TENDER NO. 194C/2020/21	CITY OF CAPE TOWN ISIXEKO SASEKAPA STAD KAAPSTAD

FRAMEWORK CONTRACT DOCUMENT

FOR THE

TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

CONCLUDED BETWEEN

CITY OF CAPE TOWN

(RETICULATION BRACH)

AND

iX ENGINEERS (PTY) LTD

"STANDBY SERVICE PROVIDER 2"

REGISTRATION NUMBER: [redacted]

[redacted]

PREAMBLE

WHEREAS Term **Tender 194C/2020/21** was awarded to namely **iX Engineers (Pty) Ltd**, in line with the decision of the **Appeals Authority** dated 21 June 2021 for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town, from the Start Date for a period of 60 months.

AND WHEREAS it is recorded that this Contract will be governed by the provisions of **Standard Professional Services Contract (July 2009) (Edition 3 of CIDB document 1015)**, as published by the Construction Industry Development Board ("**GCC**"), read with the Contract Specific Data ("**CSD**") annexed hereto marked "**PART C1.2: CONTRACT DATA**".

NOW THEREFORE THE PARTIES AGREE AS FOLLOWS:

1. **PARTIES**

The Parties to this Contract are:

1.1. **The City of Cape Town**, a metropolitan municipality, established in terms of the Local Government: Municipal Structures Act. 117 of 1998 read with the Province of the Western Cape: Provincial Gazette 5588 dated 22 September 2000, as amended ("**the Employer**"), herein represented by the **Executive Director: Water and Waste** duly authorised hereto;

1.2. **iX Engineers (Pty) Ltd**, a private company registered in terms of the laws of the Republic of South Africa with registration no [redacted] with its principal place of business situated at [redacted] (the "**Service Provider**"), herein represented by its duly authorised representative, [redacted] in his capacity as [redacted]

hereinafter jointly referred to as each a "Parties" and in singular, a "Party",

2. **INTERPRETATION**

2.1. In the event of any conflict between the provisions of this Contract, the GCC and any Part attached hereto, or any other document incorporated by reference to this Contract, save to the extent expressly stated to the contrary, such conflict will be resolved by giving precedence to such different parts of this Contract in the following order of precedence:

2.1.1. first, the terms and conditions of the CSD;

2.1.2. second, the terms and conditions of the GCC;

2.1.3. third, Parts and annexures to this Contract; and

2.1.4. fourth, any other documents incorporated by reference.

2.2. The provisions of this Contract supersede and replace the provisions of any previous agreement entered into between the Parties relating to the same subject matter. [redacted]

3. APPOINTMENT AND DURATION

3.1. The Employer hereby appoints the Service Provider to perform the Scope of Work for the Employer from the Start Date.

3.2. Unless terminated earlier in accordance with the provisions as set out in the GCC or any other provision in terms of this Contract, this Contract shall be for a period of 60-months from the Start Date.

4. MUTUAL GOOD FAITH / CO-OPERATION

4.1. The Parties represent and undertake to do all such things, perform all such acts and take all steps to procure the doing of all such things and the performance of all such acts, as may be necessary or incidental to give effect to the execution of this Contract.

4.2. The Parties shall at all times during the continuance of this Contract observe the principles of good faith towards one another in the performance of their obligations in terms of this Contract.

5. OBLIGATIONS OF THE EMPLOYER

5.1. The Employer undertakes to perform its obligations in accordance with the Contract, including but not limited to the Scope of Work (**PART C3: SCOPE OF WORK**), subject to the satisfactory fulfilment of the obligations by the Service Provider as set out in this Contract.

5.2. The Employer shall monitor and evaluate the Contractor's performance in respect of the Scope of Work.

6. OBLIGATIONS OF THE SERVICE PROVIDER

6.1. The Service Provider hereby agrees and undertakes to perform the Services to the Employer as set out in Scope of Work (**PART C3: SCOPE OF WORK**).

6.2. The Service provider will perform the Works as expeditiously as possible and furthermore agrees and undertakes to perform the services in accordance with the operational requirements of the Employer.

6.3. The Service Provider will ensure that the Works will be of a satisfactory quality and fit for purpose, having due regard to the assumptions that the Service Provider can be reasonably expected to make in accordance with sound engineering and/or professional practice and exercising the level of skill, care and attention required of the Service Provider.

6.4. The Service Provider shall, ensure that its employees, agents, representatives, sub-contractors and suppliers comply with this Contract and all applicable Laws in the execution of the Works.

6.5. The Service Provider will not conduct any activity of whatsoever nature which may be detrimental to the Employer's reputation and goodwill.

7. PRICING DATA

7.1. The Contract Price for the Works shall be as set out in the Pricing Data annexed marked "**PART C2: PRICING DATA**".

7.2. The Service Provider shall not be entitled to any other consideration for the rendering of the Services other than as provided for in this Contract.

[redacted]

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[redacted]

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[redacted]

CITY OF CAPE TOWN

WATER AND SANITATION

CONTRACT NO. 194C/2020/21

TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

C1.1 Form of Offer and Acceptance – Reticulation Branch

Offer

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

CONTRACT 194C/2020/21: TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

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

By the representative of the tenderer, deemed to be duly authorised, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the service provider 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.

This is a rates based contract.

The rates as contained in Part C2.2: Schedules of Rates for the branches tendered for, shall form the tender offer. These rates shall be multiplied, as applicable, by the quantities required in respect of relevant items to develop individual Works Projects to be allocated in accordance with the procedures described in the Procedure for the Allocation of Works Projects, Part C1.2: Contract Data in this Framework Contract document.

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

Signature(s) [redacted]

Name(s) .....

Capacity .....

for the tenderer

(Name of organization/tenderer) ... IX ENGINEERS (PTY) LTD .....

(Address of organization/tenderer) .. [redacted] .....

.....

Name and signature of witness [redacted] .....

Date ..... 11 DEC 2020 .....

For official use.

[redacted]

Acceptance – Reticulation Branch

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

The terms of the contract, are contained in:

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

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

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's representative (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. 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 the parties have signed the table below and confirms receipt from the employer of one fully completed original copy of this agreement, including the schedule of deviations (if any). The tenderer (now contractor) shall within five working days of the agreement coming into effect notify the employer in writing of any reason why he cannot accept the contents of this agreement as a complete and accurate memorandum thereof, failing which the agreement presented to the contractor shall constitute the binding contract between the parties.

. .

[redacted]

The Parties	Employer	Service Provider
Business Name	City of Cape Town Metropolitan Municipality	iX Engineers (Pty) Ltd
Business Registration	Not applicable	[redacted]
Tax number (VAT)	4500 193 497	[redacted]
Physical Address	Civic Centre 12 Hertzog Boulevard Cape Town 8000	
Accepted contract sum including tax	Rates based contract	
Accepted contract duration	60 months from Start Date	
Signed – who by signature hereto warrants authority	[redacted]	
Name of signatory	Michael John Webster	[redacted]
Signed: Date	19 October 2021	2021/10/13
Signed: Location	Cape Town	BELLVILLE
Signed: Witness	[redacted]	[redacted]
Name of Witness		

Start Date	20 October 2021
Completion Date	19 October 2026

[redacted]

CITY OF CAPE TOWN

DIRECTORATE: DEPARTMENT

CONTRACT NO. 194C/2020/21

TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

C1.2 Contract Data – Reticulation Branch

Data provided by the Service Provider

The name of the Service Provider is IX ENGINEERS (PTY)LTD

The address of the Service Provider is

Physical Address: [redacted]

Postal Address: [redacted]

Telephone: [redacted]

Fax: [redacted]

email: [redacted]

[redacted]

C1.2 Contract Data

Part 1: Contract Data provided by the Employer

GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract are the **Standard Professional Services Contract (July 2009) (Edition 3 of CIDB document 1015)**, as published by the Construction Industry Development Board.

Copies of these General Conditions of Contract may be obtained from the Construction Industry Development Board's website **www.cidb.org.za**. Copies of the General Conditions of Contract are also available for inspection and scrutiny at the offices of the Employer.

The pro-formas attached to the Standard Professional Services Contract (July 2009) on pages 17 to 24 shall not apply to this Contract and shall be replaced with the documentation bound into this Contract Document.

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

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

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence;

i. the Form of Offer and Acceptance,
ii. the Contract Specific Data within the Contract Data,
iii. the General Conditions of Contract
iv. the Drawings
v. the Scope of Work
vi. the Pricing Data, and.
vii. The Conditions of Tender, the Tender Data and Tender Schedules

If an ambiguity or discrepancy is found in the documents, the Employer shall issue any necessary clarification or instruction.

CONTRACT SPECIFIC DATA

The following contract specific data is applicable to this Contract:

Clause 1:
*Add the following to the definition of **Employer:***
The **Employer** is the **CITY OF CAPE TOWN.**

Add the following new definitions:
"**Framework Contract**" means the Contract as defined in Clause 1 of the Standard Professional Services Contract (July 2009) (Edition 3 of CIDB document 1015).

"**Framework Contract Period**" means the period 60 months from the Start Date.

[redacted]

"**Framework Contract Manager**" (for each branch)" means the person named as the Framework Contract Manager in the Contract Data or any other person appointed from time to time by the Employer and of whom the is notified, in writing, to act as Framework Contract Manager for the particular branch for the purposes of the Contract as substitute for the Framework Contract Manager so named.

The function of the Framework Contract Manager is to administer the Framework Contract, and such functions as would normally fall to the Employer's Agent/Engineer/Principal Agent in accordance with the provisions of the Framework Contract, shall be undertaken by the Framework Contract Manager in this regard.

The Framework Contract Manager shall be an employee of the Employer, authorised as its representative to administer the Framework Contract, and all references to Employer's Agent/Engineer/Principal Agent in the Contract shall apply to the Framework Contract Manager in respect of his/her administering the Framework Contract.

The Framework Contract Manager is:

Branch:	**Reticulation**
Name:	Mr Sarel Beets
Postal address:	Water and Sanitation Department Private Bag X98 Bellville, 7535
Cellphone No.:	074 538 9443
E-mail:	sarel.beets@capetown.gov.za

Add the following to the definition of ***Key Persons:***
Key personnel shall have the same meaning as Key Persons.

Replace the term ***Period of Performance:***
Replace the term Period of Performance with the term **Framework Contract Period** (as defined above)

Add the following to the definition of ***Project:***
The project is the **TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN**

Add the following new definitions:

"Intellectual Property" means any and all intellectual property rights of any nature anywhere in the world whether registered, registerable or otherwise, including patents, trademarks, registered designs and domain names, applications for any of the foregoing, trade or business names, copyright and rights in the nature of copyright, design rights, rights in databases, know-how, trade secrets and any other intellectual property rights which subsist in computer software, computer programs, websites, documents, information, techniques, business methods, drawings, logos, instruction manuals, lists and procedures and particulars of customers, marketing methods and procedures and advertising literature, including the "look and feel" of any websites

"**Purchase Order**" means the official purchase order created and released on the City of Cape Town's SAP System.

"**Schedules of Rates**" means, in this Framework Contract document, the document so designated in the Pricing Data, and which will be used to compile a quotation for Professional Services to be rendered for each Works Project.

