Representative to complete his "drawings of record", must be submitted to the Engineer's Representative before a final payment certificate and a certificate of completion will be issued.

PART B : AMENDMENTS TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS

INTRODUCTION

In certain clauses in the Standard Specifications, allowance is made for a choice to be specified in the project specifications between alternative materials or methods of construction, and for additional requirements to be specified to suit a particular contract.

Details of such alternative or additional requirements applicable to this contract are contained in Part B1 of the project specifications.

The number of each clause and each payment item in this part of the project specifications is prefixed "PS" and numbered sequentially followed by a number corresponding to the relevant clause or payment item in the standard specification in parentheses.

New clauses and payment items not covered by clauses or items in the Standard Specifications have also been included.

Additional particular specifications are also included in Part B2 and are prefixed "P" and numbered alphabetically.

PART B1 : AMENDMENTS TO THE STANDARD SPECIFICATIONS

PSA GENERAL

PSA.1 MATERIALS (3)

PSA 1.1 QUALITY (3.1)

All materials used in this contract shall comply with the relevant SABS Specification (as amended) or particular specification as noted.

PSA.2 PLANT (4)

PSA.2.1 PLANT FOR CONSTRUCTION PURPOSES (No reference)

The Contractor's plant for construction purposes shall be of modern design, adaptable

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for the purpose for which it is required, in sound condition, and ample in capacity for carrying out the Works expeditiously.

Should the Engineer be of the opinion that the plant in use is in any way unsuitable for carrying out the Works in a manner or at a rate commensurate with the requirements of the Contract, they shall have the right to call on the Contractor at any time during the progress of the works to provide additional or improved plant and tools as may be necessary to meet these requirements.

PSA.2.2 **CONTRACTOR'S CAMP (4.2)**

No housing is available for the Contractor's employees, and the Contractor shall make his own arrangements with the Local Authority regarding the housing of his employees and transporting them to site.

The Contractor shall provide in locations approved by the Engineer, adequate sanitary facilities for the use of all persons engaged on the Works. Such conveniences, which shall comply with Local Authority 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.

The Contractor shall make his own arrangements with the municipal authorities for any bucket removals and shall bear all the costs in connection with such service. On removal of such conveniences the sites thereof shall be left in a clean, sanitary and tidy condition.

PSA 8.2 **PAYMENT**

PSA 8.2.1 **FIXED – CHARGE AND VALUE RELATED ITEMS**

Replace the contents of this sub-clause with the following: -

Payment for the sum tendered under item PSA 8.2.1 will be made in three separate installments as follows: -

- a. The first installment which is 50% of the sum, will be paid when the Contractor has met all his obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract, and where the value of work certified for payment, excluding Materials on Site and any payments under preliminary and general items is equal to not less than 5% of the total value of the work listed in the Schedule of Quantities.
- b. The second installment, which is 35% of the sum, will be made when the amount

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certified for payment, including retention monies but excluding the second installment referred to herein, exceeds 50% of the tender sum.

- c. The final payment, which is 15% of the sum, will be made when the Works have been certified as completed and the Contractor has fulfilled all his obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract.

No adjustment will apply to item 8.3.1 in respect of variations in the value of work done or the time for completion finally authorised.

Payment for the sum tendered under PSA 8.3.2 will be made in monthly installments in relation to the value of the work done (excluding the value of any price adjustments in terms of Clause 6.10 of the General Conditions of Contract).

Should the value of the measured work finally completed be more or less than the tender sum (excluding the value of any price adjustments in terms of Clause 6.8 of the General Conditions of Contract), then the sum tendered under Item PSA 8.3.2 will be adjusted pro-rata up or down and this adjustment shall be applied to the final instalment.

PSA 8.2.2 **TIME-RELATED ITEMS**

Replace the contents of this sub-clause with the following:

“Subject to the provisions of Item 8.2.3 and Item 8.2.4, payment under item PSA 8.4.1 (time- related item) will be made monthly, pro rata for parts of a month, from the Commencement Date, until the end of the period for completion of the works, plus any extension of time awarded provided always that the total of the monthly amounts so paid for the item is not more than in proportion to the progress of the work as a whole.

Should the Engineer Grant an extension of time for completion of the Works, the Contractor will be entitled to an increase in the sum tendered for the time-related item, which increase shall be in the same proportion to the original tendered sum as the extension of time is to the original time for completion of the Works.

Payment for such increased amounts will be taken to be in full compensation for all additional time-related preliminary and general costs that result from the circumstances pertaining to the extension of time Granted.”

PSA 8.3 **SCHEDULED FIXED-CHARGED AND VALUE RELATED ITEMS**

Replace the item with the following: -

“PSA 8.3.1: Fixed Preliminary and General Charges Unit: Sum

PSA 8.3.2: Value-Related Preliminary and General Charges..... Unit: Sum

The sums tendered shall include full compensation for all fixed and value-related preliminary and general charges as described in sub-clause PSA 8.1.2.2. Payment will be made as described in sub- clause PSA 8.2.1.”

PSA 8.4 **SCHEDULED TIME-RELATED ITEMS**

Replace the items with the following: -

“PSA 8.4.1: Time-Related Preliminary and General Charges

(a) General Obligations..... Unit: Sum

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(b) Health and Safety ObligationsUnit: Sum

The sum tendered for item PSA 8.4.1(a) shall include full compensation for all time-related preliminary and general charges as described in sub-clause PSA 8.1.2.2, excluding health and safety.

The sum tendered for item PSA 8.4.1 (b) shall include full compensation for any and all costs related to complying with the Occupational Health and Safety Act and in particular with its Construction Regulations 2014 and Part PG of the Project Specification.

Payment will be made as described in sub-clause PSA 8.2.2.”

PSAB ENGINEER’S OFFICE

PSAB.1 NORMAL PROJECTS

PSAB.1.1 OFFICE BUILDINGS (Engineers Site Office) (1)

One site office shall be provided of at least 20m² area, complete with a level, 85mm concrete floor over 250micron USB green water proofing , insulated roof / ceiling, lockable door and be supplied with a table of at least 3.0m x 1.8m and 12 chairs. Allowance shall be made for the proper display and storage of plans.

In addition this office shall be fitted with an air conditioning unit of at least 12000 BTU capacity and powered by the contractor’s electrical provision / arrangement during meetings at least twice monthly. This office shall not be used for the contractor’s storeroom.

This office will be paid for per week and only once it is erected and approved.

At least one pit latrine or chemical toilets, suitably enclosed, shall be maintained close to all the engineers office at all times. All possible measures shall be taken to control odours.

No telephone facilities are required by the Engineer

PSAB.1.2 NAMEBOARDS (3.2.1)

The Contractor shall supply one name board in accordance with the details indicated in this document. (2.4m x 1.2m on metal frame on timber posts)

The board shall be placed in a position designated by the Engineer.

This board shall remain the property of the Contractor who shall dismantle and remove the said board on completion of the contract.

PSAB.1.3 LABORATORY (3.2.3)

Provide a suitably sized concrete curing pit / bath, filled with water and maintained, to keep all concrete test cubes submerged prior to delivery to an independent test laboratory.

PSAB.1.4 SURVEY FACILITIES (3.2.4)

The Contractor shall make available on site and maintain for use by the Engineer and /

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or his representative the following:-

- a) Two survey assistants as and when required.
- b) Two automatic levels (new, with calibration certificates) each with tripod;
- c) Two level staffs, all graduated metrically;
- d) Two 5m and one 30m tape measure;
- e) four ranging rods;
- f) steel pegs – No: 50, 12 mm dia. x 400 mm long; and
- g) Two x 1.8kg hammer.

PSAB.1.5 HOUSING FOR THE ENGINEER'S STAFF (3.2.5)

No engineer's staff housing is required for this contract.

PSC SITE CLEARANCE

PSC.1 MATERIALS (3)

PSC .1.1 DISPOSAL OF MATERIAL (3.1)

Suitable spoil sites will be located on site by the Engineer and confirmed by the issue of a site instruction. The Contractor may not make his own arrangements in this regard without the written approval of the Engineer.

PSC.2 CONSTRUCTION (5)

PSC.2.1 AREAS TO BE CLEARED AND GRUBBED (5.1)

Areas to be cleared and grubbed shall be classified as follows:

- a) General Clearing and Grubbing

Any areas requiring particular clearing and grubbing must be agreed with the Engineer prior to any such clearing taking place. Any area cleared without the consent of the Engineer will not be measured in terms of this Clause and may result in further action being taken against the Contractor in terms of any contravention with the environmental management plan. Where the Engineer has instructed that clearing must take place or is required, it shall be measured as a strip 3m wide.

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PSD EARTHWORKS

PSD.1 MATERIALS (3)

PSD .1.1 CLASSIFICATION FOR EXCAVATION PURPOSES (3.1)

Classification of material other than "soft excavation" shall be agreed with the Engineer before excavation may be commenced.

The Contractor shall immediately inform the Engineer if and when the nature of the material being excavated changes to such an extent that a new classification for further excavation is warranted. Failure on the part of the Contractor to advise the Engineer thereof in good time shall entitle the Engineer to classify, at his discretion, such excavation as may have been executed in material of a different nature.

For the purpose of this contract all material will either be classed as soft, hard rock or Boulder Class A.

No differentiation shall be made between "soft", "Boulder Class B" and "Intermediate" excavation.

PSD.1.2 Classes of excavation (3.1.2)

(b) Intermediate excavation - Shall be classified as soft excavation

(e) Boulder excavation Class B - Shall be classified as soft excavation

PSD.2 CONSTRUCTION (5)

PSD.2.1 Disposal (5.2.2.3)

All excess material shall be disposed of at the designated spoil sites leveled in layers not exceeding 300 mm and compacted to 90% MOD AASHTO density.

The free haul distance shall be:

1km for machines

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PSDB	<u>EARTHWORKS (PIPE TRENCHES)</u>
PSDB.1	MATERIALS (3)
PSDB.1.1	<u>CLASSES OF EXCAVATION (3.1)</u> The classification of excavated materials shall be as specified in Subclause 3.1 of SABS 1200 D and PSD.1.2.
PSDB.1.2	<u>CONTROL OF WATER (4.2)</u> The Contractor may encounter some seepage water in some of the trench excavation although the geotechnical investigation suggests that this is unlikely. No separate payment will be made for measures required to deal with this water.
PSDB.2	CONSTRUCTION (5)
PSDB.2.1	<u>MINIMUM BASE WIDTHS (5.2)</u> Base widths shall be as detailed on SABS 1200DB.
PSDB.2.3	<u>BACKFILLING (5.6)</u>
PSDB.2.3.1	General (5.6.1) ADD the following to the clause: No thrust block or pipe requiring special wrapping may be covered by either the fill blanket or the main backfill until inspected and passed by the Engineer.
PSDB.2.3.2	Disposal of unsuitable and make up of deficiency of backfill material (5.6.3 and 5.6.5) The freehaul distance shall be: - 1.0km for machines
PSDB.2.3.3	Completion of backfilling (Clause 5.6.6) Backfilling around the pipe shall not be allowed to fall more than 250m behind the laying of the pipe. After the pipes have been laid, no backfilling shall be undertaken until the pipes have been inspected and approved by the Engineer. The Contractor may use his discretion as to whether to backfill around joints before the pipeline is tested and should he decide to backfill the joints he shall be responsible for the locating of any leaks and no extra payment shall be made for any re-excavation and subsequent reinstatement.
PSDB.2.4	<u>COMPACTION (5.7)</u>
PSDB.2.4.1	Areas subject to traffic loads (5.7.2) Areas subject to traffic loads will be instructed by the Engineer in writing. No other areas will be considered for payment. The contractor will be expected to provide test results from an approved laboratory demonstrating that the additional compactive effort has been achieved. No additional payment will be made for these tests.
PSDB.2.5	<u>SHORING (5.11)</u>

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In view of the fact that the excavation will take place in open areas, no additional payment will be made for shoring. The measurement width will also remain as specified herein although the Contractor may wish to batter the sides to avoid the need for shoring.

The provision for shoring shall be deemed to be included in the relevant rates for excavation. The Contractor's attention is drawn to the need to operate safely and to ensure that trenches are either shored or battered to a safe slope.

PSDB.3 MEASUREMENT AND PAYMENT (8)

PSDB.3.1 BASIC PRINCIPLES (8.1)

In addition to the activities listed in 8.1.1, excavation shall also include for the cost of piping and compacting the trench bottom to a minimum of 90% MOD AASHTO density in all materials irrespective of whether the base has been loosened or not during excavation.

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PSG **STRUCTURAL CONCRETE**

PSG 2 **FORM WORK (5.2)**

PSG 2.2.1 **FORMED FINISHES**

Are those concrete surface finishes developed using formwork and whose standard of finish in each class shall be as described.

The Contractor shall inform the Engineer of any defect in terms of this Specification and the Contractor without the prior approval of the Engineer shall carry out no remedial work. Any defect shall be made good at the Contractor's expense by either removing and replacing the defective concrete, or, in certain instances only, by patching, all as approved by the Engineer and to the standard of finish required.

PSG 2.2.2 **CLASS F1 ORDINARY FINISH**

Formwork panels shall be of such quality that upon removal, the concrete is true and even, free from fins and recesses greater than 5mm size, honeycombing, large air holes and the like. Blowholes shall be filled if so required by the Engineer.

PSG 2.2.3 **CLASS F2 SMOOTH FINISH**

This class of finish requires a high standard concrete work, formwork and technique. Concrete placed in any one structure to give this finish shall be made from cement and aggregates from the same source, and similarly, the grading of the aggregate shall be kept constant.

Formwork shall be metal or wrought timber in a new condition designed and constructed to suit the particular job in hand and with shutter bolts and joints between panels in a regular pattern approved by the Engineer. Joints between panels shall be watertight. Construction joints shall be in the position and of the detail shown upon the working drawings.

Should the Contractor wish to incorporate further construction joints or amend the position of those shown to suit his own requirements or technique, this may be allowed provided that all design considerations are met, that the prior approval of the Engineer is obtained and that any extra costs are borne by the Contractor. In the case of horizontal construction joints, the top edge of the concrete on the Class F2 smooth finish is to be struck true and level with a trowel.

Special care shall be taken to ensure that forms are clean of all pieces of tying wire, nails and other debris at the time of concreting.

The standard of finish shall be such that, upon removal of the formwork, no further treatment, other than treatment of bolt holes if required, shall be found necessary to provide a straight, smooth and uniform finish of good quality and consistent colour and texture, free of all honeycombing and large air holes.

