



TENDER COVER PAGE



MBD 1

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF JOHANNESBURG WATER

BID NUMBER: JW14337

CLOSING DATE: 04 DECEMBER 2024

CLOSING TIME: 10:30 AM

DESCRIPTION: DRIEFONTEIN WASTEWATER TREATMENT WORKS: INFRASTRUCTURE RENEWAL PLAN – REPLACEMENT OF MCC AT UNIT 2 BIO-REACTOR

CIDB REQUIREMENTS: TENDERERS SHOULD HAVE A CONTRACTOR CIDB GRADING OF 6EP OR HIGHER

BRIEFING SESSION	COMPLUSORY: YES
BRIEFING DETAILS	<p>DATE AND TIME : 08 NOVEMBER 2024 AT 12:00 TO 13:00</p> <p>ADDRESS : PLOT 55, CLINIC ROAD, MULDERSDRIFT, 1747 OR 55 RIVERSIDE ROAD, MULDERSDRIEFT</p> <p>VENUE : DRIEFONTEIN WASTEWATER TREATMENT WORKS ADMIN BUILDING</p> <p><i>Note:</i> <i>For offsite briefing attendees to ensure that transport used is capable to access the gravel road for site viewing.</i></p>
TENDER SUBMISSION DETAILS	<p>BID DOCUMENTS MUST BE DEPOSITED IN THE TENDER BOX SITUATED AT GROUND FLOOR IN JOHANNESBURG WATER</p> <p>ADDRESS: TURBINE HALL, 65 NTEMI PILISO STREET, NEWTOWN, JOHANNESBURG, 2001</p> <p>PLEASE ALLOW SUFFICIENT TIME TO ACCESS JOHANNESBURG WATER OFFICES IN TURBINE HALL AND DEPOSIT YOUR TENDER DOCUMENT IN THE JOHANNESBURG WATER TENDER BOX SITUATED AT RECEPTION BEFORE TENDER CLOSING TIME.</p> <p>TIMES: THE BUILDING WILL OPEN 7 DAYS A WEEK FROM 06:00 UNTIL 18:00</p>

BIDDER INFORMATION

BIDDER INFORMATION				
NAME OF BIDDER				
NO. OF DOCUMENTS SUBMITTED				
PHYSICAL ADDRESS				
TELEPHONE NUMBER				
CELLPHONE NUMBER				
E-MAIL ADDRESS				
VAT REGISTRATION NUMBER				
TAX COMPLIANCE STATUS	TCS PIN		MAAA No	
OTHER STATUS	COIDA Registration No		CIDB (CRS) No	

EMPLOYER INFORMATION

DEPARTMENT	CAPEX	DEPARTMENT	SCM
CONTACT PERSON	PETER LOUW	CONTACT PERSON	GCINA NDELA
TELEPHONE NUMBER	011 688 1676	TELEPHONE NUMBER	011 688 1796
E-MAIL ADDRESS	peter.louw@jwater.co.za	E-MAIL ADDRESS	gcina.ndela@jwater.co.za



**TENDER COVER PAGE
PART B
TERMS AND CONDITIONS FOR BIDDING**

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED—(NOT TO BE RE-TYPED) OR ONLINE**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
- 2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.
- 2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

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

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

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.



TENDER COVER PAGE

NOTE: HARD COPY TENDER DOCUMENTS ARE AVAILABLE AT A COST OF R350.00 PER SET. DOCUMENTS DOWNLOADED FROM THE ETENDER PORTAL IS AT NO COST BUT MUST COMPLY WITH SUBMISSION REQUIREMENTS.

WITHOUT LIMITATION, JOHANNESBURG WATER TAKES NO RESPONSIBILITY FOR ANY DELAYS IN ANY COURIER OR POSTAL SYSTEM OR ANY LOGISTICAL DELAYS WITHIN THE PREMISES OF JOHANNESBURG WATER. JOHANNESBURG WATER LIKEWISE TAKES NO RESPONSIBILITY FOR OFFERS DELIVERED TO A LOCATION OTHER THAN THE TENDER BOX AS PER THE TENDER SUBMISSION DETAILS STATED IN THE TENDER DOCUMENT. PROOF OF POSTING OR OF COURIER DELIVERY WILL NOT BE TAKEN BY JOHANNESBURG WATER AS PROOF OF DELIVERY. TENDER SUBMISSION DOCUMENTS MUST BE IN THE BOX BEFORE TENDER CLOSURE.

The Johannesburg Water Supply Chain Management policy at time of tender advert is applicable to this tender and is available on the JW website www.johannesburgwater.co.za

THE TENDERER IS ENCOURAGED TO SIGN THE TENDER SUBMISSION REGISTER WHEN SUBMITTING THEIR TENDERS.

**PLEASE ENSURE YOU SUBMIT 1 x ORIGINAL TENDER HARD DOCUMENT
(ALSO PROVIDE AN ELECTRONIC COPY IN A MEMORY STICK/USB).**

Any documents required that are not submitted in the tender box at the deadline will be considered late.

The tenderer accepts that Johannesburg Water will not take responsibility for the misplacement or premature opening of the tender if the outer package is not sealed and marked as stated.

NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

NAME OF CONTACT PERSON:

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

DATE:



TENDER NOTICE AND INVITATION TO TENDER

Johannesburg Water (SOC) Ltd invites the tenderer for the following:

**CONTRACT NO: JW14337 DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN**

The tender document will be available in the form of a download from the Johannesburg Water website (www.johannesburgwater.co.za/supply_chain/tenders) starting from **01 November 2024**.

The Employer is **Johannesburg Water (SOC) Ltd**

All tenders and supporting documents must be sealed and be placed in the Tender Box on the ground floor of Johannesburg Water by no later than **10:30 am 04 December 2024**. The address is as follows:

**TURBINE HALL,
65 NTEMI PILISO STREET,
NEWTOWN,
JOHANNESBURG,
2001**

The Employer is not obliged to accept the lowest or any tender and reserve the right to appoint:

- a) in whole or in part.
- b) to more than one tenderer.
- c) to the highest points scoring bidder.
- d) to the lowest acceptable tender or highest acceptable tender in terms of the point scoring system.
- e) to a bidder not scoring the highest points (based on objective grounds in terms of section 2 (1) (f) of the PPPFA) (where applicable).
- f) not to consider any bid with justifiable reasons.

A valid and binding contract with the successful Tenderer/s will be concluded once the Employer has awarded the contract. Both the Employer and the successful Tenderer/s will sign the applicable MBD 7 form or Letter of Award which, together with the submitted tender document, will form the contract.

Employer:		Contractor:	
Witness:		Witness:	

Johannesburg Water SOC Ltd



CONTRACT NO: JW14337

DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN

VOLUME 1 TENDER AND CONTRACT

Prepared by
PMU
PO BOX 61542
Marshalltown
2107

V1.0
August 2018

Employer:		Contractor:	
Witness:		Witness:	

The Tenderer is required to indicate in the "Submitted (Yes/No)" column in the below table that they have completed the required section of the tender document. Completion of this checklist will assist the Tenderer in ensuring that they have attended to all the required items for submission with this tender. Additionally, it is an absolute requirement that Tenderers comply with National Treasury's CSD registration as well as SARS Tax compliance requirements for contract award – refer to T2.2.4.

The below will form part of the tender document. Tenderers are therefore encouraged to submit the returnable and or documentation with their tender offer to avoid elimination, especially with regards to what is stated in the "Required for Tender Evaluation" column or not obtaining points for Specific Goals. Tenderers are encouraged to ensure that their Tax status remains Tax Compliant on the CSD throughout the process to avoid delaying the process or being eliminated at award stage. For infrastructure related projects. Tenderers must have an active CIDB Status with the requested GIDB requirement by evaluation stage of this tender to avoid disqualification.

All documentation listed in the Checklist below shall form part of the Contract.

Table 1

Ref	Description of Returnable/s or Documentation that will form Part of Contract and must therefore to be Completed and / or Submitted by the Tenderer	Required for Tender Evaluation	Required for Tender Award	Required After Tender Award	Submitted (Yes/No)
	Tender Cover:				
	Name of Tender	Y			
	Contact Person	Y			
	Telephone Number	Y			
	Central Supplier Database Registration	Y			
	CIDB Registration Number	Y			
	COIDA Registration Number	Y		.	
	Tax SARS PIN No.	Y	.		
	MAAA No. for Tax Compliant Status	Y	.		
	Bank Details Form	Y	.		
	Mandatory Documents at Particular Stage:				
	CIBD grading 6EP or higher or Proof of registration with minimum required CIDB grading for the tender and Active Status	Y			
	Mandatory Tender Briefing Meeting	Y			
	Complete and Sign Schedule of Rates and Summary	Y			
T2.4.1	Acknowledgement of SHE Specification & Annexures	Y			
T2.4.2	Acknowledgement of Project Tender Drawings	Y			

Employer:		Contractor:	
Witness:		Witness:	

	Complete and sign the Form of Offer	Y			
	Administrative Documentation:				
	MBD 1 - Invitation to Bid - Completed and signed	Y	•		
T2.2.4	MBD 4 - Declaration of interest - Completed and signed	Y	•		
	MBD 5 - Declaration for procurement above R10 Million (all applicable taxes included) Completed and signed.	Y	•		
	MBD 6.1 - Preference Points Schedule – Specific Goals and Price Points - Completed and signed.	Y	•		
	Form of Offer for construction related – Completed and Signed	Y	•		
T2.1	Signed Certificate of Authority to Sign	Y			
T2.2.4	MBD 8 - Bidder's past supply chain management practices – Completed and signed.	Y	•		
T2.2.4	MBD 9 - Certificate of Independent Bid Determination – Completed and signed.	Y	•		
	Municipal Rates and Taxes for the Tenderer - Current municipal rates for the entity not older than 90 days (if leasing/renting, submitted proof such as lease agreement where premises are rented), OR Confirmation that suitable arrangements are in place for arrear municipal obligations with your local municipality.	Y	•		
	Municipal Rates and Taxes - Current municipal rates for the directors of the entity not older than 90 days (if leasing/renting, submitted proof such of lease agreement where premises are rented), OR Confirmation that suitable arrangements are in place for arrear municipal obligations with your local municipality.	Y	•		
	3-year financial statements (audited where applicable)	Y	•		
	Any qualifications. If “Yes”, reference to such qualification/s must be indicated on a cover letter. Please be aware that alterations on the tender document may result in your tender being eliminated as the qualification may impede on the ability to evaluate like with like.	Y			

Employer:		Contractor:	
Witness:		Witness:	

4.	Functionality Documentation:				
	Documentary Evidence Required 1 - (CVs of Key Personnel)	Y			
	Documentary Evidence Required 2 – (Qualification Certificates of Key Personnel)	Y			
	Documentary Evidence Required 3 – (Reference Letters for Applicable Completed Projects)	Y			
	Documentary Evidence Required 4 – (Completion/Approval Certificates of related Projects)	Y			
	Documentary Evidence Required 5 – (Appointment Letters where additional information is not available on completion certificate)	Y			
5.	Specific Goals:				
	Business owned by 51% or more – Black Youth <ul style="list-style-type: none"> Valid BBBEE Certificate issued by SANAS accredited verification agency or Affidavit sworn under oath. 	Y			
	Business owned by 51% or more-Women <ul style="list-style-type: none"> Valid BBBEE Certificate issued by SANAS accredited verification agency or DTI/CIPC BBBEE Certificate for Exempted Micro Enterprises or Affidavit sworn under oath, OR CIPC registration document showing percentage of ownership and share certificate where applicable 	Y			
6.	Scope of Work				
	Scope of Work and or Specifications	N			
7.	Pricing Schedule:				
	Pricing Schedule completed in accordance with the award strategy	Y			
	Alterations authenticated – Refer to Acknowledgment of Tender Conditions	Y			
	Bill of Quantities	Y			
8.	Terms and Conditions:				
	General Conditions of Contract	Y			
	Special Conditions of Contract	Y			
9.	Other Documents				
Employer:		Contractor:			
Witness:		Witness:			

	Form of Acceptance do not complete Form of Acceptance	N		.	
	Public Liability Insurance	Y		.	
	Valid Registration with Compensation for Occupation Injuries and Diseases Act	Y		.	
	Performance Guarantee – where applicable for industrial related services	N		.	

Tenderers will be notified of such or any missing and incomplete documents and will be offered a period of 3 days to complete or submit those pages i.e., Municipal Bidding Documents (MBD) and other documents that require completion and signatures that do not have a bearing on functionality, price and preference points for specific goals. Tenders that are received contrary to the above requirements will be disqualified after three (3) days period has lapsed.

If locality is a specific goal in MBD6.1 – the requested documentation may not be used to allocate points for specific goals.

Non-submission of any item listed only under the column “Required for Tender Evaluation” may result in the tender to be rejected by the Employer.

Signature: _____ Date _____

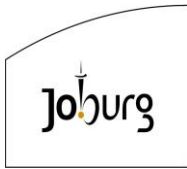
Employer:		Contractor:	
Witness:		Witness:	

CONTENTS OF TENDER DOCUMENT

Volumes	Contents	
Number	Number	Heading
Volume 1	Part 1: Tender Procedures	
	T1.1	Tender Data
	Part 2: Returnable Documents	
	T2.1	List of Returnable Documents
	T2.2	Returnable Schedules
	Part 1: Agreement and Contract Data	
	C1.1	Form of Offer and Acceptance
	C1.2	Contract Data
	C1.3	Forms of Securities
	Part 2: Pricing Data	
	C2.1	Pricing Instructions
	C2.2	Bill of Quantities
Volume 2A	Part 3: Scope of Work	
	C3	Scope of Work
Volume 2B		Particular Specifications
Volume 2A	Part 4: Site Information	
	C4	Site Information
Volume 3		Occupational Health and Safety Specification and Environmental Management Plan
Volume 4		Tender Drawings

Only Volume 1 and Volume 2A must be returned.

Employer:		Contractor:	
Witness:		Witness:	



Johannesburg Water (SOC) Ltd



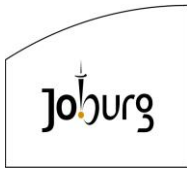
CONTRACT NO. JW14337

DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN

VOLUME 1

TENDERING PROCEDURES

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN

Volume 1 Tender and Contract
Section T1 Tender and Contract

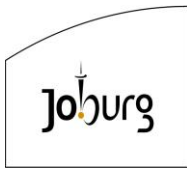


TABLES OF CONTENTS

T1.1 TENDER DATA

T1.1.1	Conditions of Tender	TP.1
T1.1.2	Certificate of Contractor Registration issued by the Construction Industry Development Board	TP.1

Employer:		Contractor:	
Witness:		Witness:	



T1.1 TENDER DATA

T1.1.1 Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement (August 2019). (See www.cidb.org.za).

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

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

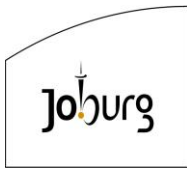
T1.1.2 Tender Data

The clause numbers in the Tender Data refer to the corresponding clause numbers in the Conditions of Tender.

The additional Conditions of Tender are:

Clause Number	Tender Data
C.1.1	The Employer is, Johannesburg Water (SOC) Limited
C.1.2	<p>The tender documents issued by the Employer comprise:</p> <p>Volume 1</p> <p>Tender Part 1: Tendering Procedures</p> <p>T1.1 Tender Notice and Invitation to Tender</p> <p>T1.2 Tender Data</p> <p>Tender Part 2: Returnable Documents</p> <p>T2.1 List of Returnable Documents</p> <p>T2.2 Returnable Schedules, including the Enterprise Declaration Affidavit which may be bound in a separate volume.</p> <p>Contract Part 1: Agreement and Contract Data</p> <p>C1.1 Form of Offer and Acceptance</p> <p>C1.2 Contract Data</p> <p>C1.3 Forms of Securities</p> <p>Contract Part 2: Pricing Data</p> <p>C2.1 Pricing Instructions</p> <p>C2.2 Schedule of Rates</p> <p>Volume 2A</p> <p>Contract Part 3: Scope of Work</p> <p>C3.1 Scope of Work</p> <p>C3.2 Particular Specifications</p>

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN



Volume 1 Tender and Contract
Section T1 Tender and Contract

Clause Number	Tender Data
	<p>Contract Part 4: Site Information C4 Site Information</p> <p>Volume 2B Generic Specifications</p> <p>Volume 3 Occupational Health, Safety and Environmental Specification and Environmental Management Plan, Vegetation Management Procedure</p> <p>Volume 4 Tender Drawings</p>
C.1.4	<p>The Employer's representative is:</p> <p>Contact Person: Peter Louw Telephone: 011 688 1676 E-mail address: peter.louw@jwater.co.za</p> <p>The SCM representative is</p> <p>Contact Person: Tshilidzi Takalani Telephone: 011 688 1772 E-mail address: tshilidzi.takalani@jwater.co.za</p>

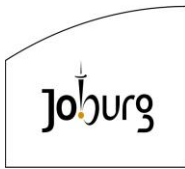
Employer:		Contractor:	
Witness:		Witness:	

Clause Number	Tender Data
C.2.1	<p>Eligibility criteria and requirements</p> <p>CIDB registration and grading:</p> <ol style="list-style-type: none"> 1) Only tenderers who are registered with the CIDB and were capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an 6EP class of construction work, are eligible to submit tenders. Tenders must have an Active status at the required CIDB grading at time of tender evaluation for the bidder to meet the eligibility criteria and requirement. 2) Joint ventures are eligible to submit tenders provided that: <ol style="list-style-type: none"> i) Every member of the joint venture is registered with the CIDB; and i) The lead partner has a contractor grading designation in the 6EP class of construction work; or ii) The combined contractor grading designation calculated in accordance with the CIDB Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an 6EP class of construction work. <p>Failure to meet to Eligibility criteria and requirements will result in disqualification.</p>
C.2.7	Tenderers should forward their contact details to the contact persons as stated on the Tender Cover Page and Invitation to Tender so that they will be sent any communication pertaining to this tender.
C.2.8	<p>Replace the contents of the clause with the following:</p> <p>“Request clarification of the tender documents, if necessary, by notifying the Employer’s Officials indicated on the Tender Notice and Invitation to Tender in writing at least seven (7) working days before the closing time stated in the foregoing notice.</p>
C.2.9	<p>Add the following to the clause:</p> <p>“Accept that the submission of a Tender shall be construed as an acknowledgement by the Tenderer that they are satisfied with the insurance cover, the Employer will affect under the contract.”</p>
C.2.10.5	<p>Add the following to the clause:</p> <p>“If no offer is made for an item, a line must be drawn through the space in pen.</p> <p>All prices and details must be legible / readable to ensure the tender will be considered for adjudication.”</p>

Employer:		Contractor:	
Witness:		Witness:	

Clause Number	Tender Data
C.2.11	<p>The evaluation on price alteration will be conducted as follows:</p> <p>Where the tender award strategy is to evaluate and award per item or category, the following must apply:</p> <ul style="list-style-type: none"> • If there is an alteration in the rate but no alteration on the total for the item or category, the bidder will not be disqualified. • If there is an alteration on the total for the item/s without authentication, bidders will only be disqualified for alteration per item or category. <p>Where the tender award strategy is to evaluate and award total bid offer, the following must apply:</p> <ul style="list-style-type: none"> • If there is an alteration on the rate, total for the line item, sub-total/ sum brought/carried forward for the section but no alteration on the total bid offer, the bidder will not be disqualified. • If there is an alteration on the total bid offer on form of offer then the amount in words must be considered or vice-versa. • If there is an unauthenticated alteration on the total bid offer and the amount in words is not authenticated, the bidders will be disqualified for the entire tender. <p>Where the tender pricing schedule or bill of quantities is requesting rates/price from bidder/s without providing a total, the following will apply:</p> <ul style="list-style-type: none"> • (i) If there is an unauthenticated alteration on the unit rate/price the bidder must be disqualified. <p>Please note: Corrections may not be made using correction fluid, correction tape or the like.</p>
C.2.12.1	<p>Replace Contents</p> <p>Alternative offers will not be permitted.</p>
C.2.12.2	<p>Failure to complete and sign the form of offer in full will result in the elimination of the tender.</p>
C.2.13.3	<p>Each tender offer shall be submitted as an original. Tenderers are also requested to submit a soft copy in a USB (Tenderers who do not submit a soft copy will not be disqualified).</p>
C.3.9	<p>Replace Existing Clause</p> <p>Arithmetic Errors</p>

Employer:		Contractor:	
Witness:		Witness:	



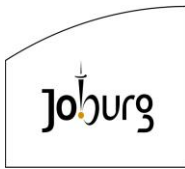
Contract: JW14337
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN



Volume 1 Tender and Contract
Section T1 Tender and Contract

Clause Number	Tender Data
	<p>Construction-related tenders.</p> <p>JW undertakes to check the highest scoring bid for arithmetical errors and correcting them as follows:</p> <p>JW shall check for arithmetic errors using the following sequence:</p> <ul style="list-style-type: none">(i) Check the amount in words against the amount in figures on the <i>Form of Offer</i>,(ii) Check the Form of Offer against the Summary Schedule Total,(iii) Check the Section Sub-Totals per section against the Summary Total for summation errors,(iv) Check the Section Sub-Totals in the Summary Schedule against Section Sub-Totals in the Bill of Quantities.(v) Check the Section Sub-Totals against the Item Totals for summation errors.(vi) Check the Item Totals against the product of the Item Rate and the Quantity Provided. <p>If a bill of quantities or price schedule applies JW will request the bidder to correct the arithmetic errors as follows:</p> <ul style="list-style-type: none">(i) In respect of the Form of Offer, where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern. The Tenderer must be requested to adjust the amount in figures to correspond with the amount in words. <p>JW will notify the Tenderer of all errors or omissions that are identified in the tender offer and either request the Tenderer to confirm the offer as tendered or JW will accept the corrected total of prices. Where the Tenderer elects to confirm the tender offer as tendered, correct the errors as follows:</p> <ul style="list-style-type: none">(i) 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.(ii) 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 requested to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices. <p>Clarification session(s) shall be held with Tenderer where there is pricing discrepancies, errors are highlighted and identified corrections are explained.</p> <p>Tenderer is afforded an opportunity to provide clarification, accept or reject identified corrections in writing.</p> <ul style="list-style-type: none">(i) In the event that the Tenderer accepts identified corrections, JW will proceed with evaluation.

Employer:		Contractor:	
Witness:		Witness:	

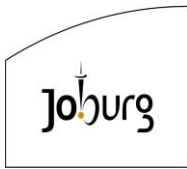


**Contract: JW14337
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN**



**Volume 1 Tender and Contract
Section T1 Tender and Contract**

Clause Number	Tender Data
	<p>(ii) In the event that the Tenderer rejects the identified correction(s), JW must review the Tenderer's motivation and risks associated with the proposed change.</p> <p>This is not an opportunity for Tenderers to change the bid offer. A bidder that does not agree to the above will be disqualified.</p> <p>Risk related to the Arithmetic Corrections shall be assessed. Where risks are identified, Tenderers shall provide JW with any other material or information that has a bearing on the tender offer, the Tenderer's commercial position (including joint venture agreements), quotations preferencing arrangements or samples of materials considered necessary by JW for the purpose of a full and fair risk assessment.</p> <p>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 JW request, or fails to attend any meeting in which it has been formally invited to clarify any issue, the tender offer will be regarded as non-responsive.</p>
C.2.13.5	<p>The Employer's address for delivery of tender offers and identification details to be shown on the Tenderer's offer package are:</p> <p>Location of tender box: Ground Floor Entrance</p> <p>Physical address: Johannesburg Water (SOC) Ltd Turbine Hall 65 Ntemi Piliso Street Newtown Johannesburg 2001</p> <p>Identification details: Tender reference number, Title of Tender and the closing date and time the tender, as well as the Tenderer's name, their Authorised Representative name, postal address and telephonic contact numbers.</p>
C.2.13.6 & C.3.5	A two-envelope procedure will not be followed.
C.2.15.1	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
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Witness:	Witness:



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Clause Number	Tender Data
C.2.16	The tender offer validity period is 90 days.
C.2.16.1	<p>Add the following to the clause:</p> <p>"If the tender validity expires on a Saturday, Sunday or public holiday, the Tender Offer shall remain valid and open for acceptance until the closure of business on the following working day."</p>
C.2.19	The Tenderer must provide access during working hours to his premises for inspections on request.
C.2.23	<p>The Tenderer is required to submit with his tender:</p> <ol style="list-style-type: none">1) Valid SARS Compliance status Pin for Tenders issued by the South African Revenue Services.2) Proof of CSD registration i.e. MA xxxxxxxx number3) A Certificate of Contractor Registration issued by the CIDB.4) Where the tendered amount inclusive of VAT exceeds R 10 million:<ol style="list-style-type: none">i. Audited annual financial statement for 3 years, or for the period since establishment if established during the last 3 years, if required by law to prepare annual financial statements for auditing;ii. If the bidder is not required by law to prepare financial statements, then the bidder is required to submit their unaudited financial statements prepared by an independent accounting professional.5) Proof that the Tenderer and directors of the Tenderer are not in arrears for more than 90 days with municipal rates and taxes and municipal service charges, The latest municipal account is to be attached, or a signed copy of the valid lease agreement if the Tenderer or director of the Tenderer is currently leasing premises and not responsible for paying municipal accounts.<ol style="list-style-type: none">i. Should the municipal statement that was submitted with the tender document before tender closing date and time be in arrears for more than 90 days at time of award, the tenderer will be requested to submit the latest municipal statement which shows that the Tenderer is not in arrears for more than 90 days. If the statement at that time is in arrears for more than 90 days, the Tenderer must submit before the stipulated deadline, the written proof of an approved arrangement with the municipality.ii. The proof may be a copy of the agreement or an updated municipal statement which reflects the arrangement.iii. Should this tender be considered for award of the contract, based on proof of submission and should proof of such submission be found to be invalid, erroneous

Employer:		Contractor:	
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Clause Number	Tender Data
	<p>or inaccurate, the tenderer will no longer be considered for the award of the contract.</p> <p>iv. Statement must not be older than 90 days from the closing date of this tender. Attach latest municipal account statement behind this page.</p> <p>v. In cases where the director of the tenderer resides with their spouse, parent, partner or sibling the owner of the property that confirm where the director of the tenderer resides must submit an affidavit stating such and explaining the relationship. This would happen in the case where the submitted municipal statement or lease agreement is not in the name of the director of the tenderer. Point (i) will be applicable.</p> <p>vi. In cases where the business address of the tenderer is also the official residence of the director of the tenderer, the director of the tenderer must submit an affidavit stating such. Proof that the municipal statement is not in arrears for more than 90 days or a valid lease agreement must be submitted. Point (i) will be applicable.</p> <p>6) Particulars of any contracts awarded to the tenderer 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.</p> <p>7) A statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality or municipal entity is expected to be transferred out of the Republic.</p> <p>8) Where a Tenderer satisfies CIDB contractor grading designation requirements through joint venture formation, such Tenderers must submit the Certificates of Contractor Registration in respect of each partner.</p>
C.2.24	<p>Add the following new clause:</p> <p>Canvassing and obtaining of additional information by Tenderers</p> <p>Accept that:</p> <ol style="list-style-type: none"> 1. No Tenderer shall make any attempt either directly or indirectly to canvass any of the Employers officials or the Employer's Agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon. 2. No Tenderer shall make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.
C.2.25	<p>Add the following new clause:</p> <p>Prohibitions on awards to persons in service of the state</p> <p>Accept that the Employer is prohibited to award a tender to a person -</p> <ol style="list-style-type: none"> a) Who is in the service of the state; or

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Clause Number	Tender Data
	<p>b) If that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or</p> <p>c) A person who is an advisor or consultant contracted with the municipality or municipal entity.</p> <p>the service of the state” means to be -</p> <p>i) a member of:-</p> <ul style="list-style-type: none"> any municipal council; any provincial legislature; or the National Assembly or the National Council of Provinces; the board of directors of any municipal entity; <p>ii) an official of any municipality or municipal entity;</p> <p>iii) an employee of any national or provincial department;</p> <p>iv) provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);</p> <p>v) a member of the accounting authority of any national or provincial public entity; or</p> <p>vi) an employee of Parliament or a provincial legislature.”</p> <p>To give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in Section T2.1 must be completed.</p>
C.2.26	<p>Add the following new clause:</p> <p>Awards to close family members of persons in the service of the state</p> <p>“Accept that the notes to the Employer’s annual financial statements must disclose particulars of any award of more than R 2 000 to a person who is a spouse, child or parent of a person in the service of the state (defined in clause C.2.25), or has been in the service of the state in the previous twelve months, including:</p> <p>a) The name of that person;</p> <p>b) The capacity in which that person is in the service of the state; and</p> <p>c) The amount of the award.</p> <p>To give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 – Returnable Documents must be completed in full and signed.</p>
C.2.27	<p>Add the following new clause:</p> <p>Tax Compliance</p> <p>In the case of a Joint Venture/Consortium the tax Compliance status Pin must be submitted for each member of the Joint Venture/Consortium.”</p>

Employer:		Contractor:	
Witness:		Witness:	

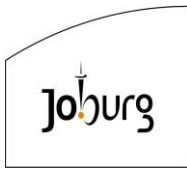
Clause Number	Tender Data
C.2.28	<p>Add the following new clause:</p> <ul style="list-style-type: none"> • Tenderers will be notified of such missing and incomplete documents and will be offered a period of three (3) days to complete or submit those pages i.e., Municipal Bidding Documents (MBD) and other documents that require completion and signatures that do not have a bearing on functionality, specific goals and price. • Tenders that are received contrary to the above requirements will be disqualified after three (3) days period has lapsed. • In cases where locality is a specific goal and the Tenderer did not submit the required documentation, the Tenderer upon submitting the municipal statement, lease agreement or letter from ward councilor confirming business address as per above, may not be eligible for points under specific goals if such documentation was not submitted with the tender document.
C.3.4.2	Tenders will be opened to the public soon after closing time and recording of received documents but not later than 11:00 at the tender office located at Turbine Hall, 65 Ntemi Piliso, Newtown, 2001, Ground Floor. Tenderers' names and total prices, where practical will be, read out.
C.3.11	Replace Contents with Returnable Schedule MBD 6.1 for evaluation criteria

Mandatory Requirements

NO.	DEFINITELY NON -NEGOTIABLE CRITERIA	YES/NO
Criteria 1	CIBD grading 6EP or higher	Active CIBD Grading at Evaluation
Criteria 2	Mandatory Tender Briefing Meeting	Yes
Criteria 3	Form of Offer Completed and Signed	Yes
Criteria 4	Acknowledgement of Project Tender Drawings	Yes
Criteria 5	Acknowledgement of SHE Specification & Annexures	Yes
Criteria 6	Signed BoQ	Yes

Tenderers who **FAIL** to meet the mandatory criteria or requirements of tender will result in disqualification.

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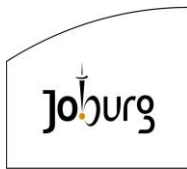


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Administrative Requirements

Description				Complied	
No	Reference to Tender Document	Description	Requirement	Yes	No
1	MBD 1	Invitation to Bid Form	Complete and submit complete and signed MBD 1 Form.		
2	CSD	Central Supplier Database Registration	Provide proof of CSD registration.		
3	MBD 4	Declaration of Interest	Complete and submit complete and signed MBD 4 Form.		
4	MBD 5	Declaration of Procurement Above R10m (All Applicable Taxes Included)	Complete and submit complete and signed MBD 5 Form.		
5	MBD 6.1	Preference Points Claim in Terms of The Preferential Procurement Regulations 2022	Complete and submit complete and signed MBD 6.1 Form.		
6	MBD 8	Declaration of Bidder's Past Supply Chain Management Practices	Complete and submit complete and signed MBD 8 Form.		
7	MBD 9.	Certificate of Independent Bid Determination	Complete and submit complete and signed MBD 9 Form.		
8	Annexure – Proof of Specific Goals	Valid BBBEE Certificate or certified copy thereof or a valid sworn affidavit			
9	Annexure	Municipal statement of account for Director/s (not older than three [03] months from the closing date of tender or a valid lease agreement at time of tender closure).			
10	Annexure	Municipal statement of account for Company (not older than three [03] months from the closing date of tender or a valid lease agreement at time of tender closure).			
11	Annexure	Joint Venture Agreement signed by all parties.			

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Witness:		Witness:	



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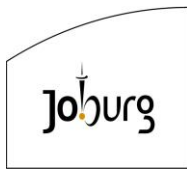
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Functionality Requirements

CRITERIA NO	CRITERIA	EVIDENCE	SUB-CRITERIA/CLAUSE		MAX SCORE	SCORE
1	Tenderers (Company) Experience in construction of Motor Control Centres (MCC) and refurbishments works of projects worth a minimum value of R 10 million	Supporting documents required include Reference Letters as per T2.1.6 (or on client letterhead with functional required information) and Completion / Approval Certificates. Note: <i>This reference letter must be completed by the referee/previous client of the tenderer and included in the tender submission. Alternatively, the Clients letterhead may be used provided it complies with the functional requirements. A separate form must be completed for each reference as a requirement in the evaluation criteria. The information provided will be verified and if found to be false or misrepresented, punitive measures will be instituted against the respective party including blacklisting in participating in any future government tenders.</i>	NUMBER OF MOTOR CONTROL CENTER PROJECTS COMPLETED WITH A MINIMUM VALUE OF R10M	Tenderer has not completed any project.	30	0
				Tenderer has completed 1 project.		15
				Tenderer has completed at least 2 projects.		30

Employer:		Contractor:	
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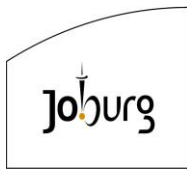
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CRITERIA NO	CRITERIA	EVIDENCE	SUB-CRITERIA/ CLAUSE		MAX SCORE	SCORE
2	Post Qualification Experience of Contract Manager Only Contract Managers with minimum Qualifications of: <ul style="list-style-type: none"> BSc/BEng or BTech degree in Electrical Engineering OR higher. AND Minimum 5 years post minimum qualification AND Professional Registration (Pr. Eng. / Pr. Tech.Eng) OR PrCPM / PrCM 	Tenderer must provide CV of Contract Manager in the format given in T2.1.9 Note: Tenderers may provide their own CVs but information provided should contain all information as provided in T2.1.9. Note: Certified copies of qualifications are to accompany the CVs.	EXPERIENCE IN PROJECTS INVOLVING ELECTRICAL WORKS AND MOTOR CONTROL WITH AT LEAST ONE PROJECT WITH A VALUE AT LEAST R5 MILLION AS CONTRACTS MANAGER	0 Projects completed	25	0
				1 Project completed		15
				>=2 Projects completed		25
3	Post Qualification Experience of Site Manager Only Site Managers with minimum qualifications of: <ul style="list-style-type: none"> National Diploma in Electrical Engineering or more. AND Minimum 5 years post minimum qualification AND Registered as a Candidate Professional in the Built Environment or more will be considered. 	Tender must Provide CV of Site Manager in the format given on T2.1.9 Note: Tenderers may provide their own CVs, but information provided should contain all information as provided in T2.1.9. Note: Certified copies of qualifications are to accompany the CVs.	EXPERIENCE IN PROJECTS INVOLVING ELECTRICAL WORKS AND MOTOR CONTROL WITH AT LEAST ONE PROJECT WITH A VALUE AT LEAST R5 MILLION AS CONTRACT MANAGER	0 Projects completed	25	0
				1 Project completed		15
				>=2 Projects completed		25

Employer:		Contractor:	
Witness:		Witness:	



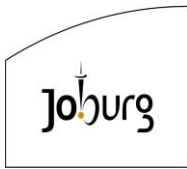
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4	Post Qualification Experience of Safety Officer Only Safety Officers with minimum qualifications of: <ul style="list-style-type: none">National Diploma (Safety Management)/National Diploma (Environmental Health/Environmental Science/ Environmental Management) /SAMTRAC / SHEOMTRAC/ SHEMTRAC / MESHTRAC /NEBOSH / Safety Officers Course (NQF 5) or more, ANDProfessionally Registered with SACPCMP in the Construction Health and Safety Sector will be considered.	Tender must Provide CV of Safety Officer in the format given on T2.1.9 Note: All Civil Engineering related projects will be considered. <i>Note: Certified copies of qualifications are to accompany the CVs.</i>	NUMBER OF ANY RELATED ENGINEERING PROJECTS COMPLETED AS SAFETY OFFICER	0 Projects completed	20	0
	1 Project completed	15				
	>=2 Projects completed	20				
	MINIMUM QUALIFYING SCORE				60	
	TOTAL				100	

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Witness:		Witness:	

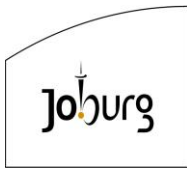


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	<p>NOTE 1: Where applicable, foreign qualifications MUST be accompanied by a SAQA verification certificate. Failure to submit SAQA verification certificate will lead to that qualification not being considered for allocation of points for that criterion.</p> <p>NOTE 2: When an uncertified copy of professional registration is submitted and the requirement was to submit a certified copy, JW will verify the validity of the registration on the issuing bodies or institution's website. If the verification is confirmed on the website, the bidder meets the criteria. This will only be applicable for the recommended bidders.</p> <p>ECSA: Engineering Council of South Africa SACPCMP: South African Council for the Project and Construction Management Professions SAMTRAC: Safety Management Training Course NEBOSH: National Examination Board in Occupational Safety and Health SHEOMTRAC: Safety Health Environmental Occupational Management Training Course SHEMTRAC: Safety Health Environmental Management Training Course MESHTRAC: Management Environmental Safety Health Training Course</p>		
C.3.11.2 & C.3.11.3	<p>The procedure for the evaluation of responsive tenders is Method 2 (Financial Offer and Specific Goals):</p> <p>Award and Allocation Strategy:</p> <table border="1"> <tr> <td>AWARD STRATEGY</td><td>The award strategy is based on the responsive Tenderer scoring the highest points for Financial Offer and Specific Goals.</td></tr> </table> <p>1. APPLICATION OF THE PREFERENCE POINTS SCORING SYSTEM</p> <p><u>The following preference point systems are applicable to all bids:</u></p> <ul style="list-style-type: none"> • 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). • If unclear, any preference points scoring may be included and the lowest acceptable tender will be used to determine the preference points to be used for the evaluation. Where the lowest acceptable tender is below R50 million, the 80/20 preference point system must be used and if the lowest acceptable tender is above R50 million, the 90/10 preference point system must be used. • The Specific Goals for the tender will be stated in MBD 6.1. In MBD 6.1, the tenderer must indicate how many points they are claiming for each Specific Goal and must submit all the required supporting documentation for the points to be verified and awarded by JW. The BEC will evaluate the submitted supporting documentation and confirm Specific Goal points claimed by the tenderer. Specific goals to be allocated by the BEC will depend on verification documentation submitted. • Only tenderers that have completed and signed MBD6.1 and submitted applicable verification documents will be allocated Specific Goal points for preferencing. <p>1.1 The value of this bid is estimated to exceed R50 000 000 (all applicable taxes included) and therefore the 90/10 preference point system shall be applicable.</p>	AWARD STRATEGY	The award strategy is based on the responsive Tenderer scoring the highest points for Financial Offer and Specific Goals.
AWARD STRATEGY	The award strategy is based on the responsive Tenderer scoring the highest points for Financial Offer and Specific Goals.		

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1.2 Preference points for this bid shall be awarded for:

Price; and
Specific Goals.

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

DESCRIPTION	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and Specific Goals must not exceed	100

1.4 Failure on the part of a bidder to submit proof of specific goals points claimed in MBD6.1 will not result in disqualification but will result in points not being awarded for Specific Goals.

Specific Goals

In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations 2022, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in Table 1 below as may be supported by proof/ documentation stated in the conditions of this tender.

Specific goals may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination based on race, gender or disability.

Race:

- I. Ownership by black people
- II. Black Designated Group:
 - Ownership by black people that are unemployed
 - Ownership by black people who are youth
 - Ownership by black people living in rural or underdeveloped areas or townships
 - Ownership by black people with disabilities
 - Ownership by black people who are military veterans
 - Cooperative owned by black people

Gender:

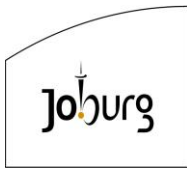
- III. Persons, or categories of persons, historically disadvantaged by unfair discrimination based on gender are women. Ownership by persons that are classified as female according to the Department of Home Affairs of South Africa.

Disability:

- IV. Persons, or categories of persons, historically disadvantaged by unfair discrimination based on disability are disabled persons.

Reconstruction and Development Programme (RDP) objectives as published in Government Gazette No. 16085 dated 23 November 1994 i.e.,

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Local Manufacture:

- I. Promotion of procurement of locally manufactured goods in South Africa to promote job creation in light of the high unemployment rate in South Africa which has a greater impact previously disadvantaged individuals and black youth.

Locality:

- I. Promotion of procurement from local business in the geographical areas that JW operate in. This is also directed at creating employment in the areas JW operate in. The BSC may allocate points as follows:
 - Promotion of enterprises located in the Gauteng Province
 - Promotion of enterprises located in a specific region within COJ (the 7 regions. A to G)
 - Promotion of enterprises located in the City of Johannesburg municipality
 - Promotion of enterprises located rural or underdeveloped areas or townships.

QSE

- Promotion of procurement from QSE's that are black owned.

EME:

- Promotion of procurement from EME's that are black own.

SUB-CONTRACTING:

Promotion of sub-contracting a Historically Disadvantaged Individuals (HDI) company.

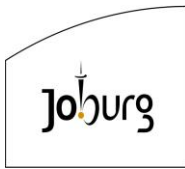
Consider sub-contract only in cases where there are no company which can meet any of the specific goals. Check if the portion of the work cannot be subcontracted in terms of specific goals.

One goal may be chosen, or a combination of goals may be decided upon including a sub-goal i.e., owned by black people that are disabled etc.,

Table 1:

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)
Documentary Evidence Required 1 – (B-BBEE Certificate)	
Documentary Evidence Required 2 – Entity Rates and Taxes [Or Lease Agreement] as proof of Locality)	
Documentary Evidence Required 3 – (CIPC Registration Documents)	
Documentary Evidence Required 4 – (Sworn Affidavit from Ward Councillor as proof of Business Address)	

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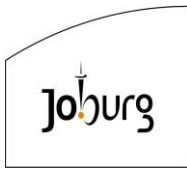
The following verification documents must be submitted with the tender document:

SPECIFIC GOALS – ANY ONE OR A COMBINATION OF ANY	MEANS OF VERIFICATION THAT MAY BE SELECTED OR A COMBINATION THEREOF
Business owned by 51% or more – Black Youth	<ul style="list-style-type: none"> Certified copy of a valid BBBEE certificate issued by SANAS accredited verification agency or Affidavit sworn under oath.
Business owned by 51% or more- Women	<ul style="list-style-type: none"> Certified copy of valid a BBBEE certificate issued by SANAS accredited verification agency or DTI/CIPC BBBEE Certificate for Exempted Micro Enterprises or Affidavit sworn under oath, OR CIPC registration document showing percentage of ownership and share certificate where applicable.