"Standby Service Provider" means either "Standby Service Provider 1" or "Standby Service Provider 2"

"**Standby Service Provider 1**" means the highest ranked eligible (subject to Clause C.1.6.1 (b) in the Tender Data) Service Provider for a branch appointed by the Employer under the Framework Contract to be available to execute Works Projects, for the duration of the Framework Contract Period and then only if the "Winner" declines/refuses a Works Project or unless the Employer considers the "Winner" not to be performing on existing Works Projects. (refer to clause 5.1.3 in C 1.2: Contract Data)

"Standby Service Provider 2" means the highest ranked eligible (subject to Clause C.1.6.1 (b) in the Tender Data) Service Provider for a branch appointed by the Employer under the Framework Contract to be available to execute Works Projects, for the duration of the Framework Contract Period and then only if the "Winner" and "Standby Service Provider 1" declines/refuses a Works Project or unless the Employer considers the "Winner" and "Standby Service Provider 1" not to be performing on existing Works Projects. (refer to clause 5.1.3 in C 1.2: Contract Data)

"**Winner**" means the highest ranked eligible (subject to Clause C.1.6.1 (b) in the Tender Data) Service Provider appointed by the Employer under the Framework Contract who will be allocated work as and when a Works Project arises for the duration of the Framework Contract Period.

"**Works Project**" means a part of the Works to be performed (task) by a Service Provider under the Contract, the specific terms, conditions and scope of the Works Project contract being specified in a Works Project Contract Brief.

Add the following to the definition of ***Service Provider:***

The contracting party may be a consortium/joint venture contracting as a formally constituted Joint Venture Partnership, in which all parties are jointly and severally liable. In terms of this definition, the words consortium and joint venture shall be regarded as synonymous.

Add the following to the definition of ***Start Date:***
The Start Date is the date when the Service Provider confirms receipt of one fully completed original copy of this document, including the acceptance part of the form of offer and acceptance, and schedule of deviations (if any).

Add the following definition:

Clause 3.1
*Delete the heading and replace with "**Governing law and policies**"*

Add the following at the end of clause 3.1

Supply Chain Management Policy

a) The parties agree that this contract shall also be subject to the Employer's Supply Chain Management Policy ('SCM Policy') that was applicable on the date the bid was advertised, **save that if the Employer adopts a new SCM Policy which contemplates that any clause therein would apply to the contract emanating from this tender, such clause shall also be applicable to that contract.** Please refer to this document on the Employer's website.

b) Abuse of the supply chain management system is not permitted and may result in cancellation of the contract, restriction of the supplier, and/or the exercise by the Employer of any other remedies available to it as described in the SCM Policy.

Clause 3.2
Replace the words "time for completion" with "Framework Contract Period".

Clause 3.4 and Clause 4.3.2:
Add the following:
The authorised and designated representatives of the Employer are the Directors of Bulk Services, Retail Services and Technical Services of the Water and Sanitation Department.

The address for receipt of communications is:

Branch	Reticulation
Department	Retail Services
Email	mbali.matiwane@capetown.gov.za
Postal Address:	Private Bag X98 BELLVILLE 7535
Physical Address:	Bellville Water and Sanitation Head Office Corner of Voortrekker Road and Mike Pienaar Boulevard BELLVILLE 7535

Clause 3.4.1:
Add the following to the first sentence:
… , and may be given as set out hereunder and shall be deemed to have been received when:
a) hand delivered - on the working day of delivery
b) sent by registered mail - five (5) working days after mailing
c) sent by email or telefax - one (1) working day after transmission

Clause 3.5:
Add the following:
The location for the performance of the Project will be the **Local Office** of the Service Provider, together with the sites of the proposed projects. The local office must be in the Cape Metropolitan area or within a radius of 60 km from the Water and Sanitation Head Office, Bellville. If the Service Provider does not have a local office, they will be required to establish a local office within 2 (two) months of the Start Date. All communication with the Employer will flow through this local office. This local office may belong to the Service Provider or any of his Joint Venture partners or sub-consultants.

Key personnel will be expected to work out of the local office for the full duration of the Framework Contract as the exigencies of this contract require.

Clause 3.8.1:
Add the following new paragraph:
The Employer reserves the right to reduce, increase or cancel individual Works Projects. This shall be done without adjustment to the agreed rates, sums or fees and without payment of any penalty or surcharge in this regard.

Clause 3.9.1:
Add the following after f):

g) a change in the cost of the construction works applicable to the services

Clause 3.9.2:
Replace the words "6 weeks" with "21 days".

Add the following at the end of the clause:
Should any of the events described in clause 3.9.1 occur, the professional fees and disbursement may be adjusted in a fair and reasonable manner. The Service Provider shall, however, not be entitled to an adjustment to the extent that the variation is due to the negligence or default of the Service Provider. The Service Provider is required to provide all necessary substantiating documents required by the employer to evaluate the request for variation.

Clause 3.9.3:
Delete the clause and replace with the following:
The Employer shall assess the changes to the estimated fee (per Works Project) proposed by the Service Provider on any fair and reasonable basis. The Employer may assess these changes on the effect of the event on the Services based on the time-based fees as stated in the Pricing Data.

Clause 3.12
*Delete the heading and replace with "**Penalties and fines**"*

Clause 3.12.1
Add the following:
Failure to establish a Local Office within 2 (two) months of the Contract Start Date (refer to clause 3.5 of the Contract Data above):

Failure to establish a Local Office within 2 (two) months of the Contract Start Date will result in the implementation of penalties.

- The penalty amount for every day for which the Local Office is not established and functional is R5 000 with no limit.
- The minimum 'functional' requirement is for the Key Personnel (required for the Works Projects) to be established together with the necessary physical resources.
- A Breach Notice will be issued if the Local Office is not established by the due date with the requirement that the matter be remedied within 14 days or such time as agreed to by the Employer.
- No further Works Project Briefs will be issued if the Local Office is not established and functional within 2 (two) months of the Contract Start Date.
- Should the Employer consider the local office not to be functional at any stage during the course of the contract, the Employer will notify the Service Provider accordingly and issue a Breach Notice.
- If the matter is not resolved within 14 days (or such time as agreed to by the Employer) of the issuing of the Breach Notice, the Employer may terminate the contract in terms of Clause 8.4.1 (c) of the Contract Data.

Failure to meet deliverable or milestone date (as defined in the agreed Works Project proposal):
Failure to adhere to timeframes without valid agreed upon reasons will result in the implementation of penalties.

- The penalty amount per day for each deliverable/milestone is R2 000 (to a maximum of 42 days - R84 000).
- A deliverable/milestone that is more than 14 days late will result in the issuing of a Breach Notice which will require the matter to be remedied within 14 days or such time as agreed to by the Employer.
- If the matter is not resolved within 14 days (or such time as agreed to by the Employer) of the issuing of the Breach Notice, the Employer may terminate the contract in terms of Clause 8.4.1 (c) of the Contract Data.

Add the following after 3.12.2

Clause 3.12.3
The Employer may impose the following additional penalties or fines:

a) Penalties for breach of conditions of granting preferences in terms of the **Preference Schedule.**
b) Penalties for failure to meet targeted labour and local enterprises contract participation goals (if applicable)
c) Any other fines or penalties levied in accordance with any of the specifications.

[redacted]

Clause 3.15.1:
Add the following:
The programme shall be submitted within **14** days of the Start Date.

Clause 3.16.2:
Replace the words "in which the start date falls" with "prior to the closing date of the tender".

Add the following:
The indices are those contained in Table A of the P0141 Consumer Price Index for the **CPI for services** published by Statistics South Africa.

Clause 4.7:
Delete the clause and replace with:
The Employer shall pay the Service Provider in accordance with the provisions of the Contract.

Add the following clause after Clause 4.7:

Clause 4.8 Procedure for the allocation of Works Projects
The Employer will provide the Service Provider with a scope/project brief and any specific terms and conditions (such as time frames/milestones) for a particular Works Project. The Employer reserves the right to plan and effect individual Works Projects at its sole discretion and subject to the availability of funding. The Employer also reserves the right to increase or decrease the scope of work at its sole discretion.

If the "Winner" declines the Works Project due to lack of capacity at that time, the Employer reserves the right to offer the Works Project to the "Standby Service Provider 1".

If the "Standby Service Provider 1" declines the Works Project due to lack of capacity at that time, the Employer reserves the right to offer the Works Project to the "Standby Service Provider 2".

If, in the opinion of the Employer, the "Winner" is:

(a) not performing on an existing Works Project/s; or
(b) is lacking capacity or the necessary skills for a particular Works Project; or
(c) if the proposal on a Works Project is unsatisfactory (after consultations), then

the Employer reserves the right to offer the Works Project to the "Standby Service Provider 1".

If, in the opinion of the Employer, the "Standby Service Provider 1" is:

(a) not performing on an existing Works Project/s; or
(b) is lacking capacity or the necessary skills for a particular Works Project; or
(c) if the proposal on a Works Project is unsatisfactory (after consultations), then

the Employer reserves the right to offer the Works Project to the "Standby Service Provider 2".

The procedure for the allocation of Works Projects is described in detail at the end of this Part 1: Contract Data provided by the Employer.

Clause 5.1.1
Add the following

The Services to be performed will be defined in terms of the Works Projects.

The procedure for the allocation of Works Projects are described in Clause 4.8 above.

The Service Provider will respond to the Works Project Brief with a Works Project Proposal

The Employer reserves the right to reduce the scope of work of a Works Project or cancel a Works Project based on the Non-performance of the Service Provider.

Add the following after Clause 5.1.2:
Clause 5.1.3 Failure to perform (Non-performance) by the Service Provider on a Works Project would include (but not be limited to) the following:

- Repeated inadequate Works Project Proposals (including methodology, resources availability and appropriate skills, resource-based costing where applicable, programming time frames/milestones, cost proposals);
- Failure to provide adequate and appropriate resources;

- Repeated failure to adhere to the agreed programme or time frames/milestones;
- Repeated failure to submit reports, drawings or other documents by the agreed dates;
- Repeated errors or significant design or construction monitoring errors;
- Other failures or actions on the part of the Service Provider causing additional costs to the Employer or delays to the programme;
- Combinations of the above.

(a) If the "Winner" does not remedy a failure in the performance of their duties under the Works Project within fourteen (14) days of having been notified thereof, or within any further period that the Employer may subsequently approve in writing, the Employer reserves the right to:

- Reduce the scope of work of the Works Project;
- Cancel the Works Project;
- Offer the Works Project in question and/or subsequent Works Projects to the "Standby Service Provider 1".

(b) If the "Standby Service Provider 1" does not remedy a failure in the performance of their duties under the Works Project within fourteen (14) days of having been notified thereof, or within any further period that the Employer may subsequently approve in writing, the Employer reserves the right to:

- Reduce the scope of work of the Works Project;
- Cancel the Works Project;
- Offer the Works Project in question and/or subsequent Works Projects to the "Standby Service Provider 2".

Clause 5.4.1:
Add the following:
The Service Provider is required to take out and maintain, for the full duration of the performance of this contract, the following insurance cover:

a) Professional Indemnity (PI) insurance providing cover in an amount of not less than R20 000 000 in respect of each and every claim during the period of insurance. Where the entity tendering is a joint venture then the value of the PI insurance cover required may be shared between the joint venture partners in proportion to the percentage contribution of each party to the joint venture.
b) Public Liability insurance with a limit of indemnity of not less than R20 000 000 for any single claim, the number of claims to be unlimited during the contract period.
c) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases (COID) Act No. 130 of 1993.