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PSG 6 CONCRETE STRUCTURES (5.5.11)**PSG6.2 DESIGN OF CONCRETE MIX**

The design of the concrete mix should be based on the following:

- A maximum water / cement ratio of "0.5" should be used and;
- The 28 day characteristic cube strength should not be less than 35 N/mm².
- 600g/m³ Polypropylene Microfibers should be added to the concrete mix.
- Oxygen Permeability & Water Sorptivity test of the concrete structure will be evaluated as per the following table: (Average of 4 x core samples)

Acceptance	Oxygen Permeability Index (log scale)	Water Sorptivity (mm ^{1/2} /h)
Full Acceptance	Greater than or equal to 9.15	Less than or equal to 8
Conditional Acceptance	From 9.0 to 9.15	From 8 to 12
Rejection	Less than 9.0	Greater than 13

PSG6.5 REQUIREMENTS AND TESTS FOR WATERTIGHTNESS OF CONCRETE STRUCTURES

PSG6.5.1 The completed structure shall be watertight, and the quality and finish of the work shall be such that no after-treatment of the work such as plastering or cement wash is necessary to ensure compliance with this requirement.
The works will not be certified complete until the structures have been proved by testing to be watertight.

PSG6.5.2 Upon completion of construction and when so agreed by the Engineer, the structure shall be filled by the gradual admission of water until the water level reaches the designed maximum level. The water level shall then be carefully noted and recorded by the Engineer in relation to a fixed bench mark, and the structure shall be allowed to remain filled for a period of two (2) weeks or such longer time as may be required to permit complete saturation of the concrete. During this period, readings will be taken by the Engineer and the results so obtained will be available for the information of the Contractor.
At the end of this period more water shall be added, if necessary, to bring the water level back to the designed maximum level and the water shall be left undisturbed for a period of ninety six (96) hours during which time the level shall again be recorded by the Engineer at regular intervals. The structure shall be considered to be watertight if the drop in water level does not exceed 6 mm in ninety six (96) hours in the case of a roofed structure and if no leakage is apparent.
The acceptable drop in level in the case of an unroofed structure shall be such that it allows for normal evaporation during the time of the test.

PSG6.5.3 If appreciable leakage is evident at any stage of the filling or testing or if, in the opinion of the Engineer, the degree of water tightness is unsatisfactory, the Contractor shall, when so ordered by the Engineer, discontinue the test immediately and at his own expense take approved steps to rectify the work. The work of rectification shall be continued assiduously until, on repetition of the test procedure, a satisfactory test result is obtained and the degree of water tightness is acceptable.

PSG6.5.5 The Engineer shall have the right to retest the structure before the expiry of the period of maintenance and the results of these tests will be made available to the Contractor. If these tests indicate to the Engineer that the degree of water tightness is unsatisfactory, the Engineer (before issuing the final certificate) will be entitled to order the Contractor to rectify the work at his own expense in such a manner as will cause least interruption to the running of the works and will ensure that the degree of watertightness of the structure is satisfactory.

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PSG 7 UNFORMED CONCRETE SURFACES (5.5.2)

PSG7.1 CLASS U1 ORDINARY FINISH

Immediately after placing, the concrete shall be finished by screeding with the edge of a wooden board of straight and true line and working between guides set accurately to level. No mortar shall be added and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after removing down the offending aggregate.

PSG7.2 CLASS U2 WOOD FLOAT FINISH

The concrete surface shall be brought to the standard Class U1 ordinary finish and then floated with a wood float. Floating shall be started as soon as the screeded finish is stiffened sufficiently and the bleed water has evaporated or been removed and it shall be the minimum necessary to produce a surface free from screed marks and uniform in texture.

PSG7.3 CLASS U3 STEEL TROWEL FINISH

The concrete surface shall be brought to standard of Class U2 wood floating finish with floating being continued until a small amount of mortar without excess water is brought to the surface and then when the floated surface has hardened sufficient to prevent any more excess fine material from being drawn to the surface, trowelling with a steel trowel. Trowelling shall be performed with a firm pressure such as will flatten the sandy texture of the floated surface and produce a dense uniform surface free from blemishes and trowel marks. Gradual surface irregularities shall not exceed 5mm over any 3m. The sprinkling of sand and/or neat cement on the surface to absorb excess moisture shall not be permitted.

PSG7.4 CLASS U4 POWER FLOAT FINISH

The concrete surface shall be first be brought to the standard of Class U1 ordinary finish using wooden screeding boards or steel rollers. After evaporation or removal of all bleed water and immediately the concrete is stiff enough to support the machine the surface shall be closed with a mechanical power float and then finished with a mechanical power trowel. The texture of the finished surface shall be either non-slip or polished as shown on the drawings. Irregularities shall be of long wavelength not exceeding a curvature of 2mm in 600mm. Under no circumstances shall sand and/or neat cement be sprinkled over the surface either to absorb excess moisture or to fill surface blemishes of irregularities. Power floats and trowels shall be operated by skilled operators.

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PSHA STRUCTURAL STEELWORK

PSHA.1 CONSTRUCTION (5)

PSHA.1.1 Add the following sub-clause:

5.5.6 Fasteners:

Erection shall include the supply of fasteners.

PSHA.2 MEASUREMENT AND PAYMENT (8)

PSHA.1.2 **Erection on site (8.3.3)**

Add the following:

The unit rate for erection shall cover the cost of fasteners.

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PSL MEDIUM PRESSURE PIPELINES

PSL.1 MATERIALS (3)

PSL.1.1 STEEL PIPES FITTINGS AND SPECIALS (3.4)

PSL.1.1.1 **Pipes of nominal bore up to 150mm (3.4.2)**

AMEND to read: -

Unless otherwise scheduled, steel pipes and fittings of nominal bore up to 150mm shall be of heavy duty, shall be screwed or plain ended for welded fittings or connecting with flexible couplings and shall comply with the applicable requirements of SANS 62.

PSL.1.1.2 **Pipes of nominal bore over 150mm (3.4.3)**

Unless otherwise scheduled, steel pipes and fittings of nominal bore over 150mm shall be manufactured to conform to SABS 719/1971 from grade 300WA steel and shall have a minimum wall thickness of 4.5mm.

PSL.1.1.3 **Steel Pipe Specials and Fittings (3.4.4)**

Steel specials shall be fabricated from straight steel pipe as specified in PSL.1.1.1 and PSL.1.1.2 and shall be manufactured and tested in accordance with BS 534 – Clause 4.

Where specified on the drawings or schedule of quantities, ANSI B16 curvature bends, tees and reducers shall be used.

PSL.1.2 OTHER TYPES OF PIPES (3.7)

PSL.1.2.1 **uPVC Pipes**

Where uPVC bends are specified, they shall have a minimum pressure rating of 16 bar irrespective of the rating of the pipe to which they are attached.

PSL.1.2.2 **Polyethylene Pipes (3.7.2)**

ADD the following: -

All HDPE piping used on this contract shall be manufactured to the latest SABS ISO 4427 specification in an ISO 9002 listed factory belonging to a company which is a member of SAPPMA. Pipes from manufacturers who are non-SAPPMA members will not be accepted. Random samples will be taken to check the MFI and OIT index of the material.

All HDPE piping is to be SABS ISO 4427: 1996E PE80.

The contractor will be required to submit certified proof of the above prior to bringing any pipe material to site. The Engineer may also call for certificates of compliance to be submitted to substantiate the origin of raw material used in the manufacture of the pipes.

Pipe shall be supplied in rolls of lengths of either 100m or 50m.

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PSL.2 JOINTING MATERIALS (3.8)

PSL.2.1 **Flexible Couplings** (3.8.2)

HDPE compression fittings, including both the coupling and the thread, shall be rated as being suitable for operating pressures of 12.5 bar and shall be manufactured of the following materials:

- Body: Virgin polypropylene in master batch UV, high stability copolymer (PP-B) with UV Protection;
- Seal: Nitrile rubber (NBR);
- Bush Ring: Polypropylene, high stability copolymer (PP-B) with UV Protection;
- Clamping Ring: Acetalic resin (POM); and
- Body Nut: Polypropylene, high stability copolymer (PP-B) with UV Protection.

Clamp saddles must comply with the following minimum specification:

- They must have a pressure rating of minimum 16 Bar;
- The parallel thread may not exceed 2"BSP;
- They must be reinforced with a stainless-steel reinforcing ring; and
- They must have a minimum of 4 x galvanised steel bolts.

PSL.2.2 **Flanges and accessories** (3.8.3)

Unless otherwise indicated on the drawings or schedules of quantities, dimensions and drilling of flanges shall be in accordance with the requirements of SABS 1123 Table 1600/3 or 2500/3 as specified. All flanges shall be truly at right angles to the axis of the pipe fittings and shall be drilled with bolt holes off-centre.

Flanges for normal working pressures up to 2500 kPa shall be flat-faced with full-face gaskets. **All gaskets shall be of the "Klinker" type.**

Nuts and bolts for flanges shall comply with SABS 135 or SABS 136 as applicable.

All bolts, nuts and washers shall be mild steel, hot dip, galvanized in accordance with SABS ISO 1461.

The length of each bolt shall be such that after tightening at least one thread in addition to the thread run out and not more than the bolt diameter shall project. The threaded portion of bolts shall be clear of the shear plane.

All nuts and studs shall be fitted with two, steel, flat washers, under the bolt head and under the nut.

Any bolts not complying with this requirement shall be removed and replaced at the expense of the Contractor.

PSL.3 CORROSION PROTECTION (3.9)

PSL.3.1 **Steel pipes** (3.9.2.1)

These pipes, fittings, specials etc shall all be internally and externally hot-dip galvanized. All galvanizing shall be done in accordance with SANS 121: 2000/ISO 1461 2000. The minimum amount of zinc deposited shall be 760 g/m². The Contractor shall submit certificates certifying that all galvanized pipes have been manufactured in a certified facility and meet the specifications noted above. Retention will not be released until such certificates are delivered to the Engineer.

All internal flanges and bolts shall be wrapped with a "Denso" mastic blanket applied in accordance with the manufacturer's instructions.

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PSLB **BEDDING (PIPES)**

PSLB.1 **INTERPRETATIONS (2)**

PSLB.1.1 **DEFINITIONS** (2.3)

Add the following new definition:

PSLB.1.1.1 **Stone mat**

Material that complies with the requirements of PSLB.2.3

PSLB.2 **MATERIALS (3)**

PSLB.2.1 **SELECTED GRANULAR BEDDING** (3.1)

Add the following new subclause:

PSLB.2.1.1 **STONE MAT** (3.1.1)

Stone mat shall be 13,2mm nominal size stone for concrete complying with the requirements of SABS 1083 (Category 2).

PSLB.2.2 **BEDDING** (3.3)

PSLB.2.2.1 **GRANULAR BEDDING** (3.3.1)

Add the following to the clause:

“All granular material must come from commercial sources. Should the Contractor require to obtain granular material from a suitable borrow pit, then this will be for his cost and the borrow is to be agreed on with the Engineer.

The rate for granular material sourced from borrow pits shall include for all work to select, remove oversize and/or unsuitable material by sieving etc.”

PSLB.2.2.2 **PLACING OF BEDDING** (3.5)

Add the following new clause:

“All bedding from commercial/borrow shall be hauled and placed along the trench at intervals not closer than 100m. The bedding material shall then be hauled with wheel barrow from the stockpile to the trench by Labour intensive methods (LI).”

PSLB.3 **CONSTRUCTION (5)**

PSLB.3.1 Details of Bedding (5.1.2)

Delete clause 5.1.2a and 5.1.2b and substitute:

“Pipes should be bedded and protected in accordance with the details shown on drawings.

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PSLB.4 TOLERANCES (6)

PSLB.4.1 MOISTURE CONTENT AND PAYMENT (6.1)

Add the following to the clause:

“Permissible deviations of moisture content and density shall conform to Class II degree of accuracy.”

PSLB.5 MEASUREMENT AND PAYMENT (8)

PSLB.5.1 Disposal of displaced material (8.1.5)

Amend to read:

“Material displaced by importation of material in terms of 8.1.2 shall be spread leveled and shaped to conform with the natural contours adjacent the trench. In all cases the thickness of the material once spread shall not exceed 100mm. Overhaul will be paid on such material”.

PART B2 : PARTICULAR SPECIFICATIONS

PA: OHSA 1993 HEALTH AND SAFETY SPECIFICATION

PA.1 SCOPE

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy environment for all workers, employees and subcontractors under his control and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Regulations, and all other safety codes and specifications referred to in the said Regulations.

In terms of the OHSA Agreement in Section C1.2.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHSA 1993 and Regulations 2014.

This safety specification and the Contractor's own Health & Safety Plan as well as the Occupational Health & Safety Act, 85 of 1993 & Construction Regulations 2014, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of works.

The following are possible risks associated with this project:

- Working in elevated positions, most of the time in a restricted environment with limited landings (working platforms);
- Working above a continuously flowing river and in a flood plain environment subject to flooding;
- Lifting and lowering of materials and equipment from the ground to the bridge and vice versa, exposed to cross winds;
- Steep and restricted access to the lower flood plain below the bridge
- Potentially dangerous existing services, i.e. gas lines, water and sewerage mains, electrical high voltage cables, on the bridge, buried and overhead
- Deep excavations in soils requiring shoring or reducing of slopes
- Blasting of hard rock or demolition of concrete
- High pressure during testing of the new rising main, which could result in potentially dangerous situations in the event of the pipeline or fittings failing

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- Potentially harmful gasses when tying into the existing sewer mains
- Movement of construction vehicles on site, taking into consideration steep slopes, other traffic and existing services
- Exposure to possible injuries due to mishandling or failure of power and hand tools
- Falling debris, tools and materials from bridge
- Non-conformance to specifications with regards to fasteners and materials
- Risks related to general safety and security on site

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessary covered in the above.

PA.2 DEFINITIONS

For the purpose of this contract the following shall apply:

Employer” where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as “**client**” as defined in the Construction Regulations 2014. “**Employer**” and “**client**” is therefore interchangeable and shall be read in the context of the relevant document.

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(a) “**Contractor**” wherever used in the contract documents and in this specification, shall have the same meaning as “**Contractor**” as defined in the General Conditions of Contract. In this specification the terms “**principal contractor**” and “**contractor**” are replaced with “**Contractor**” and “**subcontractor**” respectively.

For the purpose of this contract the **Contractor** will, in terms of OHSA 1993, be the mandatory, without derogating from his status as an employer in his own right.

(b) “**Engineer**” where used in this specification, means the Engineer as defined in the General Conditions of Contract. In terms of the Construction Regulations the Engineer may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

PA.3 TENDERS

The Contractor shall submit the following with his tender:

- (a) a documented Health and Safety Plan as stipulated in Regulation 7 (1) (a) of the Construction Regulations 2014. The Safety Plan must be based on the Construction Regulations 2014 and will be subject to approval by the Employer;
- (b) a declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2014;
- (c) a declaration to the effect that he made provision in this tender for the cost of the health and safety measures envisaged in the Construction Regulations; and
- (d) Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely in accordance with the Construction Regulations.