The following are the requirements for the Sworn Affidavit in terms of the BBBEE Sector Codes of Good Practise:

Affidavit Prescribed Formats	Category	Financial Threshold
Generic Enterprises	BO QSE BO EME	Between R10m and R50m Less than R10m
Sector Specific Enterprises	BO QSE BO EME	Between R10m and R50m Less than R10m
Construction Sector Code	EME Contractor BO EME BEP	Less than R3m Less than R1.8m
Financial Sector Code	BO QSE BO EME	Between R10m and R50m Less than R10m
Information Communication Technology Sector Code (ICT)	BO QSE BO EME	Between R10m and R50m Less than R10m
Marketing, Advertising & Communication Sector Code (MAC)		
> Public Relations	BO QSE	Between R5m and R10m
> Marketing, Advertising & Communications	BO EME	Less than R5m
Property Sector Code		
> Service-based	BO QSE EME	Between R5m and R10m Less than R5m
> Agency-based	BO QSE	Between R2.5m and R35m
> Asset-based	EME	Less than R2.5m

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Witness:		Witness:	

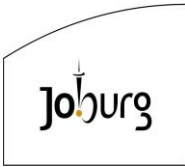


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	Tourism Sector Code	BO QSE	Between R80m and R400m
	Specialised Enterprises	BO QSE	Between R5m and R45m
		BO EME	Less than R5m
		BO QSE	Between R10m and R50m
		BO EME	Less than R10m
Requirements for a valid BBBEE Certificate			
<p>a) Copy of a certified valid BBBEE certificate (Only Valid BBBEE certificate must be accredited by SANAS) or valid Sworn Affidavit issued by the DTIC or the CIPC or in a similar format complying with commissioner of oath Act.</p> <p>b) Bidders who do NOT qualify as EME's and QSE's as outlined in 5.5, must submit B-BBEE verification certificates that are issued by an Agency accredited by SANAS.</p> <p>c) Bidders who fail to submit a certified copy of their valid B-BBEE certificate or valid sworn affidavit or valid DTI / CIPC B-BBEE certificate will score zero points for specific goals.</p> <p>Valid Sworn Affidavits or certified copies of B-BBEE Certificate must comply with the requirements outlined in the Justices of the Peace and Commissioners of Oaths Act, no 16 of 1963 and its Regulations promulgated in Government Notice GNR 1258 of 21 July 1972 Justices of the Peace and Commissioners of Oaths Act, No. 16 of 1963.</p> <p>i.e.</p> <p>(i) The deponent shall sign the declaration in the presence of the commissioner of oaths (COA).</p> <p>(ii) Below the deponent's signature the COA shall certify that the deponent has acknowledged that he knows and understands the contents of the declaration and the COA shall state the manner, place, and date of taking the declaration.</p> <p>(iii) The COA shall sign the declaration and print his full name and business address below his signature; and state his designation and the area for which he holds his appointment, or the office held by him if he holds his appointment ex officio.</p> <p>(iv) Copy of certified copies will not be accepted.</p>			
2. ADJUDICATION USING A POINT SYSTEM			
2.1	The bidder obtaining the highest number of total points will be awarded the contract.		
2.2	Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;		
2.3	Points scored must be rounded off to the nearest 2 decimal places.		
2.4	In the event that two or more bids have scored equal total points, the successful bid must be		

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN

Volume 1 Tender and Contract
Section T1 Tender and Contract

C.3.17	The number of paper copies of the signed contract to be provided by the Employer is one.
	There are no additional conditions of tender.

--- END OF PART---

Employer:		Contractor:	
Witness:		Witness:	

Johannesburg Water (SOC) Ltd



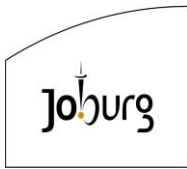
CONTRACT NO. JW14337

DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN

VOLUME 1

RETURNABLE DOCUMENTS AND SCHEDULES

Employer:		Contractor:	
Witness:		Witness:	



T2.1 LIST OF RETURNABLE DOCUMENTS

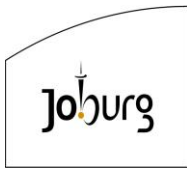
The Tenderer must complete the following returnable documents:

<u>Document</u>	<u>Page</u>
1. Returnable Schedules required for tender evaluation purposes	
T2.1.1 Record of addenda to tender documents	RD.1
T2.1.2 Certificate of Authority	RD. 2
T2.1.3 Compulsory Enterprise Questionnaire	RD.7
T2.1.4 Preferential Procurement	RD.9
MBD 6.1 Preference points claim form in terms of the preferential procurement regulations	RD.10
MBD 4 Declaration of any potential conflict of interest	RD.18
	Error! Bookmark not defined.
MBD 8 Declaration of bidder's past Supply Chain management practices	RD.21
MBD 5 Declaration for Procurement above R10 Million (VAT Included)	RD.23
MBD 9 Certificate of independent bid determination	RD.25
T2.1.5 Proposed Qualifications	RD.28
T2.1.6 Schedule of the Tenderer's Experience	RD.30
T2.1.7 Contactable Reference Template	RD.31
T2.1.8 Schedule of Key Personnel	RD.33
T2.1.9 Curriculum Vitae of Key Personnel	RD.34

T2.2 LIST OF RETURNABLE DOCUMENTS

<u>Document</u>	<u>Page</u>
2. Other documents required only for tender evaluation purposes	
T2.2.1 Certificate of Contractor Registration issued by the Construction Industry Development Board	RD.37
T2.2.2 SARS Tax Compliance Status Pin and Proof of CSD registration i.e. MA xxxxxxxxxxxx number	RD.38

Employer:		Contractor:	
Witness:		Witness:	



T2.3 LIST OF RETURNABLE SCHEDULES

<u>Document</u>	<u>Page</u>
3. Returnable Schedules that will be incorporated into the contract	
T2.3.1 Imported content: forward exchange cover for imported goods	RD. 40
T2.3.2 Approach Statement	RD. 42
T2.3.3 Proposed Project Programme	RD. 43

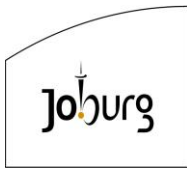
T2.4 LIST OF RETURNABLE SCHEDULES

<u>Document</u>	<u>Page</u>
4. Other documents that will be incorporated into the contract	
T2.4.1 JW 6.4 Returnable Annexure A – SHE Acknowledgment Form	RD.45
T2.4.2 JW 6.5 Returnable Annexure B: Acknowledgement of Tender Drawings	RD.46

<u>Document</u>	<u>Page</u>
C1.1 FORM OF OFFER AND ACCEPTANCE	C.1
C1.2 CONTRACT DATA (PART 2)	C.5
C1.3 FORMS OF SECURITIES	C.22
C2.1 PRICING DATA	C.31
Bill of Quantities	C.37
Summary of Bill of Quantities	C.86

NOTE: The Tenderer is required to complete each and every schedule listed above to the best of his ability as the evaluation of tenders and the eventual contract will be based on the information provided by the tenderer.

Employer:		Contractor:	
Witness:		Witness:	



T2.1.1 Record of Addenda to Tender Documents

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

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

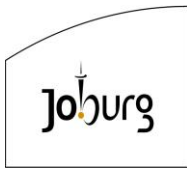
Attach additional pages if more space is required.

Signed: _____ Date: _____

Name: _____ Position: _____

Tenderer: _____

Employer:		Contractor:	
Witness:		Witness:	



T2.1.2 Certificate of Authority

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 that by resolution of the Board (copy attached) taken on, Mr/Ms,
acting in the capacity of, was authorized to sign all documents in connection with
the tender for Contract No. JW14337 and any contract resulting from it on behalf of the company.

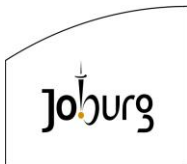
Chairman:

As Witnesses: 1.....

2.....

Date:

Employer:		Contractor:	
Witness:		Witness:	



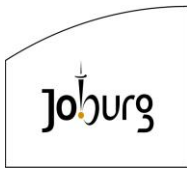
ii. **Certificate For Close Corporation**

We, the undersigned, being the key members in the business trading as,
hereby authorize Mr/Ms, acting in the capacity of
....., to sign all documents in connection with the tender and any contract resulting from
it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

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

Employer:		Contractor:	
Witness:		Witness:	



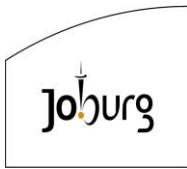
iii. Certificate For Partnership

We, the undersigned, being the key partners in the business trading as,.....,
hereby authorize Mr/Ms acting in the capacity of
....., to sign all documents in connection with the tender and any contract resulting from it on
our behalf.

NAME	ADDRESS	SIGNATURE	DATE

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

Employer:		Contractor:	
Witness:		Witness:	



iv. Certificate For Joint Venture

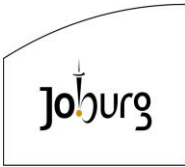
This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Msauthorised signatory of the company....., acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

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

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

Employer:		Contractor:	
Witness:		Witness:	



v. Certificate For Sole Proprietor

I,, hereby confirm that I am the sole owner of the Business
trading as

Signature of Sole owner:

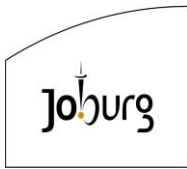
As Witnesses:

1.....

2.

Date:

Employer:		Contractor:	
Witness:		Witness:	



T2.1.3 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: CIDB registration number, if any:.....

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

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

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number :

Proof of CSD registration ie MA xxxxxxxx number.....

SARS Tax Compliance status Pin number:.....

Section 6: Record in the service of the state

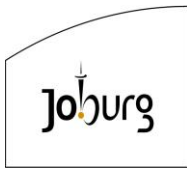
Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

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

Employer:		Contractor:	
Witness:		Witness:	



Volume 1 Tender and Contract
Section T2 Returnable Documents and Schedules

*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:

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

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

*insert separate page if necessary

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

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

Signed: _____

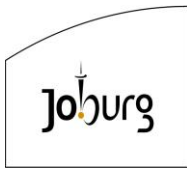
Date: _____

Name: _____

Position: _____

Enterprise Name: _____

Employer:		Contractor:	
Witness:		Witness:	



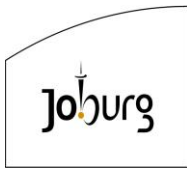
T2.1.4 Preferential Procurement

Forms for Completion by the Tenderer included in this section are:			
Form No.	Form Title	Description	Page
JW6.1	Special Conditions	Sub-contracting and Skills Transfer	RD.Error! Bookmark not defined.
MBD 6.1	Empowerment and Preferential Procurement	Procedures and adjudication criteria for the information of the Tenderer	RD.10
MBD 4	Declaration of any potential Conflict of Interest	Form to be completed by the Tenderer	RD.Error! Bookmark not defined.
MBD 8	Declaration of bidder's past supply chain management practices	Form to be completed by the Tenderer	RD.21
MBD 5	Declaration for Procurement above R10 Million (VAT Included)	Form to be completed by the Tenderer	RD.23
MBD 9	Certificate of Independent Bid Determination	Form to be completed by the Tenderer	RD.Error! Bookmark not defined.

Note:

All information supplied must be current and valid. Proposed or imminent changes to a Tenderer's status may be mentioned but the declarations must reflect current circumstances.

Employer:		Contractor:	
Witness:		Witness:	



MBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

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

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

1. GENERAL CONDITIONS

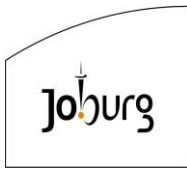
- 1.1. The following preference point systems are applicable to invitations to tender:
- 1.1.1. The 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
 - 1.1.2. The 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).
- 1.2. To be completed by the organ of state:
(Delete whichever is not applicable for this tender)
- 1.2.1. The preference point system for this tender is the 90/10 preference point system.
 - 1.2.2. The preference point system for this tender is the 80/20 preference point system.

NOTE: The 90/10 will be applicable in this tender. The lowest acceptable tender will be used to determine the accurate system once tenders are received.

- 1.3. Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:
- 1.3.1. Price, and:
 - 1.3.2. Specific Goals
- 1.4. To be completed by the organ of state:
The maximum points for this tender are allocated as follows:

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

Employer:		Contractor:	
Witness:		Witness:	



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- 1.5. Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.
- 1.6. The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- 2.1. **“Tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- 2.2. **“Price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- 2.3. **“Rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- 2.4. **“Tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- 2.5. **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR DISPOSAL OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

80/20

or

90/10

$$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right) \quad \text{or} \quad P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where:

P_s = Points scored for price of tender under consideration
 P_t = Price of tender under consideration
 P_{min} = Price of lowest acceptable tender

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

4.1. POINTS AWARDED FOR PRICE

THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

Employer:		Contractor:	
Witness:		Witness:	

80/20

or

90/10

$$Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right) \text{ or}$$

$$Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

Where:

Ps = Points scored for price of tender under consideration
Pt = Price of tender under consideration
Pmin = Price of lowest acceptable tender

5. POINTS AWARDED FOR SPECIFIC GOALS

- 5.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in Table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:
- 5.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
- an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
 - any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

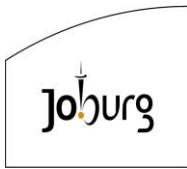
then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

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

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

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

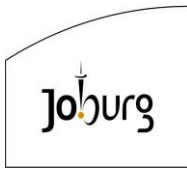
Employer:		Contractor:	
Witness:		Witness:	



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The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the Tenderer)
Business owned by 51% or more – Black Youth	10	
Business owned by 51% or more- Women	10	
TOTAL	20	

Employer:		Contractor:	
Witness:		Witness:	



Volume 1 Tender and Contract
Section T2 Returnable Documents and Schedules

6. DECLARATION WITH REGARD TO COMPANY / FIRM

6.1. Name of company/firm.....

6.2. Company registration number:

6.3. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
- (a) disqualify the person from the tendering process;
- (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
- (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
- (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
- (e) forward the matter for criminal prosecution, if deemed necessary.

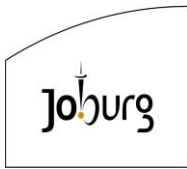
.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

DATE:

ADDRESS:

Employer:		Contractor:	
Witness:		Witness:	



Volume 1 Tender and Contract
Section T2 Returnable Documents and Schedules

6.5. SUB-CONTRACTING

6.5.1. Will any portion of the contract be sub-contracted?

(Tick applicable box)

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

6.5.2. If yes, indicate:

- i) What percentage of the contract will be subcontracted _____ (minimum of 11%)
ii) The name of the sub-contractor(s):

- iii) The black shareholders of the sub-contractor(s):

- iv) Whether the sub-contractor(s) is an EME or QSE

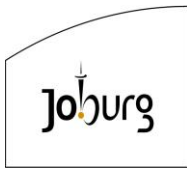
(Tick applicable box)

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

- v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2022:

Designated Group: An EME or QSE which is at last 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
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		

Employer:		Contractor:	
Witness:		Witness:	



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Any QSE		
---------	--	--

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

6.6.1. Name of company/firm:

6.6.2. VAT number registration number:.....

6.6.3. Company registration number:

6.7. **TYPE OF COMPANY/ FIRM**

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

[TICK APPLICABLE BOX]

6.8. **DESCRIBE PRINCIPAL BUSINESS ACTIVITIES**

.....

.....

.....

6.9. **COMPANY CLASSIFICATION**

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

[TICK APPLICABLE BOX]

6.10. **MUNICIPAL INFORMATION**

Municipality where business is situated:

Registered Account Number:.....

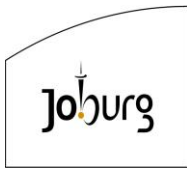
Stand Number:

6.11. Total number of years the company/firm has been in business:.....

6.12. 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 Specific Goals in MBD 6.1 qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

v) The information furnished is true and correct;

Employer:		Contractor:	
Witness:		Witness:	

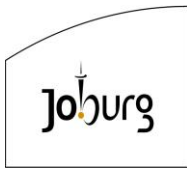


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- vi) In the event of a contract being awarded as a result of points claimed as shown in MBD 6.1, the contractor is required to furnish documentary proof as requested in the Tender Data to the satisfaction of the purchaser that the claims are correct;
- vii) If the specific goals points have 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) Recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury 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.

<p>.....</p> <p>SIGNATURE(S) OF BIDDERS(S)</p> <p>DATE:</p> <p>ADDRESS</p> <p>.....</p>	<p>WITNESSES</p> <p>1.</p> <p>2.</p>
---	--

Employer:		Contractor:	
Witness:		Witness:	



MBD 4 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. **To give effect to the above, the following questionnaire must be completed and submitted with the bid:**

- 3.1 Full Name of bidder or his or her representative:.....
- 3.2 Identity Number.....
- 3.3 Position occupied in the Company (director, trustee, shareholder²):.....
- 3.4 Company Registration Number:
- 3.5 Tax Reference Number:.....
- 3.6 VAT Registration Number:
- 3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
- 3.8 Are you presently in the service of the state? **YES / NO**
 - 3.8.1 If yes, furnish particulars.

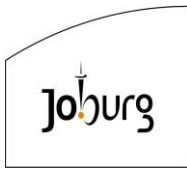
¹MSCM Regulations: "in the service of the state" means to be –

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

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

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

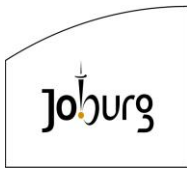
Employer:		Contractor:	
Witness:		Witness:	



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- 3.9.1 If yes, furnish particulars.....
- 3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?YES / NO
- 3.10.1 If yes, furnish particulars.....
-
- 3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? YES / NO
- 3.11.1 If yes, furnish particulars.....
-
- 3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? YES / NO
- 3.12.1 If yes, furnish particulars.....
-
- 3.13 Are any spouse, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of the state? YES / NO
- 3.13.1 If yes, furnish particulars.....
-
- 3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract. YES / NO
- 3.14.1 If yes, furnish particulars.....
-

Employer:		Contractor:	
Witness:		Witness:	



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

Full Name	Identity Number	State Employee Number

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

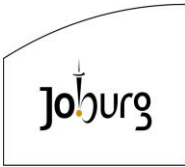
Employer:		Contractor:	
Witness:		Witness:	

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

- 1 The bid of any bidder may be disregarded if that bidder, or any of its directors have-
- a. abused the institution's supply chain management system;
 - b. committed fraud or any other improper conduct in relation to such system; or
 - c. failed to perform on any previous contract.
- 2 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 companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audi alteram partem</i> rule was applied).	<input type="checkbox"/>	<input type="checkbox"/>
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)? To access this Register, enter the National Treasury's website, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445.	<input type="checkbox"/>	<input type="checkbox"/>
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 outside of the Republic of South Africa) for fraud or corruption during the past five years?	<input type="checkbox"/>	<input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	<input type="checkbox"/>	<input type="checkbox"/>
4.4.1	If so, furnish particulars:		

Employer:		Contractor:	
Witness:		Witness:	



CERTIFICATION

I, THE UNDERSIGNED (FULL NAME).....

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

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

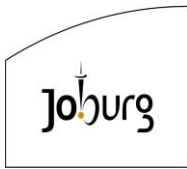
.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

Employer:		Contractor:	
Witness:		Witness:	



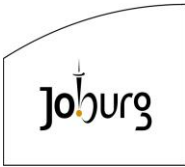
MBD 5

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED)

For all procurement expected to exceed R10 million (VAT 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 If the bidder is not required by law to prepare annual financial statements for auditing, they shall be required to furnish their Annual Financial Statements -
i. for the past three years , or
ii. since their establishment if established during the past three years
- 2.1 Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days? **YES / NO**
- 2.2 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.
- 2.3 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.....

Employer:		Contractor:	
Witness:		Witness:	



CERTIFICATION

I, THE UNDERSIGNED (FULL NAME).....

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

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

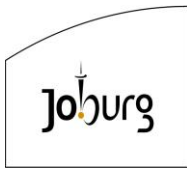
.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

Employer:		Contractor:	
Witness:		Witness:	



MBD 9

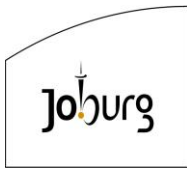
CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging)². Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD9) must be completed and submitted with the bid:

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

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

Employer:		Contractor:	
Witness:		Witness:	



MBD 9
CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description) in response to the invitation for the bid made by:

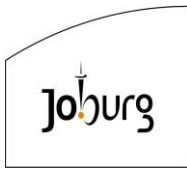
(Name of Municipality / Municipal Entity) do hereby make the following statements that I certify to be true and complete in every respect:

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

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

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.

Employer:		Contractor:	
Witness:		Witness:	



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Infrastructure Renewal Plan



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- (c) methods, factors or formulas used to calculate prices;
- (d) the intention or decision to submit or not to submit, a bid;
- (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
- (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

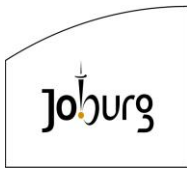
.....

Signature Date

.....

Position Name of Bidder

Employer:		Contractor:	
Witness:		Witness:	



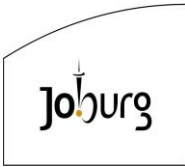
T2.1.5 Proposed Amendments and Qualifications

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause C.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the employer's handling of material qualifications.

Page	Clause or item	Proposal

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
Driefontein Wastewater Treatment Works
Infrastructure Renewal Plan



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Signed _____

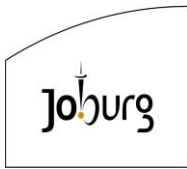
Date _____

Name _____

Position _____

Tenderer _____

Employer:		Contractor:	
Witness:		Witness:	



Contactable Reference Template - 1

To Johannesburg Water (SOC) Ltd

I, the undersigned being duly authorised to do so, hereby furnish a reference to Johannesburg Water relative to tender Contract No. JW14337 for the Driefontein Wastewater Treatment Works Infrastructure Renewal Plan.

Name of Tenderer:

Description of Goods / Services provided

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

Contract Value (excl. VAT):

Name of authorised person:

Signature:..... Date

Telephone/Mobile:

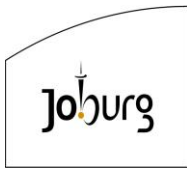
Email:

Completed on behalf (Name of Client)

NB: This document must be completed by the referee and included in the tender submission. Alternatively, the client's letterhead may be used for this purpose provided it complies with the functional criteria requirements. A separate form must be completed for each reference as required in the evaluation criteria. Information provided will be verified and if found to be false or misrepresented, punitive measures will be instituted against the respective party including blacklisting and restriction from participating in any future government tender.

IF BIDDER WAS A SUBCONTRACTOR ON THE PROJECT – PROOF OF SUBCONTRACTING AGREEMENT BETWEEN BIDDER AND MAIN CONTRACTOR PLUS REFERENCE LETTER TO BE SUBMITTED AS STATED ABOVE

Employer:		Contractor:	
Witness:		Witness:	



Contactable Reference Template - 2

To Johannesburg Water (SOC) Ltd

I, the undersigned being duly authorised to do so, hereby furnish a reference to Johannesburg Water relative to tender Contract No. JW14337 for the Driefontein Wastewater Treatment Works Infrastructure Renewal Plan.

Name of Tenderer:

Description of Goods / Services provided

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

Contract Value (excl. VAT):

Name of authorised person:

Signature:..... **Date**

Telephone/Mobile:

Email:

Completed on behalf (Name of Client)

NB: This document must be completed by the referee and included in the tender submission. Alternatively, the client's letterhead may be used for this purpose provided it complies with the functional criteria requirements. A separate form must be completed for each reference as required in the evaluation criteria. Information provided will be verified and if found to be false or misrepresented, punitive measures will be instituted against the respective party including blacklisting and restriction from participating in any future government tender.

IF BIDDER WAS A SUBCONTRACTOR ON THE PROJECT – PROOF OF SUBCONTRACTING AGREEMENT BETWEEN BIDDER AND MAIN CONTRACTOR PLUS REFERENCE LETTER TO BE SUBMITTED AS STATED ABOVE

BIDDER AND MAIN CONTRACTOR PLUS REFERENCE LETTER TO BE SUBMITTED AS STATED ABOVE

Employer:		Contractor:	
Witness:		Witness:	

T2.1.8 Schedule of Key Personnel

In terms of the Project Specification and the Conditions of Tender, unskilled workers may only be brought in from outside the local community if such personnel are not available locally.

The Tenderer shall list below the personnel which they intend to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.

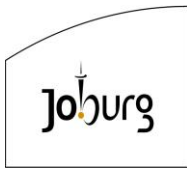
CATEGORY OF EMPLOYEE	NUMBER OF PERSONS					
	KEY PERSONNEL, PART OF THE TENDERER'S ORGANISATION		KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY		UNSKILLED PERSONNEL TO BE RECRUITED FROM LOCAL COMMUNITY	
	HDI	NON-HDI	HDI	NON-HDI	HDI	NON-HDI
Site Agent, Contracts Manager						
Foremen, Quality Control and Safety Personnel						
Technicians, Surveyors, etc.						
Artisans and other Skilled workers						
Plant Operators						
Unskilled Workers						
Others:						

SIGNATURE:.....

DATE:

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

Employer:		Contractor:	
Witness:		Witness:	



T2.1.9 Curriculum Vitae of Key Personnel

Provide separate forms for each position listed in Key Personnel Forms:

Contracts Manager

Name:		Date of birth:
Profession:		Nationality:
Qualifications:		
Professional Registration Number:		
Name of Employer (firm):		
Current position:		Total Months Relevant Experience:
<u>Employment Record:</u>		
<u>Experience Record Pertinent to Required service:</u>		
START DATE (dd-mm-yyyy)	End DATE (dd-mm-yyyy)	ROLE WHICH PROVES RELEVANT EXPERIENCE

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

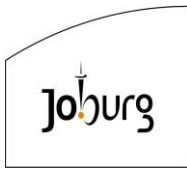
.....

Signature of person named in the schedule

.....

Date

Employer:		Contractor:	
Witness:		Witness:	



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Site Agent

Name:		Date of birth:
Profession:		Nationality:
Qualifications:		
Professional Registration Number:		
Name of Employer (firm):		
Current position:		Total Months Relevant Experience:
<u>Employment Record:</u>		
<u>Experience Record Pertinent to Required service:</u>		
START DATE (dd-mm-yyyy)	End DATE (dd-mm-yyyy)	ROLE WHICH PROVES RELEVANT EXPERIENCE

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

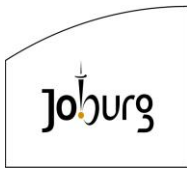
.....

Signature of person named in the schedule

.....

Date

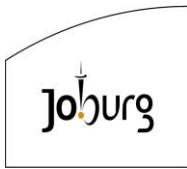
Employer:		Contractor:	
Witness:		Witness:	



T2.2 LIST OF RETURNABLE DOCUMENTS

<u>Document</u>		<u>Page</u>
2. Other documents required only for tender evaluation purposes		
T2.2.1	Certificate of Contractor Registration issued by the Construction Industry Development Board	RD.37
T2.2.2	SARS Tax Compliance Status Pin and Proof of CSD registration i.e. MA xxxxxxxxxx number	RD.38

Employer:		Contractor:	
Witness:		Witness:	



T2.2.1 Contractor's Certificate of Registration With CIDB

NB: The Tenderer shall attach hereto the Contractor's Certificate of Registration with CIDB OR provide the CIDB registration number that JW can use to verify CIDB requirements for this tender. Failure to submit the certificate or CIDB registration number with the tender document will lead to the conclusion that the Tenderer is not registered with the CIDB and therefore not eligible to tender.

Tenderers who have made application to CIDB for registration and are capable of being so registered prior to the evaluation of submissions must attach a notification from CIDB that their application is being considered.

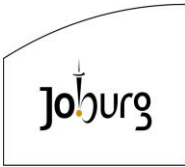
CIDB status to be active at the required CIDB grading at time of evaluation to avoid disqualification.

SIGNATURE:.....

DATE:

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

Employer:		Contractor:	
Witness:		Witness:	



T2.2.2 SARS Tax Compliance Status Pin and Proof of CSD registration

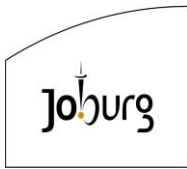
The Tenderer must attach hereto a copy SARS Tax Compliance Status Pin and Proof of CSD registration i.e. MA xxxxxxxxxxxx number.

SIGNATURE:.....

DATE:

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

Employer:		Contractor:	
Witness:		Witness:	



T2.3 LIST OF RETURNABLE SCHEDULES

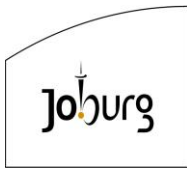
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3. Returnable Schedules that will be incorporated into the contract

T2.3.1	Imported content sheet: forward exchange cover for imported goods	RD. 40
T2.3.2	Approach Statement	RD. 42T2.3.2 Approach Statement RD.43
T2.3.3	Proposed Project Programme	

Employer:		Contractor:	
Witness:		Witness:	



T2.3.1 Imported Content Sheet: Forward Exchange Cover for Imported Goods

The Tenderer shall, in the attached schedule, for each item which a price is tendered, state the item number as it appears in the Schedule of Quantities, a brief description of the item, the country of origin, the value of the imported content of all goods comprising that item, the number of items for which he requires forward exchange cover, and the total amount for which forward exchange cover will be required.

Each Part of the Schedule of Quantities must be dealt with separately.

In the event of components being imported from more than one country, a separate entry shall be made for each country.

The Tenderer shall state the applicable rate(s) for the relevant country(ies) as at the date seven days prior to the closing date for the receipt of tenders.

Exchange rate(s) as at (insert date)

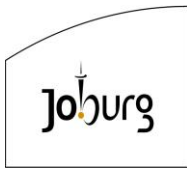
Country	Exchange Rate

SIGNED ON BEHALF OF TENDERER :

NAME (in print) :

DATE :

Employer:		Contractor:	
Witness:		Witness:	

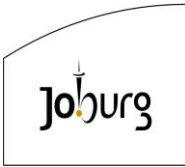


T2.3.2 Approach Statement

The approach statement and quality control plan are to address the items provided below:

APPROACH STATEMENT SUB-CRITERIA SCORING		
No	ITEM	%
1	REMOVAL OF THE DAMAGED EQUIPMENT	25%
2	REFURBISHMENT WORK TO THE MCC BUILDING	25%
3	DESIGN, MANUFACTURE, TEST, DELIVER AND INSTALL THE NEW MCC	25%
4	DESIGN, MANUFACTURE, TEST, DELIVER AND INSTALL THE NEW PLC	25%
	TOTAL	100%

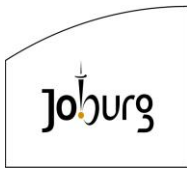
Employer:		Contractor:	
Witness:		Witness:	



T2.3.3 Proposed Preliminary Programme

The Tenderer is to provide a preliminary programme in terms of how they propose to carry out the Works to meet the 12 months construction period.

Employer:		Contractor:	
Witness:		Witness:	



T2.4 LIST OF RETURNABLE SCHEDULES

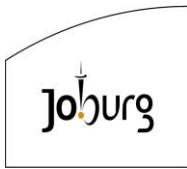
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4. Other documents that will be incorporated into the contract

T2.4.1	JW 6.4 Returnable Annexure A – SHE Acknowledgment form	RD. 45
T2.4.2	JW 6.5 Returnable Annexure B: Acknowledgement of Tender Drawings	RD. 46

Employer:		Contractor:	
Witness:		Witness:	



T2.4.1 JW 6.4 Returnable Annexure A: Acknowledgement of SHE Specification & Annexures

DECLARATION BY CONTRACTOR

I, the undersigned, and representing the tenderer as indicated hereby acknowledge that I have obtained copies of the following listed documentation and confirm that I fully understand the contents thereof and confirm compliance thereto in the event of being successful:

- OHS Specification (Volume 2)
- Annexure 1: COVID-19 Guidelines
- Annexure 2: Baseline Risk Assessment and COVID-19 Risk Assessment
- Annexure 3: Medical Screening Policy
- Annexure 4: Contractor Competency Evaluation
- Annexure 5: Sign off form
- Annexure 6: Environmental Management Plan
- Annexure 7: Environmental Specification

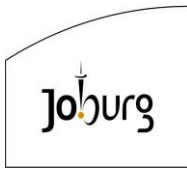
We furthermore commit to:

- Comply with all applicable SHE related legal and other requirements.
- Inform all staff of their role in managing environmental impacts and safety hazards on site.

Signed at on this Day of 20.....

Name of Tenderer	
Name of Authorized person	
Authorized Signature*	

Employer:		Contractor:	
Witness:		Witness:	



T2.4.2 JW 6.5 Returnable Annexure B: Acknowledgement of Tender Drawings

DECLARATION BY CONTRACTOR

I, the undersigned, and representing the tenderer as indicated hereby acknowledge that I have obtained copies of the following listed documentation and confirm that I fully understand the contents thereof and confirm compliance thereto in the event of being successful:

The drawings that are issued for **TENDER PURPOSES** are those noted below:

DRAWING NUMBER	DESCRIPTION	REV
18052-73-001	DRAWING LIST	T00
18052-72-002	LOCALITY PLAN AND SITE LAYOUT	T00
AS-BUILT DRAWINGS OF UNIT 2 BIO-REACTOR		
10420-04-201	BIOLOGICAL REACTOR – LAYOUT – SHEET 1 OF 12	T00
10420-04-205	BIOLOGICAL REACTOR - WALKWAY AND PLATFORM DETAILS – SHEET 5 OF 12	T00
10420-04-206	BIOLOGICAL REACTOR - WALKWAY AND PLATFORM DETAILS – SHEET 6 OF 12	T00
AS-BUILT DRAWING OF UNIT 2 BIO-REACTOR CONTROL BUILDING		
10420-04-301	BIOLOGICAL REACTOR – CONTROL BUILDING	T00
18052-72-004	BIOLOGICAL REACTOR – CONTROL BUILDING – PHOTOGRAPHIC RECORDS	T00
ELECTRICAL ENGINEERING (ME) DRAWINGS		
18052-72-005	BIO-REACTOR MCC - SINGLE LINE DIAGRAM	T00

Signed at on this Day of 20.....

Name of Tenderer	
Name of Authorized person	
Authorized Signature*	

Employer:		Contractor:	
Witness:		Witness:	

Johannesburg Water (SOC) Ltd



CONTRACT JW14337

DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN

VOLUME 1

PART 1: AGREEMENT AND CONTRACT DATA

Employer:		Contractor:	
Witness:		Witness:	

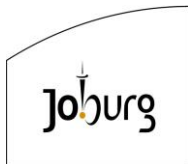
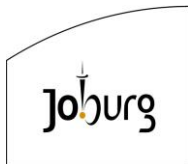


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Summary of Bill of Quantities	C.86

Employer:		Contractor:	
Witness:		Witness:	



C1.1 FORM OF OFFER (ACCEPTANCE & AGREEMENT)

C1.1.1 Form of Offer

The Contractor is to complete and sign the Form of Offer.

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

JW 14337: Driefontein Wastewater Treatment Works Infrastructure Renewal Plan.

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

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

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

Rand (in words); _____ R _____ (in figures),

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

Signature(s)

Name(s)

Capacity

For the Contractor

(Name and address of organisation)

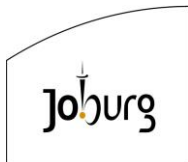
**Name and signature of
witness**

(Name)

(Signature)

Date

Employer:		Contractor:	
Witness:		Witness:	



C1.1.2 Form of Acceptance

The Employer is to complete and sign the form of acceptance.

By signing this part of the Form of Offer and Acceptance, the Employer identified below accepts the Contractor'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 Contractor's Offer shall form an agreement between the Employer and the Contractor 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 Volume 1:

- Part 1 Agreement and Contract Data, (which includes this Agreement)
- Part 2 Pricing Data
- Part 3 Scope of Work
- Part 4 Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above. Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Contractor and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representative(s) of both parties.

The Contractor shall within twenty-eight **(28) days** 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 Contact Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date of this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Contractor receives one fully completed copy of this document, including the Schedule of Deviations (if any). Unless the Contractor (now the Contractor) within five days after 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 binding contract between the parties.

Name(s) _____

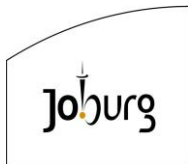
Capacity _____

For the Employer **Johannesburg Water SOC (Ltd), Turbine Hall, 65 Ntemi Piliso Street, Newtown.**
(Name and address of organisation)

Name and signature of witness _____
(Name) _____ (Signature) _____

Date _____

Employer:		Contractor:	
Witness:		Witness:	



C1.1.3 Schedule of Deviations

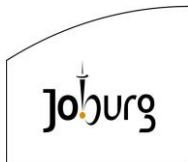
Notes:

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

1	Subject	
	Details	
2	Subject	
	Details	
3	Subject	
	Details	
4	Subject	
	Details	
5	Subject	
	Details	
6	Subject	
	Details	
7	Subject	
	Details	
8	Subject	
	Details	

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

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
Driefontein Wastewater Treatment Works Infrastructure Renewal Plan
Volume 1 Tender and Contract
Section C1 Agreement and Contract Data



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 Contractor of a completed and signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the Contractor:

Signature(s)

Name(s)

Capacity

For the Contractor

(Name and address of organisation)

**Name and signature of
witness**

(Name)

(Signature)

Date

For the Employer:

Name(s)

Capacity

For the Employer

Johannesburg Water SOC (Ltd), Turbine Hall, 65 Ntemi Piliso Street, Newtown.

(Name and address of organisation)

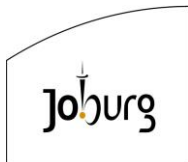
**Name and signature of
witness**

(Name)

(Signature)

Date

Employer:		Contractor:	
Witness:		Witness:	



C1.2 CONTRACT DATA

C1.2.1 Part 1: Data Provided by the Employer

CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works Third Edition (2015), published by the South African Institution of Civil Engineering, is applicable to this Contract.

Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Telephone number: 011-805 5947)

C1.2.1.1 Contract Specific Data

The following contract specific data are applicable to this Contract:

GCC Clause	Information
1.1.1.13	The Defects Liability Period is 52 weeks from the date of the Certificate of Completion.
1.1.1.14	The time for achieving Practical Completion is 12 months.
1.1.1.15	The name of the Employer is Mr Peter Louw of Johannesburg Water (SOC) Limited.
1.1.1.16	The name of the Employer's Agent is Zitholele Consulting represented by Tonthozo Kaponda, who is Registered as a Pr. Tech. Eng with the Engineering Council of South Africa .
1.1.1.26	The Pricing Strategy is a Re-measurement Contract.
1.2.1.2	The address of the Employer is: Physical Postal Tel: 011 688 1676 Turbine Hall P.O. Box 61542 Fax: 011 688 1521 65 Ntemi Piliso Street Marshalltown Email: peter.louw@jwater.co.za Newtown 2107
1.2.1.2	The address of the Employer's Agent is: Building 1, Maxwell Office Postal Tel: 011 207 2060 Park, Magwa Crescent, P.O. Box 6002 Email: tonthozok@zitholele.co.za Waterfall City Halfway House Midrand 1685 1685
3.2.3	Specific Approval – The Employer's Agent is required to obtain the Employer's approval for the following: <ul style="list-style-type: none"> • Approval of Variation Orders • Approval to exceed the Contract Sum • Approval of Subcontracting Plan
4.4.2	Add the following after this clause: Apart from subcontractors identified by the Contractor for the execution of certain sections of the Works, subcontractors shall also include (but not be limited to) SMME's (Small Medium and Micro Enterprises), whether sourced from local communities or not, who are identified by the Contractor for the execution of certain sections of the Works. The appointment of subcontractors and the allocation of work to subcontractors shall, in addition to the provisions of the General Conditions of Contract, comply with, but not be limited to, the provisions of C1.2.1.2.14 (see below). A minimum value of 30% (thirty percent) of the Contract Price shall be subcontracted to SMME's.