The Service Provider shall ensure that any sub-contractors engaged in construction activities shall, in addition to the Public Liability and COID Insurances as described above, also take out and maintain contractors all risks insurance to the value of the work being undertaken.

Clause 5.4.2
Add the following:
Evidence of insurance or confirmation (warranty) from a reputable Insurance Broker that the required insurances are in place, shall be submitted within **14** days of the Start Date.

Add the following clause after Clause 5.4.2:

5.4.3 The Service Provider shall maintain the insurance policy/ies for the duration of the liability period in terms of Clause 13.4 and shall upon request by the Employer provide periodic proof of such insurance.

Clause 5.5:
Add the following:
The Service Provider is required to obtain the Employer's prior approval in writing before taking any of the following actions:

a) Replacing any of the key and additional personnel listed at the time of tender.
b) Occupying any public land or facility for any purpose that will cause disruption and or inconvenience to the users of such land or facility in respect of any construction contract.
c) Making a material change, addition or omission from the approved designs.
d) The exercising of any discretion in terms of any terms and conditions in this contract, that results in the utilisation of the contingency allowance of a construction contract, increasing the contract value for that construction contract or awarding any additional time for that construction contract as detailed in the relevant contract conditions.
e) Permitting advance payment for items not listed in the Advance Payment Schedule.
f) Nominating the Employer's Agent/Engineer/Principal Agent or their respective representatives (as applicable) in terms of the relevant Conditions of Contract.
g) Authority of the Employer's Agent/Engineer/Principal Agent to delegate.
h) Granting permission to work during non-working times in terms of the relevant Conditions of Contract.

i) Suspend the progress of the works in terms of the relevant Conditions of Contract.
j) The issuing of an instruction to accelerate progress in terms of the relevant Conditions of Contract.
k) Approval of any other Additional and Specialist Services and their respective costs/hourly rates.

Clause 6.4:
Add the following clause after Clause 6.3:

6.4 Conflict of interest
The Service Provider shall immediately disclose any potential conflict of interest or involvement in the project other than a professional interest in terms of this Contract.

Clause 7.1.2
Add the following:
Key Persons shall be those individuals listed under "Key personnel" in Part C3.1 Scope of Work.

Clause 7.2.1:
Add the following:
The Service Provider shall provide appropriate Personnel for such time periods as required and shall enter all data pertaining to Personnel (Key personnel and additional personnel) on Schedules 11, 11A and 18, in Part T2.2: Returnable Schedules.

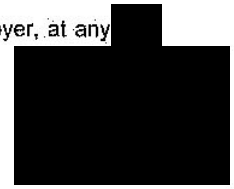
Clause 8.1:
Add the following:
The Service Provider is to commence the performance of the Services within **14** days of the Start Date.

Clause 8.4.1:
Delete "thirty (30)" in the second line of Clause (c) and replace with "fourteen (14)"
Delete "or" at the end of Clause 8.4.1(d) and add the following five clauses after Clause 8.4.1(e):
f) if the Service Provider has failed to provide the required insurances within the prescribed time;
g) if the Service Provider has committed a corrupt or fraudulent act during the tender process or the execution of the Contract;
h) if the Service Provider has benefitted from an official or other role player committing any corrupt or fraudulent act during the tender process or in the execution of the Contract;
i) if a material irregularity vitiates the procurement process leading to the conclusion of the contract, rendering the procurement process and the conclusion of the resulting contract unfair, inequitable, non-transparent, uncompetitive or not cost-effective, provided the Employer follows the processes as described in its SCM Policy; or
j) The implementation of the contract may result in reputational risk or harm to the City as a result of (inter alia):
    (i) reports of poor governance and/or unethical behaviour;
    (ii) association with known family of notorious individuals;
    (iii) poor performance issues, known to the Employer;
    (iv) negative social media reports; or
    (v) adverse assurance (e.g. due diligence) report outcomes.;

Clause 8.4.3(c):
Add the following:
The period of suspension under Clause 8.5 is not to exceed 6 months.

Clause 8.4.4:
Delete the content of this clause and replace with the following:
Upon termination of this Contract pursuant to Clauses 8.4.1 or 8.4.3, the Employer shall remunerate the Service Provider in terms of the Contract for Services satisfactorily performed prior to the effective date of termination and reimburse the Service Provider without adjustment to the agreed rates, sums or fees and without payment of any penalty or surcharge, including any pro-rata payment for partially completed Services, except in the case of termination pursuant to events (c) and (d) of Clause 8.4.1.

Add the following after clause 8.4.5:
Clause 8.4.6
In addition to anything else contained in this contract, the Employer may make either of the following elections to ensure its rights are protected and any negative impact on service delivery is mitigated in instances where the Service Provider has been liquidated:
a) accept a contractor's proposal (via the trustee / liquidator) to render delivery utilising the appropriate contractual mechanisms; or
b) terminate the contract, as the liquidator proposed contractor is deemed unacceptable to the employer, at any time by giving written notice to the contractor (via the trustee / liquidator).



Clause 9:
Delete the clause and replace with the following:

9.1 The Service Provider acknowledges that it shall not acquire any right, title or interest in or to the Intellectual Property of the Employer.

9.2 The Service Provider hereby assigns to the Employer, all Intellectual Property created, developed or otherwise brought into existence by it for the purposes of the contract, unless the Parties expressly agree otherwise in writing.

9.3 The Service Provider shall, and warrants that it shall:

9.3.1 not be entitled to use the Employer's Intellectual Property for any purpose other than as contemplated in this contract;

9.3.2 not modify, add to, change or alter the Employer's Intellectual Property, or any information or data related thereto, nor may the Service Provider produce any product as a result of, including and/or arising from any such information, data and Intellectual Property, and in the event that it does produce any such product, the product shall be, and be deemed in law to be, owned by the Employer;

9.3.3 not apply for or obtain registration of any domain name, trademark or design which is similar to any Intellectual Property of the Employer;

9.3.4 comply with all reasonable directions or instructions given to it by the Employer in relation to the form and manner of use of the Employer's Intellectual Property, including without limitation, any brand guidelines which the Employer may provide to the Service Provider from time to time;

9.3.5 ensure that its employees, directors, members and contractors comply strictly with the provisions of clauses 9.3.1 to 9.3.3 above; unless the Employer expressly agrees thereto in writing after obtaining due internal authority.

9.4 The Service Provider represents and warrants to the Employer that, in providing goods, services or both, as the case may be, for the duration of the contract, it will not infringe or make unauthorised use of the Intellectual Property rights of any third party and hereby indemnifies the Employer from any claims, liability, loss, damages, costs, and expenses arising from the infringement or unauthorised use by the Service Provider of any third party's Intellectual Property rights.

9.5 In the event that the contract is cancelled, terminated, ended or is declared void, any and all of the Employer's Intellectual Property, and any and all information and data related thereto, shall be immediately handed over to the Employer by the Service Provider and no copies thereof shall be retained by the Service Provider unless the Employer expressly and in writing, after obtaining due internal authority, agrees otherwise.

9.6 Copyright of all documents prepared for the project, and the patent rights or ownership in any plant, machine, item, system or process designed or devised, shall be vested with the Employer. Where copyright is vested in the Service Provider, the Employer shall be entitled to use the documents or copy them only for the purposes for which they are intended in regard to the Project and need not obtain the Service Provider's permission to copy for such use. Where copyright is vested in the Employer, the Service Provider shall not be liable in any way for the use of any of the information other than as originally intended for the Project and the Employer hereby indemnifies the Service Provider against any claim which may be made against him by any party arising from the use of such documentation for other purposes.

9.7 The ownership of data and factual information collected by the Service Provider and paid for by the Employer shall, after payment by the Employer, lie with the Employer.

9.8 The Employer shall have no right to use any documents prepared by the Service Provider whilst the payment of any fees and expenses due to the Service Provider in terms of the Contract is overdue.

Clause 11.1:
Add the following:
A Service Provider may not sub-contract any work which he has the skill and competency to perform, unless he has the Employer's prior approval in writing.

Clause 12.1.2:
Add the following:
Interim settlement of disputes is to be by **mediation.**



Clause 12.2.1:
Add the following:
In the event that the parties fail to agree on a mediator, the mediator is nominated by the Association of Arbitrators Southern Africa.

Clause 12.2.4:
Add the following:
Final settlement is by **litigation**.

Clause 12.3.3:

In the event that the parties fail to agree on an adjudicator, the adjudicator is nominated by the Association of Arbitrators Southern Africa.

Clause 13.1:
Add the following clause after Clause 13.1.3:

13.1.4 The Employer and the Service Provider shall enter into an agreement to complete the Services required for the Project in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations, 2014 promulgated thereunder.

An agreement is included in the Contract Document (C1.3 of Contract Data) and shall be completed and submitted to the Employer together with a letter of good standing from the Compensation Commissioner (if not insured with a licenced compensation insurer) within fourteen (14) days of the Start Date. The Service Provider shall ensure that any letter of good standing shall be timeously renewed in order that it remains in full force for the duration of the Contract.

Clause 13.4:
Delete the content of this clause and replace with the following:
Notwithstanding the terms of the Prescription Act No. 68 of 1969 (as amended) or any other applicable statute of limitation neither the Employer nor the Service Provider shall be held liable for any loss or damage resulting from any occurrence unless a claim is formally made within a liability period of five years, which period shall commence on the earlier of:
(a) Final completion of the construction contract.
(b) Suspension, postponement, expiry or termination of all construction contracts.
(c) Cancellation or termination of this Framework Contract.

Clause 13.7.3:
Add the following clause after Clause 13.7.2:

13.7.3 The Service Provider hereby indemnifies the Employer against all claims by third parties which arise out of or in connection with the Services rendered under this Contract and where such claims are the consequence of breach by the Service Provider to exercise reasonable professional skill, care and diligence in the exercising of its obligations.

Clause 14.5:
Add the following new clause after Clauses 14.4:

Clause 14.5: Tax Invoices
Section 20(1) of the Value Added Tax Act No. 89 of 1991 requires that a supplier (person supplying goods or services) who is registered as a VAT vendor issue to the recipient a tax invoice within 21 days of the date of a supply whether requested or not.

The Service Provider shall provide a tax invoice (VAT invoice) which shall be included with each account delivered to the Employer in terms of Clause 14. Failure by the Servicer Provider to provide a tax invoice (VAT invoice) timeously may delay payment by the Employer and no interest shall accrue.

Clause 14.6: More frequent payments
The Service Provider may submit a fully motivated application regarding more frequent payments to the Employer's Project Manager to be submitted to the Employer for consideration. Requests for more frequent payments will be considered at the sole discretion of the Employer and is not a right in terms of this contract.

Clause 15:
Add the following:
The interest rate will be the prime interest rate of the Employer's Bank at the time the amount is due.