PA.4 CONSTRUCTION WORK PERMIT & NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

PA.4.1 Construction Work Permit

Where the project value exceeds R 60 000 000-00 / CIDB grade 7 or the project duration exceeds 12 months / 365 days, the client will apply for a Construction Work Permit in accordance with Regulation 3 (1) of the Construction Regulations of 2014.

The contractor must provide the client / client's agent with the required documentation for the Application of the Construction Work Permit. Failure to provide the documentation timeously may cause undue delays on the contract. The contractor may not claim any time lost due to these delays.

The contractor may not commence any work until the Construction Work Permit is received from the Department of Employment & labour. The contractor must erect a sign board to display the Site-Specific Construction Work Permit. This board must contain the following information in at least 100 mm size alphanumerical:

- The Department of Employment & Labour Logo
- The Contractor's Company Name & Logo
- The Construction Health & Safety Agent's full name & Company Logo
- The Contract Name & Number
- The Site-Specific Construction Work Permit Number

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PA.4.2 Notification of Construction Work

After award of the contract, but before commencement of construction work, the contractor who intends to carry out any construction work other than work contemplated in regulation 3(1) of the Construction Regulations 2014, must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will-

- (a) include excavation work;
- (b) include working at a height where there is risk of falling;
- (c) include the demolition of a structure; or
- (d) include the use of explosives to perform construction work.

The notification must be done in the form similar to Annexure 2 included on page T.53 (Forms to be Completed by Successful Tenderer) of the tender document.

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

PA.5 RISK ASSESSMENT

Before commencement of any construction work during the construction period, the Contractor must have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 9 of the Construction Regulations 2014).

The risk assessment must identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it must include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified and must include a monitoring and review plan.

The risk assessment must be available on site for inspection by inspectors, Employer, Engineer, subcontractors, employees, trade unions and health and safety committee members, and must be monitored and reviewed periodically by the Contractor.

PA.6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS

PA.6.1 Health and Safety plan

The Contractor shall appoint his employees and any subcontractors to be employed on the contract, in writing, and he shall provide them with a copy of his documented Health and Safety Plan, or relevant sections thereof. The Contractor shall ensure that all subcontractors and employees are committed to the implementation of his Safety Plan.

PA.6.2 Health and safety induction training

The Contractor must ensure that all employees under his control, including subcontractors and their employees, undergo a health and safety induction training course by a competent person before commencement of construction work. No visitor or other person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety training pertaining to hazards prevalent on site.

The Contractor must ensure that every employee on site is in possession of proof of the health and safety induction training issued by a competent person prior to commencement of construction work.

PA.7 APPOINTMENT OF SAFETY PERSONNEL

PA.7.1 Construction Managers and Supervisors

Construction Manager and Alternate Manager – CR 8 (1)

The Principal Contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed in terms of Regulation 8 (1). The construction manager cannot manage any other site other than the single site for which he has been appointed. The construction manager must have at least a national diploma in civil engineering with a post graduate experience of five years in the Civil Engineering field.

Assistant Construction Manager(s) – CR 8 (2)

The Principal Contractor must in writing appoint one or more assistant construction managers for different sections thereof in terms of Regulation 8 (2): Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties. The assistant construction manager cannot manage any other site other than the single site for which he has been appointed. The construction manager must have at least a national diploma in civil engineering.

Construction Supervisor(s) – CR 8 (7)

The Principal Contractor must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site in terms of Regulation 8 (7). The construction supervisor cannot supervise any other site other than the single site for which he has been appointed. The construction supervisor must have at least five years' experience supervising construction activities on site.

Assistant Construction Supervisor(s) – CR 8 (8)

The Principal Contractor must in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in subregulation (7), and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor in terms of Regulation 8 (8): Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties. The assistant construction supervisor cannot supervise any other site other than the single site for which he has been appointed. The assistant construction supervisor must have at least two years' work experience in his specific task in order to supervise employees.

PA.7.2 Construction health & safety officer – CR 8 (5)

Due to the nature of the work, the degree of danger likely to be encountered and the accumulation of hazards or risk on the site, the Principal Contractor must in writing appoint one full (Where a Construction Work Permit is Required) or part time (Where the Notification of Construction Work Required) Construction Health & Safety Officer to assist in the control of all health and safety related aspects on the site, in terms of Regulation 8 (5). The Construction Health & Safety Officer must be registered and in good standing with the South African Council for the Project & Construction Management Professions (SACPCMP). Each contractor must appoint his / her Construction Health & Safety Officer who is registered and in good standing with the SACPCMP. The contractors' Construction Health & Safety Officer must conduct at least a weekly site visits and submit weekly reports on the findings on the construction site. The contractor may appoint a consultant to oversee the health and safety on site who must perform the same duties as a part time Construction Health & Safety Officer.

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Provision must be made by the Contractor in his rates, to cover the cost of this dedicated construction health & safety officer appointed after award of the contract.

PA.7.3 Health and safety representatives

In terms of **Section 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, must appoint a **health and safety representative** in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 50 employees. Although the Act requires 1, SHE representative from 20 employees onwards, this contract requires 1:50 She representatives irrespective of the number on employees on site. The same applies to contractors and sub-contractors.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery etc. on a regular base, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

PA.7.4 Health and safety committee

In terms of Sections 19 & 20 of the Act (OHSA 1993) the Contractor (as employer), shall establish one or more health and safety committee(s) where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals, but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, and to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

PA.7.5 Competent persons

In accordance with the Construction Regulations the Contractor must appoint in writing **competent persons** responsible for each of the following work situations that may be expected on the site of the works.

- (a) Construction Manager, Supervisor and Health & Safety Officer as described in Regulation 8;
- (b) Risk assessments as described in Regulation 9;
- (c) Fall protection as described in Regulation 10;
- (d) Structures as described in Regulation 11;
- (e) Temporary Works as described in Regulation 12;
- (f) Excavation work as described in Regulation 13 & blasting for excavation work;
- (g) Demolition work as described in Regulation 14;
- (h) Tunneling as described in Regulation 15;
- (i) Scaffolding work as described in Regulation 16;
- (j) Suspended platform operations as described in Regulation 17;
- (k) Rope Access as described in Regulation 18;
- (l) Material hoists as described in Regulation 19;
- (m) Batch plant operations as described in Regulation 20;

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(n) Explosive powered tools as described in Regulation 21;

Cranes as described in Regulation 22;

(o) Construction vehicle and mobile plant as described in Regulation 23;

(p) Temporary electrical installations and machinery on construction sites as described in Regulation 24;

(q) Use & temporary storage of flammable liquids on construction sites as described in Regulation 25;

(r) Water Environments as described in Regulation 26;

(s) Housekeeping & general safeguarding on construction sites described in Regulation 27;

(t) Stacking and storage on construction sites as described in Regulation 28;

(u) Fire precautions on construction sites as described in Regulation 29; and

(v) Construction employees' facilities as described in Regulation 30.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work on all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities to comply with **all** requirements of the Construction Regulations.

PA.8.....RECORDS AND REGISTERS

In accordance with the Construction Regulations the Contractor is bound to keep records and registers related to health and safety on site for periodic inspection by inspectors, the Engineer, the Employer, trade union officials and subcontractors and employees. The following records and registers must be kept on site and shall be available for inspection at all times.

(q) A copy of the OHS Act 1993 Construction Regulations 2014;

(r) A copy of this Health and Safety Specification;

(s) A copy of the Contractor's Health and Safety Plan (Regulation 7);

(t) A copy of the Notification of Construction Work (Regulation 4);

(u) A health and safety file in terms of Regulation 7(1) (b) with inputs by the Construction Health & Safety Officer - Regulation 8 (5&6);

(v) A copy of the risk assessment described in Regulation 9;

(w) A fall protection plan and the corresponding records of evaluation and training of employees working from elevated positions as described in Regulation 10 and Regulation 18 (2) (b);

(x) Drawings pertaining to the design of structures (Regulation 11 (1) (c)) and Temporary works (Regulation 12 (3) (c)) must be kept on site;

(y) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 13(2)(h));

(z) A copy of the certificate of the system design for suspended platforms (Regulation 17(3));

(aa) A notice must be affixed around the base towers of material hoists to indicate the maximum mass load, which may be carried at any one time by material hoists (Regulation 19 (5));

(bb) Maintenance records of material hoists and inspection results must be kept in a record book to be kept on site (Regulation 19 (8));

(cc) A record of any repairs to or maintenance of a batch plant must be kept on site (Regulations 20 (8));

(dd) A warning notice must be displayed in a conspicuous manner when and wherever an explosive powered tool is used (Regulation 21 (2));

(ee) A register for recording of findings by the competent person appointed to inspect construction vehicles and mobile plant (Regulation 23(1)(k)).

PA.9.....CONTRACTORS RESPONSIBILITIES

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For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and Regulations.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) to confirm his status as mandatory (employer) for the contract under consideration.

Site Establishment

The Principal Contractor must find a suitable position within the construction zone to set up the site camp and laydown areas for construction material. These positions must be approved by the client, local councillor and the engineer. These positions must be agreed between all parties before the site camp and laydown areas are established. The site camp must be fenced using a Bonnox type fence with a minimum of 1,8 metres high with shade cloth. The site camp must have separate pedestrian and vehicular access which must be lockable. Laydown areas must be adequately barricaded using barrier netting of at least 1 metre in height fixed onto timbers poles or 50mm droppers.

The Principal Contractor must erect, separate from the contract sign board, at least 3^{No} construction sign boards. These sign boards must be constructed from sheet metal fixed on metal frames and be at least 1200 x 600mm in size. The sign boards must be fixed using clamps on a minimum of 100-125mm x 3,6 metre CCA treated gum poles. The poles must be inserted at least 800mm into the ground and the sign board must have a clearance of at least 2,2 metres from the ground. The sign boards must be erected at least at the following points:

- One at the entrance to the site camp
- Two upon approaching the construction site (one from each side where construction work with high risk activities are actively taking place).
- The construction sign board must display the PPE required on site as well as the hazards to be encountered while on site. The sign board must also include "No Unauthorised Entry", Visitors Report to Site Office" & "Danger – Construction Work in Progress". The contractor must erect a sign board to display the Site-Specific Construction Work Permit. This board must contain the following information in at least 100 mm size alphanumerical:
 - The Department of Employment & Labour Logo
 - The Contractor's Company Name & Logo
 - The Construction Health & Safety Agent's full name & Company Logo
 - The Contract Name & Number
 - The Site-Specific Construction Work Permit Number

The Principal Contractor must make provisions for the set-up of an office container, stores container, portable drinking water, sufficient number of toilets for each gender as well as firefighting & first-aid equipment within the site camp.

Where a truck mounted crane is used to place the containers, the operator must be trained by an accredited training service provider on the SAQA Unit Standard 242978: Operate truck mounted cranes. The truck must be parked on level and stable ground and have suitable timber sole plates placed underneath the outriggers. All lifting gear / tackle must be inspected, used and maintained by a competent person who has been trained by an accredited training service provider on the SAQA Unit Standard 253575: Inspect, use and care for manual lifting equipment and tackle. No person must walk or stand under elevated loads. All lifting operations must be carried out under the control of a competent banksman.

Where the Principal Contractor requires electricity to the site camp, the electrical installation must be done by a registered electrical contractor who must issue a Certificate of Compliance (COC) in the form of Annexure 1 of the Electrical Installations Regulation of 2015, after the installation is completed. This installation must be inspected by a

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competent person at least weekly in terms of Regulation 24 (d) of the Construction

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Regulations of 2014 and the results of such inspections recorded in a register provided for that purpose. All electrical installations must comply with the Electrical Installations Regulation of 2015.

The site camp must be controlled by means of lockable gates as well as the placement of security personnel. The security must be trained on the use of the fire extinguisher and be provided with a list of emergency contact details, suitable shelter, welfare facilities and flashlight. The site camp is to be locked and remain secured after hours. No fuel, loose tools or equipment must be left unattended, these must be locked away in suitable storage facilities. All persons entering the site must undergo a site-specific induction.

All mobile plant which is parked at the site camp must have chock blocks and their blades, buckets and booms fully lowered when parked. Drip trays must be placed under the engine compartment of each mobile plant to contain any oil or fuel spills.

The Principal Contractor must ensure that sufficient bins are provided for the safe disposal of waste generated from the construction activities. All waste to be removed off site at least weekly and disposed of at a registered landfill site. Receipts must be obtained as proof of disposal.

The Principal Contractor must ensure that the site camp complies with the local bylaws.

Surveying

The surveying is to be done by a suitably qualified surveyor who has at least a National Diploma in Civil Engineering and specializing in Surveying. The survey team must be inducted & trained, by the appointed Construction Health & Safety Officer, on the company's plans, policies, procedures and risk assessments prior to commencing with work on site.

Traffic Accommodation

Due to the number of road crossings and work along public roads, the Principal Contractor must appoint a competent as a Traffic Safety Officer in terms of COLTO 1502 (i). The Principal Contractor must compile a site-specific Traffic Management Plan and submit it to the Client's Agent for approval. Once approved, the content of the Traffic Management Plan must be communicated to all site personnel.

Proving & Relocation of Existing Services

The Principal Contractor must obtain a copy of the updated services layout drawings from the local municipality which must be used as a guide for the proving of underground services. All identified services must be clearly identified and barricaded once located. Extreme care must be taken in order not to damage any of the existing services. The location and type of existing services must be communicated to all site personnel. The relocation of the services must be done by the local municipality or with instruction of the engineers by competent sub-contractor or persons appointed by the Principal Contractor.

Clearing & Grubbing

The Principal Contractor must ensure that the clearing and grubbing is done in accordance with the client's specification. All material to be spoiled at a suitable spoil site. Topsoil to be stored on site for future use and maintained during the construction phase. The Principal Contractor must ensure that dust is kept to a minimum during the construction phase. All construction vehicles must be operated in accordance with Regulation 23 of the Construction Regulations of 2014.

Excavation Work

The Principal Contractor must ensure that all excavation work is carried out under the supervision of a competent person who must be appointed in writing. All excavations must be suitably barricaded at the end of each shift or when not being worked on. All excavation work must be carried out in accordance with Regulation 13 of the Construction Regulations of 2014.

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Installation of Bulk & Reticulation Pipelines

The Principal Contractor must ensure that all pipes are laid in accordance with the client's specifications. All pipes to be stacked on level ground with suitable chocks to prevent them from rolling. Half-filled sandbags can be used as chocks. All pipe stacks must be suitably barricaded to prevent the public from accessing them.