Employer:		Contractor:	
Witness:		Witness:	

GCC Clause	Information
4.10.1	The Contractor shall employ labour from Local Communities (otherwise known as Local Labour), in accordance with the Tender Data, Scope of Work, Site Information, and Specifications. All Local Labour shall be recruited through the Community Liaison Officer (CLO) and/or Labour Desk Officer (LDO). The Contractor remains fully responsible for all Local Labour that are employed for the execution of the Works, as if they were the Contractor's own labour.
4.11.1	<p>Add the following to this clause:</p> <p>Competent Employees shall include, amongst others, the following Key Personnel:</p> <ul style="list-style-type: none"> • Contracts Manager • Site Manager / Site Agent • Safety Officer <p>The minimum requirements in terms of qualifications and experience of these Key Personnel are listed in C1.2.1.2.15 (see below).</p>
5.3.1	<p>The documentation required before commencement with Works execution are:</p> <ul style="list-style-type: none"> • Approved Health and Safety File (Clause 4.3) • Approval of the Environmental File (Clause 4.3) • Initial programme & cashflow projections (Clause 5.6) • Guarantee from Bank or Insurance Company (Clause 6.2) • Insurance of the Works, Plant, etc. (Clause 8.6), including but not limited to: <ul style="list-style-type: none"> ○ SASRIA Policy ○ Liability Insurance ○ Insurance of Construction Machinery and Plant ○ Insurance of Motor Vehicle Liability , etc. • Compliance Certificate in respect of COID • Signed Notification to the Department of Labour • Construction Permit (where applicable) • Organogram of resources
5.3.2	The time to submit the documentation required before Commencement of the Works is 28 days.
5.3.3	<p>Time to instruct commencement of the Works.</p> <p>Delete Clause 5.3.3 and replace with the following:</p> <p>The Contractor shall commence with carrying out the Works upon written instruction from the Employer's Agent to commence with the Works.</p>
5.4.2	The Works will be executed on an operational Wastewater Treatment Works. The Treatment Works shall remain operational at all times, except when written permission is granted by the Employer's Agent for any interruption or shutdown. All such interruptions/shutdowns shall be included in the Contractor's Programme.
5.8.1	Working days shall be Monday to Friday, between 07h00 to 17h00.
5.8.1	<p>The non-working days are Sundays.</p> <p>The special non-working days are all Public Holidays in terms of the Public Holidays Act (as amended), and the annual "Builder's Break " as defined by SAFCEC on an annual basis.</p>
5.13.1	<p>The penalty for failing to complete the Works is the greater of:</p> <p>An amount equal to the daily Time Related P&G rate (as calculated from the Time Related P&G section in the Bill of Quantities) or R25,000.00 per day, whichever is greater.</p>

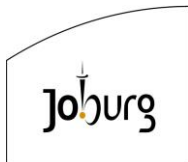
Employer:		Contractor:	
Witness:		Witness:	

GCC Clause	Information
5.14.1	<p>The time for achieving Practical Completion is 12 months.</p> <p>The requirements for achieving Practical Completion are:</p> <ul style="list-style-type: none"> • Refurbishment of the burnt MCC Building to bring it back to full capacity (removal from temporary installation arrangement). • Improvement of fire protection measures to prevent easy propagation of the fire, by limiting fire risk by electrical design and the inclusion of fire suppression systems inside the MMC cubicles. • Replacement of the burnt out MCC with a new MCC strictly to JW specifications. • Restoration of automation capacity for Unit 2 Bio-Reactor; currently there is no automation and all equipment is being controlled manually. The Programmable Logic Control (PLC) and Supervisory Control and Data Acquisition (SCADA) are not functional. This process requires the restoration of the Reactor feed control of the magflow meters and control valves. • Replacement of the complete PLC system in the MCC building. • Restoration of the ventilation system for the MCC Building which has not been operational for the entire duration since the fire damage occurred. • Reinstatement of small power in the building. • Restoration of all feeds to other structures which were fed from the MCC; Raw Sludge Pump Station feed & Emergency Power feed from the Final Clarifiers. • Investigation on the earthing for the Miniature sub stations next to the MCC Building • Recalibration of the magflow meters in the Control Box of the feed from the Balancing Tank to the Bioreactor. Currently, feed to the Reactors is manually controlled. • Replacement of panel covers for junction boxes in the Control Box. This protects the instrumentation for feed control into the Reactor
5.16.3	<p>The latent defect period is Ten (10) years for Civil Engineering works, Five (5) years for Building Works, Three (3) years for Electrical, Control and Instrumentation engineering works and Five (5) years for Mechanical engineering works.</p>
6.2.1	<p>The time to deliver the Form of Guarantee is within 28 days from the Commencement Date. The security to be provided by the Contractor shall be in the form of a Performance Guarantee and will comply with the requirements of Clause 6.2.3. The value of the Performance Guarantee shall be ten (10) % of the Contract Sum, which sum excludes VAT.</p>
6.8.2	<p>Contract Price Adjustment is applicable for this contract.</p> <p>The following formula will be applicable.</p> $(1-x) \left[\frac{aLt}{Lo} + \frac{bPt}{Po} + \frac{cMt}{Mo} + \frac{dFt}{Fo} - 1 \right]$ <p>In which the symbols have the following meaning as per GCC 2015:</p> <p>"x" is the proportion of "Ac" which is not subject to adjustment. "a", "b", "c" and "d" are the coefficients contained in the Contract Data, which are deemed, irrespective of the actual constituents of the work, to represent the proportionate value of labour, contractors' equipment, material (other than "special materials" specified in the Contract Data) and fuel respectively.</p> <p>"L" is the "Labour Index"</p>

Employer:		Contractor:	
Witness:		Witness:	

GCC Clause	Information
	<p>"P" is the "Plant Index" "M" is the "Materials Index"</p> <p>"F" is the "Fuel Index" The suffix "o" denotes the base indices applicable to the base month as stated in the Contract Data. The suffix "t" denotes the current indices applicable to the month in which the last day of the period falls to which the relevant monthly statement relates.</p> <p>If any index relevant to any particular certificate is not known at the time when the certificate is prepared, the Engineer shall estimate the value of such index. Any correction which may be necessary when the correct indices become known, shall be made by the Engineer in subsequent payment certificates.</p> <p>The value of the payment certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule, with the following values:</p> <p>The value of "x" is 0,10</p> <p>The values of the coefficients are: a = 0,32 Labour b = 0,25 Contractor's equipment c = 0,33 Material d = 0,10 Fuel</p> <p>The province where the Site is located is Gauteng and the urban area where the project is implemented is Johannesburg.</p> <p>The base month is the month prior to the month in which the tender closes.</p> <p>The Consumer Price Indices for Labour (L), Plant (P), Material (M) and Fuel (F) are as published by Statistics South Africa for the applicable time.</p>
6.8.3	Price adjustments for variations in the costs of special materials are NOT allowed.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%.
6.10.3	The percentage retention on the amounts due to the Contractor is 10%.
6.10.3	The limit of retention money is 5% of the Contract Price.
6.10.4	<p>Delivery, dissatisfaction with and payment of payment certificates</p> <p>Delete Clause 6.10.4 and replace with the following:</p> <p>Payment shall be made upon:</p> <ul style="list-style-type: none"> The Contractor providing a payment certificate with all required supporting documents to the Employer's Agent on dates to be communicated to the Contractor upon award. The payment certificate being submitted with an original tax invoice. A statement being submitted on the last day of the month. <p>Payment will be made within 30 days of receipt of the Contractor's statement.</p>

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
Driefontein Wastewater Treatment Works Infrastructure Renewal Plan
Volume 1 Tender and Contract
Section C1 Agreement and Contract Data

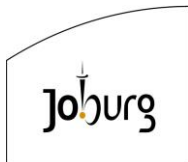


GCC Clause	Information
	Payment shall be subject to the Contractor submitting an Original Tax Invoice compliant with SARS requirements for a Valid Tax Invoice to the Employer for the amount due. Any dissatisfaction in respect of such payment certificate shall be dealt with in terms of Clause 10.2.
6.10.5	<p>Payment of Retention Money</p> <p>Add to Clause 6.10.5 the following:</p> <p>Payment will be subject to Johannesburg Water processes as outlined in clause 6.10.4 as amended.</p>
6.11	Delete Clause 6.11.
7.8.2	<p>Cost of making good of defects</p> <p>Amend Clause 7.8.2.1 as follows:</p> <p>In the first line, correct the spelling of 'therefore'.</p>
8.1.1	<p>Add to the end of Clause 8.1.1 the following text:</p> <p>"Although the extent of the Works and the Site are located within the boundaries of the Driefontein Wastewater Treatment Works (DWwTW), and the Employer may (or may not) provide security for the Treatment Works (DWwTW) as a whole, the Contractor shall remain solely responsible for the protection of the Works and the Site".</p>
8.1.5	<p>Add to the end of Clause 8.1.5 the following text:</p> <p>"Although the Employer has made certain provisions for protection of the Works and the Site in the Pricing Data, the Contractor shall ensure that any and all additional requirements for the protection of the Works and the Site are adequately catered for in his rates and/or prices.</p>
8.4.1.1	<p>Add to the end of Clause 8.4.1.1 the following text:</p> <p>"hereby indemnifies the Employer against any liability in respect of damage or physical loss of property of any person or injury or death of any person due to non-compliance with the Occupational Health and Safety Act (Act 85 of 1993).</p>
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is nil.
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is an amount equal to 10% of the Contract Price.
8.6.1.2	<p>Delete clause 8.6.1.2 and replace with the following:</p> <p>Following the introduction of legislation affecting the articles of the South African Special Risks Insurance Association (SASRIA), insurance cover for loss or damage to the Works caused by any event defined as a risk in terms of the insurance offered by SASRIA, will be provided under a certificate issued by SASRIA.</p>
8.6.1.3	The limit of indemnity for liability insurance is R10,000,000 (Ten million Rand) for any single claim – the number of claims to be unlimited during the Construction and Defects Liability Periods
8.6.1.5	<p>In addition to the insurances required in terms of General Conditions of Contract Clauses 8.6.1.1 to 8.6.1.4 the following insurance is also required:</p> <p>a. The Contractor shall insure all Construction Machinery and Plant (including tools, offices and other temporary structures and content) and other items, other than those intended for incorporation into the works, owned, leased or hired and brought on to the Site against all risks of physical loss or damage for the period that such Plant shall be on the Site to the full value thereof. In respect of Machinery and Plant brought on to the Site by or on behalf of Sub-Contractors, the Contractor shall be deemed to have complied with the provisions of this</p>

Employer:		Contractor:	
Witness:		Witness:	

GCC Clause	Information
	<p>Sub-Clause if it has ensured that such Sub-Contractors have similarly insured such Plant and Machinery. Such insurance shall be effected with an Insurer and in terms approved by the Employer (which approval shall not be unreasonably withheld) and the Contractor shall, when required, submit to the Employer's Insurance Brokers, via the Employer's Agent, the policy or policies of insurance and receipts for payment of the current premiums.</p> <p>b. The Contractor and the Sub-contractors shall effect and maintain at their cost, insurance under the provision of the Compensation for Occupational Injuries and Diseases Act (COLD), 1993 (Act No. 130 of 1993)</p> <p>c. The Contractor and the Sub-Contractors shall effect and maintain at their own cost, motor vehicle liability insurance with at least indemnification for "balance of third party" risks, including passenger liability with a limit of indemnity of not less than R2,5 million.</p> <p>d. Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's Policies of Insurance.</p> <p>e. Any other Insurance cover that may be deemed necessary by the Contractor to ensure full and successful completion of the Works.</p>
8.6	<p>Add the following clause to 8.6</p> <p>In addition to any statutory obligations, or other requirements contained in the Conditions of Contract or in the Insurance Policy and Documents the Contractor shall report in writing to the Employer's Agent every accident within 48 hours of its occurrence, whether such accident is in respect of damage to persons or property. The report shall contain full details of the accident. The Employer's Agent shall have the right to make all and any enquiries either on the Site or elsewhere as to the cause and results of any such accident and the Contractor shall give the Employer's Agent full access and facilities for carrying out such enquiries.</p> <p>The Employer's Agent shall be given full and immediate access to all communication, reports, findings, assessments, etc. between the Contractor and its Insurance Broker (or Insurance Provider), particularly as it relates to the processing and outcomes of any and all claims. The Contractor shall further allow and authorise the Employer's Agent to communicate with its Insurance Broker (or Insurance Provider) to obtain any and all such information as the Employer's Agent deems necessary.</p>
10.4.2	Dispute resolution shall be by Amicable Settlement, failing which, any dispute shall be resolved by way of ad-hoc Adjudication.
10.5.3	The number of Adjudication Board Members to be appointed is one (1).
10.7.1	The determination of disputes shall be by arbitration.

Employer:		Contractor:	
Witness:		Witness:	



C1.2.1.2 Additions

The additional Conditions of Contract are:

C1.2.1.2.1 Penalties

In addition to GCC clause 5.13, during the Contract Period should the Contractor:

a) Fail to report

- The Employer shall levy a penalty on Contractor, should the latter fail to provide reporting as required in the specification highlighted in the Scope of Work in PS 3.2, PS 6.11 and PS 6.13, with regard to content and frequency, whilst as per the Pricing Data section no payment for work completed shall be processed.
- The penalty value shall be R5,000.00 per report per day; and
- If the Contractor fails to complete the aforementioned more than three incidents and should the Employer or his duly authorised representative find that the Contractor is hindering his (the Employer's) deliverables to JW Senior Management, he shall reserve the right to:
 - i. perform the Works internally or through another Contractor; and
 - ii. deduct additional costs incurred by the Employer from monies owed to the Contractor or from the Contractor's Guarantee. Additional costs incurred by the Employer shall include all claims from Contract affected parties, claims such as but not be limited to claims from customers, any costs associated with the loss of water, and all costs associated with the procurement of an alternative Contractor.
 - iii. terminate the Contract.

No liability in terms of this clause shall be attached to the Contractor if he can prove to the satisfaction of the Employer that the nature of the failure is due to fire, war, riot, strikes, act of God, lockout, accident or other unforeseen occurrences or circumstances beyond the Contractor's control, provided, however, that in all cases the Contractor has notified the Employer in writing within 24 hours of it first coming to his notice, that delivery shall be delayed or become impossible for the above-mentioned reasons.

b) Fail to pay any labourer or SMME

- The Employer shall levy a penalty on the Contractor, should the latter fail to provide payment to the any labourer or SMME as required in the specification highlighted in the Scope of Work and specified in the appointment agreements with the Contractor and the labourer or SMME.
- The penalty value shall be R 50,000.00 per incident per occasion; and
- If the Contractor fails to complete the aforementioned more than three incidents and should the Employer or his duly authorised representative find that the Contractor is hindering his (the Employer's) deliverables to JW Senior Management, he shall reserve the right to:
 - i. perform the Works internally or through another Contractor; and
 - ii. deduct additional costs incurred by the Employer from monies owed to the Contractor or from the Contractor's Guarantee. Additional costs incurred by the Employer shall include all claims from Contract affected parties, claims such as but not be limited to claims from customers, any costs associated with the loss of water, and all costs associated with the procurement of an alternative Contractor.
 - iii. terminate the Contract.

Employer:		Contractor:	
Witness:		Witness:	

No liability in terms of this clause shall be attached to the Contractor if he can prove to the satisfaction of the Employer that the nature of the failure is due to fire, war, riot, strikes, act of God, lockout, accident or other unforeseen occurrences or circumstances beyond the Contractor's control, provided, however, that in all cases the Contractor has notified the Employer in writing within 24 hours of it first coming to his notice, that delivery shall be delayed or become impossible for the above-mentioned reasons.

- c) Failure to achieve targets in terms of Contract Participation Goals
If the Contractor fails to achieve the monetary value of the target set by the Employer for contract participation by local SMME Contractors in terms of Procurement and Particular Specifications in Scope of Works clause PS3.2.3, the Contractor shall be liable to the Employer for a sum calculated in accordance with the Contract Data and the aforementioned Scope of Works as a penalty for such underachievement."

The penalty for failing to achieve the monetary value of the target set by the Employer for contract participation by Targeted Enterprises and local SMME Contractors in terms of Small Contractor Development of Particular Specifications in PS3: Scope of Works, is 50% of the monetary value by which the achieved monetary value falls short of the target monetary value.

- d) Penalties irreversible

The Contractor shall note that all penalties once imposed shall be non-recoverable or non-reversible, even if the default is remedied.

C1.2.1.2.2 Source of instructions

The Contractor shall neither seek nor accept instructions from any authority external to the Employer's Agent in connection with the performance of his services under this Contract. The Contractor shall refrain from any action which may adversely affect the Employer and shall fulfill his commitments with fullest regard for the interest of the Employer. The Contractor may only accept and comply with instructions from the Employer's Health and Safety Representative or the Employer's Environmental Representative with regards to matters regarding Health & Safety or Environmental Management respectively, but with further approval from the Employer's Agent.

C1.2.1.2.3 Officials not to benefit

The Contractor warrants that no official of the Employer has been or shall be admitted by the Contractor to any direct or indirect benefit arising from this Contract or the award thereof. The Contractor agrees that breach of this provision is a breach of the Contract.

C1.2.1.2.4 Prevention of corruption

The Employer shall be entitled to cancel the Contract and to recover from the Contractor the amount of any loss resulting from such cancellation, if the Contractor has offered or given any person any gift or consideration of any kind as an inducement or reward for doing or intending to do any action in relation to the obtaining or the execution of the Contract or any other contract with the Employer or for showing or intending to show favor or disfavor to any person in relation to the Contract or any other contract with the Employer. If similar acts have been done by any persons employed by the Contractor or acting on his behalf whether with or without the knowledge of the Contractor in relation to this or any other Contract with the Employer the same consequences shall apply.

Employer:		Contractor:	
Witness:		Witness:	

C1.2.1.2.5 Confidential nature of documents

All maps, drawings, photographs, mosaics, plans, reports, recommendations, estimates, documents and all other data compiled by or received by the Contractor under the Contract shall be the property of the Employer, shall be treated as confidential and shall be delivered only to the Employer's Agent or his duly authorized representative on completion of the Works; their contents shall not be made known by the Contractor to any person other than the personnel of the Contractor performing services under this Contract without the prior written consent of the Employer.

C1.2.1.2.6 Returns of labour, SMME, plant, equipment and material

The Contractor shall provide a return in detail in the form and at such intervals as the Employer's Agent or his duly authorized representative may prescribe showing the supervisory staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such information respecting construction plant, equipment and material as the Employer's Agent or his duly authorized representative may require. Reporting as per JW6.1. The supporting documents required for SMMEs include but are not limited to the following:

- Valid CIPC registration (i.e. CK, COR)
- SA ID copies of owners
- Active CIDB membership: minimum grading 1CE
- Valid CSD compliance status
- Valid EME affidavit
- COIDA certificate
- Company Profile including similar experience and skilled personnel CVs
- Health and Safety Plan
- Proof of Payments

The supporting documents required for local labourers include but are not limited to the following

- Certified Copies of IDs
- Individual contracts
- Monthly Individual proof of payment
- Monthly Individual timesheets
- Training returns
- UIF forms (proof of registration from Labour)

C1.2.1.2.7 Materials and workmanship

All materials and workmanship shall be of the respective kinds described in the Contract and in accordance with the Employer's Agent's instructions and shall be subjected from time to time to such tests as the Employer's Agent may direct at the place of manufacture or fabrication, or on the Site or at all or any of such places. The Contractor shall provide such assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any materials used and shall supply samples of materials before incorporation in the Works for testing as may be selected and required by the Employer's Agent. All testing equipment and instruments provided by the Contractor shall be used only by the Employer's Agent or by the Contractor in accordance with the instructions of the Employer's Agent.

Employer:		Contractor:	
Witness:		Witness:	

- a) No material not conforming with the Specifications in the Contract shall be used for the Works without prior written approval of the Employer and instruction of the Employer's Agent, provided always that if the use of such material results or may result in increasing the Contract Price, the procedure in GCC clause 6.3 (Variations) shall apply.

C1.2.1.2.8 Examination of the work before covering up

No work shall be covered up or put out of view without the approval of the Employer's Agent or his duly authorized representative and the Contractor shall afford full opportunity for the Employer's Agent or his duly authorized representative to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. The Contractor shall give due notice to the Employer's Agent whenever any such work or foundations is or are ready or about to be ready for examination. The Employer's Agent or his duly authorized representative shall without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such work or of examining such foundations.

C1.2.1.2.9 Employer's Agent's power to order removal of improper work and materials

The Employer's Agent or his duly authorized representative shall during the progress of the Works have power to order in writing from time to time, and the Contractor shall execute at his cost and expense, the following operations:

- a) removal from the Site within such time or times as may be specified in the order of any materials which in the opinion of the Employer's Agent are not in accordance with the Contract.
- b) substitution of proper and suitable materials; and
- c) removal and proper re-execution (notwithstanding any previous test thereof or interim payment therefore) of any work which in respect of materials or workmanship is not in the opinion of the Employer's Agent or his duly authorized representative in accordance with the Contract.

C1.2.1.2.10 Default of Contractor in carrying out Employer's Agent's or his duly authorized representative's Instructions

In case of default on the part of the Contractor in carrying out an instruction of the Employer's Agent or his duly authorized representative, the Employer shall be entitled to employ and pay other persons to carry out the same, and all expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable from him by the Employer and may be deducted by the Employer from any monies due or which may become due to the Contractor.

C1.2.1.2.11 Date falling on public holiday or weekend

Where under the terms of the Contract any act is to be done or any period is to expire upon a certain day and that day or that period fall on a day of rest or recognized public holiday or weekend, the Contract shall have effect as if the act were to be done or the period to expire upon the working day following such day.

C1.2.1.2.12 Ambiguities and inconsistencies

The Employer or the Contractor shall notify the other as soon as either becomes aware of an ambiguity or inconsistency in or between the documents, which are part of this Contract. Governed by the spirit and intention of the Contract, the Employer shall give a binding instruction resolving the ambiguity or inconsistency.

Employer:		Contractor:	
Witness:		Witness:	

C1.2.1.2.13 False claims by the Contractor

- a. Failure, by the Contractor, to demonstrate or present any feature declared during the procurement stage shall constitute grounds for Contract termination or the market related equivalent price discount, if no market related value is available, the Employer shall give a final ruling on the amount.
- b. This shall be at the discretion of the Employer based on the implication of such omission. Should the Contractor refuse to accept the Employer's price, the Contract shall be terminated.
Any false claims by the Contractor or his staff (with or without his knowledge), based on Works to be performed or completed per site stage shall constitute grounds for Contract termination and result in blacklisting on the Employer's database.

The Contractor shall note that any of the above shall constitute non-performance on the part of the Contractor, further resulting in him forfeiting his full Contract Guarantee.

C1.2.1.2.14 Special Conditions

The subcontractor/s chosen for this purpose must be registered on National Treasury's Central Supplier Database (CSD) and must be from one of the following designated groups:

- An EME or QSE which is at least 51% owned by black people;
 - An EME or QSE which is at least 51% owned by black people who are youth;
 - An EME or QSE which is at least 51% owned by black women;
 - An EME or QSE which is at least 51% owned by black people with disabilities;
 - An EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;
 - A cooperative which is at least 51% owned by black people;
 - An EME or QSE which is at least 51% owned by black people who are military veterans;
 - an EME or QSE .
1. Subcontractors must be chosen from National Treasury's Central Supplier Database which can be accessed on National Treasury's website.
 2. The Contractor shall identify work packages that will be allocated to Subcontractors, so that the minimum requirement of 30% can be met during the implementation of the project, as follows:
 - The Contractor shall develop a Subcontracting Plan that sets out the details of the proposed Subcontracting arrangements including, but not limited to, competitive bidding process to be used for the appointment of SMME's, scope of work to be allocated, criteria for the selection of Subcontractor(s), Subcontractor agreements, cost of the work to be Subcontracted, etc.
 - The Subcontracting Plan shall be developed in consultation with the Ward Councillor and / or Community Liaison Officer, who shall assist the Contractor in identifying SMME's and other skills that may be available in local and surrounding communities.
 - The Subcontracting Plan shall be issued to the Employer's Agent for approval, prior to the engagement of any Subcontractor(s) by the Contractor. The activities, time periods, linkages, etc. associated with the development and approval of the Subcontracting Plan shall be included in the Project Programme, which Programme is subject to the approval of the Employer's Agent. A period of four weeks will be required for the Employer's Agent to consult with the Employer, prior to approval of the Subcontracting Plan.
 - The Contractor shall ensure that rates that are tendered (during Tender Stage) for work items that are likely to be Subcontracted, are market related rates. Provision is made in the Bill of Quantities (BoQ) for the Contractor to add a mark-up for the sourcing, handling, and management of Subcontractors, SMME's, and the like, for the duration of the Contract.
 - On or during appointment of Subcontractors, should Subcontractors indicate that rates, that have been

Employer:		Contractor:	
Witness:		Witness:	

tendered by the Contractor for BoQ work items that are being subcontracted, are not market related, the Contractor will be liable to cover the cost of the difference, i.e. the difference in rate tendered by the Contractor versus the rate that is being requested by the Subcontractor. This difference in cost will be for the Contractor's account, and no Variation Orders for additional costs will be entertained by the Employer. The Contractor bears the full and complete risk for the rates that have been tendered by the Contractor during Tender Stage.

- In the event that a rate supplied by the Contractor for a specific BoQ work item is not sufficient to cover Subcontractor costs/rates for that specific item, the Contractor shall provide a detailed rate breakdown for that specific BoQ item (and each and every subsequent BoQ work item where the rate is not sufficient to cover Subcontractor cost); and shall indicate costs (amongst others) for labour, material, handling, mark-ups, etc. to prove that the rate that was submitted during tender stage was in fact market related; and in balance with other rates that were submitted for work items that will not be undertaken by Subcontractors.
- Should any delays be experienced during the period of the Contract due to the appointment of subcontractors by the Contractor, work stoppages by subcontractors, industrial action by subcontractors, etc. such delays shall be assigned to the Contractor, and no claims for Extension of Time will be entertained by the Employer.
- The Contractor will be liable to pay a penalty if the Subcontracting target of 30% has not been met by the end of the Contract. The Employer will deduct this penalty amount through the Payment Certificate process. The Employer will have full discretion as to when the penalty will be applied (i.e. the month in which the penalty amount will be deducted). In calculating the total amount that has been (will be) paid to SMME's, all amounts that have actually been reimbursed to SMME's will be taken into account including P&G's, amounts for actual work done, etc.
- The penalty amount described above shall be equal to 50% (fifty percent) of the difference between the target Subcontract amount (i.e. 30% of the Contract Price) and the actual amount that has been spent on Subcontractors/SMME's by the end of the Contract.

3. A Subcontracting agreement between the Main Contractor and the Subcontractor shall be submitted to JW upon appointment and must include the following minimum information:

- Name of Subcontractor and BBBEE status
- Subcontractor *domicilium* and registered address of business, as well as status of compliance with all applicable legal requirements.
- Area and location of project
- Scope of Work issued to the Subcontractor
- Value of the Work issued including P&G's (this information must be submitted in a format that is readily auditable).
- Assistance provided/to be provided to the Subcontractor by the Contractor, e.g. acquisition of materials, machinery, tools, etc.
- A Skills Transfer Plan which will indicate, amongst others, the proposed skills that will be transferred to the Subcontractor, individuals that will be identified for skills transfer, the amount that will be spent by the Contractor on skills transfer, evidence that will be produced by the Contractor (such as training certificates, training registers, etc.), etc.
- A specific provision that enables the Contractor to pay the Subcontractor's suppliers, labour (skilled, local, etc.) or any other service provider of the Subcontractor, should the Subcontractor fail to do so. This provision shall include (but not be limited to) the following conditions/proviso's:
 - Invoices that are due for payment from suppliers and the like must be invoices that have been approved for payment, and be based on work or services that have actually been completed or delivered. Payments that are due to labour will be based on approved timesheets.
 - The Contractor is to ensure that any invoice presented for payment is indeed an approved invoice, and that the necessary work or services have been delivered or completed. The approved invoice shall be settled (paid) by the Contractor (on behalf of the Subcontractor) by the due date for payment.
 - The Contractor will be entitled to deduct payments made to any third party, on behalf of the

Employer:		Contractor:	
Witness:		Witness:	

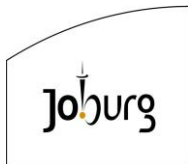
- Subcontractor, from subsequent payments that may become due to the Subcontractor.
- The Contractor will be entitled to bill the Subcontractor a mark-up on the payments made on behalf of the sub-contractor. The mark-up shall not be more than 10% (ten percent) of the amount actually paid (i.e. the amount (excluding VAT) reflected on the invoice that has been settled). The mark-up amount shall be deducted from subsequent payments that may become due to the Subcontractor.
 - Proof of any such payments made on behalf of the Subcontractor shall be issued to the Employer's Agent, on request, with all necessary supporting information that the Employer's Agent may request
 - Payments made on behalf of the Subcontractor are not subject to the Contractor first being paid by the Employer. Therefore, the Contractor shall pay approved invoices, on behalf of the Subcontractor, irrespective of whether the Contractor has first been paid by the Employer. The Contractor will be entitled to levy interest on all payments that have been made in this regard, in accordance with the necessary interest payment provisions contained in the General and Special Conditions of Contract.
4. The successful Contractor shall submit periodic SMME/Subcontractor reports to the Employer's Agent as follows:
- Status of progress against the Subcontracting Plan (described above), to the approval of the Employer's Agent
 - Subcontractor *domicilium* and registered address of business, as well as ongoing status of compliance with all applicable legal requirements.
 - Name of Subcontractor and BBBEE status
 - Area and location of project
 - Scope of work issued to the Subcontractor
 - Value of the work issued (this information must be submitted in a format that is readily auditable)
 - Monthly payments made to the subcontractor (this information must be submitted in a format that is readily auditable)
 - Assistance provided to the Subcontractor e.g. advance payments, acquisition of materials, machinery, tools, etc.
 - Performance of the Subcontractor, with evidence to support this performance assessment.
5. Upon completion of the project, the Contractor is required to provide a final report to JW on skills transferred to / acquired by the Subcontractor(s) engaged on the Project, description and value of work performed, as well as their overall performance.
6. The Contractor shall also indicate whether the experience gained by the Subcontractor is sufficient to assist the Subcontractor to improve their CIDB grading, with full details of supporting information.

Employer:		Contractor:	
Witness:		Witness:	

C1.2.1.2.15 Competent Employees

Competent Employees	Qualifications	Experience
Contracts Manager	Minimum Qualifications of Contracts Manager: <ul style="list-style-type: none"> BSc, BEng or BTech in Electrical Engineering or equivalent or higher. AND Minimum 5 years post minimum years post minimum Professional Registration (Pr. Eng. / Pr. Tech.Eng) OR PrCPM / PrCM 	Experience in projects involving electrical works and motor control with at least one project with a value of at least R5 million as a Contracts Manager
Site Manager / Site Agent	Minimum Qualifications of Site Manager: <ul style="list-style-type: none"> National Diploma in Electrical Engineering or more. AND Registered as a Candidate Professional in the Built Environment or more will be considered. 	Experience in projects involving electrical works and motor control with at least one project with a value of at least R5 million as a Site Manager
Safety Officer	Minimum Qualifications of Safety Officer <ul style="list-style-type: none"> National Diploma (Safety Management)/National Diploma (Environmental Health/Environmental Science/ Environmental Management) /SAMTRAC / SHEOMTRAC/ SHEMTRAC / MESHTRAC /NEBOSH / Safety Officers Course (NQF 5) or more, AND Professional Registration with SACPCMP in the Construction Health and Safety Sector. 	Number of any related engineering projects completed as safety officer

Employer:		Contractor:	
Witness:		Witness:	



C1.2.2 Part 2: Data Provided by the Contractor

GCC Clause	Information												
Clause 1.1.9	<p>The name of the Contractor is</p> <p>The Contact person is:.....</p>												
Clause 1.2.1.2	<p>The address of the Contractor is:</p> <table border="0"> <tr> <td>Physical Address:</td> <td>Postal Address:</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>Tel: _____</td> <td>Fax: _____</td> </tr> <tr> <td colspan="2">Email: _____</td> </tr> </table>	Physical Address:	Postal Address:	_____	_____	_____	_____	_____	_____	Tel: _____	Fax: _____	Email: _____	
Physical Address:	Postal Address:												
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_____	_____												
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Tel: _____	Fax: _____												
Email: _____													
Clause 1.1.1.14	The time for achieving Practical Completion is – refer above.												
Clause 6.2.1	<p>The security to be provided by the Contractor shall be one of the following:</p> <p>Fixed Performance Guarantee of 10% of the Contract Sum (which sum shall exclude VAT)</p>												
Clause 6.8.3	<p>The variation in cost of special materials is</p> <table border="0"> <tr> <td>Type</td> <td>Unit</td> <td>Rate</td> </tr> <tr> <td colspan="3">NOT APPLICABLE</td> </tr> </table>	Type	Unit	Rate	NOT APPLICABLE								
Type	Unit	Rate											
NOT APPLICABLE													

Employer:		Contractor:	
Witness:		Witness:	

Johannesburg Water (SOC) Ltd



CONTRACT NO. JW14337

DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN

VOLUME 1

PART 1.3: FORMS AND SECURITIES

Employer:		Contractor:	
Witness:		Witness:	

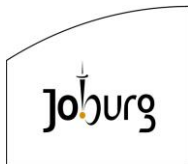
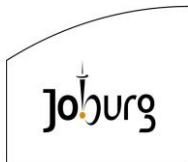


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C1.3.4	Health and Safety Contract General Information	C.27

Employer:		Contractor:	
Witness:		Witness:	



C1.3 FORMS AND SECURITIES

FORMS FOR COMPLETION BY THE CONTRACTOR

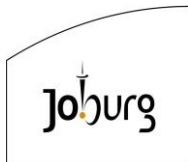
THE FOLLOWING FORMS ARE TO BE COMPLETED BY THE CONTRACTOR AFTER THE TENDER HAS BEEN AWARDED TO THE SUCCESSFUL TENDERER

- a) Form of Guarantee
- b) Blasting Indemnity
- c) Agreement in terms of the Occupational Health and Safety Act
- d) Occupational Health And Safety Indemnity Undertaking

The forms will be completed by the Contractor who will be instructed to do so in the Form of Acceptance. The completed forms will become part of the Contract.

The Form of Guarantee is a pro forma document. The Contractor will provide an original document, from a financial institution, with the same text within the time stated in the Contract Data. Only a Bank or approved Insurance Company or Guarantee Corporation is acceptable as Guarantor.

Employer:		Contractor:	
Witness:		Witness:	



C1.3.1 Form of Guarantee

**TO BE PRINTED ON THE OFFICIAL LETTERHEAD OF THE GUARANTOR.
PERFORMANCE GUARANTEE**

WHEREAS Johannesburg Water (SOC) Ltd (hereinafter referred to as “the Employer” or “beneficiary”) entered into a Contract with

(hereinafter called “the Contractor”)

on the ____ day of _____ 20__ for

(Project Description)

at _____

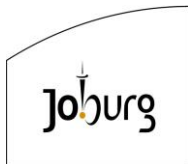
AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS _____
has/have at the request of the Contractor, agreed to such guarantee;

NOW THEREFORE WE, _____
Do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-principal Debtors to the Employer under renunciation of the benefits of division and excussion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorised and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alteration of the Completion Date which the Employer may make, give, concede or agree to under the said Contract
2. This guarantee shall be limited to the payment of a sum of money.
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee shall remain in force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
Driefontein Wastewater Treatment Works Infrastructure Renewal Plan
Volume 1 Tender and Contract
Section C2 Pricing Data



5. Our total liability hereunder shall not exceed the sum of _____
_____(R_____
6. The guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon the Guarantor's liability hereunder shall cease.
7. We hereby choose our address for the serving of all notices for all purposes arising here from as

IN WITNESS WHEREOF this guarantee has been executed by us at _____
on this _____ day of _____ 20_____

As witnesses

1. _____

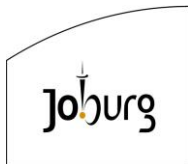
Signature

2. _____

Duly authorised to
sign on behalf of

Address

Employer:		Contractor:	
Witness:		Witness:	



C1.3.2 Blasting Indemnity

Given by _____

*Company Registration No. _____

Address _____

a *Company incorporated with limited liability according to the company laws of the Republic of South Africa, *Partnership, *Close Corporation, *Public Company (hereinafter called the Contractor), represented herein by _____ in his capacity as the Contractor's

_____ duly authorised hereto by a resolution of the Contractor dated

_____ a certified copy of which resolution is attached to this Indemnity.

WHEREAS the Contractor has entered into a Contract with the Johannesburg Water (SOC) Ltd (hereinafter called the Employer) for,

_____ and the Company requires this Indemnity from the Contractor

NOW THEREFORE THIS DEED WITNESSETH that the Contractor does hereby indemnify and hold harmless the Company in respect of all loss or damage that may be incurred or sustained by the Employer by reason of or in any way arising out of or caused by blasting operations that may be carried out by the Contractor in connection with the aforementioned Contract and also in respect of all claims that may be made against the Employer in consequence of such blasting operations, by reason of or in any way arising out of any accidents or damage to persons, life or property or any other cause whatsoever, and also in respect of all legal or other expenses that may be incurred by the Employer in examining, resisting or settling any such claims; for the due performance of which the Contractor binds itself according to law.

THUS DONE AND SIGNED for and on behalf of the Contractor at _____ on the

_____ day of _____ 20_____ in the presence of the subscribing

witnesses.

As witnesses

1. _____

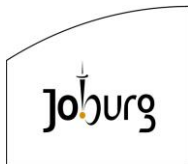
2. _____

Signature

Duly authorised to sign
on behalf of

Address

Employer:		Contractor:	
Witness:		Witness:	



C1.3.3 Health and Safety Contract Between Employer and Contractor In Terms of Section 37(2) Of The Occupational Health and Safety Act No 85 Of 1993

Written agreement between Johannesburg Water ((Proprietary) Limited (hereinafter referred to as “the

Employer) and _____ (hereinafter referred to as “the mandatory”) as envisaged by Section 37(2) of the Occupational Health and Safety Act, No. 85, of 1993 as amended.

I _____ representing

_____ (mandatory) do hereby acknowledge that

_____ (mandatory) is an employer in its own right and shall be regarded as the employer for purposes of the contract work specified in the body of the principal agreement with duties as prescribed in the Occupational Health and Safety Act, No. 85 of 1993 as amended so as to ensure that all work will be performed or machinery and plant used in accordance with the provisions of the said Act. I furthermore agree to comply with the requirements of the Employer as contained in the Occupational Health and Safety Specification included with the principal agreement and to liaise with the employer should I, for whatever reason, be unable to perform in terms of this agreement.

Signed this _____ day of _____ at _____

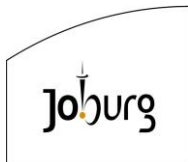
Signature on behalf of mandatory _____

Signature on behalf of Employer _____

Compensation Fund Registration No. of mandatory _____

Good Standing Certificate : ☐ yes ☐ no (tick one box)

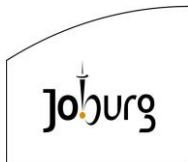
Employer:		Contractor:	
Witness:		Witness:	



C1.3.4 Health and Safety Contract: General Information

1. The Occupational Health and Safety Act comprises Sections 1 to 50 and all un-repealed regulations promulgated in terms of the former Machinery and Occupational Safety Act No 6 of 1983 as amended, as well as other regulations which may be promulgated in terms of the OHS Act.
2. 'Mandatar' is defined as including an agent, a contractor or a subcontractor for work, but without derogating from his status in his own right as an employer or user of plant and machinery
3. Section 37 of the Occupational Health and Safety Act potentially punishes employers (principals) for the unlawful acts or omissions of mandataries (contractors) save where a written agreement between the parties has been concluded containing arrangements and procedures to ensure compliance with the said Act by the mandatar.
4. All documents attached or referred to in the above agreement form an integral part of the agreement.
5. To perform in terms of this agreement mandataries must be familiar with the relevant provisions of the Act.
6. Mandataries who utilise the services of their own mandataries (subcontractors) are advised to conclude a similar written agreement.
7. Be advised that this agreement places the onus on the mandatar to contact the Employer in the event of inability to perform as per this agreement. The Employer, however, reserves the right to unilaterally take any steps as may be necessary to enforce this agreement.
8. The contractor shall be responsible for the full and proper implementation of the terms and provisions of the Act and its regulations in the area in which the work is to be undertaken by the Contractor.
9. The Contractor shall be responsible for the well-being, in relation to health and safety, of all persons coming upon or into such area in accordance with that legislation, including the implementation of any directives issued by management of the Employer in this respect.
10. The work to be done is _____
11. The area in which the work is to be conducted is _____
12. The Contractor shall familiarise himself with such area and all risks existing thereon and undertakes to report to the representative of the Employer any hazard or risk to health and safety which arises during the contract work in the area concerned and over which the Contractor may have no control. All necessary and appropriate safety / health equipment shall be issued by the Contractor to all persons working on or coming into the area.

Employer:		Contractor:	
Witness:		Witness:	



C1.3.4.1 Occupational Health and Safety Indemnity Undertaking

I, the undersigned _____
in my capacity as _____
of the firm _____

1. Hereby undertake to ensure that I/my firm and/or employees and/or subcontractors and/or his employees -
 - 1.1 comply strictly with the provisions of the Occupational Health and Safety Act of 1993 (as amended) and/or the regulations promulgated in terms thereof, with specific reference to section 37(2) of the said act, as well as any relevant legislation, in the course of the performance/execution of any service and/or work in, to or on any of the Employer's buildings, construction sites and/or premises;
 - 1.2 ensure that consultants and/or visitors comply with any instructions and measures relating to occupational health and safety, as prescribed by the Employer; and
 - 1.3 comply strictly with the statutorily prescribed work systems, operational equipment, machinery and occupational health and safety conditions;
2. And as an independent employer and contractor, hereby indemnify, in terms of the above undertakings, the Employer -
 - 2.1 in respect of any costs that I/my firm and/or employees and/or subcontractors and their employees may incur of necessity in compliance with the above undertakings; and
 - 2.2 against any claims that may be instituted against the Employer and/or any liability that the Employer may incur, whether instituted and/or caused by me/my firm's employees, agents, consultants, subcontractors and/or their employees and visitors or the Employer's clients or neighbours in respect of any incidents related to my/my firm's activities and as a result of which the occupational health and safety of the persons involved have been detrimentally affected; and
 - 2.3 against similar claims that I, managers or directors of my firm may have against the Employer and any damages for which I, managers or directors of my firm hold the Employer liable.
3. My firm's compensation commissioner number is _____
and I confirm that my firm and its subcontractors' fees have been paid up and obligations in respect of the compensation commissioner have been complied with and further that I shall furnish proof thereof in writing on request.
- 4.0 I hereby confirm that I have the authority to sign this indemnity undertaking and that the Employer is not obliged to confirm such confirmation.

Signed at _____ This _____ day of _____

Signature

Capacity

As witnesses:

1

2

Employer:		Contractor:	
Witness:		Witness:	

Johannesburg Water (SOC) Ltd



CONTRACT JW14337

**DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN
VOLUME 1**

PART 2: PRICING DATA

Employer:		Contractor:	
Witness:		Witness:	

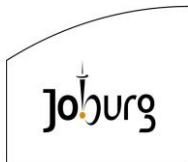
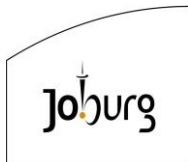


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C2.1.1	General Preamble to the Bill of Quantities C.31
C2.1.2	Special Payment Conditions C.32
C2.1.3	Health and Safety C.33
C2.2	Bill of Quantities C.36

Employer:		Contractor:	
Witness:		Witness:	



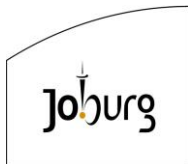
C2 PRICING DATA

C2.1 PRICING INSTRUCTIONS

C2.1.1 General Preamble to the Bill of Quantities

- a) **The Contract is to be constructed by maximising the use of labour. In cases where the use of plant is required, the Contractor must motivate and obtain written permission before the work is undertaken with plant.**
- b) All items in the Bill of Quantities, except where otherwise specified in Clause 8 of a Standardised Specification or in the Project Specification, shall be measured and shall cover operations as recommended in the standard system of measurement of civil engineering quantities, published under the title "Civil Engineering Quantities", by the South African Institution of Civil Engineering.
- c) The basis and principles of measurement and payment are described in this section (Pricing Instructions) and Clause 8 of each of the Standardised Specifications for Civil Engineering Construction. The applicable SANS 1200 Standardised Specifications are listed in the Scope of Work, Portion 1: Project Specification. Portion 2: comprises the Technical specifications for the works of each discipline in this contract.
- d) Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification or the Scope of Work, conflict with the terms of the Bill of Quantities, the requirements of the Standardised Specification or Scope of Work, as applicable, shall prevail.
- e) The clauses in a specification in which further information regarding the Schedule item may be found are listed in the "Payment Refers" column in the Schedule. The reference clauses indicated are not necessarily the only sources of information in respect of listed items. Further information and specifications may be found elsewhere in the Contract Documents. Standardised Specifications are identified by the letter or letters which follow SANS in the SANS 1200 series of specifications, e.g. G for SANS 1200G.
- f) Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
- g) The quantities set out in the Bill of Quantities are the estimated quantities of the Contract Works, but the Contractor shall be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed Works shall be computed from the actual quantities of work done, valued at the relevant unit rates and/or prices.
- h) The rates and/or prices to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the several items. Such rates and/or prices shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents, as well as overhead charges and profit. Reasonable charges shall be inserted as these shall be used as a basis for assessment of payment for additional work that may have to be carried out.

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN VOLUME 1 TENDER AND CONTRACT



Section C2 Pricing Data

- i) The units of measurement described in the Bill of Quantities are metric units. Alternatives used are as follows :
- | | |
|---|----------------------------|
| 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 = meganewton |
| m ³ = cubic metre | MN.m = meganewton-metre |
| m ³ km = cubic metre-kilometre | P Csum = Prime Cost sum |
| l = litre | Prov sum = Provisional sum |
| kl = kilolitre | % = percent |
| MPa = megapascal | kW = kilowatt |
- j) For the purpose of this Bill of Quantities, where applicable, the following words shall have the meanings hereby assigned to them:
- Unit : The unit of measurement for each item of work as defined in the SANS Standard Specification for South African National Standards.
- Quantity : The number of units of work for each item.
- Rate : The agreed payment per unit of measurement.
- Amount : The product of the quantity and the agreed rate for an item.
- Lump sum: An agreed amount for an item, the extent of which is described in the Bills of Quantities, but the quantity of work of which is not measured in any units.
- k) Arithmetical errors in the Bill of Quantities shall be corrected in accordance with Clause C3.9 of the Conditions of Tender. Should there be any discrepancy between rates and/or prices written in the Assessment Schedule and the Bill of Quantities, the latter shall govern.
- l) The Bill of Quantities shall be completed by hand in **INK or TYPED**. Tenderers are permitted to complete and submit the electronic Bill of Quantities (BOQ) instead of filling out the BOQ in the tender document. The original pages of the tender document should not be removed. The electronic version may be submitted as an annexure or inserted as additional pages within the tender document. Tenderers are not permitted to alter the document by amending the descriptions and/or quantities specified in the BOQ.