Additional Clause:

Clause 16: Periodic review

16.1 This Agreement is valid from the Start Date outlined herein and is valid for the duration of the Framework Contract Period. This Agreement shall be reviewed once every three years; however, in lieu of a review during any period specified, the current Agreement will remain in effect. The Employer reserves the right to reduce or increase the Scope of Work according to the dictates of the budget, to terminate this contract, and/or to review and terminate this contract as is contemplated in Section 116(1)(b)(iii) of the Local Government: Municipal Finance Management Act 56 of 2003, without adjustment to the agreed rates, sums or fees and without payment of any penalty or surcharge in this regard. The Service Provider shall however be entitled to pro-rata payment for all services carried out in terms of any adjustment to the Scope of Work or, in the case of termination, payment for services delivered.



PROCEDURES FOR THE ALLOCATION OF WORKS PROJECTS

The procedures for the allocation of Works Projects, given below, are to be read in conjunction with Clause 4.8 in the Contract Data and the Process Diagram for Allocation of Works Projects below. These procedures include the development of a Works Project Brief, applying the tendered rates in order to arrive at a quote and compiling a preliminary programme and scope of works from the Service Provider.

The procedures are summarised under the steps below:

Step 1 The Employer's Framework Contract Manager together with the Employer's Project Manager for the project compiles a Works Project Brief and any terms and conditions associated for a particular works project. This Works Project Brief outlines the broad details of the project and includes, but is not limited to:

- Reference drawings, plans and other information.
- Time frames/milestones and a required completion date.

Step 2 The Employer issues the Works Project Brief to the designated representative of the "Winner". If, at this stage the "Winner" declines the work, the Employer reserves the right to consider the "Standby Service Provider 1" for this particular works project.

Step 3 If the "Winner" accepts the work, a project briefing session/site meeting is organised.

Step 4 After the project briefing session/site meeting, the Service Provider will provide the Employer with an estimated cost for the preparation of a Works Project proposal. Once accepted/acknowledged, the "Winner"/"Standby Service Provider" prepares and submits a Works Project Proposal (within the specified time) for approval by the Employer which includes the following documents:

i) The Scope of the works;
ii) A methodology - extent of methodology required will be dependent on scope of work (as advised by Employer);
iii) A programme of the work;
iv) Agreed time frames/milestones;
v) Proposed resources (project team);
vi) A list of CVs for each of the project team members, their company's name and the company's BBBEE status level;
vii) Resource-based costing; (ie. tasks, staff allocation, hours and rates)
viii) A cost proposal which includes the cost of any associated fees and services and an estimated cost of construction (where applicable).

Step 5 Following submission of these documents, the Employer will review the Works Project proposal.

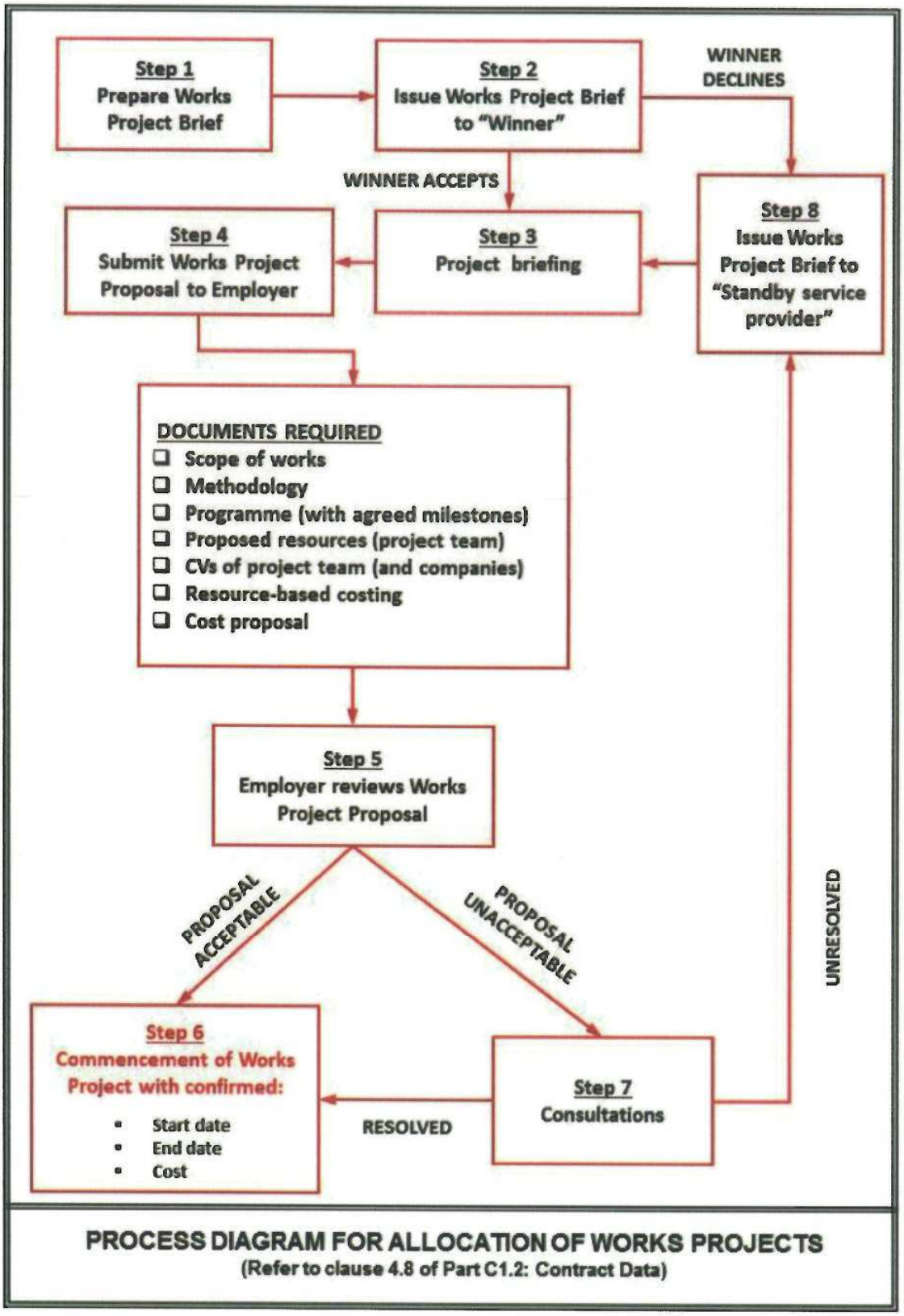
Step 6 If the Works Project proposal is satisfactory, the Employer will notify the "Winner" in writing to commence with the work. The Employer will confirm the start and end date for the Works Project and the associated cost. All work undertaken on the Works Project, prior to this approval, will be at the Service Provider's cost.

Step 7 If the Employer is not satisfied with the Works Project proposal, consultations will proceed between both parties (Employer and "Winner").

- If consultations are resolved, the Works Project proposal must be revised by the "Winner" and submitted to the Employer for final approval. On approval, the Employer will then inform the "Winner" in writing to commence with the work as for Step 6 above.
- If consultations are unresolved, the Employer reserves the right to consider appointing "Standby Service Provider 1". The Employer will inform the "Winner" in writing, giving reasons for the decision.



PROCEDURES FOR THE ALLOCATION OF WORKS PROJECTS (CONTINUED)	
Step 8	The Employer will issue the Works Project Brief to the "Standby Service Provider 1". • If, at this stage the "Standby Service Provider 1" declines the work, the Employer reserves the right to consider appointing "Standby Service Provider 2" or an alternative procurement method for this particular works project. • If the "Standby Service Provider 1" accepts the work, a Works Project Proposal will be submitted as per Step 4 above then Step 9 below.
Step 9	Following submission of the documents, the Employer will review the Works Project Proposal from "Standby Service Provider 1".
Step 10	If the Works Project proposal is satisfactory, the Employer will notify the "Standby Service Provider 1" in writing to commence with the work. The Employer will confirm the start and end date for the Works Project and the associated cost. All work undertaken prior to this approval will be at the Service Provider's cost.
Step 11	If the Employer is not satisfied with the Works Project proposal, consultations will proceed between both parties (Employer and "Standby Service Provider 1"). • If consultations are resolved, the Works Project proposal must be revised by the "Standby Service Provider 1" and submitted to the Employer for final approval. The Employer will then inform the "Standby Service Provider 1" in writing to commence with the work as for Step 10 above. • If consultations are unresolved, the Employer reserves the right to consider appointing "Standby Service Provider 2" or an alternative procurement method for this particular works project. The Employer will then inform the "Standby Service Provider 1" in writing, giving reasons for the decision.
Step 12	Proceed to Step 8 and repeat Steps 8, 9,10 and 11 with "Standby Service Provider 2"



PROCESS DIAGRAM FOR ALLOCATION OF WORKS PROJECTS
(Refer to clause 4.8 of Part C1.2: Contract Data)

[redacted]

C1.3 Occupational Health and Safety Agreement

AGREEMENT MADE AND ENTERED INTO BETWEEN THE CITY OF CAPE TOWN (HEREINAFTER CALLED THE "EMPLOYER") AND

iX Engineers (Pty) Ltd

.....,
(Service Provider/Mandatary/Company/CC Name)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 85 OF 1993 AS AMENDED.

I, [redacted] ....., representing

.....iX Engineers (Pty) Ltd....., as an employer in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated thereunder.

I furthermore confirm that I am/we are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that I/We are insured with an approved licensed compensation insurer.

COID ACT Registration Number: [redacted] .....

OR Compensation Insurer: ..... Policy No.: .....

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him/them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Council's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any subcontractors employed by me will enter into an occupational health and safety agreement separately, and that such subcontractors comply with the conditions set.

I hereby declare that I have read and understand the appended Occupational Health and Safety Conditions and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan.

Signed at BELLVILLE on the 13 day of OCTOBER 2021

[redacted]
Witness

[redacted]
Mandatary

Signed at Cape Town on the 19 day of October 2021

[redacted]
Witness

[redacted]
for and on behalf of
City of Cape Town

[redacted]
Divisional Manager

Marsh Proprietary Limited
Unit Number 1, First Floor
Glass House Main Building
Glass House Office Park
309 Umhlanga Rocks Drive
Umhlanga Ridge, 4051
South Africa
[redacted]
www.marsh-africa.com

17th August 2021

CERTIFICATE OF INSURANCE

TO WHOM IT MAY CONCERN

Dear Sirs

iX ENGINEERS (PTY) LTD
PROFESSIONAL INDEMNITY & PUBLIC LIABILITY INSURANCE COVER

This letter shall serve to confirm that we arrange Professional Indemnity cover on behalf of the above practice, subject to the terms and conditions on the policy - on the following basis:

Insured	:	iX Engineers (Pty) Ltd
Address	:	[redacted]
Policy Period	:	1st September 2021 to 31st August 2022
Limit of Indemnity	:	R75 000 000 Each and Every Claim inclusive of Costs
Insurer	:	Leppard & Associates (Pty) Ltd
Policy Number	:	[redacted]

We confirm that the above policy is currently in place. Should you require any additional information, please do not hesitate to contact this office.