Construction of Thrust & Anchor Blocks

The Principal Contractor must ensure that all Thrust & Anchor Blocks are constructed in accordance with the engineers' specifications. All concrete to be shuttered by means of timber shutters or similar means of containing the concrete. All excavations where Thrust & Anchor Blocks are constructed must comply with Regulation 13 of the Construction Regulations of 2014. All steel fixing, shuttering and concrete work must be carried out under the supervision of a competent Construction Supervisor appointed in terms of Regulation 8 (7) of the Construction Regulations of 2014. Employees must be issued with and instructed to wear rubber (Gum) boots and plastic-coated gloves when working with concrete.

Installation of Valves & Fittings

The Principal Contractor must ensure that valves & fittings are supplied and installed in accordance with the designer's specifications. Correct lifting equipment must be used for the installation of the valves and fittings. All lifting equipment must be load tested and have supporting load test certificates. All lifting equipment must be tagged with a Safe Working Load (SWL). All lifting equipment must be inspected by a competent person at least every three months. The Principal Contractor must take into account pinch points and working space when installing valves and fittings and take the necessary precautions to prevent injuries.

Bridge Crossings

The Principal Contractor must ensure that all bridge crossings are constructed in accordance with the designer's specifications. The Principal Contractor must ensure that Regulations 10, 12, 16 and 26 of the Construction Regulations are complied with regarding fall protection, temporary works, scaffolding and water environments.

Road Crossings

The Principal Contractor must ensure that all road crossings are constructed in accordance with the designer's specifications. The road crossings must be done in accordance with the Principal Contractor's approved Traffic Management Plan. The Principal Contractor must ensure that no excavation is left open overnight in the road. All excavations must be backfilled within the same day. Where road crossings cannot be backfilled, steel plates with a minimum of 12mm thickness must overlap on the excavations so that vehicles can drive over without being damaged. The steel plates must extend at a reasonable length as determined by the engineer so that the plate does not slide off and fall into the excavation.

River Crossings

The Principal Contractor must ensure that all river crossings are constructed in accordance with the designer's specifications. When excavating for the riverbed, the Principal Contractor must ensure that all excavation work is carried out in accordance with Regulation 13 of the Construction Regulations, 2014. When working near or over water, the Principal Contractor must ensure that all work is carried out in accordance with Regulation 26 of the Construction Regulations, 2014.

Construction of Pressure Reducing Valve (PRV) & Meter Chambers

The Principal Contractor must ensure that all building works are in accordance with the National Building Regulations and the client's specifications. The Principal Contractor must ensure that steel piping and ladders are supplied and installed in accordance with the designer's specifications. All pipe fabrication to be done off site. Only minor adjustments to be done

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on site. The welders performing steel fabrication work must be trained by an accredited training institute on SAQA Unit Standard 119753: Perform basic welding/jointing of metals. All welding must comply with Regulation 9 of the General Safety Regulations, 2003. All bricks to be stacked on level ground and stacks must not be placed on top of each other. Mixing of mortar must take place on an impermeable surface to prevent ground contamination. All employees working with dry cement powder must be issued with & instructed to wear dust masks and be trained on the MSDS for cement. The Principal Contractor must ensure that housekeeping is always maintained on site and that all damaged bricks, used straps, empty cements bags and general construction waste is disposed of correctly.

Construction of Air Valve Chambers

The Principal Contractor must ensure that all pre-cast rings are supplied and installed in accordance with the designer's specifications to construct the Air Valve Chambers. Correct lifting equipment must be used for the installation of the pre-cast rings. All lifting equipment must be load tested and have supporting load test certificates. All lifting equipment must be tagged with a Safe Working Load (SWL). All lifting equipment must be inspected by a competent person at least every three months.

Construction of Isolating & Scour Valve Chambers

The Principal Contractor must take into account pinch points and working space when installing concrete spacers to construct the Isolating & Scour Valve Chambers and take the necessary precautions to prevent injuries. The Principal Contractor must ensure that Regulation 28 of the Construction Regulations of 2014 are considered when stacking and storing concrete spacers.

Installation of Pipe Markers

The Principal Contractor must take into account pinch points and correct lifting procedures when installing concrete pipe markers and take the necessary precautions to prevent injuries. The Principal Contractor must ensure that Regulation 28 of the Construction Regulations of 2014 are considered when stacking and storing pipe markers.

Pipe Testing & Commissioning of Works

The Principal Contractor must ensure that pipe testing is carried out in accordance with the designer's specifications. All plant and equipment used for the testing must be operated by trained and authorised personnel who must inspect such equipment prior to each use and the results of such inspections recorded in registers provided for that purpose. The Construction Supervisor must sign off daily on the registers and action any deviations noted by the operators prior to using the plant or equipment.

On completion of the project, the Principal Contractor must ensure that the commissioning of the pipeline is done in accordance with the designer's specifications. The entire installation or parts thereof must then be handed over to the client upon completion.

1. Occupational Health & Safety Act, 85 of 1993

(a) Section 7 – Health & Safety Policy

The Principal Contractor must prepare a written policy concerning the protection of the Health & Safety of his employees at work, including the description of his organisation and the arrangements for carrying out and reviewing that policy. This policy must be signed by the Principal Contractor's CEO and prominently displayed at the site camp where it will be accessible to all employees. This policy must be communicated to all his employees during the start up of a project and whenever the policy is amended.

(b) Section 16 – CEO & Contracts Manager

The CEO will accept responsibility for health & safety in the organization in terms of Section 16 (1). The appointment of the CEO must be done in writing and may include a board resolution. Where the CEO cannot directly oversee the project, he / she may appoint a Contracts Manager to accept responsibility for health & safety on all sites allocated to him or her in terms of Section 16 (2).

(c) Section 17 – Health & Safety Representatives

The Principal Contractor must appoint in writing 1 SHE representative for every 50 employees or part thereof in terms of Section 17 (1). The SHE representative must attend formal training conducted by an accredited training service provider who is registered with the Department of Labour and the respective training authority. The SHE representative must be a full-time employee and must be familiar with the Principal Contractor's scope of work. The SHE representative must not be in a supervisory or management position. The SHE representative shall carry out regular inspections on site while performing normal duties at work. The SHE representative shall participate in incident investigations and will form part of the health & safety committee.

(d) Section 19 – Health & Safety Committees

The Principal Contractor must appoint a management representative in writing as a SHE committee member to attend health & safety committee meetings in terms of Section 19 (3). Where there are more than one SHE representatives, the Principal Contractor shall hold at least monthly SHE committee meetings. The number of management representatives shall not exceed that of the number of SHE representatives.

(e) Section 24 – Report to Inspector Regarding Certain Incidents

The Principal Contractor must report all incidents immediately, in relation to Section 24 of the Occupational Health & Safety Act, 85 of 1993, to the provisional director, Client and its agent:

(f) Section 37 – Acts or omissions by employees or mandataries

The client must engage in a mandatory agreement with the Principal Contractor to ensure that all aspects of health & safety are included within the Principal Contractor's scope of work and the agreement relieves the employer of any civil liability whenever an employee does or omits to do any act which it would be an offence in terms of this Act for the employer of such employee. This agreement shall be in writing and signed by both parties in terms of Section 37 (2). Where the Principal Contractor appointments sub-contractors, there needs to be an agreement as the sub-contractor is an employer in his own right.

2. General Administrative Regulations, 2003

a) Regulation 4 – Copy of the Act

The Principal Contractor must have a copy of the latest version of the Occupational Health & Safety Act, 85 of 1993 and Regulations, readily available at the site office for use by the Principal Contractor, employees, employer and inspectors.

In addition to the above, the Principal Contractor must prominently display size A1 laminated posters of the following Acts in the workplace:

- Occupational Health & Safety Act, 85 of 1993;
- Employment Equity Act, 55 of 1998, and
- Basic Conditions of Employment Act, 75 of 1997.

b) Regulation 9 – Recording & Investigation of Incidents

The Principal Contractor must appoint a competent person in writing as the accident and incident investigator to investigate all incidents on site. The reporting of incidents must be done in the form of WCL 1 (Diseases) / WCL 2 (Injuries) and investigated and recorded in the form of Annexure 1. The incidents must be investigated within 7 days by the appointed competent person with the assistance of the health & safety committee.

3. General Safety Regulations, 2003

a. Regulation 2 – Personal Safety Equipment & Facilities

The Principal Contractor must supply, free of charge, sufficient and suitable PPE to his employees for them to carry out their work safely. The Principal Contractor must demonstrate to the employee the safe use, care and limitations of such PPE. The employee must sign the PPE issue register for any PPE which was issued to him or her. The Principal Contractor must ensure that every reasonable effort has been taken to reduce if not eliminate the health & safety risk to his employees. PPE must and will always be the last resort.

b. Regulation 2 A – Intoxication

The Principal Contractor must ensure that no employee enters or remains in the workplace if he or she is under the influence of or in possession of intoxicating substances (Alcohol & Drugs). The Principal Contractor shall conduct random drug & alcohol tests to ensure that substance abuse is closely monitored in the workplace. Disciplinary action must be taken to employees who are found to guilty of misconduct.

c. Regulation 2 B – Substituted Notices & Signs

The Principal Contractor must display substituted notices and signs around the site which must be clearly visible and comply with the local bylaws. The Signage must include but not limited to the mandatory PPE requirements, First-Aid, Fire Equipment, Excavation Work, Hazardous Substances, Construction Activities and Public Notices.

d. Regulation 2 C – Admittance of Persons

The Principal Contractor must ensure that no unauthorized persons enter or remains in the work area. The Principal Contractor must strategically erect signage at the entrance to the site prohibiting entry. Where the site is on a public space, the Principal Contractor must ensure that adequate measures are in place to prevent unauthorized entry. The following information should also be included:

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“No Unauthorized Entry”

“Visitors Report to Site Office”

“Construction Site” & indicate the specific hazards associated with the site.

“Induction to be Obtained Prior to Entry to the Site”

e. Regulation 3 – First Aid, Emergency Equipment and Procedures

The Principal Contractor must ensure that he / she has a fully stocked first aid kit on site. The first aid kit must contain the minimum contents as per the Annexure contained in this regulation. The Principal Contractor must appoint a trained & competent person as the first aider to attend to all injuries on site and to control the first-aid kit. The training of the first aider must be done by an accredited training provider who is registered with the department of labour and the respective training authority. The Principal Contractor must display the first aid signs at strategic points on the site to indicate the location as well as the name of the person in charge of the first aid kit.

f. Regulation 4 – Use & Storage of Flammable Liquids

The Principal Contractor must store all flammable liquids in a well-ventilated store which is designed for this purpose. The store must be bunded and be able to contain 110% of the volume of the flammable liquids stored. The flammable liquids must not be stored with combustible material. The store must be clearly marked as to the content and approximate quantity of flammable liquids that are stored. The following signage (290 x 290 mm) must also be displayed at the entrance to the store:

“No Smoking”

“No Open Flames”

“Hazardous Chemicals”

“Flammable Store”

g. Regulation 6 – Work in Elevated Positions

No work at heights must be carried out unless it is done safely from a safe platform or scaffold. Ladders should be used only to gain access and not as a work platform. Only platform ladders are designed to be used as a safe work platform. Persons working at heights must undergo a Working at Heights evaluation during the medicals which will form part of the hazards listed in the Annexure 3. All persons working above 2 metres must wear and attach a safety harness to a suitable lifeline. All persons working at heights must undergo Working at Heights Training by an accredited training service provider who is registered with the department of labour and the respective training authority.

h. Regulation 8 – Stacking of Articles

The Principal Contractor must appoint a competent person in writing in accordance with Regulation 8 (1) (a) and to supervise the stacking of articles on site. All stacking and storage must be done safely, and stacks must not exceed three times the base width. Stacks must be wider or at the same size at the bottom than at the top. All storage areas must be adequately cordoned off.

i. Regulation 13 A – Ladders

The Principal Contractor must appoint a suitable person in writing to inspect the ladders on a regular basis. The Principal Contractor must ensure that every ladder is constructed of sound material and is suitable for the purpose for which it is used. Ladders should be

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used only to gain access and not as a work platform. Only platform ladders are designed

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to be used as a safe work platform. Ladders must not be painted as the paint may hide any cracks on the ladder. If the ladder is constructed from timber, the timber must be free from Knots and the rungs must be let into the styles.

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2014, and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and responsibilities in terms of the Construction Regulations.

4. Construction Regulations, 2014

a) Regulation 3 – Application for the Construction Work Permit

If the project value is over R 40 000 000-00 or the duration of the project exceeds 12 months, then the client shall appoint an agent on its behalf to apply to the provincial director of the department of labour for a construction work permit. The permit application process takes up to 30 days and the Principal Contractor may only commence work once the construction work permit is received.

b) Regulation 4 – Notification of Construction Work

The Principal Contractor must, prior to commencing with any work, notify the provincial director of the department of labour, at least 7 days before, in the form of Annexure 2 of its intention to commence with construction work. If the client does an application for a construction work permit, the notification is not necessary.

c) Regulation 5 – Duties of Client

The Client will –

- (g) ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures;
- (h) ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely;
- (i) take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with these Regulations;
- (j) ensure before any work commences on a site that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993);
- (k) appoint every principal contractor in writing for the project or part thereof on the construction site;
- (l) discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan contemplated in regulation 7(1), and must thereafter finally approve that plan for implementation;
- (m) ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor;
- (n) take reasonable steps to ensure that each contractor's health and safety plan contemplated in regulation 7(1)(a) is implemented and maintained;
- (o) ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
- (p) ensure that a copy of the health and safety audit report contemplated in paragraph

(o) is provided to the principal contractor within seven days after the audit;

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- (q) stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site;
- (r) where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely; and
- (s) ensure that the health and safety file contemplated in regulation 7(1)(b) is kept and maintained by the principal contractor.

In accordance with Regulations, the Contractor shall liaise closely with the Employer or the Engineer on behalf of the Employer, to ensure that all requirements of the Act and the Regulations are met and complied with.

d) Regulation 7 – Duties of the Principal Contractor & Contractor

The Principal Contractor must provide and demonstrate to the client a suitable, sufficiently documented and coherent site-specific health and safety plan, based on the client's documented health and safety specifications. The plan must be submitted to the client / client's agent for approval. The approved plan will be submitted together with the application for the Construction Work Permit. Work may only commence once the plan has been approved. This plan must be applied, reviewed and updated as the work progresses.