C2.1.2 Special Payment Conditions

This clause shall be read in conjunction with the 'Penalties' clause(s). Where the penalty clause shall always receive precedence over this clause, should it be found that duplicative financial corrective measures exists.

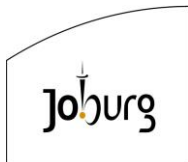
C2.1.2.1 Provided previously

The Contractor shall not re-execute works under this Contract where he has successfully executed works for the Employer under a previous contract(s) that comply with the requirements of this Contract. However, where applicable the Contractor shall:

- a) clearly state this in his qualifications; and
- b) still provide the associated rates and prices in the schedule in the associated line item, but not calculate an associated amount.

The Employer shall at his sole discretion decide to re-execute such works.

Employer:		Contractor:	
Witness:		Witness:	



C2.1.2.2 Security

The Contractor shall have been deemed to have included all security related costs in the Provisional and General item rates, including allowing for minimum 100% (high risk areas) of the sites requiring security provision for the Employer and Engineer representative(s).

C2.1.2.3 Materials and equipment

The Employer shall not provide any works material and equipment, as this shall be provided by the Contractor and deemed to have been included in his provided activity rates or prices.

C2.1.2.4 Permits and way-leaves

All associated costs to obtain permits and way-leaves as required for the execution of the works, where such affect other services, shall be deemed to have been included in the scheduled rates for SANS 1200A or SANS 1200AA or SANS 1200AB where pricing provision for such items have been allowed for in the pricing schedules, alternatively it shall be deemed to be included in the various scheduled activity rates or prices provided by the Contractor

C2.1.2.5 Confined space

The Contractor shall note that work activities shall be executed within confined spaces and it shall be deemed that allowance has been made in all activity pricing.

C2.1.2.6 Payment ONLY for works completed

The Contractor shall note that payment shall only be made for Works activities successfully (delivering the end result) executed, complying with the quality requirements and provided to the Engineer or his duly authorised representative.

C2.1.3 Health and Safety

The principal Contractor's health and safety plan has to follow the framework as laid out in the HEALTH AND SAFETY SPECIFICATION AND ENVIRONMENTAL MANAGEMENT PLAN, as a minimum.

No payment shall be applicable where equipment is not provided and services are not rendered in terms of the approved Health and Safety Plan. Additionally, the Contractor shall also be penalised in terms of Clause (30) of the Occupational Health and Safety Act 183 (1993), Construction Regulations (2014).

C2.1.3.1 Compilation of health and safety plan

Unit: Sum

The rate shall include the complete cost for the provision of resources (human and equipment), communication, transportation and travelling, documentation of activities and reporting activities required to compile a Health and Safety Plan as per the Health and Safety Specifications contained in Volume 2, and approval of such plan thereof. Remuneration shall be a lump sum.

C2.1.3.2 Implementation of health and safety plan

Unit: Sum

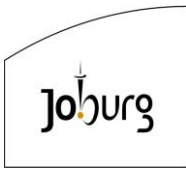
The rate shall include the complete cost for the provision of resources (human and equipment), communication, transportation and travelling, documentation of activities and reporting activities required to fully comply with the implementation and maintenance of the Health and Safety Plan. Remuneration shall be on a monthly basis for services rendered, by dividing the total sum tendered by the construction duration.

Safety officer

Unit: Sum

The rate shall include the wages and salary that is to be paid to the safety officer/s, whose responsibility it is to ensure that all activities required fully comply with the Health and Safety Plan as per the Health and Safety Specifications contained in Volume 2 for the duration of the Contract. The rate shall be on a monthly basis for services rendered, by dividing the total sum tendered by the construction duration.

Employer:		Contractor:	
Witness:		Witness:	

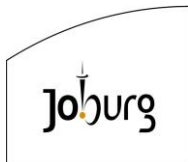


Contract: JW14337
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN VOLUME 1 TENDER AND CONTRACT
Section C2 Pricing Data



NOTE: The Contractor shall clearly state the number of Health and Safety officers in the provided space in the Bill of Quantities that he has allowed for in his price. Where no number is provided the Employer shall assume that adequate provision, minimum one (1) per site, has been made to implement the provided Health and Safety Plan successfully.

Employer:		Contractor:	
Witness:		Witness:	



C2.1.4 EMP Implementation and Maintenance

Unit: Sum

The rate shall include the complete cost for the provision of resources (human and equipment), communication, transportation and travelling, documentation of activities and reporting activities required to fully comply with the implementation and maintenance of the EMP contained in Volume 2 for the duration of the Contract. Remuneration shall be on a monthly basis for services rendered, by dividing the total sum tendered by the construction duration.

No payment shall be applicable where equipment is not provided and services are not rendered in terms of the approved EMP.

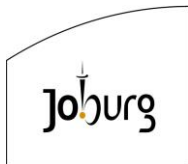
ABBREVIATIONS USED

md = man-day
dia = diameter

Source :

Construction Education and Training Authority, Learning Material for Unity Standard 15165: "Use LIC

Employer:		Contractor:	
Witness:		Witness:	



C2.2 BILL OF QUANTITIES

C2.2.1 Summary of Bill of Quantities

DESCRIPTION		AMOUNT
Pipe Schedule		
Section 1: Preliminary and General		
Section 2: Electrical Cable Racks		
Section 3: Programmable Logic Controllers		
Section 4: Electrical Distribution System		
Section 5: Electrical Installation in Buildings and on Structures		
Section 6: Multicore Cables and Earthwires		
Section 7: Power Supply Units		
Section 8: Civil Works		
Sub-Total 1		
The above prices are Firm/Not Firm*(delete one). IF NOT FIRM the client will allow for CONTRACT PRICE ADJUSTMENTS on all sums as provided for in Clause 6.8 of the General Conditions of Contract.		
ADD	Contingency @ 15% (Solely for the use of the Client, and only on instruction to Contractor)	
Sub-Total 2		
ADD	Escalation at 10%	
Sub-Total 3		
ADD	VAT at 15%	
TOTAL CARRIED TO FORM OFFER		

Name of Tenderer (in full):

Telephone Number:

Email:

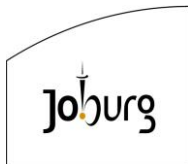
Name of Person Authorised to sign this Tender:

(Block Letters)

Signature

Date:

Employer:		Contractor:	
Witness:		Witness:	



Johannesburg Water SOC Ltd



DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN

VOLUME 2

PART 3: SCOPE OF WORK

Employer:		Contractor:	
Witness:		Witness:	



C3: SCOPE OF WORK

Portion 1: Project Specifications

PS 1 DESCRIPTION OF THE WORKS

PS 1.1 Employer's Objectives

Johannesburg Water wishes to appoint a single multidisciplinary Contractor to perform the work required to replace the burned MCC at the new module 2 Bio-Reactor at the Driefontein Wastewater Treatment Works (Driefontein).

PS 1.2 Overview of the Works

The objective of the project is to replace the burned MCC at the Module 2 Bio-Reactor at Driefontein.

- Refurbishment and upgrade of the flow measuring and control at the Module 2 Bio-Reactor
- Some minor Works to be performed under PC Sums allowed.

PS 1.3 Extent of the Works

The above works include the following:

- Replacement of the burned MCC with new panels, cabling and components .
- Replacement of the burned PLC with new panels, cabling and components.
- Refurbishment and upgrade of the flow measuring and control at the Module 2 Bio-Reactor.
- .Some minor Works to be performed under PC sums allowed.

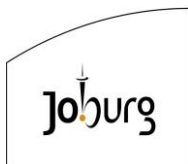
PS 1.4 Location of the Works

The equipment called for under this Contract will be installed at the Driefontein Wastewater Treatment Works which is located at the following coordinates: 26°0'18.08"S, 27°50'11.21"E.

PS 1.5 Temporary Works

No temporary works are envisaged under this contract. No equipment intended for permanent installation shall be operated for temporary purpose without the written consent of, and in complete agreement with stipulations as set forth by the Employer's Agent.

Employer:		Contractor:	
Witness:		Witness:	



The Contractor shall provide all necessary temporary drainage works, temporary pumps and other equipment as might be required for the protection, drainage and dewatering of the Works.

The Contractor shall construct and maintain all temporary access, haulage and construction roads, subject to the approval of the Employer's Agent, and permit all those with legitimate business free and unhindered usage of such roads.

PS 2 ENGINEERING

PS 2.1 Employer's Design

When and where specific reference is made or preference given to specified equipment, should the Contractor fail to comply with these requirements, this may lead to the disqualification of the tender submitted.

Contractors are free to propose alternative equipment (provided a main offer is submitted to specification) to that proposed by the Employer's Agent and, provided that drawings with details of each alternative proposal are submitted with the Tender, such alternative proposals will be considered in the adjudication of each Tender.

Any alternative equipment offered shall include all the necessary civil, mechanical, electrical and instrumentation costs necessary for a complete working system.

The cost of any changes to the Engineer's design will be for the Contractor's account where full details of the changes were not submitted with the tender.

Contractors shall satisfy themselves that the layouts as proposed by the Employer's Agent suit in all respects the equipment proposed by the Employer's Agent or by the Contractor as the case may be. Where equipment other than that proposed by the Employer's Agent is accepted, it will be the sole responsibility of the Contractor to ensure that the associated equipment including pipe work is compatible with the accepted material and proposed structures.

In the case of the Employer's Agent's acceptance of an alternative proposal, the Contractor shall submit in triplicate to the Employer's Agent for his approval, detailed working drawings of the Contractor's alternative design proposal before any related work is executed.

An extension of Time for Completion of the Contract due to time spent on the alteration of the tender drawings to suit the Contractor's alternative proposals or, due to time spent in obtaining the Employer's Agent's approval of such alternatives, shall not be considered.

Employer:		Contractor:	
Witness:		Witness:	



Acceptance of an alternative proposal or offer shall not relieve the Contractor of any of his obligations in terms of the Contract. The Contractor's cost of preparation and submission of an alternative proposal shall be deemed to be included in the rates tendered for the execution of the Work.

PS 2.2 Drawings

PS 2.2.1 Tender Drawings in Volume 3

With reference to PS 2.1 above, the drawings submitted will comprise a component of the Employer's proposed design. Drawings shall be read and understood in sufficient detail to understand the scope of the works required to be performed. If there are areas that appear unclear or if the Contractor deems there to be material errors in the design, he shall bring it to the immediate attention of the employer prior to the close of tenders. The Contractor is expected to address by letter any clarifications he may require in understanding the tender document and drawings, such that he may sufficiently price the document to complete all of the specified works.

The drawings, forming part of this Tender, are bound into Volume 3 of this document and are listed below. All tender Drawings must be returned at the time of tendering together with the tender documents. If the Contractor deems there to be drawings missing, he shall inform the Employer immediately for clarification.

The drawings included in these tender documents are intended for tender purposes only and shall not be used for construction purposes.

Only working Drawings which have been approved by the Employer's Agent and marked accordingly as follows: "This Drawing approved for construction by": and which have been signed and dated by him and officially issued to the Contractor for construction, shall be used on the Works.

The drawings that are issued for tender purposes are listed below:

Employer:		Contractor:	
Witness:		Witness:	



CIVIL ENGINEERING DRAWINGS

SECTION 01 - GENERAL ARRANGEMENT	
18052-73-001	Drawing List
18052-72-002	Locality Plan and Site Layout
SECTION 02 - AS-BUILT DRAWINGS OF UNIT 2 BIO-REACTOR	
10420-04-201	Biological Reactor – Layout – Sheet 1 of 12
10420-04-205	Biological Reactor - Walkway and Platform Details – Sheet 5 of 12
10420-04-206	Biological Reactor - Walkway and Platform Details – Sheet 6 of 12
SECTION 03 - AS-BUILT DRAWINGS OF UNIT 2 BIO-REACTOR CONTROL BUILDING	
10420-04-301	Proposed Sewer Network Layout
18052-72-004	Biological Reactor – Control Building – Photographic records

ELECTRICAL DRAWINGS

SECTION 06 – ELECTRICAL	
18052-72-005	Bio-Reactor MCC - Single Line Diagram

PS 2.2.2 Construction Drawings

Upon receiving the instruction to commence with construction, the Contractor shall receive 3 sets of construction drawings, of which 1 set shall be designated for as-built records and updated by the Contractor on a daily basis. The drawings shall be submitted to the Employer's Agent with the Contractor's request for issue of the Practical Completion Certificate.

PS 2.2.3 Shop Drawings

Where an item to be supplied in conformance with this Contract Specification has not been designed by the Employer's Agent or Employer, the Contractor shall be required to supply the Employer's Agent with 3 copies of detailed shop drawings prior to delivery of materials, including an electronic copy in drawing format that is compatible with the software packages (AutoCAD or .dxf) used by the Employer's Agent and/or Employer. Only on approval of such shop drawings or an amended version thereof, shall the Contractor proceed with the manufacturing, supply and installation of the designed item.

Employer:		Contractor:	
Witness:		Witness:	



PS 3 PROCUREMENT

PS 3.1 Preferential Procurement Procedures

The Contractor's attention is drawn to the following returnable schedules contained in Part T2:

- a. Empowerment and Preferential Procurement (JW10); and
- b. Enterprise Declaration Affidavit (to be endorsed by a Commissioner of Oaths) (JW11).

These schedules contain all requirements about preferential procurement.

PS 3.2 Sub-Contracting

PS 3.2.1 Definitions

a. Start-up Enterprises

An enterprise that has been in existence and operating for less than two years.

b. Small Enterprises

An enterprise that has a CIDB grading designation of 1 or 2.

c. Micro Enterprises

An enterprise that has a CIDB grading designation of 3.

d. Locally based SMMEs

Enterprises that have their operational base in the ward in which the project is to be executed or, alternatively, the members of the enterprise are resident in the particular ward. Should a suitable locally based SMME as defined above not be available in the particular ward, then they shall be sourced from adjacent wards.

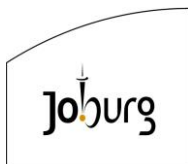
a. Contract Participation

Contract Participation in terms of this contract is a process by which the Employer implements Government's objectives by setting a target relating to small Contractor development which the Contractor shall achieve as a minimum.

b. Contract Participation Goal (CPG)

Contract Participation Goal is the monetary value of the target set by the Employer in the Contract Participation process.

Employer:		Contractor:	
Witness:		Witness:	



c. Contract Participation Performance (CPP)

Contract Participation Performance is the measure of the Contractor's progress in achieving the CPG.

The commitment of the Employer to Government Policy concerning the empowerment of the SMMEs shall be noted and adhered to by the Contractor. It is against this background that Johannesburg Water has made provisions under this contract to ensure that the Contractor impart skills to the SMME within the project area during the project implementation.

The onus is upon the Contractor to handle and manage the procurement process of the Sub-Contractors and once appointed, should be dealt with in accordance with the provisions of the Contract Data. The Contractor shall not cede or assign the Contract or any part thereof without the prior written approval of the Employer's Agent.

The Contractor shall obtain the written approval of the Employer's Agent before appointing any Sub-Contractor. The Contractor shall be solely responsible for the supervision of and payments to such a Sub-Contractor(s) and the approval of a Sub-Contractor by the Employer's Agent shall not indemnify the Contractor from any of his liabilities in terms of the Contract.

Approval given in terms of subcontracting shall not relieve the Contractor of any responsibility, duty or obligation imposed upon him by the Contract, and the Contractor shall in particular be and remain solely liable and responsible for all acts, omissions, negligence or breaches of contract on the part of the assignee or any of his employees, and for all acts, omissions or negligence of any sub-Contractor or any of his employees.

PS 3.2.2 Applicable Legislation

The following Acts, as amended from time to time, are predominant amongst those which apply to the construction industry and are listed here for reference purposes only:

- The Constitution of South Africa.
- Preferential Procurement Policy Framework Act No. 5 of 2000.
- Construction Industry Development Board Act No. 38 of 2000.
- Broad-Based Black Economic Empowerment Act No. 53 of 2003.

Employer:		Contractor:	
Witness:		Witness:	



PS 3.2.3 Scope

The City of Johannesburg has identified job creation and access to procurement opportunities by Start-ups, Small and Micro enterprises (SMMEs) as an essential requirement towards building an economically viable City.

This tender is subject to the sub-contracting condition as described in the Contract Data and must be adhered to by the main contractor. It is also the obligation of the main contractor to impart skills to the subcontractor/s on the project during implementation. Although a minimum percentage of the contract value has been identified for this project, the contractor may increase this percentage at his discretion.

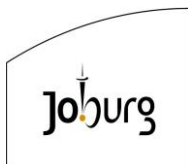
NB: all sub-contractors appointed on this contract must comply with the Central Supplier Database (CSD) requirements, i.e. they must be registered on the CSD.

It is a condition of this contract that the Contractor is required to sub-contract a minimum value of work to SMME in accordance with the Contract Data.

The Contractor is to allow for fortnightly payment certificates from the SMMEs and for payment to the SMMEs to be effected within 7 days of certification. To achieve the goals of this policy and to ensure that the SMMEs are treated fairly and given every opportunity to advance their business whilst delivering a successful project, the Contractor is to note the following and provide for any cost that may be associated therewith:

- a. The Contractor will be expected to have clearly specified the programme dates to the SMME and these dates are to be included in the contractual agreement between the two parties. The Contractor is to monitor the SMME's progress against the programme and hold progress meetings with the SMME contractors where minutes are to be kept and signed off by both parties.
- b. Before site establishment, the Contractor will provide each appointment letter and contractual agreement that the Contractor engages with for each SMME on this Project. The Agreement must include agreed work values agreed upon with the Contractor and SMME.
- c. Before site establishment, the Contractor will provide the following for all SMMEs:
 - SMME company registration
 - SMME CIDB proof of registration.

Employer:		Contractor:	
Witness:		Witness:	



-
- a. The Contractor is to assess the skills of the SMME and provide the relevant support and training for the SMME to complete the works to programme, budget and specification. The Contractor will be expected to provide training to the SMME that will ensure that the SMME's staff is suitably trained to execute the works and that they receive sufficient relevant experience on the project.
- b. The Contractor is responsible for safety compliance on the project and will assist the SMME Contractors in all aspects to achieve safety compliance, that will include:
- Assisting the SMME with developing their safety files, legal appointments, etc.
 - Assisting the SMME with achieving safety on site.
 - Having toolbox talks with the SMME Contractor's employees on a daily basis.
 - Providing all safety equipment and signage.
 - Providing safety training where necessary.
- a. The Contractor is to provide all the necessary equipment for the timeous monitoring and the checking of the quality of works as carried out by the SMME. The Contractor will be expected to monitor the SMME's works for quality compliance and provide all the necessary support to the SMME in order to achieve quality requirements. The Contractor is to ensure that if the SMME's quality of works does not achieve specification, the Contractor will assist the SMME to achieve specification and not allow the works to continue until the quality requirements are achieved.
- b. The Contractor is to generate monthly reports for the Johannesburg Water SOC. which includes the following:
- Per SMME: resources on the site, i.e. supervisors, labour, plant tools and equipment
 - Per SMME: progress of works on site.
 - Per SMME: quality control on site.
 - SMME expenditure on the project versus target expenditure including payment progress
 - Copies of minutes of the SMME and Contractor progress meetings.
 - Concerns and improvements to be made.

Employer:		Contractor:	
Witness:		Witness:	



- Items listed in PS 5.10
 - a. In the execution of the Subcontract Work, the Contractor shall ensure that the Sub-Contractor(s) comply with all relevant legislation and regulations including, but not confined to, the Occupational Health and Safety Act. The Contractor hereby indemnifies the Employer against any loss, damage, or claim for Subcontract Works set out for the Driefontein Infrastructure Renewal Plan arising out of the former's failure to comply with instructions issued to him in regard to these requirements.
 - b. Maximisation of employment shall be the aim on this contract.
 - c. Together with their tenders, all Contractors are required to submit a comprehensive implementation plan clearly stating the labour content and number of jobs that shall be created. The employment of labour shall be reflected in a programme in sufficient details to enable the Project Manager to monitor and compare it with the implementation plan.
 - d. The Contractor shall be required to submit employment data on a monthly basis to the Employer's Agent.
 - e. Contractors are to also note that it is an explicit condition of this Contract that all unskilled labourers on the project are to be employed from the local community. The Contractor shall, in general, maximise the involvement of the local community.
 - f. TRAINING OF SMMEs: The sum shall be in full compensation for the provision of training to SMMEs, to complete 8 the works as per specifications

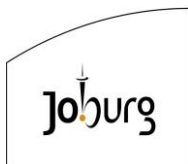
Unit: Sum

PS 3.2.4 Supply & Delivery of Equipment

A delivery period of 14 weeks, within which all materials and equipment must be delivered to site, is envisaged. If the Tenderer considers the delivery time of 14 weeks inadequate for particular items, he must specify the delivery period required for each item in the covering letter to the Tender Document.

The term "supply and deliver" of materials and equipment includes the purchase thereof from commercial sources, manufacturing thereof, factory corrosion protection, factory testing, provision of test certificates certifying compliance of the goods in accordance the Specifications, provision of drawings and details, provision of special tools and keys, the handling thereof and delivery to Site.

Employer:		Contractor:	
Witness:		Witness:	



Tender rates must provide for all the costs by the Contractor to "supply and deliver".

No other payment for materials and equipment will be considered other than that under the "supply and deliver" items in the Schedule of Quantities.

PS 3.2.5 Purchasing of Equipment

The Contractor is required to purchase the materials and equipment necessary for the Contract at the earliest possible date thus limiting the effect of inflation. The Contractor must strive to keep the number of suppliers to a minimum.

Payment for materials and equipment will only be effected if the Contractor can prove ownership of the items.

In the case that off-site storage is agreed by the Employer's Agent and Johannesburg Water then payment will only be effected if the Contractor can prove ownership and that cession of ownership from the Contractor to Johannesburg Water has taken place.

NOTE - It will be the Contractor's responsibility to ensure that the necessary warranties from the equipment suppliers is negotiated such that it only comes into effect on commissioning of the equipment.

PS 3.2.6 Guarantee of Equipment

It is an express condition of this Contract that the guarantee period on all equipment given by the suppliers to the Contractor shall only commence once the Works is in operation. This stage will be reached once the Certificate of Completion has been issued.

PS 3.2.7 Particulars of Equipment Offered

The Tenderer must include comprehensive information covering every item of equipment offered with his Tender. The Employer's Agent must be able to determine, without reference to the suppliers, any information regarding delivery, power consumption, efficiency, accuracy, etc. applicable under the specified range of operation conditions.

Technical information regarding equipment offered must also be supplied.

Failure to comply with the above requirement may lead to the disqualification of the Tender submitted.

Employer:		Contractor:	
Witness:		Witness:	



PS 3.2.8 Bill of Quantities

The prices quoted in the Bill of Quantities shall cover the cost of all work required for the execution of the Contract and each price shall be considered as the full value of the work described in each item and as covering all contingent expenses.

PS 3.2.9 Bonds & Guarantees

Security in the amount equal to ten (10) per cent of the contract price shall be provided by the Contractor for the due and faithful performance by him of all the duties and obligations resting upon and assumed by him in terms of the Contract.

Such security shall be in the form of a deed through lodging a bond of suretyship furnished by an approved bank, insurance or guarantee corporation in such form as may be prescribed by Johannesburg Water, provided however that the Employer's Agent may, upon written application by the Contractor, return to the Contractor the whole or part of such security held by Johannesburg Water. The Employer's Agent will, subject to his sole discretion, consider what he deems sufficient for the protection of Johannesburg Water, and is entitled to hold all or a portion of the security until the completion of the Contract and the expiry of the defects liability and Defects Liability Period.

PS 4 COMPLETION OF THE WORKS

The Time for Completion as stated in the Contract Data is 12 months. If the Contractor considers the completion time of 12 months inadequate, he must specify the completion period required in his covering letter to his Tender.

PS 5 CONSTRUCTION

PS 5.1 APPLICABLE STANDARDS

PS 5.1.1 National Standards (Civil)

The Standardised Specifications for all associated civil work applicable to this Contract shall be:

Civil Works	
SANS 1200 A	General
SANS 1200 AB	Employer's Agent's office
SANS 1200 C	Site clearance
SANS 1200 DB	Earthworks (pipe trenches)

Employer:		Contractor:	
Witness:		Witness:	



Civil Works	
SANS 1200 H	Structural steel work
SANS 1200 HA	Structural Steelwork (Sundry Items)
SANS 1200 LB	Bedding (Pipes)
SANS 1200 LC	Cable Ducts

PS 5.1.2 National Standards (Mechanical, Electrical and C&I)

The Standard Specifications for all associated electrical and instrumentation work applicable to this Contract shall be SANS 10142-1:2003.

These Specifications are not issued with this volume but are available at the Contractor's expense from: South African National Standards. The Contractor shall be in possession of these Technical Specifications and shall keep a hard copy of the specifications on site for reference by him and the Employer's Agent for the duration of the Contract.

- I. The Standard Specifications for all associated electrical and instrumentation work applicable to this Contract shall be SANS 10142-1:2003:
- II. This Specification is not issued with this volume but is available at the Contractor's expense from: Standards South Africa,

III. Office Address:

1 Dr Lategan Road, Groenkloof, PRETORIA

IV. Postal Address:

Private Bag X191, PRETORIA, 0001

V. Telephone: National: (012) 428-6883

International: + 27 12 428 6883

VI. Telefax:

National: (012) 428-6928

International: + 27 12 428 6928

VII. Email: sales@sabs.co.za

Employer:		Contractor:	
Witness:		Witness:	



PS 5.1.3 Other Standards

PS 5.1.4 Particular Generic Specifications

Civil

Refer to Portion 2: Variations and Additions to the Standardized Specifications.

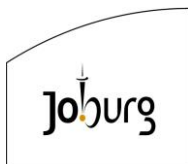
Electrical and C&I

The following Particular Generic Specifications (refer to Portion 3) forming part of the Contract have been written to cover phases or items of work involving a specialist type of operations or material to be encountered on this Contract and that are not adequately covered by the general specifications.

Electrical Works (Automation and Control Design Standards)	
Volume 3	PLC Panels
Volume 5	Clean Power and Surge Protection
Volume 6	Cabling
Volume 7	Networking
Volume 8	Flow Measurement
Volume 9	Level Measurement
Volume 19	Field Junction Boxes and Panels
Volume 21	Load Cells
Volume 23	Pressure Measurement

Electrical Works	
E01	Electrical Motors
E02	Electrical Cable Racks
E03	Electrical Isolator Pushbutton station (Local Start/Stop) Equipment
E04	Electrical Low Voltage Switchboards and Motor Control Centres
E05	Electrical Low Voltage Power & Control Cables
E06	Electrical Medium and Low Voltage Cable Installation
E07	Electrical Industrial Welding Plugs, couplers and socket outlets
E08	Electrical Wiring

Employer:		Contractor:	
Witness:		Witness:	



E09	Electrical Building Installation
E10	Electrical Busbar Trunking
E11	General Electrical Earthing and Lightning Protection
E12	Electrical Medium Voltage Cables
E13	Electrical Medium Voltage Switchgear
E15	Electrical Transformers
E17	Variable Speed Drive (VSD) Units
E18	Electrical Miniature Substations

Painting Specification	
G01	Colour Coding of Equipment
G02	Corrosion Protection

PS 5.2

Plant & Materials

All materials intended for the purpose of this Contract shall bear the approval of the relevant SANS specifications. Any deviations there from shall be recorded and reported by the Contractor for approval by the Employer's Agent.

Johannesburg Water shall have the right to refuse acceptance of any material or workmanship which is found to be unsound, damaged or contrary to the specification, or which is found during the Defects Liability Period or during tests in situ to be defective or in any way contrary to the specification due to causes within the Contractor's control or responsibility. All material or construction rejected by the Employer's Agent shall be replaced or repaired by the Contractor at his own expense to the satisfaction of the Employer's Agent, whose decision with regard to this matter shall be binding on the Contractor.

All materials used shall be the best of their respective kinds and shall be suitable for working at the pressures and temperatures involved under all working conditions, without distortion or deterioration or the setting up of undue stresses in any part and without impairing the efficiency or reliability of the plant and the strength of its component parts. No welding, burning, filling or plugging of defective castings will be permitted without the Employer's Agent's approval in writing.

Materials to be supplied "Free Issue" to the Contractor will be indicated as such in the Bill of Quantities.

Employer:		Contractor:	
Witness:		Witness:	



PS 5.3 Construction Equipment

In addition to GCC (2015) Clause 7, no plant will be supplied by the Employer, however the Employer does reserve the opportunity to negotiate with the Contractor that different plant be used of another origin for whatever purpose that may become apparent at the time.

In so doing the Contractor shall supply and use suitable and sufficient construction plant, tools, equipment and material as may be required to carry out the Works efficiently. Only the construction plant, tools, equipment and material which are required for this purpose shall be brought onto the Site and shall be stored, stacked or erected in such a way as not to interfere with other work or traffic. The Contractor shall furnish statements showing details of construction plant, tools, equipment and material employed or used on the Works on a day to day basis, the Daily Site Diary indicating types, numbers, quantities, hours worked, idle time, etc. all as stipulated in the Project Specification or as directed by the Employer's Agent.

Construction equipment shall be suited for the onsite intended use and shall conform to all relevant safety aspects required by the OHS Act Purchasing of Equipment.

PS 5.4 Existing Services

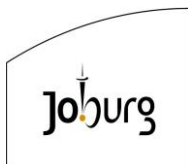
The Contractor shall make himself acquainted with all existing works. Under no circumstances shall the Contractor alter or in any way interfere with existing works or underground services unless authorised by the Employer's Agent.

Where existing works are of such a nature that the Employer's Agent may require them to be moved by the Contractor, the cost of such work will be paid for at scheduled rates or on dayworks, plant and materials basis. The Contractor will be held responsible for damages to any existing works and any damages caused shall be made good at his own cost without delay.

The Contractor is to exercise care when the proposed work is to cross an existing service, or work is to be performed close to an existing service. Prior to commencement of the relevant portion of the proposed works the Contractor with the Employer's Agent or his duly appointed representative shall also perform a visual inspection of the area in question. This inspection will not waive the Contractor of his obligations with respect care of the works referenced in GCC (2015), Clause 8.2.

The existing treatment works must remain in operation during the execution of the contract. The Employer must have access to the works at all times. If the work to be done requires

Employer:		Contractor:	
Witness:		Witness:	



the treatment works to be out of operation for a short period, prior arrangements must be made at least one week in advance with the Employer's Agent.

There are a number of points of connection to the existing structures, channels, pipelines, as well as electrical and control networks with the new works that should be regarded by the Contractor as being tie-ins to live systems. The Contractor must give the Employer's Agent and the Works Manager ten days written notice of any disruption to the normal plant operations and shall comply with all requirements of the Works Manager in arranging the required connection.

The known existing services are shown on the drawings. The positions of the services cannot be guaranteed. On establishing on Site, the Contractor shall determine the positions of all pipelines and cable routes on Site with the assistance of the Employer's Agent's and the Employer's staff on Site. The Contractor shall take precautions to prevent any damage to existing services.

Any damages which might occur shall be repaired at the cost of the Contractor, to reinstate the services to that of the original status prior to the commencement of the Contract.

PS 5.4.1 Service Providers

Organizations, which have special conditions for crossing of services, are:

- a. Johannesburg Water
- b. Eskom
- c. Telkom
- d. Fibre Providers
- e. Johannesburg Roads Agency

For crossing or working in close vicinity of a service under the control of any of the above organisations, the organisation shall be notified and its general and specific requirements for each crossing or operation shall be carefully observed.

PS 5.4.2 Priorities

Services are labelled Priority 1 (P1), Priority 2 (P2) or Priority 3 (P3) on construction Drawings according to the procedure to be observed.

Priority 1. Indicates an extremely important service.

Employer:		Contractor:	
Witness:		Witness:	



Priority 2. Indicates a less important main service.

Priority 3. Indicates minor services and leadings.

PS 5.4.3

Procedures

Procedure for Priority 1 Services

These services are extremely important.

Once the Contractor is appointed for the Contract, he shall immediately inform the respective service providers of his appointment in writing. He shall also obtain current copies of the Drawings with details of each of the services from the service providers.

The Contractor shall then arrange a meeting with the service provider and the Employer's Agent, to discuss the proposed work. Immediately after the meeting, the Contractor shall confirm in writing the content of this meeting.

At least seven days prior to the anticipated service crossing, the Contractor shall request the service provider to either expose the service or to supervise the exposure of the service. The service provider will nominate a representative, who will remain on site for the duration of all works in the vicinity of the service. No work whatsoever closer than 1,5 meters from the outer extremities of the service shall be carried out in the absence of this service representative. This representative shall have full authority to protect the safety of the service being crossed, including the power to halt and revise the Contractors work methods should he feel his service is in danger of being damaged.

Backfilling around and above the service will either be done by the service provider or under his supervision to the contract specification.

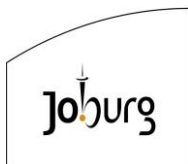
All instructions shall be in writing, acknowledged by signature of the party receiving the instruction. On completion of the work at a service crossing, the service provider will confirm in writing that his service is undamaged.

Procedure for Priority 2 Services

These are less important main services.

Once the Contractor is appointed for the project, he shall immediately inform the respective service providers of his appointment in writing. He shall also obtain current copies of the drawings with details of each of the services from the service providers.

Employer:		Contractor:	
Witness:		Witness:	



Prior to working close to a service marked P2, the Contractor must discuss the service crossing with the Employer's Agent.

It is the responsibility of the Contractor to locate the existing service before the anticipated crossing by hand excavation. Excavation must be done by shovel only. If this is impossible, work must be discontinued and the problem reported to the Employer's Agent for further instructions. Any damage, however small, must be reported immediately.

On exposing the services, the Contractor must notify the Employer's Agent that such service has been exposed and must arrange for a site visit by the Employer's Agent to inspect the service for any possible damage. When services have been located, no machine excavation may be done within one metre on either side of such service.

In the event of the indicated service not being located, the Contractor shall inform the Employer's Agent, who will in turn request the service provider for assistance.

Backfilling may only be carried out in the presence of the representative of the service owner who will provide a written clearance indicating that the work has been completed without damage to the original service.

Procedure for Priority 3 Services

These are minor services.

It is seldom possible to indicate the position of these minor services and leadings on a drawing and the initiative of the Contractor is relied upon to locate it.

Exposure of these services is the responsibility of the Contractor, and must be done with caution, by hand. Any damage shall be reported to the Employer's Agent immediately. No machine excavation is to take place within one meter on either side of the exposed service.

Before backfilling is done, the service shall be inspected by the Employer's Agent's Representative who will give the service provider the option of inspecting his service.

PS 5.4.4 Damage to Existing Services

In addition to GCC (2015), Clause 8.2, should an existing service be damaged, the procedure as set out below is to be followed. The Contractor must:

1. Take immediate steps to minimize:

Employer:		Contractor:	
Witness:		Witness:	



-
- Damage and loss to property of the service provider and the public e.g. arrange to close down valves, shut off pumps etc.
 - Inconvenience to the public.
 - Further damage to the already damaged service.
 - Damage to other services.
2. Ascertain if an important service is in the vicinity of the problem by carrying out the following checks on available drawings:
- Eskom power line.
 - Johannesburg Water potable water lines
 - Johannesburg Road Agency stormwater lines
 - Fibre Providers

If any of the above are present, the Employer's Agent must be informed.

3. The Contractor must contact the Works Manager and inform him/her of the problem.
4. The Contractor shall then contact the relevant organisation and arrange for site or other suitable representation by the organisation whose service may be affected. Failing co-operation, he should refer the matter to the Employer's Agent, who must repeat the request for co-operation and record the reaction.
5. The Contractor shall not allow any machine excavation at the site of the problem unless:
- No other services are in the vicinity.
 - All affected organizations are represented on site.
 - Any organization not represented has given written permission for machine excavation.
 - All other services are made visible and adequately protected.
6. The machine shall not work closer than one metre from any undamaged service.

Employer:		Contractor:	
Witness:		Witness:	



7. All excavation work shall preferably be done by hand using shovels only.
8. On completion of repair work, all representatives of other organizations must be requested to inspect their respective services and give written confirmation that their service is undamaged before backfilling takes place.

PS 5.4.5 Procedures When Dealing with Existing Electrical Services

The following procedures are to be followed when a proposed service is to cross an existing electrical service or work is to be performed in close proximity to an existing service.

Procedure for P1 Service

These are highly important services.

Once the Contractor is appointed for the project, he shall immediately inform the respective service providers of his appointment in writing. He shall also obtain current copies of the drawings with details of each of the services from the service providers.

The Contractor shall then arrange a meeting with the service provider and the Employer's Agent to discuss the proposed work. Immediately after the meeting, the Contractor shall confirm in writing the content of this meeting.

1. The Electrical Engineer must be informed in writing, a minimum of seven (7) working days before work commences at or near the site in question and work shall not commence until this has been acknowledged.

The following special conditions shall be complied with:

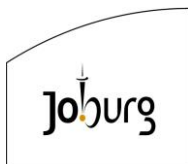
- No excavation work is done within three (3) metres of the centre line of the cable/s or any of its ancillary equipment, other than for the purpose of crossing the service.
- Should it be necessary to cross the cable/s at any point, no excavation work by means of earthmoving machinery may be done. The necessary material to support the cable or to protect it from any damage whatsoever shall be supplied free of charge or supplied by the Electrical Engineer and the costs recovered from, the Contractor. Should the Electrical Engineer decide that the Contractor may do the work it shall be under the constant supervision of the Electrical Engineer.

Employer:		Contractor:	
Witness:		Witness:	



-
- The crossings are so designed as to ensure a minimum distance of one (1) metre between the cable/s and any object. If the said minimum distance cannot be maintained an approved reinforced type concrete culvert shall be installed over the service by the Works at the cost of the Contractor.
 - The necessary liaison is arranged with the Electrical Engineer during installation of any object in order to ensure that the equipment of the Works is not damaged in any way.
 - The crossing of the service is made only under the strict supervision of the Electrical Engineer.
 - No blasting work is done in close proximity to the service and that all blasting work required is approved by the Electrical Engineer.
 - Full details of the exact location of the service and its ancillary equipment, as well as any other information required must be obtained from the Electrical Engineer.
 - The accompanying form acknowledging all of the above shall be signed.
2. During the duration of the operation the Works Manager will make certain that the service is protected and reserves the right to stop work should he feel that the work being performed could endanger the service. The matter will then be referred to the Electrical Engineer.
 3. Should any damage be caused to the Works service the costs of repairs will be for the Contractor's account.
 4. The Electrical Engineer will close and make good the excavations.
 5. The written agreement mentioned above will be signed off by both parties.
 6. The costs incurred in all of the above will be to the account of the Contractor.
 7. Should the Cable Surface Right be affected the following additional procedures shall apply:
 - No excavation work, storage and parking of motor vehicle is done within two (2) metres of the cable or any of its ancillary equipment such as oil pressure tanks, joint bays and link boxes, other than for the purpose of crossing the cable.

Employer:		Contractor:	
Witness:		Witness:	



- Should it be necessary to cross the cable at any point, no excavation work by means of earthmoving machinery is done, proper cable supports to the satisfaction of the Electrical Engineer are installed and the crossings are so designed as to ensure a minimum distance of one (1) metre between the cable and any object. For this purpose it must be noted that the cable has been laid at an average depth of 1 m.
- No crossing, structure, fence or any other object shall be constructed over any of the existing cable joints.
- Cable crossing be made only under the strict supervision of the Electrical Engineer.
- No blasting work is done in close proximity to the cable and that all blasting work required is approved by the Electrical Engineer.
- Access be provided at all times (24 hours a day 7 days a week) where the Employer's surface right permit is to be crossed during and after construction.
- No trees and/or shrubs may be removed or planted except by or with permission from the Employer's Agent.
- Where vehicular crossing is required such crossing shall conform to the requirements of the Electrical Engineer.
- Before work in the vicinity of the Employer's surface right commences the Electrical Engineer shall be informed and his permission obtained to proceed.

Procedure P2

These are services of secondary importance.

Once the Contractor is appointed for the project, he shall immediately inform the respective service providers of his appointment in writing. He shall also obtain current copies of the drawings with details of each of the services from the service providers. Prior to working close to a service marked P2, the Contractor must discuss the service crossing with the Employer's Agent.

1. The Electrical Engineer must be informed in writing two (2) working days before work commences and such work shall not commence until this has been acknowledged.
 - The top 300 mm of soil above the service may be removed by pick and shovel.
 - The remainder of the cover shall be removed carefully by shovel only. If any damage, however small, is caused to the cable it must be reported immediately. The costs of repairs will be for the Contractor's account.

Employer:		Contractor:	
Witness:		Witness:	



- When the cable is exposed, the Electrical Engineer or his representative must be informed in order that it may be inspected. No machine excavation within a one-meter radius of the exposed cable is permitted.
2. When the work is completed the excavations may be backfilled until the cable is just exposed when the Electrical Engineer's representative shall inspect once again for possible damage.

Backfilling will then proceed in the presence of the Electrical Engineer's representative who will provide a written clearance when the job is completed.

PS 5.5 Site Establishment, Facilities Available and Required

PS 5.5.1 Water Supply for Construction Purposes

The Contractor is responsible for sourcing a constant supply of clean potable water for the duration of the Contract. All costs for the provision of water shall be priced in full under the relevant scheduled items.

PS 5.5.2 Power Supply for Construction Purposes

Power is available on site. A power supply point will be made available within approximately 300 meters from the area available for the erection of site offices and stores. The availability of power is subject to Johannesburg Water's conditions and requirements and the Contractor must make the necessary arrangements with Johannesburg Water in advance.

The cost of power shall be at the same rate as charged to the Works by ESKOM. Metering of the supply to be supplied and installed at the Contractor's cos

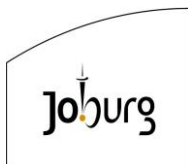
Conditions of Supply

All installations connected to a supply of electricity provided by JW shall comply with the regulations. Failure to comply with the Safety requirements may lead to immediate disconnection. No connection shall be made to the permanent installation without the prior approval of the Employer's Agent and the Work Manager.

No guarantees of power supply quality are given and power supply breaks of some duration may occur without warning. The Contractor shall make arrangements at his own expense to maintain continuity and quality of power. Any breakdown in power supply or reduction of power supply shall not be grounds for an extension of time or compensation.

Application for Supply

Employer:		Contractor:	
Witness:		Witness:	



A request for power shall be submitted to the Works Manager via the Employer's Agent at least two weeks before a power supply is required.

PS 5.5.3 Site Office, Store and Housing

An area will be made available by the Works Manager for the Contractor's site offices, workshops and stores.

The Contractor must make the necessary arrangements with Johannesburg Water to obtain access for the vehicles and personnel he intends to employ on site.

The Contractor shall employ security staff to provide security services to his site camp and other storage areas. The Contractor will not be allowed to cut down any trees or to make any excavations on the sites for the storage yard and temporary buildings without the written permission of the Engineer.

No housing for the Contractor's employees on site is permitted under any circumstances (see PS 4.12). Therefore, the Contractor shall make his own arrangements to house and transport contracting staff. On completion of the Works, or when ordered by the Engineer, the Contractor shall remove all temporary buildings and latrines and restore the Site to a clean and sanitary condition to the satisfaction of the Engineer and rehabilitate the area in accordance with the EMP.