Kind Regards

[redacted]

ADV. NALEDI MORAGANE MAMPANE
Commissioner of Oaths - Ex Officio
277 The Hillside Street
Menlo Park
0081

CERTIFIED AS A
TRUE COPY
OF THE ORIGINAL

An authorised financial services provider
FSP Licence no.: 7784
Registration no.: 1993/005898/07
Directors: S Fatouros, K Groenewald, M Pienaar, GA Royston

[redacted]

08 OCT 2021

Marsh

[redacted]
Divisional Manager

Marsh Proprietary Limited
Unit Number 1, First Floor
Glass House Main Building
Glass House Office Park
399 Umhlanga Rocks Drive
Umhlanga Ridge, 4051
South Africa
[redacted]
www.marsh-africa.com

11th October 2021

CITY OF CAPE TOWN
City Manager
Civic Centre
12 Hertzog Boulevard
Cape Town
8000

Dear Sir

CONTRACT NO. : **194C/2020/21**

CONTRACT TITLE : **TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN**

NAME OF CONTRACTOR: **iX Engineers (Pty) Ltd**

I, the undersigned, do hereby confirm and warrant that all the insurances required in terms of the abovementioned contract have been issued and/or in the case of blanket/umbrella policies, have been endorsed to reflect the interests of the CITY OF CAPE TOWN with regard to the abovementioned contract, and that all the insurances and endorsements, etc., are all in accordance with the requirements of the contract.

I furthermore confirm that all premiums in the above regard are paid monthly and are fully up to date.

Signed:
[redacted]

For: Marsh (Pty) Ltd

[redacted]

An authorised financial services provider
FSP Licence no.: 7784
Registration no.: 1993/005898/07
Directors: S Fatouros, K Groenewald, M Pienaar, GA Royston

LEADERSHIP KNOWLEDGE SOLUTIONS WORLDWIDE

Part C2: Pricing Data

		Pages
C2.1	Pricing Assumptions	25 – 26
C2.2	Schedules of Rates	27 – 40



C2.1 Pricing Assumptions

Pricing Assumptions mean the criteria as set out below, read together with all Parts of this contract document, which it will be assumed in the contract, that the tenderer has taken into account when developing his prices.

1. The short descriptions given in the Schedules of Rates below are brief descriptions used to identify the activities for which prices are required. Typical Works Projects, for which rates are required, are contained in the Part C3.1: Scope of Work.

2. While it is entirely at the tenderer's discretion as regards pricing the Schedules of Rates below, tariffs of fees or indicative time based fee rates are gazetted from time to time by the built environment professional bodies. These are useful documents that will give tenderers some idea of industry norms against which they may compare their rates, sums and/or prices as applicable. Where applicable, tenderers must take into account the possible project types when pricing the Schedules of Rates.

   The tenderer's attention is drawn to the Municipal Cost Containment Regulations, 2019 (published in Government Gazette on 7 June 2019). Rates tendered must not exceed rates:
   (a) set out in the "Guide on Hourly Fee Rates for Consultants" issued by the Department of Public Service and Administration (DPSA rates); and
   (b) as prescribed by the body regulating the profession of the consultant.

3. For the purpose of the Schedules of Rates, the following words shall have the meanings hereby assigned to them:

   Unit: The unit of measurement for each item of work.
   Tendered Rate: The agreed payment per unit of measurement.
   Tendered Percentage: Service Provider's percentage mark-up.

4. The rates (excluding VAT) in the Schedules of Rates are to be fully inclusive rates for the work described under the several items. Such rates are to cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. The rates shall also include for all payments to administrative, clerical and secretarial staff used to support professional and technical staff.

5. Where a local office is required to be established by the Service Provider (in terms of clause 3.5 in C1.2: Contract Data), these establishment and operational costs must be included in the tendered time-based rates. These tendered rates shall also include any travel, accommodation, subsistence allowances, etc. paid by the Service Provider to his employees or sub-consultants for the duration of the local office establishment (see item 19 below) in fulfillment of the Contract.

6. A rate or percentage is to be entered against each item in the Schedules of Rates for the branches tendered for. If a nil rate (i.e. "nil" or "0.00") is entered against an item, it will be considered that there is no charge for that particular item. **An item against which no rate (or rates, in the case of rate categories if provided) is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word "included" or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item.**

   The tenderer may be requested to clarify nil rates, or items regarded as having nil rates, and the Employer may also perform a risk analysis with regard to the reasonableness of such rates.

7. The tenderer may not group a number of items together and tender one lump sum for such group of items.

8. **Tenderers are only to price their Branches of Preference as they have indicated on Returnable Schedule 26, in accordance with clauses C.1.6.1 and C.2.10.5 in Part T1.2 Tender Data.**

9. There are no quantities applicable to the tender during the tender submission stage. The rates provided in the Schedules of Rates shall be used in representative Works Projects for tender evaluation purposes in accordance with clause C.3.11.1 in Part T1.2: Tender Data.

10. Tenderers shall provide rates and mark-up percentages (excluding VAT) for each required rate for each item specified in every schedule in the Schedules of Rates applicable to the branch(es) tendered for (refer to clause C.2.10.5 in Part T1.2: Tender Data).

11. The procedures for the allocation of Works Projects are specified in Part C1.2: Contract Data (refer to clause 4.8).

12. All rates (except for travel expenses – see Item 18 below) shall be adjusted in terms of clause 3.16 of the Standard Professional Services Contract.

13. A higher category person undertaking lower category work will be reimbursed, in respect of time-based fees, at the lower category rate.

14. Tenderers are to note that only those recoverable expenses listed in the Schedules of Rates will be reimbursed to the Service Provider. No reimbursement of costs for subsistence, typing, printing/copying (other than reports and/or tender documents), communications or computer hardware and/or software will be made and these costs will be deemed to be included in tendered rates.

15. Payment will only be made for copies of reports and drawings when requested by the Employer, and all drafts shall be for the Service Provider's account.

16. Full time construction monitoring staff shall be reimbursed for travelling expenses, for either the return office to site or return home to site journeys, whichever is the lesser. Part time construction monitoring staff shall be reimbursed for either the return office to site or return alternate site to site journeys, whichever is the lesser. Construction monitoring staff engaged in work outside of normal working hours shall be reimbursed for the return home to site journey. Staff other than construction monitoring staff shall be reimbursed for all travelling expenses at the appropriate rate.

17. Unless otherwise agreed with the Employer, any air travel will be for the Service Provider's account.

18. The per kilometre rate for the reimbursement of travel expenses shall be limited to the ad-hoc duty transportation allowance for the Employer's own staff as adjusted from time to time. This rate is currently R 3.98/km (excluding VAT). The Service Provider must obtain the Employers prior approval before using a 4 x 4 vehicle for any site journeys. The rate for using a 4 x 4 vehicle is currently R 5.94/km (excluding VAT), and will be adjusted pro rata to the ad-hoc duty transport allowance for the Employer' own staff.

19. Travel time and all associated travel costs from the local office, as required in fulfillment of a works project, will be reimbursable. Travel time and all associated travel costs from outside the local office area to the local office (eg. air travel) will not be reimbursable.

20. Where fractions of a cent occur in calculations of prices and amounts, they shall be rounded up/down to the nearest whole cent.

21. Clause C.2.13.11(c) in Part T1.2: Tender Data shall be applicable to the submission of Schedules of Rates which have been priced electronically, and which the tenderer wishes to submit as a printed version with his/her tender in the place of a handwritten priced Schedules of Rates.

    If there is found to be any variance between the printed version and the original issued document, the original shall stand. However, where Addenda have been issued which amend the Schedules of Rates, then the printed Schedules of Rates shall take these into account.

    The pages of the issued Schedules of Rates should not be removed from the tender document.

22. Timesheets, drawn from the Service Providers' financial system, are to be submitted with each invoice to confirm the actual hours worked for each task.

23. The Service Provider will be reimbursed for the cost of preparing a Works Project proposal.

24. The payment for Construction Monitoring levels 1 and 2 will be paid at the appropriate Category rate for the particular discipline as tendered for, Stages 5 and 6 and Additional Services.

C2.2 Schedules of Rates

Pages

Schedule No. 4: Reticulation Branch ..... 28 - 40



SCHEDULE NO. 1: RETICULATION BRANCH

The following Notes (R1 to R19) are applicable to the Reticulation Branch only:

Note R1: **Project Managers:** Category A: The required personnel must be a professionally registered (PrCPM or PMP or other proven equivalent registration) with over 20 (twenty) years of experience in project management. The Project Manager's expertise and experience must be nationally recognised and must provide advice at a level of specialisation where such advice is recognized as that of an expert in the area of project management.

Category B: The required personnel must be a professionally registered (PrCPM or PMP or other proven equivalent registration) with at least 10 (ten) years verifiable postgraduate experience in the project management of all works related to all types of construction works. The Project Manager is a person who bears the risk of the business or who takes responsibility for the projects and related liabilities of the practice and where his level of expertise and relevant experience is commensurate with the position and provides strategic guidance in planning and executing a project.

Category C: The required personnel must be a professionally registered (PrCPM or PMP or other proven equivalent registration) with at least 5 (five) years verifiable postgraduate experience in the project management of various types of similar works.

Category D: Need not be professionally registered and can be an Engineer, Technologist or Technician involved in project management of various types of works.

Note R2: **Construction Health and Safety Services:** The required personnel must be registered with the South African Council for the Project and Construction Management Professions (SACPCMP).

Professional Construction Health and Safety Agent: must be a professionally registered Construction Health and Safety Agent (PrCHSA).

Construction Health and Safety Manager: must be a registered Construction Health and Safety Manager (CHSM).

Construction Health and Safety Officer: must be a registered Construction Health and Safety Officer (CHSO).

Note R3: **Environmental Assessment Practitioner:** The required personnel must be registered with the Environmental Assessment Practitioner's Association of South Africa (EAPASA) or must meet the criteria for registration (and has applied for registration) with the Environmental Assessment Practitioner's Association of South Africa (EAPASA). The EAP must have at least 8 (eight) years verifiable experience in the undertaking of all environmental works related to all types of construction work similar to those listed in the Typical Works Projects lists. The EAP must have acted in a lead role in at least (2) two Full Scoping/Environmental Impact Assessment (EIA) reports and at least (5) five Basic Assessments of a project or type relevant to the Typical Works Projects list.

Note R4: **Environmental Control Officer:** The required personnel must have a relevant tertiary qualification and at least 3 (three) years verifiable experience of all works related to all types of construction works similar to those listed in Typical Works Projects lists.

Note R5: **Public Participation Practitioner (Lead):** The required personnel will be required to assist with Environmental Impact Assessments and must have at least 3 (three) years' experience in similar activities.

Note R6: **Environmental Auditor:** The required personnel must have an environmental auditing qualification and at least 3 (three) years' experience as a lead environmental auditor.

Note R7: **Heritage Assessment Practitioner:** The required personnel must have a postgraduate qualification in a heritage related field and at least 4 (four) years verifiable appropriate experience in heritage management issues likely to be encountered in all works similar to those listed in Typical Works Projects lists.

Note R8: **Freshwater ecologist:** The required personnel must be a registered professional with the South African Council for Natural Scientific Professions (SACNASP or other proven equivalent registration), with at least 8 (eight) years verifiable postgraduate experience in this specialised field and specifically providing aquatic ecological advisory services and undertaking all work necessary to acquire the authorisations (including General Authorisations or Water Use Licences) or permits required in terms of the National Water Act No. 36 of 1998.