The Principal Contractor must provide a comprehensive health and safety file for review to the client / client agent. The health and safety file will be audited by the client / client agent prior to commencement with work on site. Once the file has been reviewed, the Principal contractor must address all outstanding items prior to commencement with work. The Principal contractor may only commence work if the outstanding items have been addressed. This health & safety file must be updated by the Principal contractor and must remain on site at all times. On completion of the project, the contractor must consolidate the health and safety file including that of the sub-contractors and submit it to the client / client agent.

The Principal Contractor must provide potential sub-contractors, who are tendering for any work to be performed on site (including that of the plant hire companies), with the relevant sections of the client's health & safety specifications.

The Principal Contractor must ensure that the sub-contractors have the necessary competencies, resources and made adequate provision to carry the work out safely.

The Principal Contractor and sub-contractor must enter into a health & safety agreement in terms of Section 37 (2) of the OHS Act and the Principal Contractor must appoint each contractor in writing for part of the project in terms of Regulation 7 (1) (c) (v) of the Construction Regulations, 2014. The Principal Contractor must have a comprehensive and updated list of all his contractors on site.

The Principal Contractor must ensure that the sub-contractors are in Good Standing with the Compensation Commissioner in terms Section 89 of the COID Act, 130 of 1993.

The Principal Contractor must audit the contractors at least monthly. The contractors must submit a close out report with supporting documents, within 7 days, for addressing

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outstanding items.

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The Principal Contractor must ensure that where changes are brought about, sufficient health & safety information, including the necessary resources to carry out the work safely, is provided to the contractor.

The Contractor must provide and demonstrate to the Principal Contractor a suitable, sufficiently documented and coherent site-specific health and safety plan, based on the client's documented health and safety specifications. The plan must be submitted to the Principal Contractor for approval. Work may only commence once the plan has been approved by the Principal Contractor. This plan must be applied, reviewed and updated as the work progresses.

The Contractor must provide a comprehensive health and safety file for review to the Principal Contractor. The file will be audited by the Principal Contractor prior to commencement with work on site. Once the file has been reviewed, the contractor must address all outstanding items prior to commencement with work. The contractor may only commence work if the outstanding items have been addressed. This health & safety file must be updated by the contractor and must remain on site at all times. On completion of the project, the contractor must consolidate the health and safety file including that of his or her sub-contractors and submit it to the Principal Contractor.

The Principal Contractor must ensure that all his employees, including that of his / her contractors, have a medical certificate of fitness, for the type of work to be performed, issued by an Occupational Health Practitioner in the form of Annexure 3 and must include a general examination with the following test results, Blood Pressure, Snellen's Vision (20/20 Test), Spirometry (Lung Function) and Audiometry (Hearing Test). If employees are working at heights, then a 'Working at Heights' evaluation must be done.

The Principal Contractor must ensure that all his employees, including that of his / her contractors, have undergone induction training pertaining to the hazards prevalent site at the time of entry. The induction must be conducted by the Principal Contractor's appointed Construction Health & Safety Officer prior to entering the site.

The Principal Contractor must ensure that all visitors undergo an induction pertaining to the hazards prevalent on the site and that such visitors have the necessary PPE prior to entering the site. The PPE must include but not limited to: Hard Hats, Reflective Vests and Steel Toe Capped or similar approved Safety Boots.

e) Regulation 8 – Management & Supervision of Construction Work

The Principal Contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed in terms of Regulation 8 (1). The construction manager cannot manage any other site other than the single site for which he has been appointed. The construction manager must have at least a national diploma in civil engineering with a post graduate experience of five years.

The Principal Contractor must in writing appoint one or more assistant construction managers for different sections thereof in terms of Regulation 8 (2): Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties. The assistant construction manager cannot manage any other site other than the single site for which he has been appointed. The construction manager must have at least a national diploma in civil

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engineering.

Due to the nature of the work, the degree of danger likely to be encountered and the accumulation of hazards or risk on the site, the Principal Contractor must in writing appoint one full time Construction Health & Safety Officer to assist in the control of all health and safety related aspects on the site, in terms of Regulation 8 (5). The Construction Health & Safety Officer must be registered and in good standing with the South African Council for the Project & Construction Management Professions (SACPCMP). Each contractor must appoint his / her Construction Health & Safety Officer who is registered and in good standing with the SACPCMP. The contractors' Construction Health & Safety Officer must conduct at least a weekly site visit and submit weekly reports on the findings on the construction site. The contractor may appoint a consultant to oversee the health and safety on site who must perform the same duties as a part time Construction Health & Safety Officer.

The Principal Contractor must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site in terms of Regulation 8 (7). The construction supervisor cannot supervise any other site other than the single site for which he has been appointed. The construction supervisor must have at least five years' experience supervising construction activities on site.

The Principal Contractor must in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in subregulation (7), and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor in terms of Regulation 8 (8): Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties. The assistant construction supervisor cannot supervise any other site other than the single site for which he has been appointed. The assistant construction supervisor must have at least two years' work experience in his specific task in order to supervise employees.

a) Regulation 9 – Risk Assessment for Construction Work

The Principal Contractor must in writing appoint a competent person as a Risk Assessor to draw up risk assessments for the project in terms of Regulation 9 (1). The Risk Assessor must be trained on Hazard Identification & Risk Assessment (HIRA) by an accredited training service provider who is registered with the department of labour and the respective training authority on the Unit Standard 244383 – Conduct continuous hazard identification and risk assessment within a workplace.

The Risk Assessment must cover all activities performed by the Principal Contractor in site and must be based on the method statements. The Risk Assessments must contain a Risk Matrix, a Monitoring and Review Plan. The Risk Assessments must include control measures and safe work procedures to reduce if not eliminate the risk or hazard.

The Risk Assessments should be reviewed at least annually, when an incident has occurred, when there is a change in the scope of work or when there is a change in the design which may affect the health & safety of persons.

The Risk Assessments must be communicated to all site personnel involved with the activities for which the Risk Assessment has been done.

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All Risk Assessments must be carried out in accordance with Regulation 9 of the Construction Regulations, 2014.

Regulation 10 – Fall Protection

The Principal Contractor must in writing appoint a competent person as the Fall Protection Plan Developer when work is to be carried out at an elevated position. The Fall Protection Plan Developer must be trained by an accredited training service provider who is registered with the department of labour and the respective training authority. The Training must cover both Unit Standards 229994 and 229998.

The Principal Contractor must in writing appoint a competent person as the safety harness inspector to inspect all safety harnesses.

The Principal Contractor must draw up, implement, maintain and amend where necessary, a Fall Protection Plan for all work to be carried out at an elevated position.

The Fall Protection plan must cover:

- A risk assessment for work at a fall risk position and the methods and procedures to address such risk;
- A process to evaluate the medical fitness of employees who work at a fall risk position;
- A programme for the training of employees working from a fall risk position and the records thereof;
- the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
- a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

The Principal Contractor must ensure that the construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

All work carried out at a fall risk position must comply with Regulation 10 of the Construction Regulations, 2014.

b) Regulation 11 – Structures

The Principal Contractor must ensure where there are new or existing structures within the work zone, Regulation 11 of the Construction Regulations of 2014, must be complied with.

c) Regulation 12 – Temporary Works

The Principal Contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use. The designer must have at least a National Diploma in Structural Engineering and be registered as a professional engineer with the Engineering Council of South Africa (ECSA). The designer & inspector must be trained on the following Unit Standards:

113974 – Understand and apply structural construction methods; and
263246 – Inspect falsework and formwork.

The Principal Contractor must ensure that all temporary works operations are carried out

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under the supervision of a competent person who has been appointed in writing for that purpose. The temporary works supervisor must be trained by the temporary works supplier / manufacturer on the safe installation of the temporary works as well as on the Unit Standard 263027 - Supervise the erection and dismantling of falsework and formwork.

The temporary works erectors must be trained by the temporary works supplier / manufacturer on the safe installation of the temporary works as well as in the Unit Standard 263204 - Erect, use and dismantle falsework and formwork.

All temporary works must comply with Regulation 12 of the Construction Regulations, 2014

d) Regulation 13 – Excavation Work

The Principal Contractor must in writing appoint a competent person as the excavation work supervisor. The excavation work supervisor must be trained by an accredited training service provider who is registered with the department of labour and the respective training authority on the Unit Standard 365183 - Implement safety procedures for open hole or deep excavations.

All excavation work must be carried out under the constant supervision of the appointed excavation work supervisor. The excavation work supervisor must be able to evaluate the stability of the ground before excavation work begins. The excavation work supervisor must inspect the excavation prior to entry of any employees. All excavations deeper than 1,2 metres must be shaped to the maximum angle of repose relative to the horizontal plane. The Principal Contractor and his contractors must make provision in their tender rates for the shaping of the excavations.

All excavations up to 2 metres must be barricaded at least 1 metre away from the edge with barrier netting at a minimum height of 900mm. No danger tape to be used for barricading. All excavations deeper than 2 metres must be barricaded with a barrier in the form of hand and intermediate rails with barrier netting attached to it or Bonnox type fencing on posts with the barrier netting attached to it. Excavations along public roads that are deeper than 1,2 metres must be barricaded by means of a solid concrete barrier with delineators. Excavations along public roads that are less than 1,2 metres but deeper than 0,5 metres must be barricaded by means of a plastic new jersey barrier with delineators. Excavations along public roads that are less than 0,5 metres but above 100 millimetres must be barricaded by means of a barrier netting with delineators. Excavations along public roads that are less than 150 millimetres must be cordoned off by means of delineators.

All excavations deeper than 1,2 metres must be accessed by means of a ladder which is placed within 6 metres of the employees working inside and must extend at least 900mm above the top of the landing or natural ground level.

All excavated material must be placed at least 1 metre away from the edge of the excavation. No mobile plant must come within 1 metre from the top edge of the excavation or within 2 metres when employees are working inside.

All employees working in excavations deeper than 1,2 metres must wear hard hats.

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All excavation work must comply with Regulation 13 of the Construction Regulations, 2014.

e) Regulation 14 – Demolition Work

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The Principal Contractor must appoint a competent person in writing to supervise and control all demolition work on site. The demolition work supervisor must have at least five years' experience in demolition work and must be trained on Unit Standard 115457 – Conduct basic demolition tasks.

All demolition work must comply with Regulation 14 of the Construction Regulations, 2014.

f) Regulation 16 – Scaffolding

The Principal Contractor must appoint a competent person in writing as the scaffolding supervisor who must ensure that all scaffolding work operations are carried out under his or her constant supervision. The scaffolding work supervisor must be trained on the Unit Standard 263224 - Supervise the erection and dismantling of access scaffolding, by an accredited training service provider who is registered with the department of labour and the respective training authority.

The Principal Contractor must appoint competent persons in writing as scaffold erectors for erecting the scaffold. The scaffolding work erectors must be trained on the Unit Standard 263245 – Erect, use and dismantle access scaffolding, by an accredited training service provider who is registered with the department of labour and the respective training authority.

The Principal Contractor must appoint a competent person in writing as an inspector to inspect the scaffolding once erected. The scaffolding work inspector must be trained on the Unit Standard 263205 Inspect access scaffolding, by an accredited training service provider who is registered with the department of labour and the respective training authority.

All scaffold must comply with SANS 10085 with regards to the design, erection, use and inspection of access scaffolding.

g) Regulation 23 – Construction vehicles and mobile plant

The Principal Contractor must appoint a competent person in writing as a Construction Vehicles and Mobile Plant Supervisor to ensure that the said regulations are complied with.

The Principal Contractor must ensure that all construction vehicles and mobile plant-

- (a) are of an acceptable design and construction;
- (b) are maintained in a good working order;
- (c) are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- (d) are operated by a person who-
 - (i) has received appropriate training, is certified competent and in possession of proof of competency and is authorized in writing to operate those construction vehicles and mobile plant;

The following Unit Standards must be considered with regards to training.

Rigid Body Dump Truck Operator	262731	Operate a rigid body dump truck
Articulated Dump Truck Operator	262745	Operate an articulated dump truck
Front End Loader Operator	262747	Operate front end loader.

Grader Operator	262735	Operate a grader.
Tracked Dozer Operator	262729	Operate a tracked dozer.
Tractor Loader Backhoe Operator	257028	Operate a Tractor Loader Backhoe.
Skidsteer (Bobcat) Operator	262712	Operate a Skidsteer.
Tractor Operator	262804	Operate a tractor.
Excavator Operator	262744	Operate an excavator
Water Cart Operator	262764	Operate a water cart.
Roller Operator	262805	Operate a roller.
Tipper Truck Operator	262734	Operate a tip truck.
Truck Mounted Crane Operator (DMR Code C32)	242978	Operate truck mounted cranes.
Hydraulic Mobile Crane Operator (DMR Codes C33 – C36)	116254	Operate a mobile crane.

- (ii) has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.;
- (k) are inspected by the authorized operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

The Principal Contractor must provide drip trays to be placed under the engine compartment when the mobile plant is parked for more than 3 hours.

All plant hire companies must be appointed in writing, sign the Section 37 (2) agreement and provide a valid Letter of Good Standing with the Compensation Commissioner.

The Principal Contractor must comply with Regulation 23 of the Construction Regulations, 2014 when using construction vehicles and mobile plant.

h) Regulation 24 - Electrical Installations and Machinery on Construction Sites.

If the Principal Contractor intends on installing a temporary electrical supply, the installation must be done by a qualified registered electrician who must issue a Certificate of Compliance (COC). The electrician must be trained on at least the Unit Standard 113898 – Complete certificate of compliance for a single phased domestic installation. The Principal Contractor must appoint the electrician in writing in terms of Regulation 24 (c).

The Principal Contractor must appoint a competent temporary electrical installation inspector. The inspector must be trained at least on the Unit Standard 258966 - Inspect and test a single-phase domestic installation. The temporary electrical supply must be inspected by a competent person at least weekly.

The Principal Contractor must appoint a competent person in writing as the electrical machinery inspector in terms of Regulation 24 (e).

All portable electrical tools must be inspected daily by the authorized inspector. The authorized inspector of portable electrical tools must be trained on at least the Unit Standard 12878 – Use and maintain Power Hand Tools on a construction Site.

The Principal Contractor must ensure that all electrical installations and machinery on the construction site complies with Regulation 24 of the Construction Regulations, 2014.

i) Regulation 25 – Use and Temporary Storage of Flammable Liquids on Construction

Sites

The Principal Contractor must provide a lockable ventilated store for the storage of flammable liquids. The store must contain a bund which can contain up to 110% of the volume of the liquid stored therein. The Principal Contractor must provide adequate fire-fighting equipment and signage within the store.

A competent person must be trained and appointed to manage hazardous substances on the construction site. This person must be at least trained on the Unit Standard 264454 – Manage hazardous substances.