PS 5.5.4 Crane and Lifting Equipment

Crane and lifting equipment is not available on the site.

PS 5.5.5 Telephone Facilities

The Contractor will be responsible for arranging his own telephone facilities and will be responsible for all costs relating thereto.

PS 5.5.6 Ablution Facilities

Ablution facilities are not available on site. The Contractor shall therefore make the necessary arrangement to provide these facilities. Chemical serviced toilets shall be the minimum acceptable standard as indicated in the Environmental Specifications. These must be placed in a position to be approved by the Employer's Agent. The facilities must be to the Employer's Agent's approval and must be maintained in a clean and sanitary condition.

Employer:		Contractor:	
Witness:		Witness:	



PS 5.5.7 Storage Facilities

Storage are not available on site. The Contractor shall therefore make the necessary arrangement to provide these facilities. The facilities must be to the Employer's Agent's approval and must be maintained in a clean and sanitary condition.

The Contractor shall make his own arrangements to secure the facilities.

PS 5.6 Site Facilities Required

PS 5.6.1 Facilities for the Employer's Agent

No special facilities are required by the Employer's Agent. However, the conservancy tank will be required to be emptied on a regular basis by the Contractor. A BoQ item has been provided for this work.

PS 5.6.2 Name boards

Two name boards shall be erected and the boards shall comply with the format and size as directed by the Employer's Agent. The Name boards shall be erected within a month of the Letter of Award.

No other name board other than those stated above shall be allowed. The Contractor shall remove the boards from the Site of Works on completion of the Contract.

PS 5.6.3 Protective Clothing

The Contractor shall provide three sets of safety helmets, safety jackets and rubber/safety boots of acceptable quality for the exclusive use of the Engineer and his staff subject to approval by the Engineer.

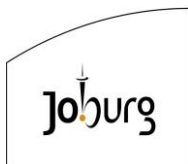
The Contractor is not obligated to provide Personal Protective Equipment for the Employer's Agent.

PS 5.6.4 Facilities for the Contractor

The Contractor will be permitted to establish a stores yard and to erect presentable temporary buildings for the storage of materials and for offices and latrines, all of which shall be neatly fenced. The fence must be sturdy, covered with diamond mesh wire and fitted with a lockable vehicle entrance gate and shall be at least 2 m in height.

The Contractor shall make his own arrangements to secure the facilities provided.

Employer:		Contractor:	
Witness:		Witness:	



The Contractor will not be allowed to cut down any trees or to make any excavations on the sites for the storage yard and temporary buildings without the written permission of the Employer's Agent.

Upon completion of the work in terms of this Contract, the site must be cleared of all structures, concrete slabs and waste. The area is to be rehabilitated according to the Specification.

The tendered sums for as scheduled by the Employer's Agent, whether grouped or individually, shall include all costs for the installation, maintenance and removal of the fencing as specified, in addition to all other facilities specified and as required by the Contractor for his own purposes.

The Contractor will be permitted to establish a stores yard and to erect presentable temporary buildings for the storage of materials and for offices and latrines, all of which shall be neatly fenced. The fence must be sturdy, covered with diamond mesh wire and fitted with a lockable vehicle entrance gate and shall be at least 2 m in height.

Although the security of the Works is outsourced by Johannesburg Water to a security firm, the Contractor shall make his own arrangements to secure the facilities provided.

No employees, apart from a security guard, may be housed on the Site of the Works. The Contractor must make the necessary arrangements with Johannesburg Water to obtain daily access for the vehicles and personnel he intends to employ on site.

The Contractor will not be allowed to cut down any trees or to make any excavations on the sites for the storage yard and temporary buildings without the written permission of the Engineer.

Upon completion of the work in terms of this Contract, the site must be cleared of all structures, concrete slabs and waste. The area is to be rehabilitated according to the Specification.

The tendered sums for as scheduled by the Engineer, whether grouped or individually, shall include all costs for the installation, maintenance and removal of the fencing as specified, in addition to all other facilities specified and as required by the Contractor for his own purposes

Employer:		Contractor:	
Witness:		Witness:	



PS 5.6.5 Waste Disposal Sites

The Contractor shall make his own arrangements for solid and liquid waste disposal. Disposal shall take place at an approved site. No approved sites are available within the Driefontein Works for the disposal of any waste material.

PS 5.7 Site Usage

Access to the Site can be obtained via the main gate to the North of the treatment works which is controlled by a security company appointed by Johannesburg Water. No restriction on access to the Site of Works will be placed on persons or vehicles involved with the execution of the Works. All traffic on Site shall be restricted to the maximum speed of 40 km/h and vehicles must be driven by licensed drivers with extreme caution.

The Contractor shall be required to report daily to the Employer's Agent's personnel on the Works.

The Contractor's staff shall be identified by either clothing or an identification tag, which shall be displayed when entering the Site of Works.

Access is to be made available to Johannesburg Water's employees to any portion of the Site whenever required.

The Contractor shall be responsible for the closing of all gates on roads and tracks used by him or his employees.

PS 5.8 Permits and Wayleaves

All required permits & wayleaves must be obtained by the Contractor before work in affected areas may commence.

Work permits for areas of the Works in operation shall be obtained from the Works Manager and shall be area specific, e.g. working in a specific area at the Head of Works and submitted to the Works Manager for approval and signature.

As the Contract shall require the removal of equipment from Site, the Contractor shall acquire permits as required by the Employer.

No wayleaves are envisaged under the Contract. The Works called for under this Contract shall be executed within the works site boundaries.

Employer:		Contractor:	
Witness:		Witness:	



PS 5.9 Alterations, Additions, Extensions and Modifications to Existing Works

The Contractor must ensure necessary resources and equipment and safety procedures are included in the tender price to carry out this work under the above limitations and shall include the provision of temporary works.

All proposed interruptions and tie-ins to the existing treatment process shall be discussed and agreed with the Employer's Agent and the Works Operational staff. Where necessary, detailed method statements will be required to be provided. Allow four weeks for approval of method statements.

PS 5.10 Water and Electricity for Construction Purposes

The responsibility lies with the Contractor to negotiate all costs and necessary connections that might be required during the execution of the works as set out in Clause PSA 4.2 of Portion 2. All connections will conform to the requirements of Johannesburg Water and costs applicable will be paid by the Contractor.

PS 5.11 Survey Control and Setting out of the Works.

The Contractor shall be responsible for the construction of survey beacons and the setting out of the Works in accordance with the co-ordinates indicated on the construction drawings.

PS 5.12 Accommodation and Care of Employees

No employees, apart from security guards, may be housed on the Site of Works. Although the security of the Works is outsourced by JW, to a security firm, the Contractor shall make his own arrangements to secure the facilities provided for under the Contract.

The Contractor must make the necessary arrangements with Johannesburg Water to obtain daily access for the vehicles and personnel he intends to employ on site..

PS 5.13 Marking

All plant including steel piping and specials delivered under this Contract shall have painted or marked thereon or on the container the relative item number given in the Bill of Quantities.

Employer:		Contractor:	
Witness:		Witness:	



PS 5.14 Off-Loading, Stacking and Liability for Breakages

The Contractor will be required at his own expense to make all arrangements for off-loading and carefully stacking all plant delivered under this Contract at the Site of the Works. The off-loading and stacking shall be carried out strictly in accordance with the requirements of the Employer's Agent so as to permit a thorough and careful examination and testing of all items for breakages, fractures, etc. and any routine maintenance during storage.

The Contractor shall be fully responsible for the protection of all plant delivered by him to Site but still in storage, against damage by water, weather, fire and any other interference until such time as it is erected and installed, put into satisfactory operation and accepted by the Employer as complete.

PS 5.15 Storage

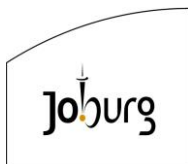
Facilities for storage at Site for plant is not available on the Treatment Works and the Contractor shall therefore make his own arrangements for any off-site storage which may be required for plant which become available before installation thereof can be commenced. Tenderers shall state in their tenders what the cost of such off-site storage will be.

Should the Contractor claim payment of a portion of the value of some or all of the plant held in off-site stores, the items concerned must be clearly marked: "The property of Johannesburg Water" and a certificate to this effect shall accompany his claim detailing the items and serial numbers included in his claim as well as the street address of the store where the plant is held. In addition, a certificate must also be furnished by the company with whom the plant has been insured in terms of the requirements of Clause 8.6 of the General Conditions of Contract, in which it is certified that the plant for which the Contractor is claiming payment is fully covered by the insurance policy concerned while the plant is stored away from the Site (street address of store to be stated)...

PS 5.16 Inspection at Site

All plant will be carefully examined upon delivery at the Site by the Employer's Agent's representative and all items showing defects or damage of any description shall be laid aside as not being in accordance with the requirements of the Contract and these shall be removed and replaced by the Contractor at his own cost.

Employer:		Contractor:	
Witness:		Witness:	



PS 5.17 Temporary Housing, Stores, etc.

The Contractor shall provide and maintain at his own cost all sheds of a temporary nature necessary for the accommodation and proper protection of plant from damage or loss. These are to be erected only on sites which shall have been approved by the Employer's Agent and they shall be removed as soon as their necessity ceases and the site thereof restored to its original condition and the ground left clean and sanitary.

PS 5.18 Management Meetings

Meetings will be held every month with the first meeting called the site handover meeting. The Contractor will be supplied with an appropriate agenda for the management meetings and meetings will be chaired by the Employer's Agent or his duly appointed representative. The Employer's Agent or his duly appointed representative will be responsible for issuing of the minutes.

PS 6 MANAGEMENT OF THE WORKS

PS 6.1 Applicable SANS 1921 Standards

Although not bound in or issued with this document, the following SANS 1921 Construction and Management Requirements for Works Contracts as approved by the Council of the South African Bureau of Standards shall apply to this Contract. The Contractor shall be in possession of these Standards and shall keep a copy of it on site for reference by him and the Employer's Agent for the duration of the Contract.

SANS 1921 Part 1: General Engineering and construction works.

SANS 1921 Part 5: Earthworks activities which are to be performed by hand.

SANS 1921 Part 6: HIV/AIDS awareness

These Specifications are not issued with this volume but are available at the Contractor's expense from: Standards South Africa. Details are given in Section PS 5.1 above.

PS 6.2 Planning and Programming

An initial programme in terms of the Clause 5.6 of the GCC (2015), complete with a cash flow budget for the execution of the works must be made available to the Employer's Agent for approval within 14 days after the receipt of the Letter of Award.

Employer:		Contractor:	
Witness:		Witness:	



Aspects that will require co-ordination with the Employer must be indicated clearly and provision must be made for it in the programme.

The Employer's Agent retains the right to alter, as circumstances may require, the sequence in which installation is to be executed. Such alterations shall only be made after consultation with all parties concerned.

The programme shall be in the form of a gant chart and shall clearly show the anticipated quantities of work to be performed each month, together with the manner in which the listed plant is to be used, as well as the cash flow for the various sections of work. The Contractor must take cognisance of the following when developing the programme:

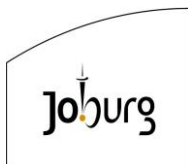
1. Sequence of the works for the relevant works area.
2. Target dates for the tasks identified in sequence of the works for the relevant working areas.
3. Materials requirements.
4. Construction Plant to be used.
5. Services affecting construction.
6. Any factors that could affect construction progress after commencement.

No deviation from the approved sequence of construction shall be accepted without prior written approval.

No work of a permanent nature may be executed before the programme has been approved by the Employer's Agent.

All method statements shall be approved by the Employer's Agent before commencement of construction. In order to minimize the impact on traffic, pedestrians and business the Contractor will be required to segment the works in such a manner that no portion of the works is more than one day ahead of the following position i.e. trenches cannot be excavated more than one day ahead of pipe laying, pipes more than one day in advance of manhole construction and finishing off etc. These segments of the works shall be clearly defined in the Contractor's method statement for each work area.

Employer:		Contractor:	
Witness:		Witness:	



If, during the progress of the work, the quantities of work performed per month fall below those shown on the programme, or if the sequence of operations is altered, or if the program is deviated from in any other way, the Contractor shall, within one week after being notified by the Employer's Agent, submit a revised programme.

If the programme is to be revised by reason of the Contractor falling behind his programme, he shall produce a revised programme showing the modifications to the original programme that are necessary to ensure completion of the Works or any part thereof within the time for completion. Any proposal to increase the rate of work shall be accompanied by positive steps to increase production by providing more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the programme or revised programme shall be sufficient reason for the Employer to take steps as provided for in the GCC (2015).

The approval by the Employer's Agent of any programme shall have no contractual significance other than that the Employer's Agent would be satisfied if the work is carried out in accordance to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Employer's Agent to instruct the Contractor to vary the programme should circumstances make this necessary.

Where the Contractor's programme indicates completion beyond the official contract completion date, and the programme is accepted by the Employer's Agent, such acceptance shall in no way whatsoever indicate the Employer's Agent's acceptance of an extension to the contract period. Nor shall it be acceptable in terms of Clause 5.6.5 of the GCC (2015) as notification of an intention to claim. It shall, however, indicate that the Contractor has taken due cognizance of the completion date and of the consequent possible application of penalties.

PS 6.3

Planning

The Contractor shall ensure that he delivers goods and services timeously, to not unnecessarily delay other contractors, service providers and suppliers.

Employer:		Contractor:	
Witness:		Witness:	



PS 6.4 Programming

It will be an explicit requirement of the contract that this programme is updated monthly and submitted to the Employer's Agent at least two working days prior to the monthly site progress meeting. The programme shall at minimum contain:

PS 6.4.1 Time Scale Minimum

1. Days, where the period does not exceed three months.
2. Weeks, where the project period exceeds three months.
3. Months, where the period does not exceed one year.
4. Years, where the project period exceeds one year.

PS 6.4.2 Tasks

Where phases or stages are anticipated, this shall be the highest level of division and all tasks related to the successful accomplishment of that phase of the area shall be grouped. Resources allocation and task dependency shall be indicated.

PS 6.4.3 Start and Finish Dates

All tasks shall have specific start and finish dates.

PS 6.4.4 Critical Path

All tasks forming the programme line that will establish any delays in the overall Contract Period shall be clearly indicated and an indication of their sensitivity characteristics shall be provided.

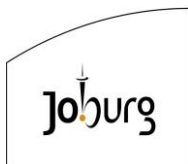
PS 6.4.5 Progress Tracking

The Contractor shall be required to periodically indicate progress per task graphically and on a percentage basis.

PS 6.4.6 Non-working Time

South African public holidays, weekends and the local traditional annual builder's break shall be incorporated in the programme.

Employer:		Contractor:	
Witness:		Witness:	



PS 6.4.7 Sequence of the works

As per Clause 5.6.1 of the General Conditions of Contract the Contractor shall submit for approval to the Employer's Agent, within the time stated in the Contract Data, a detailed programme showing the order of, procedure and method in which he proposes to carry out the Works and as well as his method of measurement of progress.

Details of certain mechanical, electrical, control and instrumentation equipment, which will have an influence on the final design of certain components and drawings thereof of some of the civil works to be constructed under this contract. The Contractor will, therefore, be required to take this into account in drawing up his programme.

The Contractor shall, whenever required by the Employer's Agent, furnish for his information particulars in writing of the Contractor's arrangements for the carrying out of the works and of the plant and temporary works that the Contractor intends to supply, use or construct as the case may be. The submission to and approval by the Employer's Agent of such programme, or the furnishing of such particulars will not relieve the Contractor of any of his duties or obligations under the contract.

The Tenderer shall submit with his tender separate management and supervisory organisation charts and supervisory and labour histograms as well as an estimated cash flow for the project.

PS 6.4.8 Software Application for Programming

The construction programme shall be completed in Microsoft Office Project Professional 2010 or compatible software. It shall show the activities planned start dates, planned end dates and planned durations. The construction programme and updated versions thereof shall be made electronically available to the Employer's Agent.

The programme shall be costed in accordance with the Bill of Quantities and resourced accordingly.

PS 6.5 Methods and Procedures

The methods and procedures for the execution of the works shall be in accordance with the standard specifications and the variations and additions thereto.

The Contractor will advise in his tender the methods and procedures that he proposes in performing the Works. These methods and procedures shall not be deemed as terms

Employer:		Contractor:	
Witness:		Witness:	



of the Contract. The Contractor is also allowed to change his methods and procedures as he sees fit subject to the change being approved by the Employer's Agent. Methods and procedures will not vary the specification and cannot be used to provide qualifications to the proposed agreement. The intention of the method statement is to provide the Employer's Agent and the Employer with information as how he proposes to perform the said works.

PS 6.6 Quality Plans and Control

In addition to guidelines set out in GCC 2015 Clause 7, the Contractor will furnish the Employer's Agent with a Quality Assurance and Control Plan that incorporates all of the requirements of this specification within three weeks of the Letter of Award of the contract. The onus to produce work that conforms in quality and accuracy of detail to the requirements of the specifications and drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality-control system and provide experienced personnel, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the works at all times.

All material, plant and equipment shall be of the best quality available and shall, where applicable, comply with the relevant standard specifications of the SANS. In cases where no specification of the SANS exists, the relevant British, German or American specifications will be applicable as determined by the Employer's Agent. The latest amendments of these specifications shall apply.

The Contractor shall submit for the approval of the Employer's Agent and before any orders are placed, the names of the firms from which he proposed to obtain his supplies of materials and manufactured articles.

He shall also supply samples as and when required by the Employer's Agent.

The Employer's Agent may also, in exercising the powers vested in him, order the Contractor to remove all or any of the material and equipment which, in his opinion, is of an inferior quality and to replace them with proper materials or equipment at his own expense.

The cost of supervision and process control will be deemed to be included in the rates tendered for the related items of work.

Employer:		Contractor:	
Witness:		Witness:	



On completion and submission of every part of the Works to the Employer's Agent for examination, the Contractor shall furnish the Employer's Agent with proof of quality in the form of a data pack containing measurements and levels to indicate compliance with the scope of work.

Notwithstanding anything contained in this document, nor any examination of the Works by the Employer's Agent, nor any tests carried out, nor any approvals granted (verbally or in writing), nor any consent that may have been given, either directly or implied, nor anything that may be construed to the contrary, the Contractor shall remain fully and solely accountable for correctly setting out, founding and constructing the Works, and for compliance with the specifications and the drawings.

PS 6.7 Accommodation of Traffic on Public Roads Occupied by the Contractor

The Contractor is responsible for pricing traffic accommodation in his tender if applicable. The Contractor, in understanding his site operations, may require traffic accommodation and therefore will have to comply with prevailing local and /or national guidelines in this regard. The Contractor shall make applications to the relevant authorities for such permissions. The timing and contractual risk of such applications shall be for the Contractors account. The Employer's Agent, without prejudice, may assist in this regard.

PS 6.8 Other Contractors on Site

During the course of the contract, other contractors may be involved in construction projects within and in the vicinity of the site, which may be inter-related to the work being undertaken on this contract.

The Contractor shall cooperate with other such contractors and shall provide them with all reasonable access to enable them to carry out their work. Access may be required, from time to time, by these contractors and the Contractor shall take all reasonable steps to accommodate such requirements.

No claims, related to works being carried out by other contractors, will be entertained by the Employer.

Employer:		Contractor:	
Witness:		Witness:	



PS 6.9 Testing, Completion, Commissioning and Correction of Defects

PS 6.9.1 General

The onus is on the Contractor to produce work that will conform in quality and in accuracy of detail to the requirements hereinafter specified. The Contractor shall clearly understand that it is not a duty of the Employer's Agent or his representative to act as foreman or surveyor on the Works.

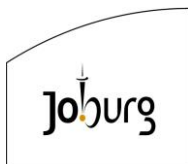
The Contractor shall, at his own expense, provide an experienced Site Agent, foremen and surveyors together with all transport, instruments and equipment for supervising, checking and controlling the work.

The act of passing any completed work for payment by the Employer's Agent shall not be construed as signifying approval or acceptance thereof. Failure on the part of the Employer's Agent to reject any defective work or material shall not in any way relieve the Contractor of his obligations under the Contract, nor prevent later rejection when such work or material is discovered. In this regard, it is emphasised that notwithstanding anything contained in this document, any tests that may have been carried out, any consent that may have been given, either directly or implied, and anything that may be construed to the contrary, the Contractor shall remain fully and solely accountable for the Works and for compliance with the specifications and the drawings.

The Contractor shall, when submitting any work to the Employer's Agent for examination, satisfy himself by testing, measurement and otherwise as may be necessary that the work does in fact meet the requirements of the Specifications. This information shall be submitted with the Contractor's request for examination and the Employer's Agent shall decide on the number and type of tests, measurements, etc. required to enable him to judge the quality of the work. The submission of this information shall in no way diminish the authority of the Employer's Agent to conduct such tests as he may consider necessary in order to determine the quality of the work performed by the Contractor, nor will he be bound to take account of the Contractor's tests, measurements, etc. should he consider these to be either incorrect or not representative.

Quality control and completion tests shall be in accordance with the relevant standard and amended specifications and additional specifications.

Employer:		Contractor:	
Witness:		Witness:	



The tendered rates shall include the cost of all control testing, and no additional claims shall be entertained in this respect. This includes the supply of all necessary equipment required for these tests and/or inspections by the Employer's Agent.

Should the control testing performed or arranged by the Contractor not meet the requirements of the specification, the Employer's Agent shall have the right to conduct all such testing at the Contractor's expense.

In such a case, the Employer's Agent shall be given at least 72 hours' notice when testing is required. No claims, however, shall be considered in respect of delays resulting from such testing.

Whenever the Employer's Agent conducts control testing on behalf of the Contractor, charges shall be levied. The Employer's Agent may, from time to time, carry out his own check tests on the work performed by the Contractor. Should such check tests show the Contractor's control testing to be such that the quality of the Contractor's work can be called into question, then the Employer's Agent may order further check tests to be carried out on work already completed by the Contractor.

All costs associated with such check tests shall be for the Contractor's account as shall the costs of any other check test whose results do not comply with the specification.

Where the Employer's Agent is required to witness certain control tests, such as the pressure testing of pipelines, and the results of such tests do not comply with the specifications, then charges will be levied against payments to the Contractor in order to recover the costs of the Employer's Agent's presence at the test.

The requirements of the Local Authority, insofar as their witnessing of tests, shall be adhered to.

PS 6.9.2 Performance Tests

General

The Contractor shall carry out all tests required to satisfy the Employer's Agent that the plant is capable of performing the duties prescribed in the Specification, and shall allow for this in his Tender. Any defects detected during the testing operation shall be made good by and at the expense of the Contractor, including all additional costs incurred by the Employer and his representatives and the Employer's Agent. These tests shall be carried out to certify that the plant, as installed on Site is operating in accordance with

Employer:		Contractor:	
Witness:		Witness:	



the specified and guaranteed hydraulic, mechanical and electrical performance of the equipment and must be witnessed by the Employer's Agent. Three copies of reports on all tests shall be submitted within one week after the tests have been carried out.

The Employer's Agent will be entitled to be present at such test and the Contractor shall give the Employer's Agent reasonable notice of the dates of the test.

PS 6.9.3 Factory Tests

The Contractor shall carry out tests in accordance with the requirements of the recognised SANS, IEC or BS standards. Comprehensive details of the standards used and to which equipment the tests will be applicable shall be supplied. Such additional tests in the manufacturer's "Works", which in the opinion of the Employer's Agent are necessary to determine that the Contract work complies with the requirements of the Specification, whether under test conditions or in normal service, may be called for at no additional cost to the Employer.

PS 6.9.4 Tests on Site

All Site tests shall normally be carried out in the presence of, but always to the satisfaction of the Employer's Agent and at such times as he may reasonably require. The Contractor shall provide all the relevant test equipment and bear the costs of all testing to be done. All equipment must be tested to ascertain whether it performs its intended duties in a manner as specified.

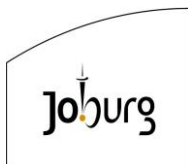
PS 6.9.5 Accepted Laboratories

Unless otherwise stated in a specification that forms part of this Contract, only the testing laboratories of the South African Bureau of Standards, the Council of Scientific and Industrial Research, the relevant Government Departments and Local Authorities will be accepted as approved laboratories in which tests or design work required in terms of a specification may be carried out.

PS 6.9.6 Methods of Testing

Unless otherwise prescribed in a specification that forms part of this Contract, all testing shall be carried out and interpreted in strict accordance with the methods specified in relevant SANS, IE or BS Specification(s).

Employer:		Contractor:	
Witness:		Witness:	



PS 6.9.7 Inspection of Works by Local Authority

The Contractor shall afford inspectors from the Local Authority reasonable access to all parts of the site. The Employer's Agent in the presence of representatives of the Local Authority will generally undertake testing of the works. Accordingly, the Contractor shall notify the Employer's Agent at least 24 hours in advance as to when the various sections of work will be available for testing. The Employer's Agent may require the Contractor to submit a weekly schedule of times, based on his programme, that he envisages work to be available for testing.

PS 6.9.8 Commissioning of Equipment

Before starting up any section of the mechanical plant or filling tanks and sumps with liquid, the Contractor shall clean out the tanks or structures or, if necessary, arrange with the Main Contractor to remove any building rubble from the structures, check that all nuts are tightened correctly, that all equipment is complete and ready for start-up, that the plant has been installed correctly and that three copies of the operating manuals have been handed over.

PS 6.9.9 Servicing and Defects Liability Period

Without limiting in any way, the obligations or responsibilities of the Contractor for maintenance, the Contractor shall make regular quarterly visits to the site during the Defects Liability Period to supervise the maintenance of the equipment. During these visits, he shall make all adjustments and do everything necessary to ensure the proper running of the plant. After each supervising visit to the Site, the Contractor shall submit to the Employer's Agent a report on:

- a. The condition of the equipment and the servicing work carried out, and
- b. Any adjustments which may have been made.

The last servicing visit shall be carried out during the last week of the Defects Liability Period during which visit the Contractor's representative shall carry out full checks on the equipment to ensure that the alignment, clearances and any other setting are correct, and he shall carry out any adjustments necessary. The Defects Liability Period will not terminate until the Employer's Agent is satisfied that the Contractor has finally checked the adjusted equipment.

Servicing will be measured as scheduled by the number of visits.

Employer:		Contractor:	
Witness:		Witness:	



The dates for the service visits shall be agreed with the Employer's Agent during the final inspection prior to issue of the certificate of completion. T

he tendered rate shall exclude the cost of providing lubricants but shall cover the cost of servicing visits and operation as specified above.

PS 6.9.10 Operating and Maintenance Instructions

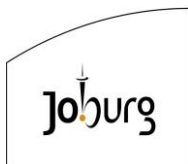
Before completion of the testing of the plant, the Contractor shall provide the Employer with adequate and complete working, operating and maintenance instructions in triplicate, with the necessary drawings and diagrams clarifying the instructions.

The Contractor must compile and provide three copies of a complete operation manual for the equipment provided. This manual shall contain comprehensive information as set out hereafter.

- a. Drawings of the equipment detailing all part numbers and materials.
- b. A complete spare list.
- c. A lubrication and maintenance schedule showing all maintenance and lubrication operations, their recommended frequency and the grades of lubricant required.
- d. A maintenance brochure describing all maintenance, adjustment and replacement procedures.
- e. Operating manual describing the operation of the equipment with performance curves where applicable.
- f. A manual detailing all dismantling and reassembly procedures.
- g. Maintenance procedure for corrosion protection painting systems.
- h. Complete Data book of the equipment on completion of the Contract.

The Contractor shall amplify and amend such drafts until the Employer's Agent is satisfied that they will fulfil the purpose of ensuring that the Employer's staff is adequately instructed to operate and maintain the works. Once the drafts have been

Employer:		Contractor:	
Witness:		Witness:	



approved by the Employer's Agent, the Contractor shall prepare three suitably bound copies and deliver them to the Employer's Agent.

The manual must be specific for the plant supplied and all extraneous material not connected with the relevant plant shall be deleted, leaving the manual as a comprehensive coherent document, bound in a professional way such that it may be used frequently without falling apart. Standard pamphlets may be supplied as addenda, bound separately in a good quality file to serve as a reference but will not be allowed as part of the main manual. The Contractor shall allow in his tender price for the supply of these operating and maintenance instructions.

In addition to the above, the Contractor, and where necessary the suppliers of equipment, will be required to instruct the works personnel in the proper and correct operation of the equipment installed for a maximum period of 14 days. The timing of this training will be determined in consultation with the Employer and the Employer's Agent.

The manuals shall be drawn up in English.

PS 6.9.11 Completion, Commissioning and Correction of Defects

The tendered rates shall include the cost of all activities and tests that may be required in ensuring proper completion and commissioning of the Works, and no additional claims shall be entertained in this respect. This includes the supply of all necessary equipment required for such and / or for inspections by the Employer's Agent and any other relevant authority.

Any defect in the Works shall be corrected to the satisfaction of the Employer's Agent.

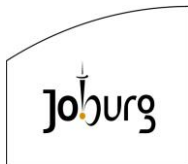
PS 6.10 Recording of Weather and Abnormal Rainfall

If during the time for completion of the works or any extension thereof, abnormal rainfall or wet conditions shall occur, then an extension of time in accordance with Clause 5.12 in GCC 2015 hereof shall be granted by the Employer calculated in accordance with the formula given below for each calendar month or part thereof.

$$V = (Nw - Nn) + ((Rw - Rn)/X)$$

V	Extension of time in calendar days in respect of the calendar month under consideration.
---	--

Employer:		Contractor:	
Witness:		Witness:	



Nw	Actual number of days during the calendar month on which a rainfall of Y mm or more has been recorded.
Nn	Average number of days, as derived from existing rainfall records, on which a rainfall of Y mm or more has been recorded for the calendar month.
Rw	Actual rainfall in mm recorded for the calendar month under consideration.
Rn	Average rainfall in mm for the calendar month as derived from existing rainfall records.

For purposes of the contract Nn, Rn, X and Y shall have those values assigned to them in the Contract Data and/or the Specification.

The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for part of a month to be calculated using pro rata values of Nn and Rn.

This formula does not take account of flood damage that could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.

The factor (Nw Nn) shall be considered to represent a fair allowance for variations from the average number of days during which rainfall exceeds Y mm. The factor (Rw Rn)/X shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

The following average rainfall figures are applicable:

Information Source: South African Weather Service,
Pretoria, Tel.: 012 367 6014

Y = 10 mm/24-hour day

X = 20 mm

Employer:		Contractor:	
Witness:		Witness:	



STATISTICAL INFORMATION: MIDRAND: LATEST		
Month	RAINFALL	
	<u>Nn</u>	<u>Rn</u>
	<i>Actual number of days during the calendar months in which a rainfall of more than Y mm has been received</i>	<i>Average monthly rainfall</i>
January	2.4	140.7
February	1.3	69.4
March	0.9	45.4
April	0.2	32.6
May	0.3	15.9
June	0.0	6.0
July	0.0	0.8
August	0.0	3.2
September	0.1	5.4
October	1.3	48.9
November	1.2	63.7
December	1.9	107.1
TOTAL	9.5	539.1

The Contractor shall be permitted to take his own rainfall measurements on site subject to the Employer's Agent's approval, but access to the measuring gauge(s) shall be under the Employer's Agent's control. The Contractor is to provide and install all the necessary equipment for accurately measuring the rainfall as well as to provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost.

PS 6.11 Format of Communications

All communication shall be in writing and any verbal agreements shall only be binding once confirmed and agreed to in writing. Communication by registered post, email or facsimile is acceptable.

The Contractor and the Employer shall follow the correct communication protocol applicable to a normal electrical engineering contract. The Contractor shall not put into effect any instructions received by him, other than through such protocol.

Employer:		Contractor:	
Witness:		Witness:	



Should the Contractor be unclear in this regard, he shall obtain a ruling from the Employer's Agent.

Contractor to provide the following reporting on a monthly basis, Local resources reporting shall include but not be limited to;

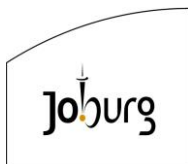
- a. Number (labourers, SMMEs and suppliers)
- b. Labour:
 - Process of recruitment, selection and appointment
 - Name and surname
 - Gender and age
 - Certified copies of ID not validated older than three months.
 - Proof of Compliance with COID Act, which will be valid for the duration of the Construction period.
 - Contact details (address, telephone numbers and ward number)
 - Contract signed
 - Duration of appointment
 - Commencement date
 - Termination date
 - Activity performed
 - Classification (Skilled, semi-skilled or unskilled (labourer))
 - Time or task rate
 - Allocated Supervisor/foreman
 - Health and Safety induction undergone
 - Training provided:

Trainer details

Type of training

Duration of training

Employer:		Contractor:	
Witness:		Witness:	



Cost of training

Attendance register

- Performance rating (good, fair, poor):

For training

Work execution

Health and safety awareness

- Additional training or supervision to be provided
- Proof of Monthly and cumulative payments, including salaries or wages
- UIF Returns
- Certified copy of the contractual agreement not validated older than three months.

c. SMMEs

- Process of recruitment, selection and appointment
- Company name
- Company contact details (address, telephone numbers and ward number)
- Company registration (also VAT and TAX)
- Company age (months or years)
- Type of company
- Company size (number of permanent employees)
- Name and surname of owner
- Owner contact details (address and telephone numbers and ward number)
- Gender, age and PDI status
- Contract signed
- Certified copies of ID
- Proof of Compliance with COID Act, which will be valid for the duration of the Construction period.

Employer:		Contractor:	
Witness:		Witness:	



- Duration of appointment:

Commencement date

Termination date

- Resources provided (labour and/or plant and/or materials)
- Activity performed
- Classification
- Time or task rate
- Allocated Contractor Supervisor/foreman
- Health and Safety induction undergone
- Training provided:

Trainer details

Type of training

Duration of training

Cost of training

Attendance register

- Performance rating (good, fair, poor):

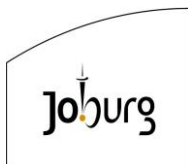
For training

Work execution

Health and safety awareness

- Additional training or supervision to be provided
- Proof of Monthly and cumulative payments , including salaries or wages
- UIF returns
- Certified copy of the contractual agreement not validated older than three months

Employer:		Contractor:	
Witness:		Witness:	



d. Suppliers

- Process of recruitment, selection and appointment
- Company name
- Company contact details (address, telephone numbers and ward number)
- Company registration (also VAT and TAX)
- Company age (months or years)
- Type of company
- Company size (number of permanent employees)
- Name and surname of owner
- Owner contact details (address and telephone numbers and ward number)
- Gender, age and PDI status
- Contract signed
- Duration of appointment:
 - Commencement date
 - Termination date
- Resources provided (plant and/or materials)
- Activity performed
- Allocated liaison
- Health and Safety induction undergone
- Performance rating (good, fair, poor)
- Monthly and cumulative payments

The report format may be amended from time to time by the Employer's Agent. However, the initial format shall be finalised by the Employer's Agent in association with the Contractor.

A Daily Site Diary shall be used by the Contractor for recording day by day the state of the weather, the work done each day and full details of any circumstance which may affect the progress of the works. One original sheet and two copies shall be used for each day. The original sheet of each set of 3 pages will be retained by the Employer's

Employer:		Contractor:	
Witness:		Witness:	



Agent or his representative. The Contractor may remove the second sheet, but the third sheet shall be retained on the site until completion of the Works, when it shall be handed over to the Employer's Agent.

PS 6.12 Key Personnel

The Contractor is deemed to have in making his offer, all personnel available to perform the works entirely in the contracted time and cost. In addition, he shall comply with the prevailing Act 85 of 1993, Occupational Health and Safety Act.

The Contractor is to provide the Curricula Vitae of key personnel to be employed on the project as well as the person's position and responsibilities within the project team. The Contractor shall provide the following minimum key staff:

- a. Contracts Manager
- b. Site Agent
- c. Quality Manager/Auditor/Controller
- d. Health and Safety Officer/s; and
- e. Foremen
- f. SMME supervisor

PS 6.13 Management Meetings

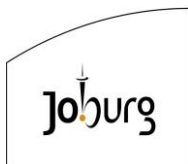
The Employer's Agent shall hold regular site meetings with representatives of the Contractor, and the Employer. Minutes of such site meetings shall be kept and distributed by the Employer's Agent. Senior Contractor management staff attendance shall be compulsory.

The Contractor shall be required to provide reporting with regard to project progress, resources (human, plant and equipment), community issues, environmental and health and safety aspects. The Contractor must include for attending technical meetings as and when required by the Employer's Agent.

PS 6.14 Forms for Contract Administration

The Contractor shall maintain a file which shall contain project information related to project progress, resources (human, plant and equipment), community issues, environmental, health and safety aspects, penalties imposed, claims lodged and outcomes, disputes and resolutions, payment and variations.

Employer:		Contractor:	
Witness:		Witness:	



The Employer shall provide all standard forms for the administration of the contract.
The Contractor shall be required to correspond on the standardized format.

PS 6.15 Daily Records

In addition to records on rainfall and weather, labour, plant, and materials, a site diary, site instruction book (both in triplicate) and safety documents are to be provided and maintained by the Contractor on site and updated daily.

The Contractor shall be required to keep a daily on-Site record activity report. The activity report shall be submitted to the Employer's Agent's Representative for signature on a daily basis. Daily records shall include all on site activities and progress made shall be kept by the Contractor. These records shall include all material deliveries for the day, personnel employed on the Site of Works, equipment delivered to site or storage and the number of man-hours for the week in question. Plant used during the on-site activities shall need to be recorded by the Contractor.

These shall be submitted to the Employer's Agent on completion of the contract.

PS 6.16 Bonds and Guarantees

The Contractor shall within the period stated in the Contract Specific Data, of this document, provide the Employer with a Surety Bond in the form of a Bank Guarantee, Bank Transfer or a Guarantee from an approved Insurance Company to the satisfaction of the Employer in the form included in the Tender Documents. The Bank Guarantee shall be for an amount equal to ten per cent (10%) of the Tender Sum, for the due and punctual fulfilment and completion of all the Contractor's obligations under the Contract. No Extension of Time or any variation of the Contract nor the termination of the Contract by the Employer in terms of GCC 2015 hereof shall in any way impair, diminish or terminate any liability to the Employer under and by virtue of such Surety Bond. The cost of the Surety Bond to be so entered into, shall be at the expense in all respects of the Contractor; the Surety Bond to be released upon issue of the Employer's Agent's Certificate of Completion of the Works, unless otherwise stated in the Contract Data.

Should the Contractor, when notified of the acceptance of his offer, fail to provide an approved Surety Bond within the stated period, then the Employer may, at his sole discretion:

Employer:		Contractor:	
Witness:		Witness:	



-
- a. Grant the Contractor a further reasonable period in which to provide the bond;
or
- b. Withdraw his acceptance of the tender, in which case the Contract shall be deemed to be void, but without prejudice to the Employer's rights to recover whatever damages he may have suffered by virtue of the Contractor's failure to fulfil his obligations.

PS 6.17 Payment Certificates

Monthly payment certificates shall be submitted by the Contractor in the format approved by the Employer's Agent. Once agreement has been reached with the Employer's Agent on the value of the certificate, the Contractor shall submit an original invoice on which payment will be made. The format will be discussed in the month preceding the first claim and will be resolved before the first payment is made.

Payment for particular items scheduled shall conform to the applicable payment clauses of the Pricing Data, Project Specifications and the Particular Specifications.

Where retention money is applicable to a Contract, the retention money shall be deducted on the invoice from the total amount for work done and then the Value Added Tax (VAT) added to calculate the total amount payable on the invoice.

If penalties are payable, they will be deducted prior to the addition of (VAT) but after the calculation of retention.

Tax invoices shall be submitted for each interim payment claim. The Contractor shall submit a provisional invoice with his payment claim as soon as possible after the date of measurement.

The tendered rates or sums shall cover the cost of drawings and instructions for anything not specially mentioned but obviously required, (e.g. all ancillaries, including all bolts, fastenings and brackets, safety guards and any work or material required for the proper installation of such equipment in complete working order), to enable the equipment as described to be installed and/or function safely and correctly as specified.

If any material on site is claimed, proof of ownership shall be provided, either by means of receipts, or by means of letters from the suppliers, stating that ownership has been transferred to the Contractor.

Employer:		Contractor:	
Witness:		Witness:	



No claims whatever for extras will be allowed on the grounds that a necessary piece of equipment or a part thereof is not specifically mentioned in the Schedule of Quantities.

Payment for "supply and delivery", "install and commission", "servicing" and "tools and spares" is respectively defined in PS 3.2, PS 5.9.3, and PS 5.9.4.

Before becoming entitled to any of the above payments, the Contractor shall lodge with the Employer's Agent three copies of a detailed invoice showing the amount claimed as well as a claim form in triplicate complete by item as scheduled in a format approved by the Employer's Agent.

Payment Certificates shall be delivered to the Employer's Agent by the 10th of each month.

PS 6.18 Foreign Exchange Risk

The provision of forward cover against foreign exchange fluctuations on the imported content of all equipment required under the contract might be required. In his Tender, the Tenderer must state the value of the imported content of each item and the applicable currencies and the exchange rates on which his tender was based.

The successful Tenderer might be required to take out forward cover on all foreign exchange transactions required in his tender for this contract, the rate applied shall be that ruling at the date of commencement of the Contract that is stated in the Letter of Acceptance.

Amounts tendered will be adjusted for foreign exchange variations up to the date of commencement of the Contract; any fluctuations after this date will be for the Contractor's account.

PS 7 FEATURES REQUIRING SPECIAL ATTENTION

PS 7.1 General Conditions of Contract (GCC)

The Contract Document is compiled in accordance with the General Conditions of Contract for Construction Works, Third Edition (2015) and Tenderers are therefore required to price the Tender accordingly.

PS 7.2 Security

The Contractor shall be responsible to provide his own security on site, as he deems necessary. The Employer shall not be held responsible for any loss or damage suffered

Employer:		Contractor:	
Witness:		Witness:	



by the Contractor, his plant, equipment, materials, Sub-Contractor or employees as a result of a security incident of any nature.

Though the security of the Driefontein Works is outsourced by JW to a security company, the Contractor shall make his own arrangements to secure the on-site facilities provided for the execution of the Contract. The Contractor's required security arrangements shall cover all his works, materials, plant and equipment and personnel.

PS 7.3 Operation of Valves

Only employees of Johannesburg Water SOC. are permitted to operate existing water valves.

Requests for isolation of any section of such reticulation shall be made to the relevant section of the local authority at least 4 working days in advance of the requirement for isolation. The Employer's Agent shall be advised of the requirement and will monitor the implementation of the request.

PS 7.4 Work Outside Normal Working Hours

The Contractor is permitted to work outside of normal working hours (07:00 to 17:00) only upon obtaining written permission from the Employer's Agent.

Should the Contractor choose to work outside normal working hours without having been ordered to do so by the Employer's Agent, permission will not be unreasonably denied but all additional costs arising out of such work shall be entirely to the Contractor's account.

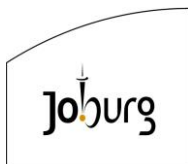
PS 7.5 Contract Award

The Contract shall be awarded to one main Contractor. It is an explicit requirement of this Contract that the work of the various disciplines be executed by competent staff and/or Sub-contractors. The Contractor will be responsible for the coordination of his own work and that of any sub-contractors.