[redacted]

Note R9: **Environmental Specialist (e.g. botanist, horticulturist, marine biologist, etc.):** The required personnel must be appropriately qualified and have a minimum of 8 (eight) years verifiable experience in the specialised field, 5 (five) of which must be proven and appropriate experience of local conditions relating to projects as stated in the Scope of Work.

Note R10: **Asset Management specialist:** The required personnel must be professionally registered with a recognized body and have at least 10 years' verifiable postgraduate experience in infrastructure asset management and maintenance planning and optimization

Note R11: **Cathodic Protection specialist:** The required personnel must be a certified NACE CP3 specialist or Metallurgy Engineering (PrEng or other proven equivalent registration) who has at least 10 (ten) years verifiable postgraduate experience in the analysis and design of cathodic protection systems for steel pipelines.

Note R12: **Dam Safety specialist:** The required personnel must be a professionally registered Civil Engineer or Civil Engineering Technologist (PrEng or PrTechEng or other proven equivalent registration) with at least 8 (eight) years verifiable postgraduate experience and must be registered as an Approved Professional Person with the Department of Water and Sanitation.

Note R13: **Fire Services specialist:** The required personnel must be registered with the Engineering Council of South Africa (ECSA) and have at least 8 (eight) years verifiable postgraduate experience, 3 (three) of which must be experience in the design, installation, testing and inspections of fire protection, detection, smoke extraction and suppression systems and who will be responsible for all fire services work required for each Works Project..

Note R14: **Geotechnical specialist:** The required personnel must be a professionally registered Civil Engineer or Civil Engineering Technologist (PrEng or PrTechEng or other proven equivalent registration) with at least 8 (eight) years verifiable postgraduate experience and must have a postgraduate qualification in the specialised field.

Note R15: **Hazardous Substance Management specialist (Major Hazardous Installations, working with hazardous materials):** The required personnel must be a qualified Chemical or Process Engineer with at least 8 (eight) years proven experience in this specialised field and must be: (i) accredited by the South African National Accreditation System (SANAS) in accordance with ISO/IEC 17020:2012; and (ii) approved by, or registered with, the Department of Labour as an Approved Inspection Authority (Type A) to conduct Major Hazardous Installations audits/inspections..

Note R16: **Hydraulic Engineer "B":** The required personnel must be a registered professional Civil Engineer or professional Civil Engineering Technologist (PrEng or PrTechEng or other proven equivalent registration), with at least 8 (eight) years postgraduate experience in the design of large diameter pipelines and in surge analyses and must have undertaken, and taken responsibility for, the design of a minimum of 5 (five) pipeline projects with a diameter larger than 300 mm.

Note R17: **Traffic Impact specialist:** The required personnel must be a registered professional Civil Engineer or Civil Engineering Technologist (PrEng or PrTechEng or other proven equivalent registration), with at least 8 (eight) years verifiable postgraduate experience in Traffic Engineering. The specialist must have a postgraduate qualification in Transportation Engineering

Note R18: **Water Use Authorisation specialist** The required personnel must be appropriately qualified and professionally registered in the applicable field and have at least 8 (eight) years proven experience in the specialist field

Note R19: **Training Supervisor:** Refer to sub-clause 5.2.1.3, Training of Personnel in C3.1: Scope of Work.



4.1: PLANNING, STUDIES, INVESTIGATIONS, ASSESSMENTS AND ADDITIONAL SERVICES

Time-based fees for Planning, Studies, Investigations, Assessments and Additional Services as described in the Scope of Work for the following disciplines:

Item No.	Activity Description	Unit	Tendered Rate
	CIVIL ENGINEERING SERVICES		
4.1.1.	Category A	Hour	0.00
4.1.2.	Category B	Hour	[redacted]
4.1.3.	Category C	Hour	
4.1.4.	Category D	Hour	
	STRUCTURAL ENGINEERING SERVICES		
4.1.5.	Category A	Hour	
4.1.6.	Category B	Hour	
4.1.7.	Category C	Hour	
4.1.8.	Category D	Hour	
	MECHANICAL ENGINEERING SERVICES		
4.1.9.	Category A	Hour	
4.1.10.	Category B	Hour	
4.1.11.	Category C	Hour	
4.1.12.	Category D	Hour	
	ELECTRICAL ENGINEERING SERVICES		
4.1.13.	Category A	Hour	
4.1.14.	Category B	Hour	
4.1.15.	Category C	Hour	
4.1.16.	Category D	Hour	
	ELECTRONIC ENGINEERING SERVICES		
4.1.17.	Category A	Hour	
4.1.18.	Category B	Hour	
4.1.19.	Category C	Hour	
4.1.20.	Category D	Hour	

[redacted]

Item No.	Activity Description	Unit	Tendered Rate
	QUANTITY SURVEYING SERVICES		
4.1.21.	Registered Professional Principals (Specialist)	Hour	0.00
4.1.22.	Registered Professional Principals (> 10 years experience)	Hour	[redacted]
4.1.23.	Registered Professional Principals (5 – 10 years experience)	Hour	
4.1.24.	Registered Professional Principals (< 5 years experience)	Hour	
4.1.25.	Salaried Personnel	Hour	
	ARCHITECTURAL SERVICES		
4.1.26.	Principal (Specialist)	Hour	
4.1.27.	Principal (>10 years experience)	Hour	
4.1.28.	Principal (<10 years experience)	Hour	
4.1.29.	Salaried staff (Associates and Managers)	Hour	
4.1.30.	Salaried Staff (Registered architectural professionals performing work of an architectural nature and carrying direct responsibility for activities related to a project)	Hour	
4.1.31.	Salaried Staff (Registered architectural professionals performing work of an architectural nature under direction and control)	Hour	
4.1.32.	Salaried Staff (Staff performing work of an architectural nature and/or to support architectural work outputs under direction and control)	Hour	
	PROJECT MANAGEMENT SERVICES		
4.1.33.	Category A (Note R1)	Hour	
4.1.34.	Category B (Note R1)	Hour	
4.1.35.	Category C (Note R1)	Hour	
4.1.36.	Category D (Note R1)	Hour	
	CONSTRUCTION HEALTH AND SAFETY SERVICES		
4.1.37.	Professional Construction Health and Safety Agent (Note R2)	Hour	
4.1.38.	Construction Health and Safety Manager (Note R2)	Hour	
4.1.39.	Construction Health and Safety Officer (Note R2)	Hour	

[redacted]

Item No.	Activity Description	Unit	Negotiated Rate Tendered Rate
	ENVIRONMENTAL AND HERITAGE SERVICES		
4.1.40.	Environmental Assessment Practitioner (Note R3)	Hour	[redacted]
4.1.41.	Environmental Assessment Practitioner Assistant	Hour	
4.1.42.	Environmental Control Officer (Note R4)	Hour	
4.1.43.	Public Participation Practitioner (Lead) (Note R5)	Hour	
4.1.44.	Public Participation Practitioner (Administrative assistant)	Hour	
4.1.45.	Environmental Auditor (Note R6)	Hour	
4.1.46.	Heritage Assessment Practitioner (Note R7)	Hour	
4.1.47.	Heritage Assessment Practitioner Assistant	Hour	
4.1.48.	Freshwater Ecologist (Note R8)	Hour	
4.1.49.	Environmental Specialist (e.g. botanist, horticulturist, marine biologist, etc.) (Note R9)	Hour	
	LANDSCAPE ARCHITECTURAL SERVICES		
4.1.50.	Registered Professional Principal Landscape Architect (minimum 8 years' experience)	Hour	
4.1.51.	Staff performing work of a landscape architectural nature and carrying direct responsibility for one or more specific activities related to a project	Hour	

[redacted]

4.2: NORMAL SERVICES AND ADDITIONAL SERVICES (STAGES 1 TO 4)

Time-based fees for Normal Services Stages 1 to 4 and Additional Services as described in the Scope of Work for the following disciplines:

Item No.	Activity Description	Unit	Tendered Rate
	CIVIL ENGINEERING SERVICES		
4.2.1.	Category A	Hour	0.00
4.2.2.	Category B	Hour	[redacted]
4.2.3.	Category C	Hour	
4.2.4.	Category D	Hour	
	STRUCTURAL ENGINEERING SERVICES		
4.2.5.	Category A	Hour	
4.2.6.	Category B	Hour	
4.2.7.	Category C	Hour	
4.2.8.	Category D	Hour	
	MECHANICAL ENGINEERING SERVICES		
4.2.9.	Category A	Hour	
4.2.10.	Category B	Hour	
4.2.11.	Category C	Hour	
4.2.12.	Category D	Hour	
	ELECTRICAL ENGINEERING SERVICES		
4.2.13.	Category A	Hour	
4.2.14.	Category B	Hour	
4.2.15.	Category C	Hour	
4.2.16.	Category D	Hour	
	ELECTRONIC ENGINEERING SERVICES		
4.2.17.	Category A	Hour	
4.2.18.	Category B	Hour	
4.2.19.	Category C	Hour	
4.2.20.	Category D	Hour	

[redacted]

Item No.	Activity Description	Unit	Tendered Rate
	QUANTITY SURVEYING SERVICES		
4.2.21.	Registered Professional Principals (Specialist)	Hour	0.00
4.2.22.	Registered Professional Principals (> 10 years experience)	Hour	[redacted]
4.2.23.	Registered Professional Principals (5 – 10 years experience)	Hour	
4.2.24.	Registered Professional Principals (< 5 years experience)	Hour	
4.2.25.	Salaried Personnel	Hour	
	ARCHITECTURAL SERVICES		
4.2.26.	Principal (Specialist)	Hour	
4.2.27.	Principal (>10 years experience)	Hour	
4.2.28.	Principal (<10 years experience)	Hour	
4.2.29.	Salaried staff (Associates and Managers)	Hour	
4.2.30.	Salaried Staff (Registered architectural professionals performing work of an architectural nature and carrying direct responsibility for activities related to a project)	Hour	
4.2.31.	Salaried Staff (Registered architectural professionals performing work of an architectural nature under direction and control)	Hour	
4.2.32.	Salaried Staff (Staff performing work of an architectural nature and/or to support architectural work outputs under direction and control)	Hour	
	PROJECT MANAGEMENT SERVICES		
4.2.33.	Category A (Note R1)	Hour	
4.2.34.	Category B (Note R1)	Hour	
4.2.35.	Category C (Note R1)	Hour	
4.2.36.	Category D (Note R1)	Hour	
	CONSTRUCTION HEALTH AND SAFETY SERVICES		
4.2.37.	Professional Construction Health and Safety Agent (Note R2)	Hour	
4.2.38.	Construction Health and Safety Manager (Note R2)	Hour	
4.2.39.	Construction Health and Safety Officer (Note R2)	Hour	

[redacted]

			Negotiated Rate
Item No.	Activity Description	Unit	Tendered Rate
	ENVIRONMENTAL AND HERITAGE SERVICES		
4.2.40.	Environmental Assessment Practitioner (Note R3)	Hour	[redacted]
4.2.41.	Environmental Assessment Practitioner Assistant	Hour	
4.2.42.	Environmental Control Officer (Note R4)	Hour	
4.2.43.	Heritage Assessment Practitioner (Note R7)	Hour	
4.2.44.	Heritage Assessment Practitioner Assistant	Hour	
4.2.45.	Freshwater Ecologist (Note R8)	Hour	
4.2.46.	Environmental Specialist (e.g. botanist, horticulturist, marine biologist, etc.) (Note R9)	Hour	
	LANDSCAPE ARCHITECTURAL SERVICES		
4.2.47.	Registered Professional Principal Landscape Architect (minimum 8 years' experience)	Hour	0.00
4.2.48.	Staff performing work of a landscape architectural nature and carrying direct responsibility for one or more specific activities related to a project	Hour	0.00