The Principal Contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that Regulation 25 is complied with when using and storing flammable liquids on site.

j) Regulation 26 – Water environments

The Principal Contractor must ensure that where construction work is done over or in close proximity to water, provision is made for-

- (a) preventing persons from falling into water by providing hand and intermediate rails or a similar barrier; and
- (b) the rescuing of persons in danger of drowning by providing a floatation device attached to a rope of suitable strength and length, a person who is able to swim with ease and rescue another person and a person trained in resuscitation, preferably a first-aider.

The Principal Contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

Regulation 27 – Housekeeping and General Safeguarding on Construction Sites

The Principal Contractor must appoint a competent person in writing as the housekeeping supervisor to ensure that good housekeeping is maintained at all times on site.

The Principal Contractor must provide adequate and suitable bins to separate and contain waste on site. This must be disposed off at a registered landfill at least weekly.

The Principal Contractor must ensure that Regulation 27 or the Construction Regulations is complied with regards to housekeeping and general safeguarding on construction sites.

k) Regulation 28 – Stacking and Storage on Construction Sites

The Principal Contractor must appoint a competent person as the stacking & storage supervisor on site who is at least trained on Unit Standard 254098 – Supervise the procurement, use and storage of equipment and materials for construction and maintenance.

All items that are stacked or stored on the construction site must be inspected by a competent person at least on a monthly basis.

The Principal Contractor must, in addition to compliance with the provisions for the stacking of articles

in the General Safety Regulations, 2003, ensure that Regulation 28 of the Construction Regulations, 2014 is complied with regards to stacking and storage on construction sites.

l) Regulation 29 – Fire Precautions on Construction Sites

The Principal Contractor must appoint a competent person in writing as the Emergency Co-ordinator / Controller in case of a fire.

The Principal Contractor must provide sufficient and suitable firefighting equipment near flammables within 5 metres of any generator or similar equipment, near portable electrical tools and in all construction vehicles and mobile plant.

The Principal Contractor must appoint a competent person in writing as the fire equipment inspector in terms of Regulation 29 (h). The fire equipment inspector must be at least trained on the Unit Standard 12484 – Perform basic firefighting, by an accredited training service provider who is registered with the department of Labour and the respective training authority.

A fire team must be trained on the PASS sequence on site.

The Principal Contractor must ensure that adequate precautions are taken to prevent the risks of a fire and comply with Regulation 29 of the Construction Regulation, 2014.

m) Regulation 30 - Construction Employees' Facilities

The Principal Contractor must appoint a competent person in writing as the facilities inspector to ensure that all the employees' facilities on site are maintained in a clean and hygienic condition.

The Principal Contractor must, in addition to the construction site provisions in the Facilities

Regulations, 2004, provide at or within reasonable access of the construction site, the following clean, hygienic and maintained facilities:

- (a) Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons;
- (b) at least one sanitary facility for each sex and for every 30 workers; (Toilets must be tied down to prevent it from toppling over in the wind and cordoned off to ensure privacy)
- (c) changing facilities for each sex; and
- (d) sheltered eating areas.

The Principal Contractor must ensure that in addition to Regulation 30 of the Construction Regulations, 2014 the Facilities Regulations, 2004 must be complied with.

n) Non-compliance with the Construction Regulations, 2014

The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.

The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations applicable to the contract under consideration are complied with to the letter.

Should the Contractor fail to comply with the provisions of the Regulations 3 to 30 as listed in Regulation 33, he will be guilty of an offence and will be liable, upon conviction, to the

finer or imprisonment as set out in Regulation 33.

5. **Environmental Regulations for Workplaces, 2003**

The Principal Contractor must ensure that the following Regulations are complied with regards to the Environmental Regulations for Workplaces.

i. **Regulation 2 – Thermal Requirements**

The Principal Contractor must take into consideration the extreme heat during the summer months and the precautions to be taken during this period to avoid possible heat strokes. These may include but not limited to:

- Drinking of ± 600ml of clean water every hour;
- Regular breaks within reason but avoiding possible delays on the project; and
- Training on of employees Heat Stroke Awareness.

The Principal Contractor must take into consideration the extreme cold temperatures during the winter months and the precautions to be taken during this period to avoid possible hyperthermia, cold sores, etc. These may include but not limited to:

- Provision of winter jackets and gloves;
- Running hot water; and
- Training of employees on working in cold temperatures.

While every effort should be made by the employee to keep warm, it must be noted that fires will not be allowed on site.

ii. **Regulation 3 – Lighting**

While there may be sufficient natural lighting, where work is carried out inside a building or closed space, sufficient artificial lighting must be provided and the above Regulation must be used as a guide for the number of lumens that will be required per square metre.

iii. **Regulation 4 – Windows**

Window must provide for sufficient natural lighting and the panes must not be painted over.

iv. **Regulation 5 – Ventilation**

Adequate ventilation must be provided in store rooms and work areas to prevent the accumulation of fumes. Note that all hazardous chemicals must be stored separately from combustibles in a ventilated store.

v. **Regulation 6 – Housekeeping**

The Principal Contractor and other Contractors must ensure that good housekeeping is maintained on site at all times. A responsible person must be appointed as the housekeeping supervisor, however this should be the responsibility of all site personnel.

vi. **Regulation 8 – Fire Precautions & Means of Egress**

The Principal Contractor and other Contractors must make adequate provisions for the prevention of fires and escape routes should a fire occur. These may include but not limited to:

The provision of a ventilated store with sufficient signage to warn persons of the dangers likely to be encountered and the control measures to be taken. The signage may include but not limited to:

- “No Smoking”
- “No Open Flames”
- “No Cell Phones”
- “Flammable Liquids”

6. Facilities Regulation, 2004

The Principal Contractor must ensure that the Facilities Regulations are complied with. These may include but not limited to the provision of clean & hygienic:

- Shower facilities for each gender clearly marked with pictorial signs and cordoned off for privacy. (1 Shower per 15 employees)
- Toilet facilities for each gender clearly marked with pictorial signs and cordoned off for privacy. (1 toilet per 30 employees)
- Clean Drinking water. (± 5 Litres per employee per day)
- Eye wash facility. (A portable eyewash bottle can be used)
- Changerooms Facilities for each gender clearly marked with pictorial signs and cordoned off for privacy.
- Lockers to be provided for employees to store their personal belongings.
- Sheltered eating areas free from dust, rain, wind and other natural elements.

7. Hazardous Chemical Substances Regulations, 2008

The Principal Contractor must appoint a competent person in writing for the control of Hazardous Chemical Substances on site.

The Principal Contractor must ensure that there are MSDSs readily available for all Hazardous Chemical Substances on site and that employees are issued with and instructed to wear appropriate PPE when handling the Hazardous Chemical Substances.

The Principal Contractor must ensure that all employees handling the Hazardous Chemical Substances on site are training on the safety precautions and MSDSs.

All Hazardous Chemical Substances on site must be placed on a suitable drip tray or bunded area.

The Principal Contractor must ensure that the Hazardous Chemical Substances Regulations are complied with.

8. Noise-Induced Hearing Loss Regulations, 2003

The Principal Contractor must ensure that adequate provisions are made to reduce the noise on site and to protect the employees who are exposed to the noise on site by providing adequate PPE and training on the use, care and limitations of the prescribed PPE.

The Principal Contractor must monitor those employees who are continuously exposed to high noise levels by means of periodic hearing tests done by an occupational health practitioner.

9. Driven Machinery Regulations, 2015

I. Regulation 18 – Lifting Machines, Hand-Powered Lifting Devices and Lifting Tackle

The Principal Contractor must appoint a competent person in writing to inspect all lifting tackle used on site. This person must be at least trained on the Unit Standard 253575 –

Inspect, use and care for manual lifting equipment and tackle.

The Principal Contractor must ensure that the Provisions of Regulation 18 of the Driven Machinery Regulations, 2015 are complied with.

10. General Machinery Regulations, 1988

i) Regulation 2 – Supervision of Machinery

The Principal Contractor must ensure that where electrical machinery is used, it is used under the supervision of a competent person who is familiar with such machinery and understands the hazards and risks associated with using the machinery.

ii) Regulation 3 – Safeguarding of Machinery

The Principal Contractor must ensure that the machinery is installed, operated and maintained in such a manner that it does not pose a hazard to persons installing, operating or maintaining such machinery.

The Principal Contractor must ensure that all moving parts of the machinery which is within the normal reach of a person is effectively safeguarded by means determined in this regulation.

The machinery must be maintained in a good working condition and is used properly.

The Principal Contractor must ensure that no safety devices are removed from the machinery.

11. Electrical Installations Regulations, 2009

a. Regulation 6 – Electrical Contractor

The Principal Contractor must ensure that no person may do electrical installation work as an electrical contractor unless that person has been registered as an electrical contractor in terms of these regulations.

b. Regulation 7 – Certificate of Compliance

The Principal Contractor must ensure that the electrical installation done by the electrical contractor must have a Certificate of Compliance in the form of Annexure 1, which shall be accompanied by a test report approved by the chief inspector, in respect of every such electrical installation.

12. Electrical Machinery Regulations, 2011

a. Regulation 10 – Portable Electrical Tools

The Principal Contractor must ensure that the Provisions of Regulation 10 of the Electrical Machinery Regulations, 2011 are complied with regarding Portable Electrical Tools.

The Contractor is advised in his own interest to make a careful study of these Specifications and as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance.

The following penalties will be imposed on any organisation that does not comply with the OHS requirements. Project Personnel must all acquaint themselves with the penalties and work in the best interest of their respective organisations.

You will be notified in writing of the non-conformance and penalties owing will be deducted from payment owed to you.

Please use the below as a deterrent as Safety is everyone's responsibility.

MINOR PENALTY-R50.00/count	MEDIUM PENALTY- R500.00/count & non-conformance	SEVERE PENALTY- R5,000.00/count & non-conformance and/or activity stoppage
Non-use of PPE supplied	Failure to address OHS File Review timeously.	NO OHS File provided for review.
Poor use of facilities provided (i.e. eating area, toilet).	No PPE provided. Repetitive non-use of PPE.	Contractor working without Health & Safety Plan approval
	Working without induction, training or the appropriate, approved H&S method statement , SWPs and RA's.	Workers transported in contravention of OHS Plan or legal requirement
	Legal nonconformance identified during the previous audit and not addressed during the agreed time frame	Working with Invalid Letters of good standing
	No monthly OHS report at site meeting to report on	
	No certificate of fitness as required (per person)	
	Working without approved method statement	
	Failure to attend OHS Committee meetings.	Plant/ Plant Operators on site in contravention of CR 23.
	Non-completion of registers for equipment on site	
	Tools & equipment identified in poor condition during inspection	Any serious breach of legal requirement.

Note that the contributions towards these fines are paid towards a Community Upliftment fund. These funds will be utilized for projects within the community and administered by the Project Managers on behalf of the Client. No payments will be made in cash however the full fund value will be utilized for these projects.

Novel Coronavirus (COVID-19)

Health & Safety Specifications

1. Introduction

Coronavirus Disease 2019 (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. The symptoms of the COVID-19 are similar in nature to that of the common flu but are much more extreme. To reduce the impact of COVID-19 outbreak conditions on the organization, employees, clients, and the public, it is important to set out a strategy / plan to address the specific exposure risks, sources of exposure, routes of transmission, and other unique characteristics of SARS-CoV-2 (i.e., compared to influenza virus outbreaks). Lack of continuity planning may result in a cascade of failures as the organization attempts to address challenges of COVID-19 with insufficient resources and employees who might not be adequately trained for jobs they may have to perform under pandemic conditions.

It is the duty of the Principal Contractor to compile a health a safety plan based on the client's specifications. The COVID-19 pandemic has introduced a new hazard to the workplace and therefore the current health & safety specifications are not adequately designed to prevent persons from contracting or spreading the Coronavirus. Planning must include administrative changes or development of new policies, procedures, plans and risk assessments.

2. Scope

The addendum to the health & safety specifications covers the procedures that must be implemented by the principal contractor and contractors during government's intervention with the COVID-19 risk adjusted strategy for economic activity. The procedures set out below must be incorporated into the scope of work which must form part of the normal activities performed by the contractor. Construction work is labour intensive and is therefore regarded as high-risk due to the close contact between employees.

3. Administrative

Employment contracts need to be reviewed to include, where necessary, revised working hours, remuneration and health & safety precautions to be taken into consideration due to the Covid-19 pandemic.

Based on the Covid-19 pandemic, a Risk Assessment must be developed to include the following:

- i. A List of Activities to be performed by the employees;
- ii. Identification of the Hazards Associated with each activity;
- iii. Analysing the Risk Associated with each Hazard;
- iv. Implementation of Control Measures to Mitigate or Reduce the Risks;
- v. Delegation of Responsible persons to address the Control Measures.

Risk Assessments must include, but not limited to:

- i. Transportation of Employees (Public Transport / Transport provided by the employer);
- ii. Access into the Workplace;
- iii. Placement of workers into their workstations / work areas;
- iv. Working Hours, Tea Breaks and Lunch Breaks;
- v. Employee Welfare Facilities (Toilets, Showers, Changerooms, Eating Areas, etc);
- vi. Emergency Procedures (Infected Employees, First-Aid, Evacuation, etc); and
- vii. Communication with employees.

The following hierarchy of controls must be considered when compiling the risk assessment:

- i. Engineering Controls (Isolating employees from work-related hazards by installing Physical Barriers / Shields, etc)
- ii. Administrative Controls (Changes in work policy or procedures to reduce or minimize exposure to a hazard)
- iii. Safe Work Practices / Procedures (Procedures used to reduce the duration, frequency, or intensity of exposure to a hazard, i.e. social distancing, etc.)
- iv. Personal Protective Equipment – PPE (Last Resort should other controls be inadequate)

The new risk assessments must be submitted to the Client's Health & Safety Agent for approval. Once approved, the risk assessments must be communicated to the employees prior to commencing work on site.

Policies must be reviewed to incorporate the prevention of contact with and the spread of Coronavirus or similar diseases / viruses.

The Health & Safety Plans must be revised to incorporate these specifications and include a plan to prevent contact with and or contain the spread of the Covid-19 pandemic.

Evacuations plans must be updated to incorporate the COVID-19 pandemic and employees must be required to maintain social distancing while evacuating and assembling at emergency assembly points.

Employees who do not comply with the rules or those who contribute to the spread of the Coronavirus must be disciplined which may lead to dismissal and possible prosecution by authorities.

4. Responsibilities

In terms of Section 8 (1) of the Occupational Health & Safety Act, 85 of 1993:

8. General duties of employers to their employees

(1) Every employer shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees.