PS 7.6 Additional Meetings

The cost of all additional meetings or inspections over and above the normal that takes place because of the Contractor not keeping to his program or because of the quality of his work will be for the account of the Contractor and will be deducted from the following payment certificate. An amount of R 5 000.00 per meeting will be paid by the

Employer:		Contractor:	
Witness:		Witness:	



Contractor to compensate for the travelling cost, time, etc. of both the Employer's Agent and the Employer.

PS 7.7 Community Liaison and Community Relations

For the purpose of this project, a community liaison officers will be required to inform the community regarding the Contractor's activities on this project.

PS 7.8 Sanitary Facilities

The Contractor shall provide his own sanitary facilities. See Clause 5.19 of the Occupational Health and Safety Specification forming part of Volume 2.

PS 7.9 Control of Pipe Manufacturing

The Contractor shall inform the Employer's Agent and the inspection authority timeously of his program and place of manufacturing so that the necessary inspections can be arranged for. Copies of all test records must be delivered to the Employer's Agent before a Certificate of Completion will be issued.

PS 7.10 Waterproofing

Where any work pierces waterproofing, installation shall be as approved. Supply all necessary sleeves, caulking and flashing required to make openings absolutely watertight. The cost of complying with these requirements shall be deemed to be included in the unit rates tendered for the items affecting the waterproofing.

PS 7.11 Local Labour

The Contractor's attention is drawn to Clause 1.4(d) of the Environmental Management Plan (Volume 2) regarding the preferential employment from local communities of labourers and where available skilled artisans.

The Contractor's shall pay Local Labour rates in accordance with the following:

GOVERNMENT GAZETTE, 17 December 2021, No. 45645. DEPARTMENT OF EMPLOYMENT AND LABOUR NO. R. 1605, LABOUR RELATIONS ACT, 1995, BARGAINING COUNCIL FOR THE CIVIL ENGINEERING INDUSTRY (BCCEI): RENEWAL OF PERIOD OF OPERATION OF THE WAGE AND TASK GRADE COLLECTIVE AGREEMENT **(OR SIMILAR BARGAINING COUNCIL THAT MAY BE RELEVANT TO THE SCOPE OF WORKS, FOR E.G. THE METAL AND ENGINEERING INDUSTRIES BARGAINING COUNCIL, OR THE**

Employer:		Contractor:	
Witness:		Witness:	



NATIONAL BARGAINING COUNCIL FOR THE ELECTRICAL INDUSTRY SA,
etc.)

and any subsequent update to the relevant Collective Bargaining Agreement, that may be gazetted by the Department of Employment and Labour or the BCCEI during the execution of this Contract.

It is expressly noted that the rates contained in the aforementioned Gazette or Collective Bargaining Agreement will apply to the Contractor or subcontractor(s) irrespective of whether the Contractor or subcontractor(s) is a member of the employer's organisations listed in the Gazette, or not.

It is equally noted that the rates contained in the aforementioned Gazette or Collective Bargaining Agreement will apply to all employees employed for the purposes of executing the Contract (and specifically those defined as local labour) irrespective of whether those employees are members of the trade unions listed in the gazette, or not.

In the absence of a relevant Collective Bargaining Agreement, the labour rates as stipulated by the City of Johannesburg shall apply.

PS 8

HEALTH AND SAFETY SPECIFICATION FOR CONSTRUCTION WORK

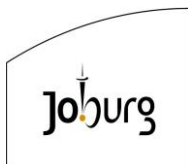
Contractors are to prepare Health and Safety Plans in accordance with Johannesburg Water's Health and Safety Specification (refer to Volume 4: Occupational Health and Safety Specification and Environmental Management Plan for Capital Investment Projects). The legal imperatives for this requirement stem from the Construction Regulations (2014), and more specifically the following:

Regulation 4(1)(a): An Employer shall prepare a documented health and safety specification for the construction work, and provide any principal Contractor who is making a bid or appointed to perform construction work for the Employer with the same.

Regulation 4(1)(d): An Employer shall take reasonable steps to ensure that each principal contractor's health and safety plan is implemented and maintained on the construction site.

Regulation 4(2): An Employer shall discuss and negotiate with the principal Contractor the contents of the health and safety plan and

Employer:		Contractor:	
Witness:		Witness:	



thereafter finally approve the health and safety plan for implementation.

Regulation 5(1): A principal Contractor shall provide and demonstrate to the Employer a suitable and sufficiently documented health and safety plan, based on the Employer's documented health and safety specification.

Regulation 5(1)(a): A client shall prepare a baseline risk assessment for an intended construction work project.

Regulation 5(1)(b): A client shall prepare a suitable, sufficiently documented and coherent site-specific health and safety specification for the intended construction work based on the baseline risk assessment contemplated in regulation 5(1)(a).

Regulation 5(1)(l): A client shall discuss and negotiate with the principle contractor the contents of the principle contractor's health and safety plan contemplated in regulation 7(1), and must thereafter finally approve that plan for implementation.

Regulation 5(1)(n): A client shall take reasonable steps to ensure that each contractor's health and safety plan contemplated in regulation 7(1)(a) is implemented and maintained.

Regulation 7(1)(a): A 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 contemplated in regulation 5(1)(b), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses.

PS 8.1 Project-Related Occupational Health and Safety Risks

According to the Construction Regulations (2014), a Health and Safety Plan "means a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified". Apart from complying

Employer:		Contractor:	
Witness:		Witness:	



with the Health and Safety Specification (Volume 2), specific attention is drawn to the identification and assessment of risks. The tendering Contractors are required to consider inter alia the following risks (where applicable):

- Excavation and safeguarding of trenches
- Collapse of the excavation walls
- Workers or onlookers falling into the excavations
- Safeguarding of deep excavations
- Working in elevated positions
- Scaffolding
- Traffic control (heavy machinery)
- Plant and machinery operation
- Working around heavy machinery
- Existing services
- Offloading of material
- Electrical Distribution boards
- Electrical Installation
- Making of steel items
- Laying of pipes
- Placing concrete
- Machine operator
- Third party exposures
- Use of portable electrical tools
- Location of site camp
- Storage and handling of material
- Storage of hazardous material
- Fire prevention and protection
- Refuelling vehicles/plant

Employer:		Contractor:	
Witness:		Witness:	

- Welding
- Handling of compressed gas cylinders

Safe work and emergency procedures need to be prepared to address the abovementioned risks.

PS 8.2 Guide to Risk Assessments

PS 8.2.1 Nine Steps to Effective Risk Assessments

Step 1: Identifying the current as well as emerging hazard, risks or exposures.

Step 2: Aim to identify major hazards, don't waste time on the minor and detail except if such hazard has the potential to repeat itself on a frequent basis.

Step 3: Involve as many people as possible in the ongoing risk assessment process especially those at risk.

Step 4: Gather all the information and analyse it.

Step 5: Look at what actually could or has occurred including non-routine operations.

Step 6: Use a systematic approach to ensure all hazards are adequately addressed.

Step 7: Assess the risks identified or the risk has occurred by taking into account the effectiveness of current as well as controls under consideration.

Step 8: Ensure the process is practical, realistic, cost and business effective.

Step 9: Always record the assessment in writing including i.e. assumptions, date and why a particular decision has been made.

PS 8.2.2 How Serious Is It?

Probability		Consequences
A	Common	1 Fatality or permanent disability.

Employer:		Contractor:	
Witness:		Witness:	

B	Has Happened	2	Major injury.
C	Could Happen	3	Average Lost Time Injury.
D	Not Likely	4	Minor Injury.
E	Practically impossible	5	Medical Treatment or less.

		Probability				
		A	B	C	D	E
Consequence	1	1	2	3	4	5
	2	2	3	4	5	6
	3	3	4	5	6	7
	4	4	5	6	7	8
	5	5	6	7	8	9
Risk rating		Action				
1 - 3 =	Serious	Immediate (within 1 week).				
4 - 5 =	High	Within 1 month.				
6 - 7 =	Moderate	> 4 weeks.				
8 - 9 =	Acceptable	No action but will consider from time to time.				

PS 9

ENVIRONMENTAL MANAGEMENT PLAN

Contractors are to adhere to the mitigation measures listed in the Environmental Management Plan (EMP) (refer to Volume 4: Occupational Health and Safety Specification and Environmental Management Plan for Capital Investment Projects). Environmental mitigation measures are actions needed to align a project implementation phase with environmental control principles, where potential impacts to the natural and social environment are prevented, minimised or remediated. Environmental safeguarding is governed by various sets of legislation, with the most noteworthy for this project constituting the National Environmental Management Act (No. 107 of 1998) and the National Water Act (No. 36 of 1998).

Cost incurred due to the above shall be included in the scheduled rates in the Pricing Data.

PS 10

HEALTH AND SAFETY AGENT AND ENVIRONMENTAL CONSULTANT

The contact details for the Health and Safety Agent and for the Environmental Consultant are:

Employer:		Contractor:	
Witness:		Witness:	



Health & Safety Agent	Environmental Consultant
Company: Johannesburg Water SOC	Company: Johannesburg Water SOC
Name: Mpho Mosia	Name: Joyce Ngobele
Contact details: 011 688 1476	Contact details: 011 688 1443

PS 11 GENERAL SECTION PAYMENT LIMITATION

The gross sum of items 8.3 and 8.4, as per SANS 1200A, may not exceed 15% of the total contract amount excluding contingencies and VAT. If the amount tendered for these items exceeds the above, the tender will be altered to the reduced amount by reducing these specific items.

PS 12 EMPLOYMENT OF LABOUR

PS 12.1 Interpretations

PS 12.1.1 Supporting documents

The Tendered Rules, Conditions of Contract, Standard, Supplementary and Specific Specifications and Construction Specifications and drawings shall inter alia be read in conjunction with this specification.

PS 12.2 Application

The provisions of this specification shall apply in respect of all workers and small, medium and micro enterprises other than the Contractor's key personnel, who are engaged on the execution of the works.

PS 12.3 Community Liaison Officer

The Project Steering Committee will identify a Community Liaison Officer (CLO) to act as a liaison between the Contractor and the community. The CLO will, amongst other things, ensure that the employment of local labour proceeds smoothly.

All decisions regarding identification and hiring of labour, relieving labour of their duties, local problems and any other matters of local importance related to the Contract, will be made in consultation with the CLO.

PS 12.4 Appointment, Office and Replacement of CLO

The CLO will be appointed for the duration of the construction phase of this Contract.

Employer:		Contractor:	
Witness:		Witness:	



The CLO will occupy his own office in the Contractor's camp from where he will fulfil his duties to identify, screen and nominate labour from the community in accordance with the Contractor's requirements.

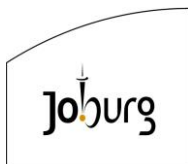
The CLO will communicate with the Contractor daily regarding labour requirements.

Should it become apparent that the appointed CLO fails to meet his duties, he may be relieved from his duties and replaced by a new CLO in consultation and approval with the Employer's Agent.

PS 12.5 Duties of the CLO

- They will be available on site daily between the hours of 07:30 and 18:30, and at other times as the need arises.
- They will consult with the Contractor and the Employer's Agent daily to determine the labour requirements regarding number and skills, to identify possible labour disputes, and to inform local labourers timeously when they will be relieved.
- They will be responsible for screening of candidates, informing them of their conditions of temporary employment and to ensuring their timeous availability.
- They will ensure that all workers who are involved in activities where productivity rates have been agreed, are fully informed regarding the expected level of productivity for the given tasks to be assigned as part of this Contract.
- They will attend disciplinary proceedings to ascertain that hearings are fair and reasonable.
- In consultation with the Contractor, They will determine the needs of the local labour for relevant technical training, and will be responsible for the identification of suitable trainees. They will also be required to attend some of the training sessions.
- They will keep a daily written record of his interviews and community liaison.
- They will attend the monthly Contractual site meetings to report about the local community labour involvement as well as any other relevant issues that need attention.

Employer:		Contractor:	
Witness:		Witness:	



-
- They will act as a liaison officer between the Contractors on site and the local community through the project committee.
 - They will be involved in all SMME related matters (Contracts, terminations etc.)

PS 12.6 Scheduled Item

PS.12.6.1a Community Liaison Officers

Unit: Provisional Sum

The tendered sum shall include full compensation for the provisions of the CLO including salary (market related), provision of an office, transport costs, the cost of typing, printing and distributing notices, and for all other obligations to perform their job.

Employer:		Contractor:	
Witness:		Witness:	



PORTION 2: VARIATIONS & ADDITIONS TO THE STANDARDISED SPECIFICATIONS

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

SANS 1200A: CIVIL ENGINEERING CONSTRUCTION: PRELIMINARY AND GENERAL

This portion of the specification covers variations and additions to the SANS 1200 Standardised Specifications. The clause numbers hereunder consist of a prefix, such as "PSA" indicating an amendment to SANS 1200 A and a number that represents the number of the clause in SANS 1200.

PSA 3 MATERIALS

PSA 3.1 Quality

Add the following to this sub-clause:

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

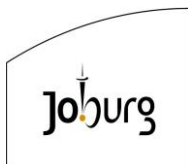
Materials specified as being to the approval of a Standards Bureau shall bear the official mark of the appropriate standard.

Samples of concrete aggregates and pipe bedding material are to be delivered to an approved laboratory.

PSA 3.3 Materials Supplied by Others

Where materials are supplied by others, the Contractor shall take delivery of such materials on site and shall be responsible for the safekeeping of the same from the time of taking delivery to the time of building into the Works or the time of return to the supplier. The Contractor shall return to the supplier any materials not used on the Contract.

Employer:		Contractor:	
Witness:		Witness:	



PSA 3.5.4 Areas Surrounding Offices

The access and other roads and parking areas surrounding the existing offices shall be treated and maintained to make them dust free either by using crushed stone or bituminous surfacing. They shall be well drained and kept trafficable and free from mud and weeds at all times. They shall also be maintained and kept clean and tidy at all times.

PSA 3.5.5 Air-conditioning Units and Heaters

The Contractor shall provide and install air-conditioning units and heaters as specified. The air-conditioning units shall be electrically operated compressor type with closed circuit, and not an evaporation type. The capacity of the air-conditioning units shall be at least 2,2 kW. The heaters shall preferably be of the space-heating type without exposed elements and shall have a capacity of not less than 1,5 kW.

PSA 3.5.6 Ablution units

Ablution facilities for the sole use of the Employer's Agent's staff and visitors must be provided.

PSA 3.6 Services

PSA 3.6.1 Sanitary arrangements

The Contractor shall be responsible for providing all sanitary services on the site.

The Contractor shall also make provision for the removal of all domestic rubbish on a regular basis.

PSA 3.6.2 Water and Electricity

The Contractor shall provide a constant supply of clean potable water suitable for human consumption.

The cost of all water & electricity required for the Employer's Agent's purposes shall be borne by the Contractor. All buildings supplied shall include the provision of 220 V electricity.

PSA 3.6.3 Maintenance

Employer:		Contractor:	
Witness:		Witness:	



The Contractor shall provide all labour, equipment and material which may be necessary to keep all accommodation in a neat and clean condition, and repairs shall be done without undue delay.

PSA 3.7 General

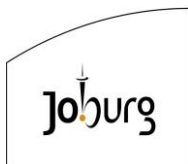
- a. The Contractor shall not order any materials, equipment or fittings on the basis of their having been specified or scheduled without the written confirmation of the Employer's Agent having been obtained. No building shall be erected without the Employer's Agent's written instructions as to the exact position and orientation of the building.
- b. Unless otherwise agreed upon, the meeting room shall be erected in close proximity to the Employer's Agent's offices.
- c. The required facilities shall be completed, ready for occupation as specified, not later than three (3) weeks after the commencement date of the contract.
- d. The ownership of the meeting room and Employer's Office shall remain the property of the Employer at the end of the Contract.
- e. The ownership of the furniture in PSAB 3.2.1 and PSAB 3.2.3 shall remain the property of the Employer.
- f. The Contractor shall take all reasonable precautions to prevent unauthorised entry to the offices and to ensure the general security of the offices and meeting rooms.
- g. No accommodation shall be erected without the prior approval of the Drawings by all local or Government authorities requiring such prior approval.

PSA 4 PLANT

PSA 4.2 CONTRACTOR'S OFFICE AND STORES (REFER SANS 1921-1 CLAUSE 4.14)

Add the following:

Employer:		Contractor:	
Witness:		Witness:	



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

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

On completion of the Works or as soon as the Contractor's facilities are no longer required the Contractor shall remove such facilities and clear away all surface indications of their presence. The site is to be rehabilitated as described elsewhere.

PSA 4.2 Contractor's Offices, Stores and Services

Add the following:

The Contractor's construction camp shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, accommodation, toilet facilities etc. The location of the camp shall be subject to approval by the Employer's Agent. The camp shall always be kept in a neat and tidy condition and all surplus or rejected material shall be removed from the site

PSA 4.3 Plant and Equipment

Add the following to this sub-clause:

The Contractor is required to provide all plant and materials necessary to carry out the works as required. No additional allowances other than those already specified in the Bill of Quantities shall be allowed for with respect to plant and materials.

Add the following to this sub-clause:

The Contractor is required to provide all equipment necessary to carry out the works as required. No additional allowances other than those already specified in the Bill of Quantities shall be allowed for with respect to equipment.

Construction equipment shall be suited for the onsite intended use and shall comply with all relevant safety aspects required by the OHS Act.

Employer:		Contractor:	
Witness:		Witness:	



PSA 5 CONSTRUCTION

PSA 5.1 Survey

PSA 5.1.1 Setting Out of The Works

Add to the sub-clause:

For any new work the Contractor shall establish his own reference points from which the work can be set out

PSA 5.1.2 Setting Out of The Works Preservation and Replacement of Pegs Subject to Land Survey Act (Refer SANS 1921 - 1 Clause 4.15)

Add to the sub-clause:

Before the commencement of construction work in the vicinity of boundaries, the Contractor, under the direction of the Employer's Agent, shall search for plot pegs where boundaries have not been established by the erection of walls or fences and the Contractor shall compile a list of such pegs that are apparently in their correct positions. At the completion of the contract, the Contractor shall expose the pegs that were listed at the commencement of the construction and the Employer's Agent will arrange for any such pegs that are missing to be replaced at the Contractor's expense.

All plot boundary pegs shall be marked with fencing droppers which shall be painted.

As the construction of the Works may necessitate the removal and re-location of certain survey beacons the Employer will make the necessary application to the Surveyor-General and, notwithstanding the provisions of Sub-Clause 5.1.2 will meet the costs of the re-survey by a Land Surveyor of these servitude beacons in their new position.

The Employer will accordingly indemnify the Contractor against all costs implied in Sub-Clause 5.1.2 in respect of those beacons which may have to be removed by the Contractor.

The Employer's Agent will arrange for any pegs that are missing to be replaced at the Contractor's expense.

All survey reference marks shall be clearly marked and protected by the erection of three fencing standards

Employer:		Contractor:	
Witness:		Witness:	



PSA 5.1.3 Alterations, Additions, Extensions and Modifications to Existing Works

The Contractor is required to verify the accuracy of all drawings and levels provided by the Employer's Agent prior to commencing with any construction activities.

Where the Works require that alterations, additions, extensions and / or modifications be carried out to existing works or facilities, these shall be carried out strictly in accordance with the requirements of the relevant authorities.

PSA 5.2 Watching, Barricading, Lighting and Traffic Crossings

Replace the words "traffic crossings" in the heading and in text of this sub-clause with the words "accommodation of traffic"

Add the following:

PSA 5.2.1 General Accommodation of Traffic

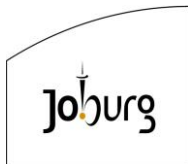
The Contractor shall be responsible for the safe and easy passage of vehicular and pedestrian traffic over, past or alongside the works.

PSA 5.2.2 Traffic control

Wherever the Contractor's activities on site affect or have the potential to affect the normal flow or safety of traffic during the construction, he shall be responsible for all aspects of traffic control, including flagmen, warning devices, signs, channelisation devices, layout of detours and by-passes, sign sequences and layouts, and all the requirements of the Chief Traffic Officer of the Local Authority.

Only warning devices, signs and channelisation devices included in the latest Road Traffic Ordinance of the province concerned (hereinafter referred to in this clause as the "Ordinance") shall be used. The standard patterns of the traffic control devices and signs, and the traffic-control procedures and methods prescribed in the Ordinance shall be applied. The dimensions and other properties of all signs and devices and the sign and device sequences, layouts and spacing shall be in accordance with the provisions of the Ordinance unless otherwise specified. In addition, signs and devices shall be placed at the positions shown on the Drawings. In cases not covered by the Ordinance, the signs, speed limits, devices, sequences, layouts and spacing shall comply with the

Employer:		Contractor:	
Witness:		Witness:	



requirements of The South African Road Traffic Signs Manual, the Chief Traffic Officer of the relevant authority, and the Employer's Agent.

The Contractor shall ensure the safe accommodation of traffic at all areas where the Works may impact on traffic, and shall provide all drums, watching, lighting, signs and barricades required by the road authorities, and in accordance with the South African Road Traffic Signs Manual. In this regard, the following references have been extracted from the SARTSM Volume 2, Chapter 13:

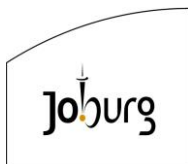
Item	Page No.
General	13.10.1
Urban Roadworks	13.10.1
Temporary Traffic Signals	13.10.2
Sidewalk Deviation	13.10.4
Localised Work Site – Good Visibility	13.10.6
Lane Closed Beyond a Junction	13.10.8
Work within a Junction	13.10.10
Work in a One-way Street	13.10.12
Road Closure - CBD	13.10.14
Road Closure – Dual Carriageway Street	13.10.16
Road Closure - Detour	13.10.18
Freeway/Dual Carriageway: Lane Closure	13.11.3

Where applicable, the Contractor shall be responsible for traffic-control at night and adequate warning lights and flashing lights shall be provided.

PSA 5.3 Protection of Structures

Add the following:

Employer:		Contractor:	
Witness:		Witness:	



PSA 5.3.1 Inspection of Adjoining Properties

The Contractor shall carry out inspections and evidence collection, as he deems appropriate, of properties adjoining the works to ensure that, in the event of a claim arising from any of the owners of the adjoining properties for damage to property and the like, the Contractor has substantial evidence to support or refute such claims. The Contractor accepts full liability and responsibility for damage that he causes to adjoining properties as well as any costs involved in refuting or processing of such claims.

PSA 5.4 Protection of Overhead and Underground Services

Delete this clause and replace with Clause 4.17 of SANS 1921-1:2004."

PSA 5.6 Pollution

Add the following:

Precaution against Pollution and Nuisance

The Contractor's attention is drawn to the fact that operations will be conducted in operational waste water treatment plant. The Contractor shall take all necessary steps and precautions to prevent pollution of the surrounding area by his employees in any way.

Wherever excavated and/or loaded material is liable to form a dust nuisance, an effective method of spraying water over the cut area and loaded material shall be installed. Tarpaulins shall be provided to cover trucks and prevent dust blowing from loads during transport.

Any material or debris falling from trucks on the roads in use by the public shall be immediately removed. Precautions shall be taken to prevent fouling of public roads or completed construction by trucks transporting muddy material. The Employer's Agent may order the Contractor to continuously broom off and clean where the mud tracking of vehicle or falling debris may constitute a danger to the public making use of roads.

PSA 5.7 SAFETY

Add to the subclause:

Employer:		Contractor:	
Witness:		Witness:	



The minimum acceptable safety standards are as laid out in the latest version of the Occupational Health and Safety Act (Act 85 of 1993). The Contractor shall provide safety equipment for his workers as well as for up to 5 visitors to the site.

1. All work and particularly work carried out in the proximity of buildings, bridges, tanks or other structures shall be carried out in conformance with the regulations framed under the Occupational Health and Safety Act, 1993 and the Minerals Act, Act 50 of 1991, including shoring where necessary, to ensure the safety of structures that are at risk.

PSA 5.8 Protection of Overhead and Underground Services

Add to the subclause:

On completion of operations the Contractor shall restore the ground surface, wherever it may have been disturbed, to its original condition by filling in all ruts with material similar to the material within the rut and levelling the ground and, where necessary, planting grass and shrubs as may be required. Any boundary fences which have been removed or damaged by his operations and activities shall be repaired and/or reinstated at the Contractor's expense. Ground restoration must include proper placement of topsoil profile.

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1.2.3 Contractor to Price all Items

Add the following paragraph;

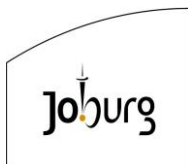
"The grouping of payment items under one all-inclusive rate is prohibited. Each payment item shall have its own rate. Where the Contractor elects not to insert a rate for any particular item, then it shall be deemed to be zero".

PSA 8.2 Payment

PSA 8.2.2 Time-related Items

Re-word the third and fourth lines to read:

Employer:		Contractor:	
Witness:		Witness:	



incremental amounts (calculated by the division of the remainder of the tendered sum by the number of remaining days of the duration specified as the "Time for Completion") will be.

Add to the Sub-Clause:

Notwithstanding the provisions of Sub-Clause 8.2.2, an approved extension of time will not qualify the Contractor to receive any payment for fixed charge and value-related items.

Add to the Sub-Clause:

The Contractor will not be entitled to additional payment for time related Preliminary and General Items for special non-working days.

PSA 8.3 Scheduled Fixed-Charged and Value-Related Items

PSA 8.3.1 Contractual Requirements

Add the following to this clause:

As indicated in the Contract Data (Clause 8.6.13), any claims against the insurance effected by the Employer shall be subject to the Contractor being responsible for the payment of the amount stated in the Policy as being the Deductible (First Amount Payable) as defined in the Policy.

PSA 8.3.2.1 Facilities for Employer's Agent

Add the following to this sub-clause:

- | | | |
|----|---|------------------|
| d) | Covered Carports(3 No.) | Unit: Sum |
| e) | Survey Assistant, Equipment and materials | Unit: Sum |
| f) | Internet Access | Unit: Sum |

The tendered rate shall cover all costs as specified in Sub-Clause 8.3.2.3 of SANS 1200 A and clauses PSAB-3.2 and PSAB-4.2 if applicable

PSA 8.3.2.1 Facilities for Employer's Agent

Employer:		Contractor:	
Witness:		Witness:	



Replace the words “general foreman, section foremen” with “salaried general and/or section foremen.

PSA 8.3.2.2 Facilities for the Contractor

(f) Tools and Equipment

Add the following new sub-clause:

“The sum shall cover the cost of supplying all hand tools and equipment, as necessary for proper execution of the works.

Unit: Sum

Add the following new sub-clause:

(k) Security of works

“The sum shall cover the cost of supplying 24hr security at the Contractors camp as well as all other areas of the Works for the duration of the Contract. The cost should also include all other security requirements, as deemed necessary by the Contractor. Refer to clause PS7.2 .

Unit: Sum

Add the following new sub-clause:

(l) Personal Protection Equipment

“The sum shall cover the cost of supplying all personal protective equipment, as deemed necessary by the Contractor and in accordance with the Health & Safety Plan.

Unit: Sum

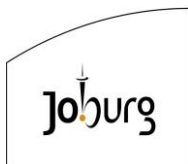
PSA 8.4 Scheduled Time Related Items

PSA 8.4.2.1 Facilities for Employer’s Agent

Add the following to this sub-clause:

- | | | |
|----|---|------------------|
| e) | Latrine facilities for the sole of the Employer’s Agent | Unit: Sum |
| f) | Boardroom to accommodate 15 personnel | Unit: Sum |
| g) | Furniture for offices and meeting rooms | Unit: Sum |

Employer:		Contractor:	
Witness:		Witness:	



PSA 8.4.2.2 Facilities for the Contractor

Add the following new sub-clause:

k) Security of Works

"The sum shall cover the cost of supplying all security works, as deemed necessary by the Contractor, refer to clause PS7.1

Unit: Sum

PSA 8.4.3 Supervision for the Duration of the Contract

Replace the words "general foreman, section foremen" with "salaried general and/or section foremen"

PSA 8.4.4 Compliance with Local Content Requirements

The sum stated shall include, at minimum, the cost of all items required to ensure compliance with local content obligations. These may include (but are not limited to), packaging of works, sourcing, evaluation and negotiations, appointments, contracts, liaison with Ward councillor, CLO and JW Stakeholder Relations, etc. Additionally, the sum stated should include any additional items that the Contractor may deem necessary.

Unit: Sum

PSA 8.5 Sums Stated Provisionally by Employer's Agent

(b) (3) Add the following sub-items:

a) Provisional sum for control testing to be carried out as required by the Employer's Agent, including testing of structure

Unit: Prov Sum

b) Additional tests ordered by Employer's Agent

Unit: Prov Sum

The provisional sum shall cover the cost of control tests specifically ordered by the Employer's Agent. Tests shall be executed by an approved commercial laboratory.

c) Community Liaison Officer

Unit: Prov Sum

The provisional sum shall cover the cost of advertising, interviewing and employing the CLO. Additionally, it should include the CLO's salary for the duration of the Contract.

Employer:		Contractor:	
Witness:		Witness:	



d) Training of targeted labour and SMME's

The sum shall be in full compensation for the provision of training to targeted labour according to the specification of the Employer and approved by the Employer's Agent.

Unit: Prov Sum

e) Training of Interns

The sum shall be in full compensation for the provision of training of interns according to the specification of the Employer and approved by the Employer's Agent.

Unit: Prov Sum

f) Signage for Buildings

The sum shall cover the full cost of the supply and installation of signage onsite.

Unit: Prov Sum

g) GPR Survey

The sum shall cover the full cost of a GPR survey to identify all existing sub-surface services as directed by the Employer's Agent. The survey submission must include all drawings in DWG and PDF format.

Unit: Prov Sum

h) Protection of Existing Services

The sum shall cover the full cost of protecting the identified existing services which may be exposed during the duration of the Contract.

Unit: Prov Sum

i) Application for Environmental regulation

The sum shall cover the full cost for Environmental Regulation which may be required by the authorities during the duration of the Contract.

Unit: Prov Sum

j) Environmental Control Officer

The sum shall cover the full cost of an Environmental Control Officer during the duration of the Contract.

Unit: Prov Sum

k) Full time Environmental Liaison Officer

The sum shall cover the full cost of a Full time Environmental Liaison Officer during the duration of the Contract.

Unit: Prov Sum

Employer:		Contractor:	
Witness:		Witness:	



l) Project Mentor

The sum shall cover the full cost of a Project Mentor during the duration of the Contract.

Unit: Prov Sum

m) Contractor's percentage to cover cost of handling cost and charges

PSA 8.7 Daywork

Add the following:

No work shall be measured on a daywork basis unless the Contractor has been instructed to do so by the Employer's Agent in Writing. All work carried out on dayworks shall be recorded in detail on a daily basis. Dayworks plant and labour returns shall be submitted to the Employer's Agent daily for consideration and approval.

No transport costs to and from the site will be paid for plant removed from site at the Contractor's request or where such plant is listed in the Schedule of Plant and Equipment as available for this Contract.

PSA 8.9 As-Built Survey (New Clause)

Add the following

As built information/Survey to be provided for all the Works.

This information must be certified as a true and correct reflection of the finished works and must be provided in hard copy and electronic (PDF and AutoCAD [*.dwg]) format. The price tendered for carrying out such work shall be inclusive of all costs, albeit direct or indirect to the Contractor. The survey must be carried out by an independent surveyor.

Further no Certificate of Completion of Works or portion of the Works shall be issued until such time as the Contractor provides the Employer's Agent with this information

PSA 8.10 Sub-Contractors (SMME's)

PSA 8.10.1 Main Contractor Overhead Charges and Profits

Employer:		Contractor:	
Witness:		Witness:	



The Main Contractor shall retain liability and responsibility for the management, scheduling, and quality control of all works performed by approved sub-contractors (SMME's). This item will be calculated as a percentage of the sum of works allocated to SMME's and shall include the process to appoint a sub-contractor, as well as all costs and charges to manage all sub-contracted works. (Note: This amount must be at a minimum of 30% of the total contract value).

Unit: Percentage of total amount of work done by SMME's (%)

PSA 8.10.2 Fixed Charge Items for SMME Contractual Requirements

This item will be calculated as a percentage of the approved amount towards Fixed Charged Preliminary and General Items allocated to SMME's as compensation for Overhead Charges and Profits for the Main Contractor.

Unit: Percentage of total amount of Fixed Charge Items for SMME's (%)

PSA 8.10.3 Time Related Items for SMME Contractual Requirements

This item will be calculated as a percentage of the approved amount towards Time Related Preliminary and General Items allocated to SMME's as compensation for Overhead Charges and Profits for the Main Contractor.

Unit: Percentage of total amount of Time Related Charges for SMME's (%)

PSA 8.10.4 Payments on behalf of Sub-Contractor by Main Contractor

Provisional Sum to cover costs incurred by the Contractor when making payments of behalf of the sub-contractor (ref Special Conditions) or to provide ad-hoc services on behalf of the sub-contractor.

Unit: Prov. Sum

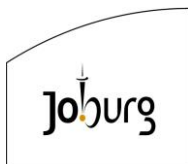
SANS 1200AB: EMPLOYER'S AGENT'S OFFICE

PSAB 1 SCOPE

Replace this Clause with the following:

This section covers the provision of accommodation for the Employer's Agent's resident staff. This accommodation shall include the necessary additional offices and furniture as well as the provision of all the services required. The Contractor will be required to supply a meeting room, an Employers office, a Employer's Agent's Representative's Office and five car ports.

Employer:		Contractor:	
Witness:		Witness:	



All furniture supplied shall be new.

PSAB 3 MATERIALS

PSAB 3.1 Name Boards

The position of the nameboard will be subject to the Employer's Agent's approval and must in no way obstruct sight lines for road, rail or pedestrian traffic. All arrangements regarding permission and approval from the controlling authority as far as location are concerned are the Contractor's responsibility..

PSAB 3.2 Site Office

Delete the first sentence and replace with the following:

The Contractor shall supply and furnish one temporary office, nominally 12.0 m x 3.0 m for the use of the Employer's Agent. The Contractor shall further make available to the Employer's Agent, his staff and the Client, for a minimum of 8 hours per working week, a furnished, air-conditioned temporary office (12.0 m x 3.0 m), that can accommodate 12 people, for use as a meeting room, for private meetings when required."

Add to the Sub-Clause after item "(j)":

- k) electrical installation to include a light and three 15A plug points plus two adequately sized air conditioning units (for heating and cooling) for each unit
- l) one refrigerator of at least 100 litre capacity
- m) one kettle of at least 2 litre capacity
- n) one tea set comprising six cups and saucers, six teaspoons, one teapot, one sugar bowl and one milk jug
- o) covered parking for two vehicles
- p) un-covered parking space for one vehicles
- q) two "Barhold" or similar wall mounted racks each with 6 clamps suitable for hanging A0 sized drawings

Employer:		Contractor:	
Witness:		Witness:	



- r) one large meeting table
- s) twelve additional chairs
- t) One A0 sized drawing board
- u) Rain gauge
- v) One Laser Jet A3 printer and scanning facility
- w) A secure internet connection for the sole use of the Employer's Agent:

PSAB 3.3 Services

PSAB 3.3.1 Sanitary arrangements

The Contractor shall be responsible for providing all sanitary services on the site.

The Contractor shall also make provision for the removal of all domestic rubbish on a regular basis.

PSAB 3.3.2 Water and Electricity

The Contractor shall provide a constant supply of clean potable water suitable for human consumption.

The cost of all water & electricity required for the Employer's Agent's purposes shall be borne by the Contractor. All buildings supplied shall include the provision of 220 V electricity.

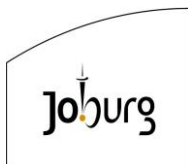
PSAB 3.3.3 Maintenance

The Contractor shall provide all labour, equipment and material which may be necessary to keep all accommodation in a neat and clean condition, and repairs shall be done without undue delay.

PSAB 3.4 General

- h. The Contractor shall not order any materials, equipment or fittings on the basis of their having been specified or scheduled without the written confirmation of the Employer's Agent having been obtained. No building shall be erected

Employer:		Contractor:	
Witness:		Witness:	



without the Employer's Agent's written instructions as to the exact position and orientation of the building.

- i. Unless otherwise agreed upon, the meeting room shall be erected in close proximity to the Employer's Agent's offices.
- j. The required facilities shall be completed, ready for occupation as specified, not later than three (3) weeks after the commencement date of the contract.
- k. The ownership of the meeting room and Employer's Office shall remain the property of the Employer at the end of the Contract.
- l. The ownership of the furniture in PSAB 3.2.1 and PSAB 3.2.3 shall remain the property of the Employer.
- m. The Contractor shall take all reasonable precautions to prevent unauthorised entry to the offices and to ensure the general security of the offices and meeting rooms.
- n. No accommodation shall be erected without the prior approval of the Drawings by all local or Government authorities requiring such prior approval.

PSAB 3.5 Insurance

The Contractor shall keep all the site offices, furniture and equipment insured against loss, damage or breakage and shall indemnify the Employer, the Employer's Agent and his staff against claims in this regard for the full duration of the Contract.

PSAB 4.1 Telephone

Delete Sub-Clause and replace with the following:

The Contractor shall provide: Airtime (R500 per month) and data (2GB per month) and satellite communication on a monthly basis for the use of the Resident Employer's Agent and Employer's Agent's Representative.

PSAB 4.2 Internet access (New Clause)

Add new Sub-Clause:

Employer:		Contractor:	
Witness:		Witness:	



The Contractor shall supply a minimum of three connections via “Wi-Fi” to a secured internet service for the sole use of the Employer’s Agent s and the Employer’s Agents Representatives to connect to the internet at a reasonable level of service (20MB/sec, uncapped and unshaped).

PSAB 4.3 Survey Equipment(New Clause)

Add new sub-clause:

The Contractor shall provide the Employer’s Agent with the necessary Survey Equipment to enable the Employer’s Agent to perform Engineering Surveys and to confirm the accuracy of the Contractor’s setting out and construction.

The Contractor shall maintain the equipment in good working order and keep it clean until the completion of the works.

PSAB 5.2 Employer’s agent’s office(s) (Refer to SANS 1921-1 Clause 4.14)

Add to the sub-clause:

The toilet facilities provided for the sole use of the Employer’s Agent and his Representative(s) shall be of the chemical type, maintained in a hygienic and sanitary condition and shall be removed on completion of the works. The facilities provided shall conform to the local health authority requirements as applicable and the Contractor shall pay all sanitary feeds and charges.

PSAB 5.5 Survey Assistants

Delete the first sentence and substitute the following:

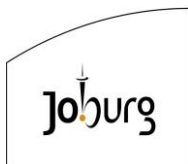
The Contractor shall make available to the Employer’s Agent two suitably educated labourers for use on and about the site for survey and other work directed by the Employer’s Agent at all reasonable times.

PSAB 8 Measurement and Payment

PSAB 8.2.1 Fixed and Time-related Charges

Add to the sub-clause:

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
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Infrastructure Renewal Plan
Volume 2
Part 3: Scope of Work



The Tenderer is to include, under the Time-Related Charges, a sum of R 1 500,00 per week for a period of time equal to the Time for Completion plus and additional time associated with delays attributed to the Contractor cover the cost of the Employer's Agent and the Employer's Agents Representatives cellular telephone and internet costs.

Employer:		Contractor:	
Witness:		Witness:	



PORTION 3: PARTICULAR SPECIFICATION

PSX INSTRUMENTATION WORK

SCOPE OF WORK

The scope of supply of the instrumentation part of this contract shall be the manufacturing, supply, delivery, safe storage on site before installation, installation and commissioning of the process monitoring instrumentation systems listed in this tender document and on the relevant drawings. The instrumentation equipment shall include the following:

- The supply, installation and commissioning of two ultrasonic level meters.
- The supply, installation and commissioning of four flow meters.
- The supply, installation and commissioning of two sets of pear ball level switches for sump level Control.
- The supply, installation and commissioning of instrument junction boxes (IJBs) for all instruments supplied.
- The manufacture, supply and installation of support steel work for field junction boxes (FJBs) and instrument control panels (ICPs).
- The supply, delivery and installation of the PLC hardware as specified.
- The supply, delivery and installation of Ethernet network switches.
- The supply, delivery, installation, splicing and termination of communication fibre-optic cables.

GENERAL

PLC Equipment

PLC Hardware supply

Supply and installation of a new PLC equipment in a new PLC Cabinet, which forms part of the scope and must be installed in the repaired module 2 Reactor MCC building.

The PLC shall be complete with 24V DC power supply, circuit breakers, surge protection, UPS, etc. and wired it to the relevant I/O. The Contractor shall ensure that there is sufficient space for all terminals, fused terminals, circuit breakers, surge protection, etc. There shall also be sufficient space to ensure that all spare

Employer:		Contractor:	
Witness:		Witness:	

slots in the PLC racks can be equipped and wired in future if required. The PLC panels must be equipped with a true online UPS.

The UPS must be a transformer-based unit (not transformer less) and must have a 5kVA rating. The applicable PLC circuits must also be equipped with proper surge protection.

The Ups and surge protection shall comply with specification "Automation and Control Standards, Volume 5, Clean Power and Surge Protection".

The panels shall comply with all the requirements of Automation and Control Standards, Volume 3, PLC Panels.

A New PLC at the Reactor MCC sub station shall be utilized for the installation in that area.

The PLC hardware to be supplied under this contract is listed in the tables below and must be able to accommodate the following I/O

Digital Input	Digital Output	Analog Input	Analog Output	RTD	Modbus
85	46	13	0	14	6

ITEM		REFERENCE	DESCRIPTION	QTY
1	Premium CPU	TSXP572634M	572X4 ETH UNITY PROCESSOR	1
2		TSXPLP01	BATTERY FOR TSX 37	1
3	Premium Power supply	TSXPSY5500M	100/240VAC 55W POW.SUP.	2
4	Premium Racks	TSXRKY8EX	8 SLOT EXT. RACK	1
5		TSXRKY12EX	12 SLOT EXT. RACK	12
6	Premium busX cables & ass.	TSXCBY030K	BUS X EXT. CABLE 3M	2
7		TSXTLYEX	2 BUS X TERMINATOR	2
8	Premium digital Inputs	TSXDEY16A5	16I 220/240VAC TR.BLK	6
9	Premium digital Outputs	TSXDSY32T2K	32Q 24VDC 0,1A TR.BLK	2
10	Premium analog modules	TSXAEY810	8I ANA. HIGH LEVEL	2
11		TSXASY410	4Q ANA. HL ISO.	1
12	Premium accessories	TSXBLY01	TERMINAL BLK	8

Employer:		Contractor:	
Witness:		Witness:	



ITEM		REFERENCE	DESCRIPTION	QTY
		ABE7R16S210	Sub-Base with 16 N/O 5A Relay contacts, 1xHE10	4
		TSXCDP503	CABLE CONN. 5M	4
		ABE7CPA02	ANALOG.BASE 8CHL SUB-D25	2
		TSXCAP030	CONNECTING CABLE	12
		TSXMRPC001M	SRAM	2

Documentation

Hardware supply

User manuals - for all equipment supplied by the Contractor must be included in the documentation.

Three copies of all documentation must be provided.

Shop Drawings

Before MCC manufacturing or field junction box manufacturing can start, the successful tenderer must submit detailed panel layout drawings for approval by the Employer's Agent.

Recommended Spares

The Contractor must quote on a recommended spares list to be approved by the Employer's Agent.