[redacted]

Negotiated Rate

4.3: NORMAL SERVICES AND ADDITIONAL SERVICES (STAGES 5 TO 6)

Time-based fees for Normal Services Stages 5 to 6 and Additional Services as described in the Scope of Work for the following disciplines:

Item No.	Activity Description	Unit	Tendered Rate
	CIVIL ENGINEERING SERVICES		
4.3.1.	Category A	Hour	0.00
4.3.2.	Category B	Hour	[redacted]
4.3.3.	Category C	Hour	
4.3.4.	Category D	Hour	
4.3.5.	Construction Monitoring: Level 3 - Category C person	Month	
4.3.6.	Construction Monitoring: Level 3 - Category D person	Month	
	STRUCTURAL ENGINEERING SERVICES		
4.3.7.	Category A	Hour	0.00
4.3.8.	Category B	Hour	[redacted]
4.3.9.	Category C	Hour	
4.3.10.	Category D	Hour	
4.3.11.	Construction Monitoring: Level 3 - Category C person	Month	
4.3.12.	Construction Monitoring: Level 3 - Category D person	Month	
	MECHANICAL ENGINEERING SERVICES		
4.3.13.	Category A	Hour	0.00
4.3.14.	Category B	Hour	[redacted]
4.3.15.	Category C	Hour	
4.3.16.	Category D	Hour	
4.3.17.	Construction Monitoring: Level 3 - Category C person	Month	
4.3.18.	Construction Monitoring: Level 3 - Category D person	Month	
	ELECTRICAL ENGINEERING SERVICES		
4.3.19.	Category A	Hour	0.00
4.3.20.	Category B	Hour	[redacted]
4.3.21.	Category C	Hour	
4.3.22.	Category D	Hour	
4.3.23.	Construction Monitoring: Level 3 - Category C person	Month	
4.3.24.	Construction Monitoring: Level 3 - Category D person	Month	

[redacted]

Item No.	Activity Description	Unit	Tendered Rate
	ELECTRONIC ENGINEERING SERVICES		
4.3.25.	Category A	Hour	0.00
4.3.26.	Category B	Hour	[redacted]
4.3.27.	Category C	Hour	
4.3.28.	Category D	Hour	
	QUANTITY SURVEYING SERVICES		
4.3.29.	Registered Professional Principals (Specialist)	Hour	0.00
4.3.30.	Registered Professional Principals (> 10 years experience)	Hour	[redacted]
4.3.31.	Registered Professional Principals (5 – 10 years experience)	Hour	
4.3.32.	Registered Professional Principals (< 5 years experience)	Hour	
4.3.33.	Salaried Personnel	Hour	
	ARCHITECTURAL SERVICES		
4.3.34.	Principal (Specialist)	Hour	0.00
4.3.35.	Principal (>10 years experience)	Hour	0.00
4.3.36.	Principal (<10 years experience)	Hour	[redacted]
4.3.27.	Salaried staff (Associates and Managers)	Hour	
4.3.38.	Salaried Staff (Registered architectural professionals performing work of an architectural nature and carrying direct responsibility for activities related to a project)	Hour	
4.3.39.	Salaried Staff (Registered architectural professionals performing work of an architectural nature under direction and control)	Hour	
4.3.40.	Salaried Staff (Staff performing work of an architectural nature and/or to support architectural work outputs under direction and control)	Hour	
	PROJECT MANAGEMENT SERVICES		
4.3.41.	Category A (Note R1)	Hour	0.00
4.3.42.	Category B (Note R1)	Hour	[redacted]
4.3.43.	Category C (Note R1)	Hour	
4.3.44.	Category D (Note R1)	Hour	
	CONSTRUCTION HEALTH AND SAFETY SERVICES		
4.3.45.	Professional Construction Health and Safety Agent (Note R2)	Hour	
4.3.46.	Construction Health and Safety Manager (Note R2)	Hour	

[redacted]

			Negotiated Rate
Item No.	Activity Description	Unit	Tendered Rate
4.3.47.	Construction Health and Safety Officer (Note R2)	Hour	[redacted]
	ENVIRONMENTAL AND HERITAGE SERVICES		
4.3.48.	Environmental Assessment Practitioner (Note R3)	Hour	
4.3.49.	Environmental Assessment Practitioner Assistant	Hour	
4.3.50.	Environmental Control Officer (Note R4)	Hour	
4.3.51.	Heritage Assessment Practitioner (Note R7)	Hour	
4.3.52.	Heritage Assessment Practitioner Assistant	Hour	
4.3.53.	Freshwater Ecologist (Note R8)	Hour	
4.3.54.	Environmental Specialist (e.g. botanist, horticulturist, marine biologist, etc.) (Note R9)	Hour	
	LANDSCAPE ARCHITECTURAL SERVICES		
4.3.55.	Registered Professional Principal Landscape Architect (minimum 8 years' experience)	Hour	
4.3.56.	Staff performing work of a landscape architectural nature and carrying direct responsibility for one or more specific activities related to a project	Hour	

[redacted]

4.4: ADDITIONAL AND SPECIALIST SERVICES - GENERAL

Time-based fees for Normal Services Stages 1 to 6 and Additional Services for the following disciplines:

Item No.	Activity Description	Unit	Tendered Rate
4.4.1	Conveyancer	Hour	[redacted]
4.4.2	Land Survey Team – Field Work (civil topographical surveys or survey/measure existing structures)	Hour	
4.4.3	Land Survey Team – Office Work (reduce field work, prepare CAD/GIS drawing/s, maps and reports)	Hour	
4.4.4	CAD Draughting Operator	Hour	
4.4.5	GIS technician	Hour	
4.4.6	Registered Land Surveyor (cadastral surveys, property registration of sub-divisions)	Hour	
4.4.7	Town Planner (Zoning/Land Use report/reports or certificates/ re-zoning applications)	Hour	
4.4.8	Asset Management specialist (Note R10)	Hour	
4.4.9	Cathodic Protection specialist (Note R11)	Hour	
4.4.10	Dam Safety specialist (Note R12)	Hour	
4.4.11	Fire Service specialist (Note R13)	Hour	
4.4.12	Geotechnical specialist (Note R14)	Hour	
4.4.13	Hazardous Substances Management specialist (Major Hazardous Installations, working with hazardous materials) (Note R15)	Hour	
4.4.14	Hydraulic Engineer "B" (Note R16)	Hour	
4.4.15	Traffic Impact specialist (Note R17)	Hour	
4.4.16	Water Use Authorisation specialist (Note R18)	Hour	
4.4.17	Training Supervisor (Note R19)	Hour	

[redacted]

4.5: RECOVERABLE EXPENSES

Recoverable Expenses

Item No.	Activity Description	Unit	Sum
4.5.1.	Service Provider's cost for materials, equipment, testing and/or any other recoverable expenses not covered in the tender document will be claimed under this item for each individual works project during the Framework Contract Period.	Sum	

Provision for Service Provider's Mark-up on Recoverable Expenses claimed under item 4.5.1.

Item No.	Activity Description	Unit	Tendered Percentage
4.5.2.	Service Provider's percentage mark-up on item 4.5.1 above	%	0.00

4.6: DISBURSEMENTS/RECOVERABLE EXPENSES

Item No.	Description	Unit	Tendered Rate
	Recoverable expenses in respect of printing/plotting/copying, traveling expenses, etc. as specified below:		
4.6.1.	Size A0 (Monochrome)	No.	0.00
4.6.2.	Size A1 (Monochrome)	No.	0.00
4.6.3.	Size A2 (Monochrome)	No.	0.00
4.6.4.	Size A3 (Monochrome)	No.	0.00
4.6.5.	Size A4 (Monochrome)	No.	0.00
4.6.6.	Size A4 (Monochrome on colour paper)	No.	0.00
4.6.7.	Size A0 (Colour)	No.	0.00
4.6.8.	Size A1 (Colour)	No.	0.00
4.6.9.	Size A2 (Colour)	No.	0.00
4.6.10.	Size A3 (Colour)	No.	0.00
4.6.11.	Size A4 (Colour)	No.	0.00
4.6.12.	Laminated posters: Size A0 (Colour)	No.	0.00
4.6.13.	Laminated posters: Size A1 (Colour)	No.	0.00
4.6.14.	Laminated posters: Size A2 (Colour)	No.	0.00
4.6.15.	Laminated posters: Size A3 (Colour)	No.	0.00
4.6.16.	Compilation and binding of reports/tender documents, books of drawings, etc.	No.	0.00
4.6.17.	Electronic Data provided on a flash drive (4 GB).	No.	0.00
4.6.18.	Provision of Personal Computer	Month	0.00
4.6.19.	Travel expenses	km	0.00
4.6.20.	Travel expenses (4 X 4)	km	0.00

[redacted]

Part C3: Scope of Work

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C3.1 Scope of Work

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1. INTRODUCTION AND EMPLOYER'S OBJECTIVE

The Employer's objectives are to execute new developments and services and repairs, maintenance, alterations, additions and refurbishments to existing properties and services within the Water and Sanitation Department, for which it requires teams of Professional Services Providers. The department is divided into five (5) branches for this tender and the Employer intends to appoint a "Winner", a "Standby Service Provider 1" and a "Standby Service Provider 2" to provide multidisciplinary professional services for each branch.

Branch No.	Branch Name	Estimated professional fees to be spent per branch for the Framework Contract Period
A	Bulk Water	R100 000 000
B	Catchment Stormwater and River Management	R56 000 000
C	Engineering and Asset Management	R54 000 000
D	Reticulation Branch	R84 000 000
E	Wastewater Treatment	R100 000 000

Note 1: It is the intention of the Employer to use the successful Service Providers if and when required and the successful appointment under this contract does not guarantee any amount of work to be executed hereunder. The Employer reserves the right to plan and effect individual Works Projects at its sole discretion and to reduce or increase the estimated professional fees to be spent per branch according to the dictates of the budget.

Teams of Professional Service Providers are required to provide the professional services necessary to implement these projects, which, in terms of the Municipal Finance Management Act, 2003 and the Municipal Supply Chain Management Regulations, 2005, must be procured through a competitive bidding process.

The list of Typical Works Projects contained in Clauses 2.1, 2.2, 2.3, 2.4 and 2.5 (Description of the Services Required) is merely an outline of the scope of the Contract Works for each branch and shall not limit the work to be carried out by the Service Provider under this Framework Contract. The anticipated services to be provided in accordance with the Framework Contract Document for the Typical Works Projects are included in the Schedules of Rates.