Client – Employer :

Compensate the contractor for any additional costs incurred due to the implementation of the prevention of contact with and spread of the COVID-19 pandemic. (This may include but not limited to the supply of additional PPE, Sanitizers, Physical Barriers, administrative costs, training, signage and loss of production due to new work practices and social distancing).

In light of the above, The Principal Contractor must delegate the responsibilities to the various competent appointed persons within the organization and should be as follows.

CEO – OHSA 16 (1):

Set out the policies & procedures for addressing the prevention of contact with or spreading of the Coronavirus.

Contracts Manager – OHSA 16 (2):

Ensure that policies and procedures are implemented at the various sites allocated to him / her.

NB: The persons listed below must be on site full-time.

SHE Representative – OHSA 17 (1):

Assists employees in complying with the policies and procedures and is the Liaison between the employees and the employer.

Construction Manager – CR 8 (1):

Enforces the implementation of the policies and procedures on his / her site. Also appointed as the COVID-19 Manager in terms of Section 16 (5) of Disaster

- Management Act, 57 of 2002.
- Assistant Construction Manager – CR 8 (2): Assists the CR 8 (1) in enforcing the implementation of the policies and procedures.
- Construction Health & Safety Officer – CR 8 (5): Develops the procedures and assists the employer and employees in complying with the policies and procedures. Also appointed as the COVID-19 Compliance officer to monitor the controls set out by the principal contractor and co-ordinate emergencies.
- Construction Supervisor – CR 8 (7): Enforces the implementation of the policies in his / her work area.
- Assistant Construction Supervisor – CR 8 (8): Assists the CR 8 (7) in enforcing the implementation of the policies in that work area.
- Risk Assessor – CR 9 (1): Compiles a COVID-19 Risk assessment with the assistance from management and employee representatives and ensure that it is communicated to the employees.

To prevent unnecessary appointment of new employees, the current employees on site must be appointed to monitor and maintain the implementation of policies, plans, procedures and risk assessments.

5. Procurement

The Principal Contractor must procure the following:

- Services of an Occupational Health & Safety Professional to compile the required documentation and conduct training of employees. The Principal Contractor can utilize his / her own resources provided that the appointed person is registered with the SACPCMP in the Health & Safety Profession and at least one other occupational health & safety statutory body established in terms of Section 2 of the Project and Construction Management Act, No. 48 of 2000 (SAIOSH, IOSH, IOSM, etc).
- 70 % Alcohol based hand sanitizers for all entrances, offices, workstations, plant and welfare facilities;
- Disinfectants for surfaces, tools, plant, etc;
- 3 Ply Washable cloth face masks (Minimum of 2 per employee);
- FFP2 type masks and additional latex gloves for first-aiders
- Safety glasses to prevent droplets making contact with the eyes;
- Face Shields where social distancing is inadequate;
- Infrared Thermometers (Non-contact) for temperature screening;
- COVID-19 Awareness Posters & Signage;
- Additional security, where justified, to secure site entrances;
- Provision of an area or room to isolate employees showing symptoms of COVID-19.
- Bio-Hazard waste bins and provisions for safely disposing of waste.

The Construction Manager must ensure that there is adequate additional PPE for the COVID-19 pandemic. First-aiders must be required to wear the FFP2 type masks in addition to the latex gloves when attending to patients.

A preventative team must be established to ensure that all tools and equipment used on site are disinfected accordingly (70% JIK with 30% water can be used) to prevent the potential spread of COVID-19 virus.

6. Who must report for duty?

- a) The Principal Contractor must ensure that employees who are most vulnerable to the Coronavirus must be the last to resume work on site and only when permitted by government. The return of employees to work must be staggered to prevent the sudden influx of staff. The essential employees must be first orientated into the workplace thereafter followed by support staff.

The following must be considered when selecting employees:

- The need / urgency for the employee to return to work;
- The age of the employee (employees 60 years and older must not be allowed to immediately resume work);
- The employee's current health condition based on their most recent Occupational Health Medicals (employees with respiratory problems or have chronic illnesses such as TB, Cancer, Diabetes, etc, must not be allowed to immediately resume work);
- Employees who have, or been in contact with a person who has, the symptoms of the Coronavirus (High Fever - 38°C or higher, persistent cough, sore throat, difficulty in breathing). Only employees who test negative for the COVID-19 must be allowed to resume work (Employees must need to first self-isolate then get tested).

7. Screening

Non-contact Thermometers must be used by security personnel at the site entrances to monitor employees body temperatures before entry and before exiting the construction site on a daily basis. A daily questionnaire regarding the person's movements and current health condition must be completed for each person entering the site. It must be compulsory for all employees and visitors to complete a health declaration form before access is granted onto site. Employees showing signs of the Coronavirus must be immediately sent to the site isolation room / designated area and the necessary authorities must be contacted for instructions and further medical attention. **An area must be designated on site for isolation of employees who have the symptoms of COVID-19.** If an employee develops a high temperature or a persistent cough while at work, they must be required to:

- Maintain a 2m distance from all other people and isolate until they are able to leave the workplace.
- Inform their manager and supervisor and get directive from them in terms of what to do.
- Not touch any surfaces (door handles, counter tops, tools, etc).
- Cough or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and sneeze into the crook of their elbow.

The Principal Contractor must keep on site all contact details (Cell Numbers, Physical Addresses, etc) of all employees or persons entering the site for the tracing by the Department of Health.

If a person has high fever and the symptoms of the COVID-19:

- The infected person must be safely escorted to and isolated or quarantined in a facility (room or area) provided on site for this purpose.
- This facility must be decontaminated on a regular basis or at least prior to the start of each shift.
- The facility must be well ventilated with adequate signage and controlled to prevent the unauthorized entrance of persons.
- Emergency contact details of the local health care facility and Department of Health to be on hand and must be contacted when a person displays symptoms of the Coronavirus.
- The person must be safely transported to the healthcare facility for further testing and treatment thereof.

The person may only return to work when he / she tests negative and is placed in quarantine for 14 days before returning to work. The Principal Contractor must continually

monitor this person for symptoms of the Coronavirus.

If a person passes the screening process, i.e. no symptoms of COVID-19 and temperature below 37.5°C must be required to sanitize their hands and enter the site while wearing a cloth face mask and maintaining social distancing.

8. Site access

Notices must be placed at the site entry indicating that there will be "No Unauthorised Entry" Access to the site must be controlled by gates and manned guards which must be limited to one entry and exit point. These must be site specific, the number of entry and exit points for each site may vary however they must be controlled. All persons entering the site must wear and continue wearing a cloth face mask throughout the day while at work or in public. No person must be permitted on site without the relevant / required PPE. Access to the site must be limited to site personnel and deliveries, i.e. no visitors must be allowed unless part of the professional team. Suppliers must be informed on the requirements for entry to the site and the rules to be complied with prior to any deliveries taking place. Delivery vehicle operators must be instructed to follow the same protocol as that of the contractor's employees. Employees must not be permitted to leave the site during the course of the day or during lunch & tea breaks and must limit contact with the general public. Employees must be encouraged to bring pre-prepared meals to work to avoid going to the local shops to buy food.

9. Washing Hands

Soap and water must be provided to employees and they must be encouraged to regularly wash their hands. Each person entering the site must be required to use hand sanitizers provided by the Principal Contractor at the entrances to the sites. The following process must be used when washing hands: arriving on site, before lunch, when leaving site; and when inadvertently touching another person or surface:

10. Sanitizing of the site

The Principal Contractor must ensure that all work surfaces, tools and machinery are sanitized using mist spray disinfectants. Where employees enter offices and enclosed workplaces, their shoes and hands must be sanitized. Hand sanitizers must be placed at strategic points around the site camp which must include the site office, storerooms, washing areas and eating areas. Soap must also be provided at all taps at the site camp. Hand sanitizers must also be placed inside all construction vehicles & mobile plant for use by the operators no other person must be permitted to enter the vehicle or plant unless carrying out services and repairs. The Principal Contractor must ensure that there is sufficient stock of 70 % Alcohol based hand sanitizers on site. Employees must be instructed to clean up their waste and eating areas immediately after they are done and not leave it for someone else to clear it which will reduce contact with contaminated surfaces. All cleaning material used to disinfect surfaces and used PPE must be disposed of into Bio-Hazard waste bins which must be clearly identifiable. These must be sent to a bio-hazard waste facility.

11. Social Distancing

All employees must be required to maintain a safe distance of at least 2 metres between each other. Tasks must be rearranged to incorporate social distancing in order to prevent the gathering of employees closer than two metres from each other and where gatherings are unavoidable, the period of contact must be reduced. Where social distancing is unavoidable, physical barriers must be put in place to prevent contact with other persons. The installation of physical barriers must first need to be discussed with the client as they must incur a major cost. The option of whether the task is necessary or not, must be determined by the practicality and cost of installing the barrier.

Delivery vehicle operators must be encouraged to remain in their vehicles and avoid contact with the contractor's employees except for receiving clerks who must sign off on the deliveries.

No unnecessary meetings must take place, either between managers or employees. Where meetings are unavoidable, only key participants must attend and attendees must maintain a safe distance of at least 2 metres between each other. Meetings must be held in open areas where possible.

Where possible, avoid professional meetings taking place at site offices. Conference calls or similar types of communication must be considered instead of holding site meetings.

12. Personal Protective Equipment (PPE)

- a) All PPE must be issued free of charge to employees. All employees must be trained on the use, care and limitations of the PPE issued to them. In addition to the basic PPE issued to employees for construction work, they must also be issued with at least 2 washable cloth face masks. Wearing of the masks must be demonstrated to the employees. Where additional face protection is required, employees may be issued with and required to wear face shields. All employees must be required to wear suitable gloves for all tasks. The gloves must remain on the employee's hands for the duration of each task and must only come off when the employee uses any welfare facilities and during tea & lunch breaks. Washing and sanitizing of hands must be required when gloves are removed and prior to putting them on again. The cloth/fabric face mask must comply with the recommended guidelines of fabric face masks for the Clothing and Textile Manufacturing Industry for General Public Use. (Refer to the attached)

The face mask does not substitute a dust mask which is used for the purpose of preventing contact with dust particles. SABS FFP 1 / FFP 2 type dust masks to be worn by employees when working in dusty conditions or must be worn by first aiders when attending to patients on site.

Employees must be required to sign acknowledgement on a register for each item of PPE issued to him or her.

- a) It is very important to note that in terms of Regulation 2 (2) of the General Safety Regulations of 1986, *"the employer or user of machinery, as the case may be, shall take steps to reduce the risk as much as is practicable, and shall provide free of charge and maintain in a good and clean condition such safety equipment and facilities as may be necessary to ensure that any person exposed to any such condition or situation at a workplace or in the course of his employment or on premises where machinery is used is rendered safe"*. This basically states that it is the employer's duty and not that of the employee to maintain the PPE, i.e. the cloth/fabric face masks must be washed regularly and ironed before use.
- b) Surgical masks are discouraged however it must be accepted only where cloth/fabric masks are unavailable. Where surgical masks are issued, they must be reissued when they become unhygienic.
- c) Employees need to care for the masks to prevent the unnecessary re-issue of these masks.

13. Employee Welfare Facilities

Employees must be required to use facilities provided by the Principal Contractor. Employees must practise safe hygiene (Washing of hands regularly and sanitizing). Social distancing must also be observed when employees utilise these facilities. The use of welfare facilities must be controlled to prevent the unnecessary gathering of employees. This may include the possible staggering of work start and finish times and tea & lunch breaks. Portable toilets must be serviced more frequently by the service providers (at least twice a week). Eating areas must be reorganized such that a 2-metre distance can be maintained between each employee.

14. Transportation of Employees

Where employees are transported to the site, the transportation of employees must be done from a designated area. The transportation of staff to site must be limited to only key personnel and the number of employees transported in a vehicle must be limited to 50% of the normal capacity. Note that the transportation of employees must be in accordance with Regulation 23 of the Construction Regulations of 2014 and the South African Roads Traffic Act.

Where staff use public transport to get to the site, employee awareness programs must be in place to inform employees of the precautions to be taken to avoid contact with and the spread of the Coronavirus while in public spaces.

15. Awareness

All employees must be contacted via cell-phone and requested to report for duty accordingly. They must be instructed to practice social distancing, sanitize and wear a cloth face mask when making their way to work. Staggered briefing sessions must be held regarding the resumption of work after or during the extended lockdown period.

Employees must be trained on the COVID-19 Policies, Plans, Safe Work Procedures and Risk Assessment. Additional Toolbox talks must be held at least once a week to discuss ways to prevent contact with or the spread of the Coronavirus. Toolbox talks to be held in small groups while maintaining social distancing.

Posters should be displayed on employee notice boards, wash areas and other employee facilities to create awareness about the prevention of contact with and the spread of the Coronavirus.

16. Reporting

The following reporting process must be followed.

- Employee reports to the immediate supervisor and Construction Health & Safety Officer;
- Supervisor reports to manager on site;
- Manager reports to the Department of Health

Note that the above are minimum requirements, and where the contractor intends on implementing stricter controls to contain / prevent the spread of the Coronavirus, it must be Risk Based and at the contractor's own discretion.

PA.10 MEASUREMENT AND PAYMENT

PA.10.1 Principles

It is a condition of this contract that Contractors, who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process. All associated activities and expenditure are deemed to be included in the Contractor's tendered rates and prices.