FIELD EQUIPMENT

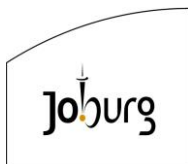
Instrumentation

Introduction

Instruments required for this scope of work are indicated in the table below.

Tag	Description	Signal	Range	Client Pref	Supplied by	Comments
Area 10-						
General Instruments						

Employer:		Contractor:	
Witness:		Witness:	



Tag	Description	Signal	Range	Client Pref	Supplied by	Comments
AIT 001	MLSS 1	AI	4-20mA	Royce Technologies	Existing	Supply, Install and commission new Instrument and Sun cover for kiosk
AIT 002	DO 1	AI	4-20mA	Royce Technologies	Existing	Supply, Install and commission new Meter
AIT 003	DO 2	AI	4-20mA	Royce Technologies	Existing	Supply, Install and commission new Meter
AIT 004	DO 3	AI	4-20mA	Royce Technologies	Existing	Supply, Install and commission new Meter
AIT 009	MLSS 2	AI	4-20mA	Royce Technologies	Existing	Supply, Install and commission new Meter
Area 09-						
FIT 001	Flow to Reactor 2	AI	4-20mA	Flow Metrix	Existing	Supply, Install and commission new Meter
FIT 002	Flow to Reactor 1	AI	4-20mA	Flow Metrix	Electrical	Supply, Install and commission new Meter

Mixed Liquor Suspended Solids (MLSS) Transducers and Transmitters

Supply and install two new MLSS sensors and transducers 10-AIT-001 & 01-AIT-002. Connect these MLSS meters to the new PLC cubicle in the Module Reactor 2 MCC.

The MLSS meters must comply with all the requirements of the attached "Automation and Control Standards, Volume 9, MLSS Measurement".

Flow Meters

Test and calibrate two magflow sensors and replace meters 09-FIT-001, Flow to Module 2 Reactor & 09-FIT-002 Flow to Module 1 Reactor .

Employer:		Contractor:	
Witness:		Witness:	



Connect these Flow meters to the new PLC cubicle in the Module Reactor 2 MCC. The size of the flow meter shall be determined by the Tenderer based on the existing installation.

Dissolved Oxygen sensors and transducers

Supply and install three new DO sensors and transducers ultrasonic level meters 10-AIT-002 (DO-01) , 10-AIT-003 (DO-02) & 10-AIT-004 (DO-03). Install these at the same positions as the old DO meters on the reactor. Connect these DO meters to the new PLC cubicle in the Module Reactor 2 MCC.

The DO meters must comply with all the requirements of the attached "Automation and Control Standards, Volume 9, DO Measurement

Field Junction Boxes for Instruments

Supply and install instrument junction boxes (IJBs) for all the Instruments as mentioned in items above. The junction boxes will contain the transmitters, terminals, circuit breakers for local isolation, surge protection, etc.

A practical robust sun shield that can be lifted to read the instruments and closes again over the glass window to protect the instrument displays from the sun.

The junction boxes must comply with all the requirements of the attached "Automation and Control Standards, Volume 19, Field Junction Boxes".

Cabling

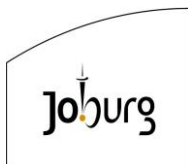
Instrumentation Cables

Cable Racking

All instrumentation cable racking must be manufactured and installed in accordance with the attached "Automation and Control Standards, Volume 6, Cabling". The instrumentation racking will follow the same routes as the electrical racking.

The Bill Of Quantities will indicate required lengths and sizes of cable racking. Sizes and quantities indicated in the Bill Of Quantities are there to ensure sufficient funds are available for racking. These quantities must not be used for

Employer:		Contractor:	
Witness:		Witness:	



placing of orders. The Contractor must submit cable racking layouts for approval by the Employer's Agent before any racking is ordered.

Data Communication and Networking

All data communication cabling and equipment must comply with the following specifications listed below. The specifications are attached to Volume 2 of the tender.

- "Automation and Control Standards, Volume 5, Clean Power and Surge Protection".
- "Automation and Control Standards, Volume 6, Cabling".
- "Automation and Control Standards, Volume 7, Networking".

In addition, the Fibre-optic cables in this Contract shall comply with the following minimum requirements:

The fibre-optic cables will be buried within 110mm sleeves.

All fibre-optic cables will be single mode fibre (SM) for use with 1000BASE-LX gigabit Ethernet for distances up to 10km.

A length of free cable shall be provided at each end of a cable pull. Loops of cable (commonly called service loops) shall be provided at all intermediate pulling points, such as in manholes and pull boxes where manholes and pull boxes are required to be installed by the Employer's Agent. Service loops of 3 m length that are easily accessible and clearly marked with the prescribed cable number shall be provided at all fibre cable patch panels. The cables' minimum bending radii shall not be exceeded.

Intermediate patch and splice panels shall not be allowed unless approved by the Employer's Agent. Cables that are found to be damaged either due to defective manufacturing, delivery or installation practice shall be replaced in their entirety at the cost of the Contractor.

All fibre-optic cables will contain at least 12-cores.

Fiber-optic cables shall be tested on delivery to site as specified in "Automation and Control Standards, Volume 6, Cabling" specifications.

Employer:		Contractor:	
Witness:		Witness:	



Approximate distances have been measured to each remote location for tender purposes and have been included in the bill of quantities. The Contractor shall verify and confirm these cable lengths on site, after the tender has been awarded, before cutting cable lengths to the exact installation size. Cable lengths in the Bill of Quantities are merely there to ensure the availability of sufficient capital for the project. These quantities must not be used for placing orders. All cable installations shall be re-measured for payment after installation.

All data communications cables (each fibre-optic cable, each patch lead, each copper cable and all equipment) will be named according to the cable block diagram and naming list as provided by the Employer's Agent during construction. All equipment labels, cable markers and cable route markers must comply with the "Automation and Control Standards, Volume 6, Cabling" specification and the "Automation and Control Standards, Volume 3, PLC Panels" specification.

Fibre-Optic Cables

Supply and install one fibre-optic cable from the Lime Clarifier MCC PLC cubicle to the switch in the Master PLC in the main Control Room building.

Fibre-Optic Splicing.

All fibre-optic cable shall be terminated on patch panels at each end'.

Eight cores (4 pairs) shall be terminated on a patch panel.

The remaining fibre will be neatly coiled in the patch panel as spares.

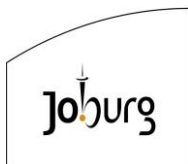
Fibre-Optic Area Switches.

An area switch shall be provided in each PLC cubicle.

The area switch shall consist of a switch, 2 x 1000BASE-LX SFP modules, 2 x 3m single mode fibre patch leads, at least 2 x 10BASE-T/100BASE-TX RJ45 copper ports, 1 x 3m certified Cat-6 patch lead and a power supply.

The Contractor is primarily responsible for all fibre-optic and data communication testing and commissioning work. All testing and commissioning work shall be

Employer:		Contractor:	
Witness:		Witness:	



documented in detail in the prescribed formats and the results shall be verified and approved by the Employer's Agent.

The fibre-optic cables must be tested and commissioned after installation. The commissioning of the data network can commence after the fibre-optic cables are commissioned.

Training

The tenderer must allow an amount to cover the cost of training of up to two Johannesburg Water personnel by the supplier (not only the Contractor) on new instrumentation supplied on this contract. Training will be by the supplier at the supplier's premises or on site. If no training is required, then this amount will not be claimed.

Maintenance Spares

The tenderer will be required to provide a recommended list of instrumentation spares, including PLC equipment and data communications equipment including, but not limited to, at least one type of each PLC I/O module processor and power supply, spare Ethernet Switch etc., for at least the following three years' maintenance. The tenderer must allow a corresponding cost for these spares in the BOQ.

Applicable SANS Standards

VIII. The Standard Specifications for all associated electrical and instrumentation work applicable to this Contract shall be SANS 10142-1:2003:

IX. This Specification is not issued with this volume but is available at the Contractor's expense from: Standards South Africa,

X. Office Address:

1 Dr Lategan Road, Groenkloof, PRETORIA

XI. Postal Address:

Private Bag X191, PRETORIA, 0001

XII. **Telephone:** National: (012) 428-6883

International: + 27 12 428 6883

Employer:		Contractor:	
Witness:		Witness:	



XIII. Telefax:

National: (012) 428-6928

International: + 27 12 428 6928

XIV. Email: sales@sabs.co.za

Particular Generic Specifications

The following Particular Generic Specifications forming part of the Contract have been written to cover phases or items of work involving a specialist type of operations or material to be encountered on this Contract and that are not adequately covered by the general specifications.

Electrical Works (Automation and Control Design Standards)	
Volume 1	SCADA
Volume 2	PLC Hardware
Volume 3	PLC Panels
Volume 5	Clean Power and Surge Protection
Volume 6	Cabling
Volume 7	Networking
Volume 8	Flow Measurement
Volume 12	DO Measurement
Volume 19	Field Junction Boxes and Panels
Volume 21	Load Cells
Volume 13	MLSS Measurement

The listed specifications are included in this tender document.

Plant and Materials

All materials intended for the purpose of this Contract shall bare the approval of the relevant SANS specifications. Any deviations there from shall be recorded and reported by the Contractor.

Data Sheets

All the data sheets required for equipment (such as flow meters, level meters, surge protection devices, power supplies, etc.) as required in the Automation And Control Design Standards must be completed and submitted with the tender. Incomplete or missing data sheets will result in the disqualification of a tenderer.

Employer:		Contractor:	
Witness:		Witness:	



QUALITY ASSURANCE

QA Plans

The contractor must submit a quality assurance plan for approval by the Employer's Agent.

Factory Acceptance Tests

Part of the QA plan must include factory acceptance tests of the PLC panels and Field Junction Boxes at the manufacturer's premises. These panels and FJBs must undergo a similar test after delivery on site. The test procedures to be followed during these tests must be submitted for the approval of the Employer's Agent. The Employer's Agent must be notified no less than 5 working days in advance of such planned inspections.

C&I PROGRAM

When compiling his program, the Contractor has to take the following C&I activities and associated durations into account:

Employer:		Contractor:	
Witness:		Witness:	



PSY: ELECTRICAL WORK

INTRODUCTION

This part contains the specific requirements for the project regarding work that is to be carried out at the Johannesburg Waste Water Treatment Works for the electrical, control and instrumentation work that is required for the Renewal work at Driefontein Wastewater Treatment Works .

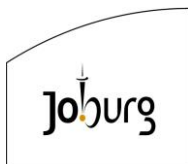
SCOPE OF WORKS

The electrical work to be carried out at the Module 2 Bio-Reactor MCC Building comprises in general, the following:

- Small power and Lighting installation to be done in the MCC building
- New MCC to be Manufactured per plant specific needs
- Installation of MCC panel in the MCC building.
- Assess existing Cabling and replace if found damaged or not suitable for service
- Assess existing Racking and routing and replace if found damaged or not suitable for service
- Assess existing electrical control equipment and replace if found damaged or not suitable for service. Main feeder supply cable from new minisub to New MCC
- Cable racking to support cables where necessary.
- Cable trenching where necessary
- Power and control cables to all new drives
- Area lighting installation
- Commissioning of the works

In general, the following shall also form part of the scope of work:

Employer:		Contractor:	
Witness:		Witness:	



- Liaising with the nominated automation subcontractor regarding the electrical/automation interface requirements.
- liaising with the Works Manager and/or Electrical Manager during the project,
- Involvement in the testing and commissioning of the complete electrical and automation installation.

DETAIL SPECIFICATION: NEW MCC INSTALLATION

SCOPE OF WORK

This specification covers the supply of a new MCC, the installation and commissioning thereof.

The motor sizes indicated in the MCC Layout are provisional. The Contractor shall confirm the final sizes of all the motors in order to correctly rate the power circuits (isolator, circuit breaker, overload, etc.) of each of the motor starters should it be required.

MCC MANUFACTURING

UNIT 2 BIO-REACTOR MOTOR CONTROL CENTRE

TYPE: Equipment specified below shall also serve the purpose of setting minimum standard required for the project and the Electrical and Electronic Contractor shall coordinate with the mechanical contractor to allow for all mechanical equipment.

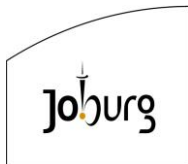
The motor control centre or distribution board shall be manufactured accordance to Particular Specification.

E04: LOW VOLTAGE MOTOR CONTROL CENTRES

The equipment referenced below does not relieve the contractor of his responsibilities in terms of quality, dimensions and proper functioning of the system. The Electrical contractor responsibility is to coordinate with the mechanical contractor in terms of P&ID's, motor sizes, operation of the plant and provide all equipment which is offered by the Mechanical Contractor.

The motor control centre board or distribution board shall be of the free-standing floor mounted type with a minimum IP rating of 55 (insect proofed enclosure). The motor control centre or distribution board shall be constructed with a minimum of 2mm 3CR12 stainless steel which will rest on a 304 stainless steel

Employer:		Contractor:	
Witness:		Witness:	



rigid channel and shall be bolted down in position by means of M16 high tensile stainless-steel bolts grouted into the concrete floor, the bolts shall be inside the board.

The panel door shall be provided with a locking system suitable for padlocking. The locking system shall consist of a 3CR12 stainless steel 3-way locking mechanism locking the door at the top, middle and bottom. The unit doors shall be capable of being opened at least 110 degrees.

The board shall be provided with readily removable, sectionalized, rigidly supported unpainted 3CR12 cable end support gland plates along the entire length of the board and at least 230 mm above floor level.

Sufficient provision for ventilation and heat dissipation as per the equipment ratings and manufacturers requirements shall be allowed for. The contractor shall prove to the Engineer by means of Anemometer or Differential that the requirements and manufacturer's requirements are met.

Screwed-on engraved labels in English shall be provided below all switchgear and equipment on and in the panels, to facilitate identification. All unpainted parts shall be plated for corrosion resistance.

Special racking in and out mechanism shall be designed by the Contractor [similar to a medium voltage circuit breaker racking tool] which will assist the operators in removing the entire backplane of a panel. All the motor control centre panels shall be designed to fit the tool. Massive drive has come to assist operators in removing heavy equipment easily without difficulty. Backplanes shall be fastened with easily removable bolts to ensure that the machine can remove the plane. Under the scope of the motor control centre the contactor shall allow one racking tool.

SUPPLY: 2 x (3 x 185mm² 4core PVC/SWA/PVC Cables + 3 x 120mm² BCEW) from each transformer to each incomer.

COLOR: Painted Light Orange – B26 (SANS 1091:2012) external, White arc-free internal (see Painting and Finishing).

FAULT LEVEL: 42kA.

Employer:		Contractor:	
Witness:		Witness:	

SECTIONING: Multi-section, Form 3b or Form 4 to SANS IEC 60439.

FUTURE: 30% for future extensions space.

CABLE ENTRY: Incoming and Outgoing – Bottom. MCC gland plates shall be 3CR12 sheet steel, unpainted or aluminium (see JHB Waters Glanding specification).

Quantity	Description	Identification
Two	Panels Comprising of the following:	Incomer No.1- No.2
1	1000Amp continuous current rated TP (triple pole) draw out type air circuit breaker complete with opening / closing release with sufficient auxiliary contacts and complete with: Control unit with adjustable overload and short circuit protection with time discrimination micrologic unit, Electrical operating mechanism for remote closing of circuit breaker, 231V AC operation,	Main Circuit Breaker
Set 3	Separate panel mounted circuit breaker close push button equal or similar to Schneider Electric: Plus 1000/5 Amp current transformer: Plus 2 Amp HRC fuse holders and fused links: Plus Front panel mounted LCD digital display supply network analyser comprising of combined voltage, current, maximum demand power measurement and power factor correction measurement complete with network card: Plus	Current inputs Voltage inputs Network analyser
1	1000Amp tint copper bus bars [appearance shall be aluminium], suitable clamps shall be used, and no drilling shall be allowed on the busbars [cubic system shall be used]: Plus	3 Phase + N
4	800Amp tint copper bus bars [appearance shall be aluminium], suitable clamps shall be used, and no drilling shall be allowed on the busbars [cubic system shall be used]: Plus	Earth
1	315Amp continuous current rated HRC fuse holders and fused links: Plus	Surge arrestors connection fuses
4	Three Phase combined class 1&2 surge arrestor unit connection type 2 as per SANS 10142-1 2009 equal or similar to DEHNguard DV M TT 255 with remote indicator panel & remote signalling contacts connected to the SCADA: Plus	Surge arrestor plus signals
1	2Amp continuous current rated HRC fuse holders and fused links: Plus	Indicator Lamp Protection
3	Robust LED indicator lamps connected load side of the circuit breaker.	Indicators for 3 Phase (Red , White and Blue Indications)

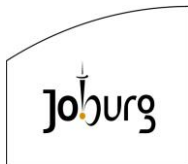
Employer:		Contractor:	
Witness:		Witness:	

1	Front panel mounted "chicken switch" socket for switching of circuit breaker from a safe distance [Tender shall select all components to preferred manufacturers]	Chicken switch
1	Relay for under voltages, phase sequence, and phase loss in three phase Plus	Protection relay
One	Panels comprising the following	Busbar Section
1	1000Amp continuous current rated TP (triple pole) draw out type air circuit breaker complete with opening / closing release and sufficient auxiliary contacts and complete with: Control unit with adjustable overload and short circuit protection with time discrimination micrologic unit, Electrical operating mechanism for remote closing of circuit breaker, 231V AC operation, Separate panel mounted circuit breaker close push button equal or similar to Schneider Electric: Plus	Main Circuit Breaker
4	1000Amp tint copper bus bars [appearance shall be aluminium], suitable clamps shall be used, and no drilling shall be allowed on the busbars [cubic system shall be used]: Plus	3 Phase + N
1	800Amp tint copper bus bars [appearance shall be aluminium], suitable clamps shall be used, and no drilling shall be allowed on the busbars [cubic system shall be used]: Plus	Earth
6	2Amp continuous current rated HRC fuse holders and fused links: Plus	Indicator Lamp Protection Left and Right Busbars
3	Robust LED indicator lamps connected load side of the circuit breaker.	Indicators for 3 Phase (Red , White and Blue Indications) Left and Right Busbars
1	Front panel mounted "chicken switch" socket for switching of circuit breaker from a safe distance [Tender shall select all components to preferred manufacturers]	Chicken switch
All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following.: <ul style="list-style-type: none"> Mechanical and electrical interlocks that all busbars fed from Transformer No 1 Mechanical and electrical interlocks that all busbars fed from Transformer No 2 	Interlocks

Employer:		Contractor:	
Witness:		Witness:	

		<ul style="list-style-type: none"> Mechanical and electrical interlocks that Busbar 1 fed from Transformer No 1; Busbar 2 fed from Transformer No 2 Mechanical and electrical interlocks that prevent paralleling the system. 	
Three [3]	Panels comprising the following		Aerator No.1 - No.3,
1	220A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus		Main
set	Continuous current rated core balanced current transformers: Plus		Current inputs
3	2 Amp HRC fuse holders and fused links: Plus		Voltage inputs
1	<p>90kW (3) phase heavy duty vector control variable frequency drive completes with 1) Programmable cards, 2) Communication card & 3) Encoder interface card. All necessary harmonic filters shall be included, EMC filter, line choke motor chokes and sinus filters all shall be inclusive.</p> <p>The following minimum protection parameters shall be available on the Variable frequency drive:</p> <ul style="list-style-type: none"> Thermal Output Phase loss Input phase loss Drive overheat Over voltage Under voltage Frequency meter Locked rotor Phase rotation Under current Torque detection for motor on bridge Speed or torque control Braking unit via re-injection to the line supply Earth leakage set to trip at 300mA. <p>(Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus</p>		Variable frequency drive
All	A separate door mountable display and programming control unit shall be front door mounted.		Separate display unit for VSD Drives with all parameters

Employer:		Contractor:	
Witness:		Witness:	

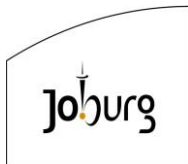


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		Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following:	
	All	a) Profibus-DP b) Profinet c) Industrial Ethernet d) Modbus TCP/IP Under no circumstances, shall the use of proprietary protocols be allowed: Plus	Communication module for VSD
	1	6Amp continuous current rated SP MCB: Plus	Variable frequency drive fans supply
	1	Turn knob speed adjustment by means of current source (4-20mA): Plus	Manual speed control
	1	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
	1	Mains operated timer to limit starts per hour: Plus	Limit Starts
	All	Extraction fans in panel door for cooling of variable speed drives in accordance with manufacturers specifications: Plus	Fans for Soft Starter
	1	Reset push button for pump casing temperature trip condition: Plus	Pump casing temperature trip reset
	All	Thermister relay: Plus	(If provided on pump sets)
	All	Thermister trip indication: plus	(If provided on pump sets)
	All	Thermister reset button: Plus	(If provided on pump sets)
	1	Manual-off-auto-remote selector switch: Plus	Selector Switch
	All	Monitoring and control equipment: Plus	Control & Monitoring functions
	1	10Amp continuous current rated SP MCB: Plus	Heater Supply
	1	Continuous current rated Ammeter: Plus	Heater supply

Employer:		Contractor:	
Witness:		Witness:	

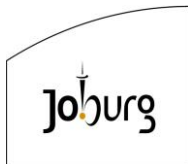


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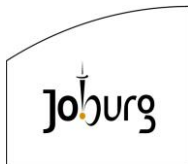
	All	All equipment necessary for remote emergency stop device	All
	1	Pump sets will be operated as one duty and one standby unit. A timer shall be provided for duty rotation of pump sets after a 24 hour period of time. In the event of a pump failure the duty cycle must be transferred to the next available pump set. Timer will be disabled in the event when one pump set is out of commission: Plus	Timer control in manual mode
	1	Duty rotation timer and flip-flop relay that will rotate duty cycle between duty and standby pump sets on a daily basis. If standby pump set is not available duty pump set will remain in operation: Plus	Duty rotation in manual mode
	All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following <ul style="list-style-type: none"> Interlock timer shall be provided for duty rotation of after a 24 hour period of time. Timer will be disabled in the event when motor is out of commission: Plus Interlock with emergency stop to trip and lock out the starter, available standby pump to become duty pump : Plus Interlock motors to prevent simultaneously starting of all motors in the automatic mode of operation after a power failure: Plus Interlock pump set with level control system. A predetermined low level will stop the duty motor and a predetermined high level will allow the start the duty motor: Plus 	
	All	<ul style="list-style-type: none"> Interlock motor with DO sensors in Reactor basin in automatic mode of operation. Predetermined low DO will start the motor and predetermined high DO will stop the motor. If a predetermined DO is not obtained the motor will stop and will ramp down. During start up and shut down this function must be bypassed for a predetermined period. 	DO control
	Three [3]	Panels comprising the following	Aerator No.4 – No.6
	1	150A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
	1	75kW heavy duty soft starter complete with ventilation fans on the unit and on the compartment door as well as a separate door mounted soft starter controller. The bypass circuit shall be connected to only bypass the	Soft Starter

Employer:		Contractor:	
Witness:		Witness:	



	<p>semi-conductor section of the soft starter and maintain the integral motor protection of the soft starter.</p> <p>The following parameters shall be available on the Soft Starter:</p> <ul style="list-style-type: none"> • Soft Start • Kickstart • Current Limit • Pump Control • Sensorless Linear Speed Acceleration and Deceleration • Torque Control • Dual Ramp Start • Full Voltage Start • Preset Slow Speed • Coast • Soft Stop • Smart Motor Braking • Slow Speed with Braking • Accu-Stop • Integrated Motor Overload Protection • Metering • Real Time Clock • Motor Winding Heater Function • Diagnostic Faults and Alarms • Automatic Tuning of Motor Parameters • Protection and diagnostics [Amps, volts, kW, kWh, MW, MWH, elapsed time, power factor, motor thermal capacity usage] • Alarms [Overload, underload, undervoltage, overvoltage, unbalance, jam, stall, and ground fault] • Pump Control [starting and stopping period. Starting time is adjustable. Stopping time is adjustable]. <p>Plus:</p> <p>Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following [Network Communications]:</p> <ol style="list-style-type: none"> Profibus-DP Profinet Industrial Ethernet Modbus TCP/IP <p>Under no circumstances, shall the use of proprietary protocols be allowed: Plus</p>	
1	<p>A separate door mountable display / HMI and programming control unit shall be front door mounted which connected to protection relay. The following</p>	<p>Separate display unit</p>

Employer:		Contractor:	
Witness:		Witness:	

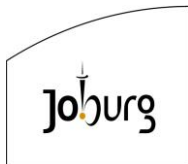


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	features shall be available on the display / HMI as listed below: <ul style="list-style-type: none">• All Indication lights as specified under particular specification shall be displayed on the door mounted display: Plus• Running hour meter shall be displayed on the door mounted display• Motor switching state• Current in phases 1, 2, 3and maximum current• Phase voltage 1, 2, 3• Active power• Apparent power• Power factor• Phase unbalance• Phase sequence• Time to trip• Temperature rise, motor model• Remaining cooling time of the motor• Temperature• Actual value, analog signals• Motor operating hours• Motor stop times• Number of motor starts• Number of overload trips	
All	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
All	Mains operated timer to limit starts per hour: Plus	Limit Starts
All	Extraction fans in panel door for cooling of Soft Starter drives in accordance with manufacturers specifications: Plus	Fans for Soft Starter
All	Continuous current rated current transformer: Plus	Current inputs
All	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
All	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
1	Mains operated timer to limit starts per hour: Plus	Limit Starts
1	Manual-off-auto-remote selector switch: Plus	Selector Switch
All	Monitoring and control equipment: Plus	Control & Monitoring functions
All	10Amp continuous current rated SP MCB: Plus	Heater Supply
All	Heater ammeter: Plus	Heater Ammeter

Employer:		Contractor:	
Witness:		Witness:	

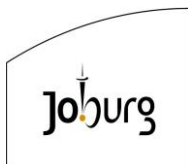


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	All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
	1	Starting delay timer for sequence starting on motors : Plus	Sequence starting
	All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following <ul style="list-style-type: none"> Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus Interlock mixers with level control system. A predetermined low level will stop all mixers: Plus 	All motors shall have E-Stops
	Two [2]	Panels comprising the following	Aerator No.7 - No.8
	1	100A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
	1	45kW heavy duty soft starter complete with ventilation fans on the unit and on the compartment door as well as a separate door mounted soft starter controller. The bypass circuit shall be connected to only bypass the semi-conductor section of the soft starter and maintain the integral motor protection of the soft starter. The following parameters shall be available on the Soft Starter: <ul style="list-style-type: none"> Soft Start Kickstart Current Limit Pump Control Sensorless Linear Speed Acceleration and Deceleration Torque Control Dual Ramp Start Full Voltage Start Preset Slow Speed Coast Soft Stop Smart Motor Braking Slow Speed with Braking Accu-Stop Integrated Motor Overload Protection 	Soft Starter

Employer:		Contractor:	
Witness:		Witness:	

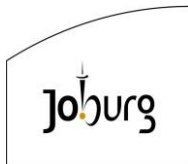


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	<ul style="list-style-type: none">• Metering• Real Time Clock• Motor Winding Heater Function• Diagnostic Faults and Alarms• Automatic Tuning of Motor Parameters• Protection and diagnostics [Amps, volts, kW, kWh, MW, MWH, elapsed time, power factor, motor thermal capacity usage]• Alarms [Overload, underload, undervoltage, overvoltage, unbalance, jam, stall, and ground fault]• Pump Control [starting and stopping period. Starting time is adjustable. Stopping time is adjustable]. <p>Plus:</p> <p>Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following [Network Communications]:</p> <ul style="list-style-type: none">e) Profibus-DPf) Profinetg) Industrial Etherneth) Modbus TCP/IP <p>Under no circumstances, shall the use of proprietary protocols be allowed: Plus</p>	
1	<p>A separate door mountable display / HMI and programming control unit shall be front door mounted which connected to protection relay. The following features shall be available on the display / HMI as listed below:</p> <ul style="list-style-type: none">• All Indication lights as specified under particular specification shall be displayed on the door mounted display: Plus• Running hour meter shall be displayed on the door mounted display• Motor switching state• Current in phases 1, 2, 3 and maximum current• Phase voltage 1, 2, 3• Active power• Apparent power• Power factor• Phase unbalance• Phase sequence• Time to trip• Temperature rise, motor model• Remaining cooling time of the motor• Temperature• Actual value, analog signals• Motor operating hours• Motor stop times• Number of motor starts	Separate display unit

Employer:		Contractor:	
Witness:		Witness:	



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	<ul style="list-style-type: none"> Number of overload trips 	
All	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
All	Mains operated timer to limit starts per hour: Plus	Limit Starts
All	Extraction fans in panel door for cooling of Soft Starter drives in accordance with manufacturers specifications: Plus	Fans for Soft Starter
All	Continuous current rated current transformer: Plus	Current inputs
All	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
All	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
1	Mains operated timer to limit starts per hour: Plus	Limit Starts
1	Manual-off-auto-remote selector switch: Plus	Selector Switch
All	Monitoring and control equipment: Plus	Control & Monitoring functions
All	10Amp continuous current rated SP MCB: Plus	Heater Supply
All	Heater ammeter: Plus	Heater Ammeter
All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
1	Starting delay timer for sequence starting on motors : Plus	Sequence starting
All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following <ul style="list-style-type: none"> Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus Interlock mixers with level control system. A predetermined low level will stop all mixers: Plus 	All motors shall have E-Stops
One [1]	Raw Sludge Pump Station Feed	External Supply

Employer:		Contractor:	
Witness:		Witness:	

1	100A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	Main
Set	100/5 A Continuous current rated current transformer: Plus	Current inputs
1	5A Ammeter scaled 0-100A	
1	3 Position Selector switch	R-W-B phase indication
1	Resettable Running hour meter.	
Two [2]	Panels comprising the following	Anaerobic mixers No.1 – No.2
1	20A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
1	7.5kW Type 2 Coordination Direct-on-line motor starter MCCB Forward/reverse complete with sensitive quick reacting overload device as specified by screen manufacturer (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	DOL starter
Set	Continuous current rated current transformer: Plus	Current inputs
3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
1	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
1	Mains operated timer to limit starts per hour: Plus	Limit Starts
1	Electronic motor protection relay complete with converter, with at least the following settings equal or similar to Schneider Electric Tesys U: <ul style="list-style-type: none"> • Thermal Overload Protection • Thermal Memory • Pre-Loading • Locked Rotor Protection • Jam Protection • Current Unbalance Protection • Phase Loss Protection 	Protection Setting on Relay

Employer:		Contractor:	
Witness:		Witness:	

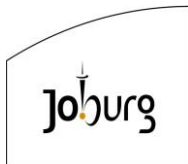


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		<ul style="list-style-type: none"> • User-Selectable Auto Reset • Underload / Dry Run Protection • Restart Timer • Restart Contact • Phase Rotation Protection • Over voltage Protection • Under voltage Protection • Voltage Phase Symmetry • Latched LED Trip Indication <p>Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following:</p> <ol style="list-style-type: none"> Profibus-DP Profinet Industrial Ethernet Modbus TCP/IP <p>Under no circumstances, shall the use of proprietary protocols be allowed: Plus.</p>	
1		<p>A separate door mountable display / HMI and programming control unit shall be front door mounted which connected to protection relay. The following features shall be available on the display / HMI as listed below:</p> <ul style="list-style-type: none"> • All Indication lights as specified under JHB Water specification shall be displayed on the door mounted display: Plus • Running hour meter shall be displayed on the door mounted display. • Motor switching state • Current in phases 1, 2, 3 and maximum current 	Separate display unit
1		Manual-off-auto-remote selector switch: Plus	Selector Switch
All		Monitoring and control equipment: Plus	Control & Monitoring functions
1		10Amp continuous current rated SP MCB: Plus	Heater Supply
All		All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
1		Front panel mounted timer to operate screen on a timed bases independent from level control system: Plus	Timer Control
All		Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following	

Employer:		Contractor:	
Witness:		Witness:	

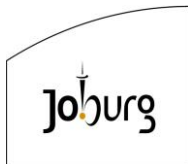


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		Interlock with sewer flow to stop all motors when sewer flow stops: Plus	
	All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
	1	Starting delay timer for sequence starting on motors : Plus	Sequence starting
		Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus	All motors shall have E-Stops
		Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus	
		Interlock mixers with level control system. A predetermined low level will stop all mixers: Plus	
		Starting delay timer for sequence starting on motors : Plus	
	One [1]	Panels comprising the following	Pre-Anoxic mixer No.1
	1	20A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
	1	7.5kW Type 2 Coordination Direct-on-line motor starter MCCB Forward/reverse complete with sensitive quick reacting overload device as specified by screen manufacturer (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	DOL starter
	Set	Continuous current rated current transformer: Plus	Current inputs
	3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
	1	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
	1	Mains operated timer to limit starts per hour: Plus	Limit Starts
	1	Electronic motor protection relay complete with converter, with at least the following settings equal or similar to Schneider Electric Tesys U: <ul style="list-style-type: none"> • Thermal Overload Protection • Thermal Memory • Pre-Loading • Locked Rotor Protection 	Protection Setting on Relay

Employer:		Contractor:	
Witness:		Witness:	

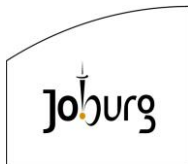


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		<ul style="list-style-type: none"> • Jam Protection • Current Unbalance Protection • Phase Loss Protection • User-Selectable Auto Reset • Underload / Dry Run Protection • Restart Timer • Restart Contact • Phase Rotation Protection • Over voltage Protection • Under voltage Protection • Voltage Phase Symmetry • Latched LED Trip Indication <p>Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following:</p> <ul style="list-style-type: none"> e) Profibus-DP f) Profinet g) Industrial Ethernet h) Modbus TCP/IP <p>Under no circumstances, shall the use of proprietary protocols be allowed: Plus.</p>	
1		<p>A separate door mountable display / HMI and programming control unit shall be front door mounted which connected to protection relay. The following features shall be available on the display / HMI as listed below:</p> <ul style="list-style-type: none"> • All Indication lights as specified under JHB Water specification shall be displayed on the door mounted display: Plus • Running hour meter shall be displayed on the door mounted display • Motor switching state • Current in phases 1, 2, 3 and maximum current 	Separate display unit
1		Manual-off-auto-remote selector switch: Plus	Selector Switch
All		Monitoring and control equipment: Plus	Control & Monitoring functions
1		10Amp continuous current rated SP MCB: Plus	Heater Supply
All		All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
1		Front panel mounted timer to operate screen on a timed bases independent from level control system: Plus	Timer Control
All		Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following	

Employer:		Contractor:	
Witness:		Witness:	

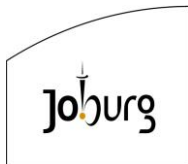


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	All	Interlock with sewer flow to stop all motors when sewer flow stops: Plus All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
	1	Starting delay timer for sequence starting on motors : Plus	Sequence starting
	1	Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus Interlock mixers with level control system. A predetermined low level will stop all mixers: Plus	All motors shall have E-Stops
	Three [3]	Panels comprising the following	Primary Anoxic mixers No.1 – No.3
	1	20A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
	1	7.5kW Type 2 Coordination Direct-on-line motor starter MCCB Forward/reverse complete with sensitive quick reacting overload device as specified by screen manufacturer (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	DOL starter
	Set	Continuous current rated current transformer: Plus	Current inputs
	3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
	1	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
	1	Mains operated timer to limit starts per hour: Plus	Limit Starts
	1	Electronic motor protection relay complete with converter, with at least the following settings equal or similar to Schneider Electric Tesys U: <ul style="list-style-type: none"> Thermal Overload Protection Thermal Memory Pre-Loading 	1

Employer:		Contractor:	
Witness:		Witness:	

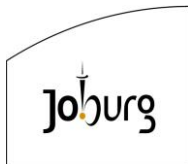


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		<ul style="list-style-type: none"> • Locked Rotor Protection • Jam Protection • Current Unbalance Protection • Phase Loss Protection • User-Selectable Auto Reset • Underload / Dry Run Protection • Restart Timer • Restart Contact • Phase Rotation Protection • Over voltage Protection • Under voltage Protection • Voltage Phase Symmetry • Latched LED Trip Indication <p>Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following:</p> <ul style="list-style-type: none"> i) Profibus-DP j) Profinet k) Industrial Ethernet l) Modbus TCP/IP <p>Under no circumstances, shall the use of proprietary protocols be allowed: Plus.</p>	
1		<p>A separate door mountable display / HMI and programming control unit shall be front door mounted which connected to protection relay. The following features shall be available on the display / HMI as listed below:</p> <ul style="list-style-type: none"> • All Indication lights as specified under JHB Water specification shall be displayed on the door mounted display: Plus • Running hour meter shall be displayed on the door mounted display • Motor switching state • Current in phases 1, 2, 3 and maximum current 	Separate display unit
1		Manual-off-auto-remote selector switch: Plus	Selector Switch
All		Monitoring and control equipment: Plus	Control & Monitoring functions
1		10Amp continuous current rated SP MCB: Plus	Heater Supply
All		All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
1		Front panel mounted timer to operate screen on a timed bases independent from level control system: Plus	Timer Control
All		Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following	

Employer:		Contractor:	
Witness:		Witness:	



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	All	Interlock with sewer flow to stop all motors when sewer flow stops: Plus	Control and monitoring
	1	All equipment necessary for remote motor status, speed monitoring and control.	Sequence starting
		Starting delay timer for sequence starting on motors : Plus	All motors shall have E-Stops
		Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus	
		Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus	
		Interlock mixers with level control system. A predetermined low level will stop all mixers: Plus	
	One [1]	Panels comprising the following	Power factor correction
	1	500A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
	1	7 step Power factor correction Controller	DOL starter
	Set	Continuous current rated current transformer: Plus	Current inputs
	3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
	1	20 TP contactor: Plus	Fan supply
	2	12.5kVA double -step capacitor bank with Fuses, discharge resistors and contactors: Plus	12.5kVAR caps
	3	25kVA double -step capacitor bank with Fuses, discharge resistors and contactors:: Plus	25kVAR caps
	All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following	
	All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
	1	Contactors : Plus	Sequence starting

Employer:		Contractor:	
Witness:		Witness:	



Contract: JW14337
Driefontein Wastewater Treatment Works
Infrastructure Renewal Plan
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	Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus	All motors shall have E-Stops
One [1]	Panels comprising the following	Change over
1	300A TP continuous current rated MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Generator supply
2	350A TP continuous current rated mechanically interlocked changeover contactors	Change over

Colour: Painted RED – B26 (SANS 1091:2012) external, White arc-free internal (see Painting and Finishing).

Fault Level: 42kA.

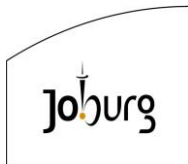
Sectioning: Multi-section, Form 3b or Form 4 to SANS IEC 60439.

Future: 30% for future extensions space.

Cable Entry: Incoming and Outgoing – Bottom. MCC gland plates shall be 3CR12 sheet steel, unpainted or aluminium (see JHB Waters Glanding specification).