(a) Safety personnel

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in clauses 7.1 to 7.5 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

(b) Records and Registers

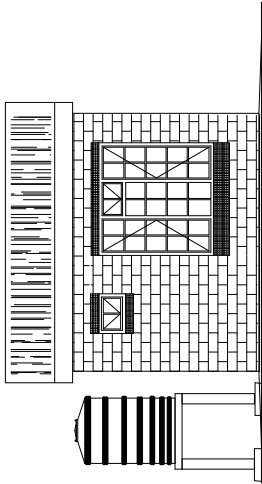
The keeping of health and safety-related records and registers as described in 8 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices

C4 SITE INFORMATION

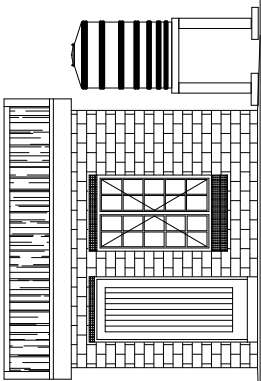
The following site information is enclosed herewith:

- Locality plan;

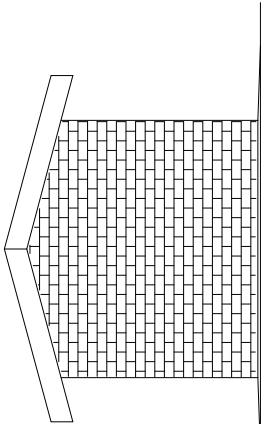




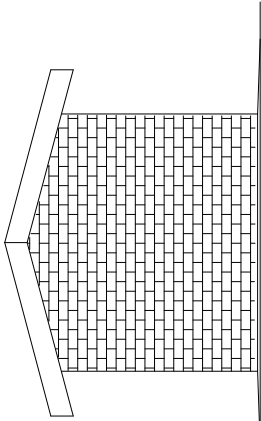
North Elevation
1:50



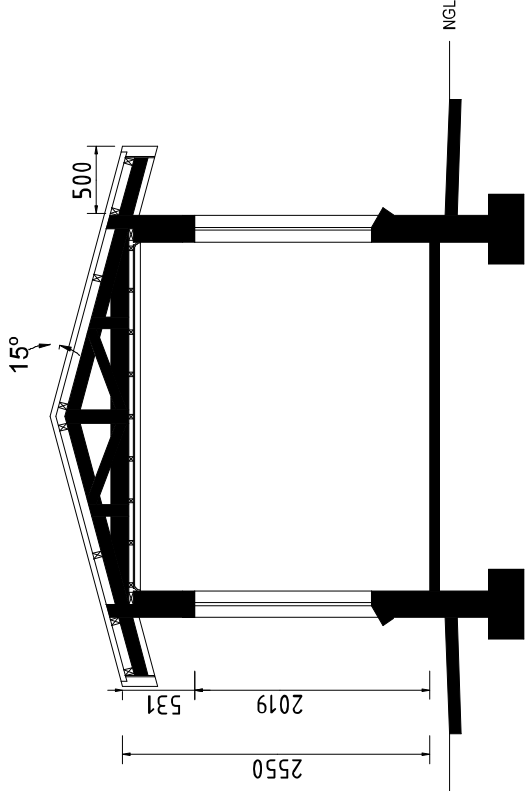
South Elevation
1:50



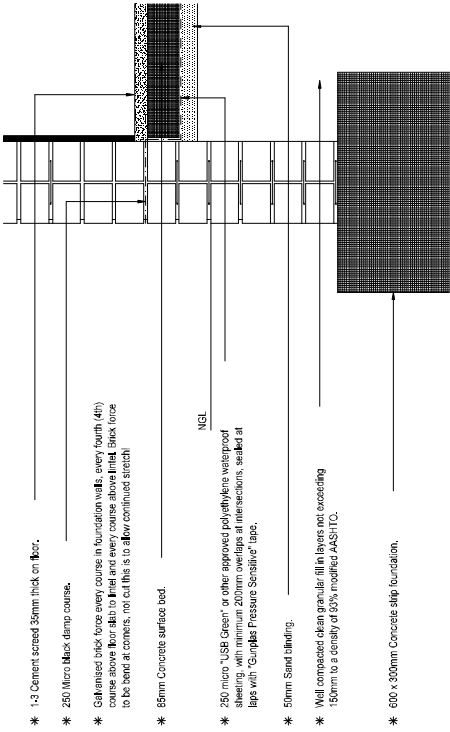
East Elevation
1:50



West Elevation
1:50

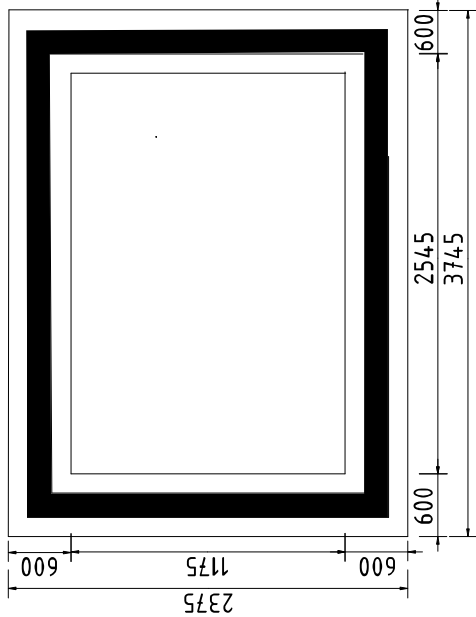


Section A:A
1:50

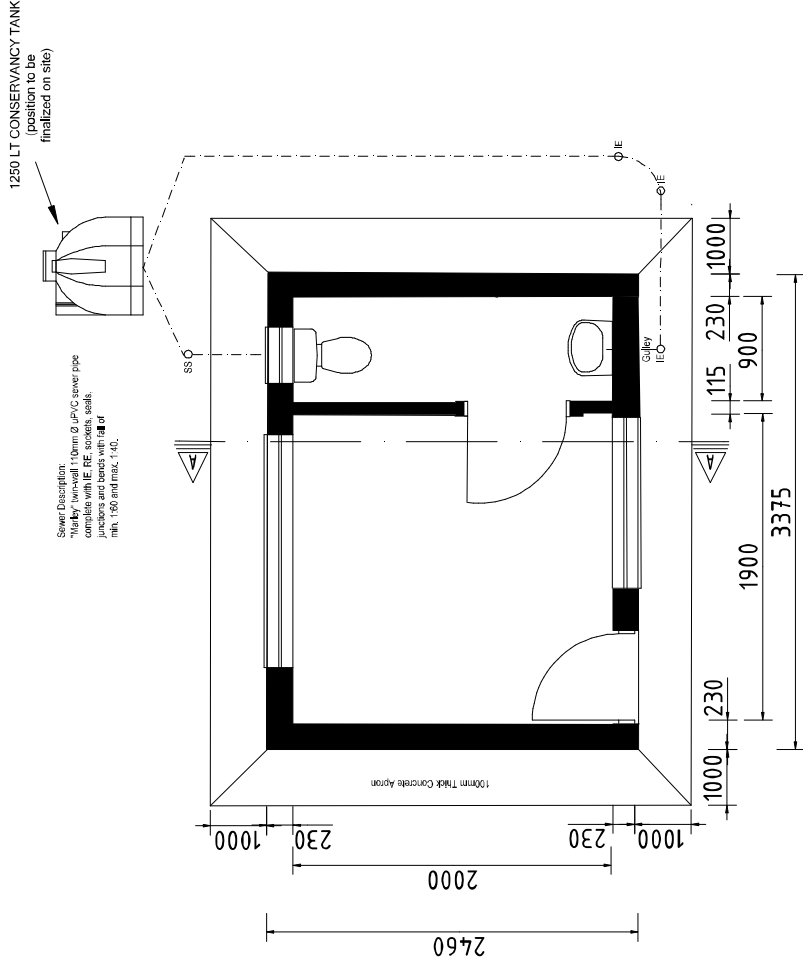


Section Through Foundation Wall
1:10

- * 1:3 Cement screed 50mm thick on floor.
- * 250 Micro Black damp course.
- * Galvanised chip/loose every course in foundation walls, every fourth (4th) course above floor slab to lined and every course above infill. Back force to be bared at corners, not cut this is to allow continued stretch.
- * 65mm Concrete surface bed.
- * 250 micro "USB Green" or other approved polyethylene waterproof membrane applied over the damp course and in all joints. Underlaid at laps with "Gardolux Pressure Sensitive" tape.
- * 50mm Sand blinding.
- * Wall compacted clean granular fill in layers not exceeding 150mm to a density of 85% modified AASH-100.
- * 600 x 90mm Concrete slab foundation.



Foundation Layout
1:50



Floor Layout
1:50

DIHLABENG
LOCAL MUNICIPALITY
MUNICIPAL INFRASTRUCTURE
DIRECTORATE



REVISIONS		
Nr.	DATE	DESCRIPTION
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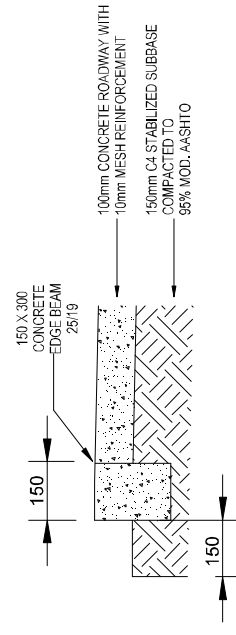
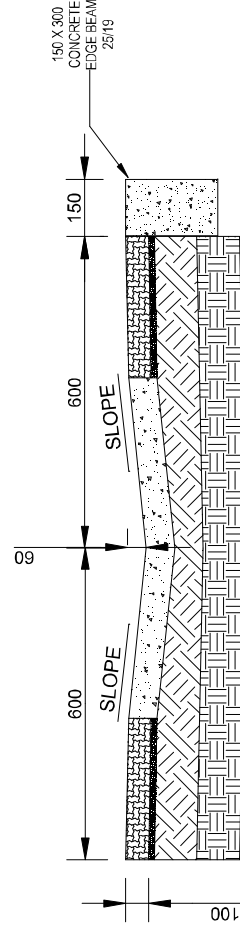
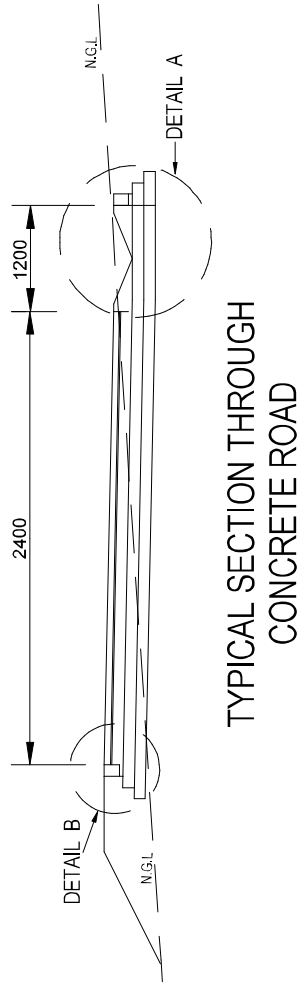
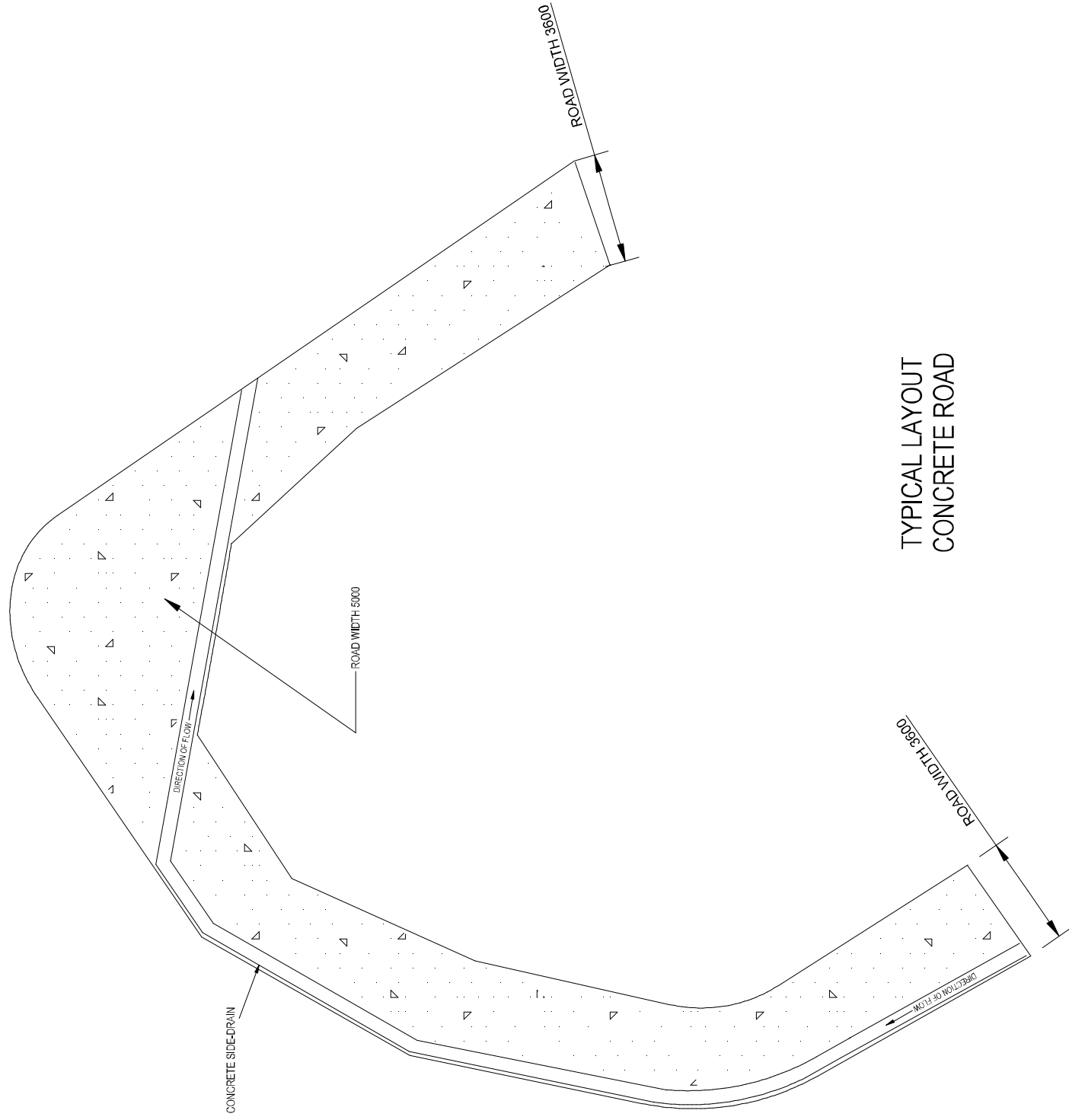
Gulf Engineers and Project Managers
Tel: 056-222 8700 • Fax: 056-222 8553
e-mail: rudnat@ru.co.za

PROJECT:
CONSTRUCTION OF GUARD HOUSE
AT ABSTRACTION WORKS

TITLE:
GUARD HOUSE:
FOUNDATION, FLOOR LAYOUT,
SECTIONS AND ELEVATIONS

DRAWN:	DATE	JUNE 2021
CHECKED (ENG):	DATE	JUNE 2021
APPROVED (ENG):	DATE	JUNE 2021

DRAWN:	RN 181/10001	SCALE:	AS SHOWN
		REVISION:	•

[illegible]

DIHLABENG LOCAL MUNICIPALITY MUNICIPAL INFRASTRUCTURE DIRECTORATE		CONSULTING ENG. DATE
		DIRECTOR/MUNIPAL INFRASTRUCTURE DATE

	SCALE OF REDUCTION
	

	SCALE AS SHOWN
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CONSTRUCTION OF PIPELINE BETWEEN THE LEM WATER TREATMENT WORKS AND BIRD CAGE RESERVOIRS	ACCESS ROAD DRAINAGE
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