One	Panels comprising the following	Emergency Section
1	250Amp continuous current rated TP (triple pole) draw out type air circuit breaker complete with opening / closing release and sufficient auxiliary contacts and complete with: Control unit with adjustable overload and short circuit protection with time discrimination micrologic unit, Electrical operating mechanism for remote closing of circuit breaker, 231V AC operation, Separate panel mounted circuit breaker close push button equal or similar to Schneider Electric: Plus	1
4	300Amp tint copper bus bars [appearance shall be aluminium], suitable clamps shall be used, and no drilling shall be allowed on the busbars [cubic system shall be used]: Plus	3 Phase + N

Employer:		Contractor:	
Witness:		Witness:	

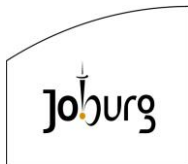


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1	300Amp tint copper bus bars [appearance shall be aluminium], suitable clamps shall be used, and no drilling shall be allowed on the busbars [cubic system shall be used]: Plus	Earth
6	2Amp continuous current rated HRC fuse holders and fused links: Plus	Indicator Lamp Protection Left and Right Busbars
3	Robust LED indicator lamps connected load side of the circuit breaker.	Indicators for 3 Phase (Red , White and Blue Indications) Left and Right Busbars
All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following <ul style="list-style-type: none"> Mechanical and electrical interlocks that all busbars fed from Normal section Mechanical and electrical interlocks that all busbars fed from Change over system Mechanical and electrical interlocks that prevent paralleling the normal and emergency feeds. 	Interlocks
Two	Panels comprising the following	B-Recycle Pump No.1 - No.2
1	80A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
1	15kW Type 2 Coordination Direct-on-line motor starter MCCB Forward/reverse complete with sensitive quick reacting overload device as specified by screen manufacturer (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	DOL starter
Set	Continuous current rated current transformer: Plus	Current inputs
3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
1	Mains operated timer to limit starts per hour: Plus	Limit Starts
1	Electronic motor protection relay complete with converter, with at least the following settings equal or similar to Schneider Electric Tesys U: <ul style="list-style-type: none"> Thermal Overload Protection Thermal Memory 	Protection Setting on Relay

Employer:		Contractor:	
Witness:		Witness:	

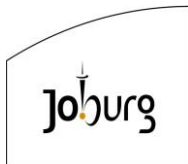


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		<ul style="list-style-type: none"> • Pre-Loading • Locked Rotor Protection • Jam Protection • Current Unbalance Protection • Phase Loss Protection • User-Selectable Auto Reset • Underload / Dry Run Protection • Restart Timer • Restart Contact • Phase Rotation Protection • Over voltage Protection • Under voltage Protection • Voltage Phase Symmetry • Latched LED Trip Indication <p>Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following:</p> <ul style="list-style-type: none"> m) Profibus-DP n) Profinet o) Industrial Ethernet p) Modbus TCP/IP <p>Under no circumstances, shall the use of proprietary protocols be allowed: Plus.</p>	
1		<p>A separate door mountable display / HMI and programming control unit shall be front door mounted which connected to protection relay. The following features shall be available on the display / HMI as listed below:</p> <ul style="list-style-type: none"> • All Indication lights as specified under JHB Water specification shall be displayed on the door mounted display: Plus • Running hour meter shall be displayed on the door mounted display • Motor switching state <p>Current in phases 1, 2, 3 and maximum current</p>	Separate display unit
1		Manual-off-auto-remote selector switch: Plus	Selector Switch
All		Monitoring and control equipment: Plus	Control & Monitoring functions
1		10Amp continuous current rated SP MCB: Plus	Heater Supply
All		All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring

Employer:		Contractor:	
Witness:		Witness:	



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Driefontein Wastewater Treatment Works
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1	Front panel mounted timer to operate screen on a timed bases independent from level control system: Plus	Timer Control
All	Monitoring and control equipment: Plus	Control & Monitoring functions
1	10Amp continuous current rated SP MCB: Plus	Heater Supply
All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
1	Front panel mounted timer to operate screen on a timed bases independent from level control system: Plus	Timer Control
All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following	
All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
1	Starting delay timer for sequence starting on motors : Plus	Sequence starting
	Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus	All motors shall have E-Stops
	Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus	
1	Indication light and reset push button for pump motor seal leak protection sensor Plus	Motor seal leak
Three [3]	Panels comprising the following	A-Recycle Pump No.1 - No.3
1	100A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
1	22kW Type 2 Coordination Direct-on-line motor starter MCCB Forward/reverse complete with sensitive quick reacting overload device as specified by screen manufacturer (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	DOL starter

Employer:		Contractor:	
Witness:		Witness:	

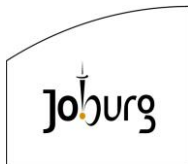


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	Set	Continuous current rated current transformer: Plus	Current inputs
	3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
	1	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
	1	Mains operated timer to limit starts per hour: Plus	Limit Starts
	1	<p>Electronic motor protection relay complete with converter, with at least the following settings equal or similar to Schneider Electric Tesys U:</p> <ul style="list-style-type: none"> • Thermal Overload Protection • Thermal Memory • Pre-Loading • Locked Rotor Protection • Jam Protection • Current Unbalance Protection • Phase Loss Protection • User-Selectable Auto Reset • Underload / Dry Run Protection • Restart Timer • Restart Contact • Phase Rotation Protection • Over voltage Protection • Under voltage Protection • Voltage Phase Symmetry • Latched LED Trip Indication <p>Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following:</p> <ul style="list-style-type: none"> q) Profibus-DP r) Profinet s) Industrial Ethernet t) Modbus TCP/IP <p>Under no circumstances, shall the use of proprietary protocols be allowed: Plus.</p>	Protection Setting on Relay
	1	A separate door mountable display / HMI and programming control unit shall be front door mounted which connected to protection relay. The following features shall be available on the display / HMI as listed below:	1
	All	Monitoring and control equipment: Plus	Control & Monitoring functions
	1	10Amp continuous current rated SP MCB: Plus	Heater Supply

Employer:		Contractor:	
Witness:		Witness:	

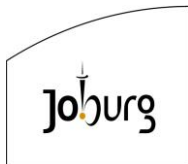


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Driefontein Wastewater Treatment Works
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	All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
	1	Front panel mounted timer to operate screen on a timed bases independent from level control system: Plus	Timer Control
	All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following	
	All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
	1	Starting delay timer for sequence starting on motors : Plus	Sequence starting
		Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus	All motors shall have E-Stops
		Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus	
	1	Indication light and reset push button for pump motor seal leak protection sensor Plus	Motor seal leak
	1	Seal leak protection relays	Seal leak relay
	One [1]	Panels comprising the following	A-Recyle Intake Mixer
	1	15A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
	1	3kW Type 2 Coordination Direct-on-line motor starter MCCB Forward/reverse complete with sensitive quick reacting overload device as specified by screen manufacturer (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	DOL starter
	Set	Continuous current rated current transformer: Plus	Current inputs
	3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
	1	Set of Stop/Start push buttons: Plus	Stop/Start Push Buttons
	1	Mains operated timer to limit starts per hour: Plus	Limit Starts

Employer:		Contractor:	
Witness:		Witness:	

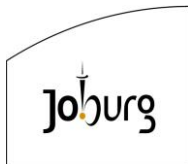


Contract: JW14337
Driefontein Wastewater Treatment Works
Infrastructure Renewal Plan
Volume 2
Part 3: Scope of Work



1	<p>Electronic motor protection relay complete with converter, with at least the following settings equal or similar to Schneider Electric Tests U:</p> <ul style="list-style-type: none"> • Thermal Overload Protection • Thermal Memory • Pre-Loading • Locked Rotor Protection • Jam Protection • Current Unbalance Protection • Phase Loss Protection • User-Selectable Auto Reset • Underload / Dry Run Protection • Restart Timer • Restart Contact • Phase Rotation Protection • Over voltage Protection • Under voltage Protection • Voltage Phase Symmetry • Latched LED Trip Indication <p>Communications module must be provided, communication links with PLC/DCS Units. The communication interface must comply with either of the following:</p> <ul style="list-style-type: none"> u) Profibus-DP v) Profinet w) Industrial Ethernet x) Modbus TCP/IP <p>Under no circumstances, shall the use of proprietary protocols be allowed: Plus.</p>	Protection Setting on Relay
1	<p>A separate door mountable display / HMI and programming control unit shall be front door mounted which connected to protection relay. The following features shall be available on the display / HMI as listed below:</p> <ul style="list-style-type: none"> • All Indication lights as specified under JHB Water specification shall be displayed on the door mounted display: Plus • Running hour meter shall be displayed on the door mounted display • Motor switching state <p>Current in phases 1, 2, 3 and maximum current</p>	Separate display unit
1	Manual-off-auto-remote selector switch: Plus	Selector Switch
All	Monitoring and control equipment: Plus	Control & Monitoring functions
All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
1	Front panel mounted timer to operate screen on a timed bases independent from level control system: Plus	Timer Control

Employer:		Contractor:	
Witness:		Witness:	

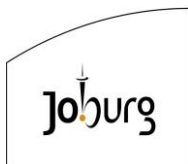


All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following	
All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
1	Starting delay timer for sequence starting on motors : Plus	Sequence starting
	Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus	All motors shall have E-Stops
	Manual mode of operation the mixer shall be started via the stop / start push buttons on system. Automatic mode of operation the mixers tanks shall be started and run consciously: Plus	
One	Panels comprising the following	Distribution Section
1	100Amp continuous current rated MCCB with door interlock (setting set to Amp) including electronic trip unit: Plus	Main
4	100Amp copper bus bars: Plus	3 Phase + N
1	100Amp copper bus bar: Plus	Earth
2	0.75kW continuous current rated thermal magnetic motor circuit breakers with adjustable current setting and auxiliary contact (monitor trip condition) (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	Ventilation Fans supplies
2	60Amp SP + N continuous current rated MCB complete: Plus	MCC Room DB and Switchgear Room DB
6	16Amp SP + N continuous current rated MCB complete (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	'24 Ultra fine screen Level controllers Feeders. Cascaded with main breaker above.
4	16Amp SP + N continuous current rated MCB complete (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	Flow Meter Kiosk Feeders. Cascaded with main breaker above.
4	16Amp SP + N continuous current rated MCB complete (Estimated and shall be coordinated with mechanical	Dissolved Oxygen meters.

Employer:		Contractor:	
Witness:		Witness:	

	4	contractor to ensure correct supplies to mechanical equipment): Plus 16Amp SP + N continuous current rated MCB complete (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	Instrument Feeders
	2	62Amp TP + N continuous current rated MCB complete (Estimated and shall be coordinated with mechanical contractor to ensure correct supplies to mechanical equipment): Plus	High mast Feeders
	One [1]	Panels comprising the following	Power factor correction
	1	500A TP continuous current rated motor protection MCCB complete with extended rotary handle for door interlocking [Mechanical operating handle for circuit-breaker, including door interlock, self-aligning spindle and padlocking facility] (Estimated and shall be coordinated with mechanical Contractor to ensure correct supplies to mechanical equipment): Plus	Main
	1	7 step Power factor correction Controller	DOL starter
	Set	Continuous current rated current transformer: Plus	Current inputs
	3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
	1	20 TP contactor: Plus	Fan supply
	1	7 step Power factor correction Controller	DOL starter
	Set	Continuous current rated current transformer: Plus	Current inputs
	3	2 Amp HRC fuse holders and fused links: Plus	Voltage inputs
	1	20 TP contactor: Plus	Fan supply
	2	12.5kVA double -step capacitor bank with Fuses, discharge resistors and contactors: Plus	12.5kVAR caps
	3	25kVA double -step capacitor bank with Fuses, discharge resistors and contactors: Plus	25kVAR caps
	All	Relays, auxiliary contacts, indicating lights, wiring and reset buttons necessary for the following	
	All	All equipment necessary for remote motor status, speed monitoring and control.	Control and monitoring
	1	Contactors : Plus	Sequence starting

Employer:		Contractor:	
Witness:		Witness:	



	Interlocking with emergency stop stations on all motors to lockout main circuit breaker: Plus	All motors shall have E-Stops
Two [2]	Panels comprising the following	Fire suppression
3	5kg Low pressure automatic Fire detection and Suppression System with Tubing running thru the entire MCC for detection and suppression a direct quick acting clean agent Plus	Cylinder and agent
6	30m detection and suppression tubing running on top and below all main current carrying components in each cubicle of the MCC.	Tubing
3	Low pressure switched: Plus	Indication / alarm
All	Relays and wiring to connect to the PLC for alarming and trending	

PSY3.3 MCC WIRING

The motor starter circuits shall be wired according to the schematic drawings generated by the Contractor, based on the typical schematics provided. The Contractor shall generate the detailed schematics for each of the starters and other equipment to be installed in the MCC's. The control centre shall include no interconnections between control units.

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.

PSY3.4 CUBICLE IDENTIFICATION LABELS

Cubicle identification labels shall be similar to the existing equipment in the field that was connected to the burned out MCC. as per schedule above in PSY3.2

PSY3.5 QUALITY CONTROL

The Contractor shall submit complete QA/QC documentation for approval by the Employer's Agent, before manufacturing of the MCC shall begin. The documentation will be approved by the Employer's Agent, who will indicate hold points, tests and inspections to be carried out in the presence of the Employer's Agent. At least three

Employer:		Contractor:	
Witness:		Witness:	



(3) days' notice shall be given to the Employer's Agent for the witnessing of tests, inspections, etc.

The MCC shall go through a quality inspection and factory acceptance testing (FAT) before being taken to site. This inspection will include physical inspection of the structure and electrical conductors and general wiring. The quality inspection shall include general electrical tests of the power circuit phasing, control circuit wiring, and device electrical operation.

The MCC 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.

PSY3.6 TRENCHING

Trenching will be done per the drawing and trenching standards.

PSY3.7 DRAWINGS

The Contractor is required to produce the detailed individual wiring diagrams for each starter in AutoCAD format fully in compliance with the Employer's Agent's requirements. All drawings are to be submitted for approval prior to the start of manufacture. Typical schematic drawings of circuits are attached in the annexures.

PSY3.8 MANUFACTURING

The MCC's shall be manufactured by an approved supplier with proven track record within the business. A set of workshop drawings must be presented for approval prior to the commencement of manufacturing of the MCC's.

PSY4 DETAIL SPECIFICATION: LOCAL START/STOP ISOLATOR PUSHBUTTON STATIONS

PSY4.1 SCOPE OF WORK

This specification covers the supply of the local start/stop isolator pushbutton stations.

PSY4.2 SUPPLY OF LOCAL START/STOP ISOLATOR PUSHBUTTON STATIONS

The local start/stop isolator pushbutton stations shall be manufactured in accordance with the requirements of the following particular specifications:

Employer:		Contractor:	
Witness:		Witness:	



- E03: LOCAL START/STOP ISOLATOR PUSHBUTTON STATION EQUIPMENT

For standardisation purposes, all new components and wire colours to be provided by the Contractor shall be similar to the components and wiring in the existing local start/stop isolator pushbutton stations.

PSY5 DETAIL SPECIFICATION: LOW VOLTAGE PVC INSULATED POWER AND CONTROL CABLES

PSY5.1 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.

PSY6 SUPPLY OF LOW VOLTAGE CABLES

The low voltage cables shall be manufactured in accordance with the requirements of the following particular specifications:

- E05: LOW VOLTAGE CABLES

PSY7 DETAIL SPECIFICATION: LOW VOLTAGE CABLE INSTALLATION

PSY7.1 SCOPE OF WORK

This specification covers the installation requirements of electrical equipment under this contract.

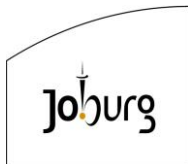
PSY7.2 LOW VOLTAGE CABLE INSTALLATION REQUIREMENTS

A low voltage cable installation and the additional requirements detailed below shall be supplied, installed and commissioned between the new circuits installed on the MCC and the respective equipment by the Contractor.

The electrical installation shall be completed in accordance with the requirements of the following particular specifications:

- E06: MEDIUM AND LOW VOLTAGE CABLE INSTALLATION
- E02: CABLE RACKING

Employer:		Contractor:	
Witness:		Witness:	



The Contractor shall supply and install 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.

PSY8 DETAIL SPECIFICATION: EARTHING AND EARTH BONDING

PSY8.1 EARTH BONDING OF METAL STRUCTURES AND EQUIPMENT

All new metal parts, structures and equipment are to be earth bonded to the relevant earth bar system to eliminate static build up. The new MCCs' earth bars shall in turn be bonded to the existing pump stations' earth bars.

In general, unless otherwise specified, all 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 bonding from steel structures to the main substation earth bar shall be done by means of a 70 mm², Kwena type earth wire.

PSY8.2 EARTHING AND LIGHTNING PROTECTION REQUIREMENTS

The earthing and earth bonding of structures and equipment shall be completed in accordance with the requirements of the following particular specification:

- E11: GENERAL ELECTRICAL EARTHING AND LIGHTNING PROTECTION

PSY9 DETAILED SPECIFICATION: SUPPLY OF MOTORS

PSY9.1 SCOPE OF WORK

New electrical motors shall be supplied under this project. This specification covers the supply of any new electrical motor to be supplied.

PSY9.2 SUPPLY OF ELECTRICAL MOTORS

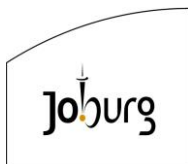
The motors to be supplied shall be manufactured in accordance with the requirements of the following particular specifications:

- E01: ELECTRICAL MOTORS

PSY10 DETAIL SPECIFICATION: BUILDING SMALL POWER AND LIGHTING FOR THE EXISTING PUMP STATION AND NEW MCC BUILDING

PSY10.1 SCOPE OF WORK

Employer:		Contractor:	
Witness:		Witness:	



The Contractor is required to refurbish the small power and lighting installation for the existing MCC Building.

PSY10.2 SUPPLY AND INSTALLATION OF BUILDING SMALL POWER AND LIGHTING

The building small and lighting shall be completed in accordance with the requirements of the following particular specification:

- E08: ELECTRICAL WIRING
- E09: ELECTRICAL BUILDING INSTALLATION

PSY11 DETAIL SPECIFICATION: ELECTRICAL MINIATURE SUBSTATIONS

PSY11.1 SCOPE OF WORK

The Contractor is required to replace the existing Supply cables from the two 630kVA Compost Minisub with a new cables the miniature substations are still in good working order.

PSY11.2 SUPPLY AND INSTALLATION OF ELECTRICAL MINIATURE SUBSTATIONS

The minisub shall be supplied and installed in accordance with the requirements of the following particular specification:

- E18: ELECTRICAL MINIATURE SUBSTATIONS

DOCUMENTATION AND COMMISSIONING

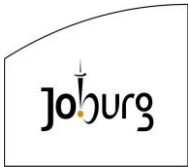
The issuing of a Certificate of Compliance for each individual area/equipment in the entire installation must be included in the tender price.

QA documentation for each set of equipment must be provided.

Commissioning and setting up of all protection equipment must be included in the tender price AND overall commissioning assistance.

The vendors recommended list of commissioning spares must be included in the tender price.

Employer:		Contractor:	
Witness:		Witness:	



PORTION 4: STANDARD JOHANNESBURG WATER SPECIFICATIONS

Employer:		Contractor:	
Witness:		Witness:	

Johannesburg Water SOC Ltd



DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN VOLUME 2

PART 4: SITE INFORMATION

Employer:		Contractor:	
Witness:		Witness:	

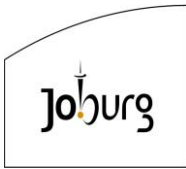


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Employer:		Contractor:	
Witness:		Witness:	

C4: SITE INFORMATION

1. GENERAL

This section describes the site at the time of tender to enable the Contractor to price their tender, decide upon their method of working, as well as their programming and risks.

2. SITE LOCATION

The Driefontein Wastewater Treatment Works is located west of the road, M5 and south of road, R374. . The co-ordinates of the site are 26° 0' 41.70" S and 27° 50' 14.50" E.

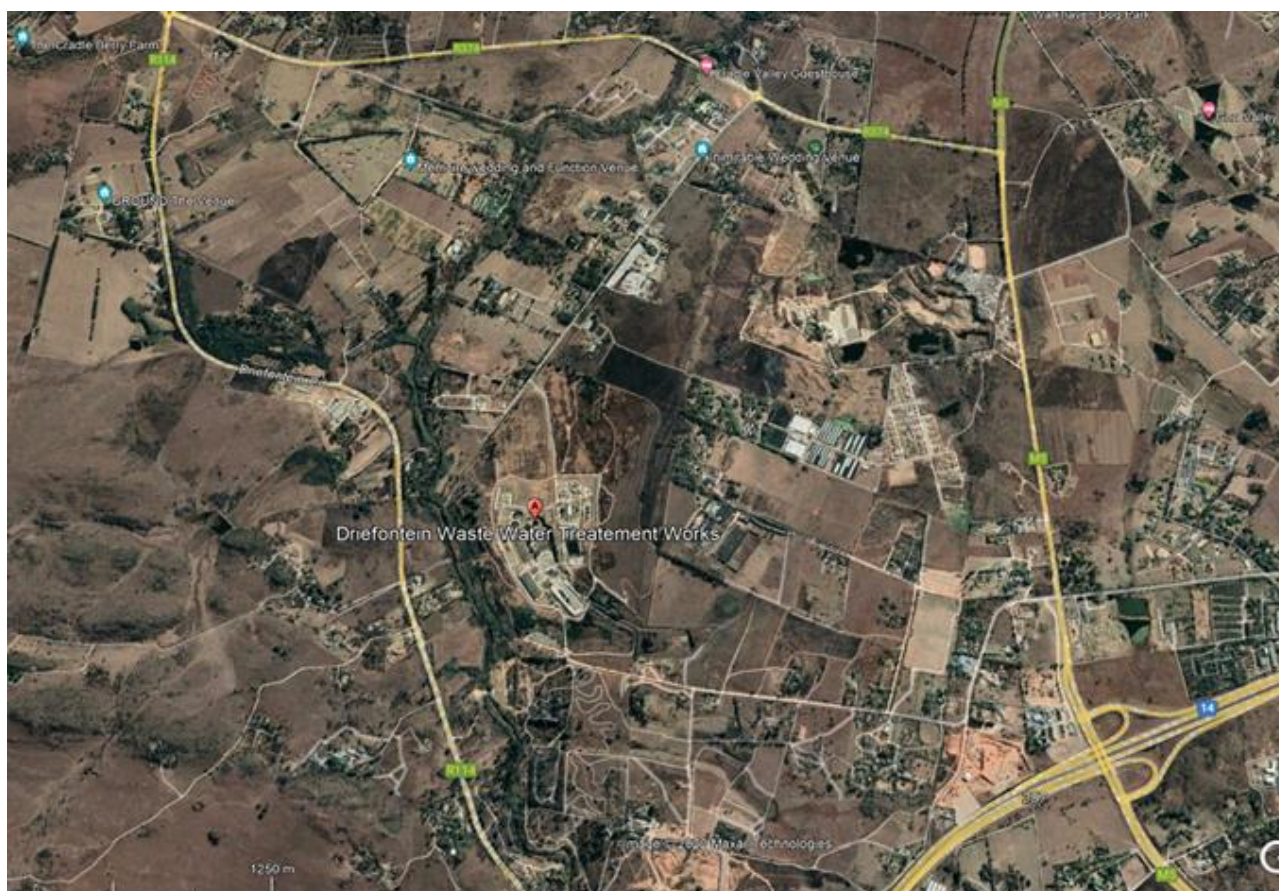
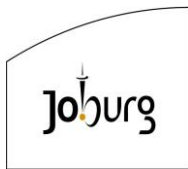


Figure 1: Locality Plan (From Google Earth)

Employer:		Contractor:	
Witness:		Witness:	



3. ACCESS TO SITE AND RESTRICTIONS

Access to the plant is off the M5 as shown in Figure 1. R374 road leads up to the main entrance to the plant. The surfaced road from the R374 leads to the site of works.

The Treatment Works is a fully functional Plant and as such its operation must not be jeopardised at any time.

The Contractor may not operate any valves, sluice gates or any other equipment currently in use on the works without written permission from the Works Manager.

The Contractor shall provide temporary access to the Works as may be required by him and to the approval of the Engineer.

Access to the Site is by means of existing roads through the existing access gates controlled by a security company approved by Johannesburg Water. No restriction on access to the Site of Works will be placed on persons or vehicles involved with the execution of the Works. All traffic must be restricted to the maximum speed of 40 km/h and vehicles must be driven with extreme caution.

The Contractor shall be required to report daily to Management personnel of the Works. Work permits shall be completed and shall be area specific.

As the Contract shall require the removal of equipment from the Site, the Contractor shall acquire permits as required by the Employer for the equipment removed from the Site.

The Contractor's staff shall be identified by either clothing bearing the contracting company's name or an identification tag, which shall be displayed when entering the Site of Works.

Movement within the Works is restricted to avoid damage to the existing services, structures, trees and, where practical, to the gardens. The making good of any damage caused by non-observance of such restrictions will be for the Contractor's account.

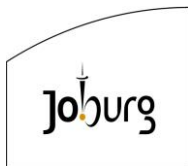
Access is to be made available to Johannesburg Water's employees to any portion of the site whenever required.

4. EXISTING SERVICES, SERVITUDES AND WAYLEAVES

The existing treatment works must remain in operation during the execution of the contract. The Employer must have access to the works at all times. If the work to be done requires the treatment works to be out of operation for a short period, prior arrangements must be made at least one week in advance with the Engineer.

The known existing services are shown on the drawings. The positions of the services cannot be guaranteed. On establishing on Site, the Contractor must determine the positions of all pipelines and cable routes on Site with the assistance of the Engineer's and the Employer's staff on Site. The Contractor must take precautions to

Employer:		Contractor:	
Witness:		Witness:	



prevent any damage to existing services. Damages which might occur will be repaired at the cost of the Contractor.

No permits or wayleaves will be required.

5. SECURITY

A concrete palisade fence has been installed along the entire perimeter boundary of the Works. The Employer has appointed a security company which controls the access through the main access gate to the works and regular patrols within the boundaries of the works. The Contractor shall remain responsible for the security of his on-site establishment and plant. Upon the appointment of a security guard, the grade of such appointed personnel shall be made available to the Employer.

Refer to clause PS7.2 (Security).

Employer:		Contractor:	
Witness:		Witness:	

CONTRACT NO : JW14337 Section C2.2: Schedule of Quantities (Electrical and Electronic Works) SCHEDULE1 : Preliminary and General						
Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
		SCHEDULE1 : Preliminary and General				
1.1	SANS 1200 A	FIXED CHARGE ITEMS				
	8.3.1	Contractual Requirements				
1.1.1		Surety or bank guarantee	Sum	1		
1.1.2		Insurance of Works	Sum	1		
1.1.3		Common Law Liability insurance	Sum	1		
1.1.4		Third Party insurance	Sum	1		
1.1.5		Insurance of construction plant and equipment	Sum	1		
1.1.6		Design and Drawings	Sum	1		
1.1.7		Other (Detail) (.....)	Sum	1		
1.1.8		Advance Payment Guarantee or Other Forms of Guarantee that may be required, to the value of R5 million	Sum	1		
		Forward cover				
1.1.9		In respect of the total value of imported content of goods used in the Treatment Works from page RD72 Imported Content Sheet: R				
1.1.10		Allow a Provisional Sum to cover variation in exchange rate prior to obtaining forward cover. Tenderer is to insert an amount = 20% of the above amount from Item 1.1.9	Prov. Sum	1		
1.1.11		Allow a Provisional Sum to cover the cost of forward cover. Tenderer is to insert an amount = 10% of the above amount from Item 1.1.9	Prov. Sum	1		
1.1.12		Allowance as a percentage of the PC value of Items under 1.1.10 and 1.1.11 for Contractor's cost and profit. Tenderer to insert summed rate and state percentage.	%			
	SANS 1200A	Establish Facilities on the Site				
	8.3.2.1	Facilities for the Engineer				
1.1.13	PSAB 8.3.9	(c) Nameboards (2 No) (PSAB 3.1)	Sum	1		
1.1.14	PSA 8.3.11	Services for offices	Sum	1		
1.1.15	PSAB 8.3.13	(i) Personal Protection Equipment	Sum	1		
	SANS 1200A	Facilities for the Contractor				
1.1.16	8.3.2.2	(a) Offices and storage sheds	Sum	1		
1.1.17		(b) Workshops	Sum	1		
1.1.18		(d) Living accommodation	Sum	1		
1.1.19		(e) Ablution and latrine facilities	Sum	1		
SUB-TOTAL CARRIED FORWARD						

CONTRACT NO : JW14337 Section C2.2: Schedule of Quantities (Electrical and Electronic Works) SCHEDULE1 : Preliminary and General						
Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
		<i>brought forward</i>				
1.1.20		(f) Tools and equipment	Sum	1		
1.1.21		(g) Water supplies, electric power & communications	Sum	1		
1.1.22		(h) Dealing with water	Sum	1		
1.1.23		(i) Access	Sum	1		
1.1.24		(j) Plant	Sum	1		
1.1.25	8.3.3	Other fixed charge obligations	Sum	1		
1.1.26	8.3.4	Removal of site establishment	Sum	1		
1.1.27		Compliance with the Occupational Health and Safety Act and Specification	Sum	1		
1.1.28		Compliance with the Environmental Management Plan	Sum	1		
1.1.29		Hazard Identification and Risk Assessment (OHS Spec Clause 4.1)	Sum	1		
1.1.30		Health & Safety Plan (PS 7)	Sum	1		
1.1.31		Construction Safety Officer and other appointments (OHS Spec Clause 4.3)	Sum	1		
1.1.32	PSA 8.3.1	Work Skills Plan and Implementation Report to CETA	Sum	1		
1.1.33		Pre-employment medical examination (Clause 3.1 Annexure 2 of OHS Specification), including annual medicals and certificates, and exit medicals	Sum	1		
1.1.34		Provision of Operating and Maintenance Manuals (Full version and Summary version for daily operator use)	Sum	1		
1.1.35		Quality Control Plan and Compliance	Sum	1		
1.2	SANS 1200A	TIME RELATED ITEMS				
	8.4	Contractual Requirements				
1.2.1	8.4.1	Surety or bank guarantee	Sum	1		
1.2.2		Insurance of works	Sum	1		
1.2.3		Common Law Liability insurance	Sum	1		
1.2.4		Third Party insurance	Sum	1		
1.2.5		Insurance of construction plant and equipment	Sum	1		
1.2.6		Other (Detail)	Sum	1		
SUB-TOTAL CARRIED FORWARD						

CONTRACT NO : JW14337 Section C2.2: Schedule of Quantities (Electrical and Electronic Works) SCHEDULE1 : Preliminary and General						
Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
		<i>brought forward</i>				
	8.4.2	Operate and Maintain Facilities on the Site				
	8.4.2.1	Facilities for Engineer for the Duration of Construction				
1.2.7		(c) Nameboards (2 No.)	Sum	1		
1.2.8	8.3.11	Services for offices	Sum	1		
1.2.9	8.3.12	Treatment and maintenance of areas surrounding offices	Sum	1		
	8.4.2.2	Facilities for Contractor for the Duration of Construction				
1.2.10		(a) Offices and storage sheds	Sum	1		
1.2.11		(b) Workshops	Sum	1		
1.2.12		(d) Living accommodation	Sum	1		
1.2.13		(e) Ablution and latrine facilities	Sum	1		
1.2.14		(f) Tools and equipment	Sum	1		
1.2.15		(g) Water supplies, electric power and communications, dealing with water and access	Sum	1		
1.2.16		(h) Dealing with water	Sum	1		
1.2.17		(i) Access	Sum	1		
1.2.18		(j) Plant	Sum	1		
1.2.19		Other time-related obligations				
		Sum	1		
		Sum	1		
1.2.20	8.4.3	Supervision for duration of construction	Sum	1		
1.2.21		Project Management for the duration of the Contract	Sum	1		
1.2.22		Quality Assurance and Quality Control	Sum	1		
1.2.23		Servicing Visits during Defects Liability Period	No.	4		
1.2.24	8.4.4	Company and head office overhead costs for the duration of the contract	Sum	1		
1.2.25	8.4.5	Other time-related obligations (list)	Sum	1		
					
		..				
		Security for the duration of the contract				
1.2.26		Dayshift - 2 no. of armed guards (grade of guard to be determined by Contractor, appropriate for the assignment at hand), including patrol vehicles (if required) for the duration of the contract	Months	12		
SUB-TOTAL CARRIED FORWARD						

CONTRACT NO : JW14337 Section C2.2: Schedule of Quantities (Electrical and Electronic Works) SCHEDULE1 : Preliminary and General						
Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
		<i>brought forward</i>				
1.2.27		Nightshift - 2 no. of armed guards (grade of guard to be determined by Contractor, appropriate for the assignment at hand), including patrol vehicles (if required) for the duration of the contract	Months	12		
1.2.28		Compliance with the Occupational Health and Safety Act and Specification (Including compliance with COVID-19 Regulations)	Sum	1		
1.2.29		Construction Safety Officer and Other Appointments	Sum	1		
1.2.30		Hazard Identification and Risk Assessment (OHS Spec Clause 4.1)	Sum	1		
1.2.31		Compliance with the Environmental Management Plan and Vegetation Management Plan	Sum	1		
1.2.32	PSA 8.3.1	Workplace Skills Plan and Implementation Report to CETA	Sum	1		
1.2.33		Quality Control Plan and Compliance	Sum	1		
1.3	PSA 8.7	DAYWORK				
1.3.1		Expenditure on dayworks (i.e. wages paid to workmen and invoiced cost of materials, delivered on site)	Prov. Sum	1	R200,000	
	8.7.2	Extra over item above for supervision, overheads and all other costs related to the daywork items under items below for the following:				
1.3.2		Skilled artisans	%	100,000		
1.3.3		Unskilled labourers	%	50,000		
1.3.4		Material	%	50,000		
TOTAL: SCHEDULE1 (CARRIED FORWARD TO SUMMARY)						

#REF! : JW14337 Section C2.2: Schedule of Quantities (Electrical Works) Schedule E2: ELECTRICAL CABLE RACKS						
Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
2		Schedule E2: ELECTRICAL CABLE RACKS				
2.1		RATE TO INCLUDE FOR THE SUPPLY ONLY OF THE FOLLOWING PLANT AND EQUIPMENT INCLUDING DELIVERY, STORAGE, QUALITY ASSURANCE AND ALL NECESSARY INSURANCE				
2.1.1	E02.7	Supply and Delivery of Cable Ladders (all cable ladders must be covered) 100mm x 76mm	m	300		
2.1.2.	E02.7	Supply and Delivery of Horizontal Cable Ladder bends (all cable ladders must be covered) 100mm x 76mm	ea	8		
2.1.3.	E02.7	Supply and Delivery of Internal Cable Ladder bends (all cable ladders must be covered) 100mm x 76mm	ea	4		
2.1.5.	E02.7	Supply and Delivery of Cable Ladder Tee-pieces (all cable ladders must be covered) 100mm x 76mm	ea	3		
2.2		RATE TO INCLUDE ONLY FOR INSTALLATION, COMMISSIONING, TESTING AND ADJUSTING THE FOLLOWING PLANT AND EQUIPMENT AS A COMPLETELY SEPARATE OPERATION SOMETIME AFTER THE COMPLETION AND/OR ERECTION AND INSTALLATION, INCLUDING TRANSPORTATION AND ACCOMMODATION FOR PERSONNEL				
2.2.1	E02.7	Installation of Cable Ladders (all cable ladders must be covered) 100mm x 76mm	m	300		
2.2.2.	E02.7	Installation of Horizontal Cable Ladder bends (all cable ladders must be covered) 100mm x 76mm	ea	8		
2.2.3.	E02.7	Installation of Internal Cable Ladder bends 100mm x 76mm	ea	4		
2.2.5.	E02.7	Installation of Cable Ladder Tee-pieces 100mm x 76mm	ea	3		
TOTAL: SCHEDULE 2 (CARRIED FORWARD TO SUMMARY)						

CONTRACT NO : JW14337 Section C2.2: Schedule of Quantities (Electrical and Electronic Works) Schedule 3: Programmable Logic Controllers						
Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
3		Schedule 3: Programmable Logic Controllers				
3.1		RATE TO INCLUDE FOR THE SUPPLY ONLY OF THE FOLLOWING PLANT AND EQUIPMENT INCLUDING DELIVERY, STORAGE, QUALITY ASSURANCE AND ALL NECESSARY INSURANCE				
3.1.1	C3.10.5	PC Amount for PLC system	Prov Sum	-	-	R 1,450,000.00
3.1.2	C3.10.5	% Markup on PLC system	%			
3.1.3	C3.10.5	PC Amount for SCADA Software	Prov Sum	-	-	R 425,000.00
3.1.4	C3.10.5	% Markup on SCADA Software	%			
3.1.5	C3.10.5	PC Amount for testing and restoration of fibre network in the area	Prov Sum	-	-	R 200,000.00
3.1.6	C3.10.5	% Markup on FIBRE works	%			
TOTAL: SCHEDULE 3 (CARRIED FORWARD TO SUMMARY)						

CONTRACT NO : JW14337
Section C2.2: Schedule of Quantities (Electrical and Electronic Works)
Schedule 4: Electrical Distribution System

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
4		Schedule 4: Electrical Distribution System				
4.1		RATE TO INCLUDE FOR THE SUPPLY ONLY OF THE FOLLOWING PLANT AND EQUIPMENT INCLUDING DELIVERY, STORAGE, QUALITY ASSURANCE AND ALL NECESSARY INSURANCE				
4.1.1		Nett amount for MLSS and kiosk	Each	2		
4.1.2		Nett amount for flow meter installation and kiosk	Sum	2		
4.1.3		Nett amount for DO meter installation and kiosk	Sum	3		
4.1.4		Nett amount for notices at all Buildings	Sum	1		
4.1.5		Nett amount for lightning protection at New MCC for BR2	Sum	1		
4.1.6		Nett amount for MCC at BR2	Sum	1		
4.1.7		Nett amount for Fire Suppresion system in MCC at BR2	Sum	1		
4.2		RATE TO INCLUDE ONLY FOR HANDLING INCLUDING DOUBLE HANDLING IF STORED, TRANSPORTATION AND HANDLING ON SITE, ERECTION, QUALITY ASSURANCE AND INSTALLATION OF THE FOLLOWING PLANT AND EQUIPMENT				
4.2.1		Nett amount for MLSS and kiosk	Each	2		
4.2.2		Nett amount for flow meter installation and kiosk	Sum	2		
4.2.3		Nett amount for DO meter installation and kiosk	Sum	3		
4.2.4		Nett amount for notices at all Buildings	Sum	1		
4.2.5		Nett amount for lightning protection at New MCC for BR2	Sum	1		
4.2.6		Nett amount for MCC at BR2	Sum	1		
4.2.7		Nett amount for Fire Suppresion system in MCC at BR2	Sum	1		
4.3		RATE TO INCLUDE ONLY FOR COMMISSIONING, TESTING AND ADJUSTING THE FOLLOWING PLANT AND EQUIPMENT AS A COMPLETELY SEPARATE OPERATION SOMETIME AFTER THE COMPLETION AND/OR ERECTION AND INSTALLATION, INCLUDING TRANSPORTATION AND ACCOMMODATION FOR PERSONNEL				
4.3.1		Nett amount for MLSS meter and kiosk	Each	2		
4.3.2		Nett amount for flow meter installation and kiosk	Sum	2		
4.3.3		Nett amount for DO meter installation and kiosk	Sum	3		
4.3.4		Nett amount for notices at all Buildings	Sum	1		
4.3.5		Nett amount for lightning protection at New MCC for BR2	Sum	1		
4.3.6		Nett amount for MCC at BR2	Sum	1		
4.3.7		Nett amount for Fire Suppresion system in MCC at BR2	Sum	1		
4.4		Provisional sum for working on existing equipment, structures, etc.	ProvSum	1	200,000.00	200,000.00
TOTAL: SCHEDULE 4 (CARRIED FORWARD TO SUMMARY)						

CONTRACT NO :JW14337

Section C2.2: Schedule of Quantities (Electrical and Electronic Works)

Schedule 5: Electrical Installation in Buildings and on Structures

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
5		Schedule 5: Electrical Installation in Buildings and on Structures				
5.1		RATE TO INCLUDE FOR THE SUPPLY ONLY OF THE FOLLOWING PLANT AND EQUIPMENT INCLUDING DELIVERY, STORAGE, QUALITY ASSURANCE AND ALL NECESSARY INSURANCE				
5.1.1	C3.10.12	Nett amount for complete electrical installation in existing MCC building	Sum	1		
	DRW's	Type A Light Fitting	Each	10		
	DRW's	Type B Light Fitting	Each	10		
5.2		RATE TO INCLUDE ONLY FOR HANDLING INCLUDING DOUBLE HANDLING IF STORED, TRANSPORTATION AND HANDLING ON SITE, ERECTION, QUALITY ASSURANCE AND INSTALLATION OF THE FOLLOWING PLANT AND EQUIPMENT				
5.2.1	C3.10.12	Nett amount for complete electrical installation in existing MCC building	Sum	1		
	DRW's	Type A Light Fitting	Each	10		
	DRW's	Type B Light Fitting	Each	10		
5.3		RATE TO INCLUDE ONLY FOR COMMISSIONING, TESTING AND ADJUSTING THE FOLLOWING PLANT AND EQUIPMENT AS A COMPLETELY SEPARATE OPERATION SOMETIME AFTER THE COMPLETION AND/OR ERECTION AND INSTALLATION, INCLUDING TRANSPORTATION AND ACCOMMODATION FOR PERSONNEL				
5.3.1	C3.10.12	Nett amount for complete electrical installation in existing MCC building	Sum	1		
	DRW's	Type A Light Fitting	Each	10		
	DRW's	Type B Light Fitting	Each	10		
TOTAL: SCHEDULE 5 (CARRIED FORWARD TO SUMMARY)						R -

CONTRACT NO : JW14337

Section C2.2: Schedule of Quantities (Electrical and Electronic Works)

Schedule 6: Multicore Cables and Earthwires

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
6		Schedule 6: Multicore Cables and Earthwires				
6.1		RATE TO INCLUDE FOR THE SUPPLY ONLY OF THE FOLLOWING PLANT AND EQUIPMENT INCLUDING DELIVERY, STORAGE, QUALITY ASSURANCE AND ALL NECESSARY INSURANCE				
6.1.1	C3.10.10	Nett amount for all cables, terminations, joints, cable route marking tape and other accessories carried forward from Excell cable schedule. (include electronic schedule as part of tender).	Sum	1		
6.1.2	C3.10.10.18	Nett amount for cable route markers	Each	5		
6.1.3	C3.10.10.7	Nett amount for concrete cable slabs	Each	2		
6.1.4	C3.10.10.14	Nett amount for cable name tags	Sum	1		
6.1.5	C3.10.10.10-11	Nett amount for cable supports	Sum	1		
6.1.6	C3.10.10	Nett amount for pump set sensor termination cubicle	Each	0		
6.1.7		Nett amount for core drilling 100mm diameter holes through 250mm concrete	Each	5		
6.2		RATE TO INCLUDE ONLY FOR HANDLING INCLUDING DOUBLE HANDLING IF STORED, TRANSPORTATION AND HANDLING ON SITE, ERECTION, QUALITY ASSURANCE AND INSTALLATION OF THE FOLLOWING PLANT AND EQUIPMENT				
6.2.1	C3.10.10	Nett amount for all cables, terminations, joints, cable route marking tape and other accessories carried forward from Excell cable schedule. (include electronic schedule as part of tender).	Sum	1		
6.2.2	C3.10.10.18	Nett amount for cable route markers	Each	5		
6.2.3	C3.10.10.7	Nett amount for concrete cable slabs	Each	2		
6.2.4	C3.10.10.14	Nett amount for cable name tags	Sum	1		
6.2.5	C3.10.10.10-11	Nett amount for cable supports	Sum	1		
6.2.6	C3.10.10	Nett amount for pump set sensor termination cubicle	Each	0		
6.3		RATE TO INCLUDE ONLY FOR COMMISSIONING, TESTING AND ADJUSTING THE FOLLOWING PLANT AND EQUIPMENT AS A COMPLETELY SEPARATE OPERATION SOMETIME AFTER THE COMPLETION AND/OR ERECTION AND INSTALLATION, INCLUDING TRANSPORTATION AND ACCOMMODATION FOR PERSONNEL				
6.3.1	C3.10.10	Nett amount for all cables, terminations, joints, cable route marking tape and other accessories carried forward from Excell cable schedule. (include electronic schedule as part of tender).	Sum	1		
TOTAL: SCHEDULE 6 (CARRIED FORWARD TO SUMMARY)						

CONTRACT NO : JW14337**Section C2.2: Schedule of Quantities (Electrical and Electronic Works)****Schedule 7: Power Supply Units**

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
7		Schedule 7: Power Supply Units				
7.1		The tendered rate shall include full compensation for the manufacture, supply, testing and delivery of the UPS incorporating all options/extras as detailed in the detail specification.				
7.1.1		Supply and deliver UPS	No	2		
7.1.2		Supply and deliver 3kVA hybrid inverter with 4x100Ah batteries for PLC	No	2		
7.2		The tendered rate shall include full compensation for the installation, site testing and commissioning plus the 12 months maintenance of the UPS incorporating all options/extras as detailed in the detail specification.				
7.2.1		Install standby UPS	No	2		
7.2.2		Supply and deliver 3kVA hybrid inverter with 4x100Ah batteries for PLC	No	2		
7.3		The tendered rate shall include full compensation for the manufacture, supply, testing and delivery of the support platform/stand for UPS as detailed in the detail specification.				
7.3.1		Supply and deliver support platform/stand for UPS	No	2		
7.3.2		Supply and deliver 3kVA hybrid inverter with 4x100Ah batteries for PLC	No	2		
7.4		The tendered rate shall include full compensation for the installation of the support platform/stand as detailed in the detail specification.				
7.4.1		Install support platform/stand for UPS	No	2		
TOTAL: SCHEDULE 7 (CARRIED FORWARD TO SUMMARY)						

CONTRACT NO : JW14337

Section C2.2: Schedule of Quantities (Electrical and Electronic Works)

Schedule 8: Civil Works

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
8		Schedule 8: Civil Works				
8.1		Refurbishment of the Ceilings				
8.1.1		Replacement of damaged ceiling units	m ²	15		
8.1.2		Painting of ceiling units	m ²	2		
8.2		Replacement of the Building Door. The tendered rate shall include full compensation for the supply and installation of the same door type as installed (specifications of the door are provided on the as-built drawing for the Control Building)	No.	1		
TOTAL: SCHEDULE 8 (CARRIED FORWARD TO SUMMARY)						

SUMMARY OF BILL OF QUANTITIES

SECTION 1	PRELIMINARY AND GENERAL	R
SECTION 2	ELECTRICAL CABLE RACKS	R
SECTION 3	PROGRAMMABLE LOGIC CONTROLLERS	R
SECTION 4	ELECTRICAL DISTRIBUTION SYSTEM	R
SECTION 5	ELECTRICAL INSTALLATION IN BUILDINGS AND ON STRUCTURES	R
SECTION 6	MULTICORE CABLES AND EARTHWIRES	R
SECTION 7	POWER SUPPLY UNITS	R
SECTION 8	CIVIL WORKS	R
Sub-Total 1		R
The above prices are Firm/Not Firm*(delete one). IF NOT FIRM the client will allow for CONTRACT PRICE ADJUSTMENTS on all sums as provided for in Clause 6.8 of the General Conditions of Contract.		
ADD	Escalation at 10%	R
Sub-Total 2		R
ADD	Contingency at 15%	R
Sub-Total 3		R
ADD	VAT @ 15%	R
TOTAL CARRIED TO FORM OFFER		R