It will be expected that a Project Leader (Project Manager or similar professional person) will lead the teams of Professional Service Providers and who will draw the required competencies from resources available to him (e.g. in his own company or sub-consultant) or from external approved Service Providers. The key personnel in the Service Provider teams shall comply with the competencies required irrespective of the nature of the teams and will be evaluated as a single entity

As this framework contract period will exceed the current budget cycle, it is subject to Section 33 of the Municipal Finance Management Act, 56 of 2003, and consequently the Employer must follow the required processes in terms of Section 33. These will run concurrently with the procurement process for this tender/contract. The Start Date of the Framework Contract is expected to be within 10 (ten) months of the tender closing date.

The Employer reserves the right to utilise, under exceptional circumstances, the Service Providers appointed for this framework contract to provide professional services to other Directorates/Departments within the City of Cape Town. These Works Projects will be issued subject to agreement between the Framework Contract Manager and the Service Provider and will be without prejudice.

2. DESCRIPTION OF THE SERVICES REQUIRED

2.1 NOT APPLICABLE

2.2 NOT APPLICABLE

2.3 NOT APPLICABLE

2.4 RETICULATION BRANCH

The Service Provider is required to provide the professional services listed in Clauses 2.4.1 to 2.4.7 below to address the following Typical Works Projects which are anticipated to be executed during the duration of the contract. (Note: Projects requiring design will mostly include the construction phase)

- Environmental investigations and studies.
- Geotechnical investigations.
- Heritage investigations and studies.
- Commercial laboratory testing of soils/materials.
- Topographical and engineering surveys which may include ground penetrating radar surveys for services detection and mapping.
- Bulk sewer pipeline and manhole structure design including route planning, hydraulic analysis, optimization and corrosion protection.
- Water and sewer pressure main (rising main) design including planning, optimization, vertical alignment and hydraulic analysis.
- Refurbish, upgrade or new sewer or water pump stations.
- Design, upgrade or refurbishment of existing water and sewer networks.
- Compiling of Environmental Management Plan (EMP) per works project.
- Acting as the Employer's Agent in terms of the Occupational Health and Safety Plan per Works Project.
- Approval of Occupational Health and Safety Plans per works project.
- Semi-monthly site/admin audits per works project.
- Close-Out report for Occupational Health and Safety per works project.
- Potable water reservoir structural inspections/investigations.
- Upgrades and additions to road works, paving, sewer, stormwater, reticulation/minor water supply and ducts (electrical, instrumentation, telecommunications, etc.) at the Water and Sanitation depots, workshops, pump stations and reservoirs.
- Design of water retaining structures (reservoirs, settling tanks, balancing tanks) and other concrete structures.
- Site traffic surveys.
- Compile traffic accommodation plans in terms of South African Road Traffic Signs Manual (SARTSM).
- Design shoring specification for deep pipe trenches and excavations.

- Conducting of water and sewer infrastructure investigations to determine root cause of experienced operational shortcomings and presentation of findings.
- Facilitate appointment of Community Liaison Officer (CLO) as required by prevailing site demographics.
- Construction Monitoring during implementation phase for Trenchless Technology construction methods and conventional Open-Cut Trench Methods, where pre-approved panel of Contractors will execute the construction works.
- Quality Control and Quality Acceptance of new construction works and reinstatements. Reinstatements of paving, excavated roads works, etc.
- Coordinate and submit Monthly Project Labour Reports.

Personnel requirements

The requirements of the various professional/technical personnel are contained in the Notes provided as a preamble to Schedule No.4: Reticulation Branch in Part C2.2: Schedules of Rates.

Verifiable experience referred to in the Notes is interpreted as experience in that particular service. Postgraduate years of experience is defined as working experience gained from the time of obtaining a baccalaureus/diploma qualification, as applicable.

2.4.1 Engineering Services (Civil, Structural, Mechanical, Electrical and Electronic)

2.4.1.1 Planning, Studies, Investigations and Assessments

The provision of all services described in Clause 3.1 of Board Notice 138 of 2015: Guideline for Services and Processes for Estimating Fees for Persons Registered in terms of the Engineering Profession Act, 2000 (Act No 46 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below.

2.4.1.2 Normal Services

The provision of all services described in Clauses 3.2.1 to 3.2.6 (inclusive) of Board Notice 138 of 2015: Guideline for Services and Processes for Estimating Fees for Persons Registered in terms of the Engineering Profession Act, 2000 (Act No 46 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below.

The Service Provider's attention is also drawn to the responsibilities of the designer of a structure in terms of the Construction Regulations, and shall comply with all requirements in this regard.

The Service Provider shall, apart from conducting his own activities in compliance with the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and Construction Regulations 2014, ensure that any sub-consultants/contractors employed by the Service Provider also comply with the requirements of the Act and Regulations. The Service Provider shall enter into an agreement with the Employer in this regard before the commencement of any work related to this contract (Form C1.3, Occupational Health and Safety Agreement Part C1, refers).

2.4.1.3 Additional Services

(1) The provision of additional services pertaining to all stages of the project as anticipated in Clause 3.3.1 of Board Notice 138 of 2015: Guideline for Services and Processes for Estimating Fees for Persons Registered in terms of the Engineering Profession Act, 2000 (Act No 46 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below, will be conducted based on the hourly rates tendered and upon the acceptance of a quotation for such services received from the Service Provider by the Employer.

(2) The provision of construction monitoring service as described in Clause 3.3.2 of Board Notice 138 of 2015: Guideline for Services and Processes for Estimating Fees for Persons Registered in terms of the Engineering Profession Act, 2000 (Act No 46 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below, will be based on the rates tendered and upon the acceptance of a quotation for such services received from the Service Provider by the Employer.

2.4.2 Quantity Surveying Services

2.4.2.1 Building and Engineering Works Services

The provision of all applicable services described in Board Notice 170 of 2015: Guideline Tariff of Professional Fees in respect of Services rendered by Persons Registered in terms of the Quantity Surveying Profession Act, 2000 (Act No 49 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below.

2.4.3 **Architectural Services**

2.4.3.1 **Standard Services**

The provision of all services described in Clauses 1.1 of Board Notice 121 of 2015: Framework for the Professional Fees Guideline in respect of services provided by persons registered in terms of the Architectural Profession Act, 2000 (Act No 44 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below.

The Service Provider's attention is also drawn to the responsibilities of the designer of a structure in terms of the Construction Regulations, and shall comply with all requirements in this regard.

The Service Provider shall, apart from conducting his own activities in compliance with the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and Construction Regulations 2014, ensure that any sub-consultants/contractors employed by the Service Provider also comply with the requirements of the Act and Regulations. The Service Provider shall enter into an agreement with the Employer in this regard before the commencement of any work related to this contract (Form C1.3, Part C1, refers).

2.4.3.2 **Additional Services**

(1) The provision of additional services pertaining to all stages of the project as anticipated in Clauses 1.2.1 of the 2015: Framework for the Professional Fees Guideline in respect of services provided by persons registered in terms of the Architectural Profession Act, 2000 (Act No 44 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below, will be conducted based on the hourly rates tendered and upon the acceptance of a quotation for such services received from the Service Provider by the Employer.

(2) The provision of special inspections (more intensive inspections and assessments of the works) as described in Clause 1.2.1.2(c) of the 2015 Professional Fees Guidelines as published by the South African Council for the Architectural Profession in terms of the Architectural Profession Act, 2000 (Act No 44 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below, which will be conducted based on the rates tendered and upon the acceptance of a quotation for such services received from the Service Provider by the Employer.

(3) Rezoning or change of use or amendments of town planning schemes.

2.4.4 **Project Management Services**

The provision of all services described in Clause 3.0 (Standard Services) and Clause 4.0 (Additional/Supplementary Services) of Board Notice 202 of 2011: Guideline Scope of Services and Recommended Guideline Tariff of Fees for Persons Registered in terms of the Project and Construction Management Professions, (Act 48 of 2000), as amended or amplified upon in the Project Brief (Clause 5) below.

2.4.5 **Environmental Assessment Practitioner, Environmental Control Officer, Environmental Auditor and Heritage Assessment Practitioner**

2.4.5.1 An independent Environmental Assessment Practitioner (EAP) is required to assess the project objectively, provide advice on the implementation of relevant environmental legislation and the requirements for any Environmental Assessments, undertake such assessments (where required), obtain the required Environmental Authorisation from the Environmental Authorities (where required) and develop an Environmental Management Programme (EMPr) for the project.

The EAP will be responsible for the planning, management, coordination of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instruments introduced through regulations

An EAP may be required to act as a Review EAP on any project as instructed by the Employer. A Review EAP must fulfil the requirements of an EAP and must be registered with EAPASA.

When required, a Public Participation Practitioner will assist with any Environmental Impact Assessments or similar. The practitioner will be required to have at least 3-years' experience in similar activities.

2.4.5.2 An independent Environmental Control Officer (ECO) is required to monitor objectively the implementation of relevant environmental legislation, conditions of Environmental Authorisations (EAs or other environmental licences, permits) and the Environmental Management Plan for the project. The ECO must be on site prior to any site establishment and must form an integral part of the project team.

2.4.5.3 An independent Environmental Auditor is required to undertake environmental compliance audits at prescribed timeframes (prescribed by the competent authority) for the duration of construction related activities (and thereafter as required). These audits must comply with the requirements as prescribed in Regulation 34 of the EIA Regulations, 2014, as amended

2.4.5.4 An independent Heritage Assessment Practitioner (HAP) may be required to assess a project objectively and provide advice on the implementation of the National Heritage Resources Act and Heritage Protection Overlay zoning where this is in place. The Heritage practitioner will be required to complete any Notifications of Intent to Develop, carry out any heritage impact assessments or develop heritage statements for the project, and assist with any required applications under heritage legislation as well as with the implementation of any heritage requirements put in place by the relevant authorities. It must be noted that the heritage practitioner should be appropriately experienced/qualified in the applicable fields of heritage such as built environment, archaeology or palaeontology as required.

2.4.6 Health and Safety Services

The provision of all services described in Clause 3 (Standard Services) and Clause 4 (Additional Related Services) as described in the Guideline Scope of Services and Recommended Guideline Tariff of Fees for Construction Health and Safety Professionals Registered in terms of the Project and Construction Management Professions Act, 2000 (Act 48 of 2000), Board Notice 167 of 2019 as gazetted in government Gazette No. 42697, 13 September 2019, as amended or amplified upon in the Project Brief (Clause 5) below.

2.4.7 Specialist Services

Where the Employer requires specialist services from the Service Provider to comply with the Scope of Works, such services shall be provided by the Service Provider and shall be conducted on a Time and Cost basis. No additional services shall be undertaken without the approval of the Employer. Such specialist services shall include but are not limited to those listed in item 4.4 in C2.2: Schedules of Rates.

Where the Employer requires materials, equipment, testing and/or any other recoverable expenses not covered in the Scope of Work, such items will be provided by the Service Provider on a cost basis plus administration fee (refer to items 4.5.1 and 4.5.2 in C2.2: Schedules of Rates). Prior approval needs to be obtained from the Employer before these items may be procured.

2.5 NOT APPLICABLE

3. EXTENT OF THE SERVICES

The work that is to be carried out under the contract is as provided for in the Schedules of Rates. However, if during the course of the Works Project, circumstances are found to differ from those anticipated, the Employer reserves the right to modify the scope of the Work Project to suit the prevailing circumstances.

Purchase Orders will be raised for each approved Works Project by the Employer. Such Works Project will be based on the Schedules of Rates or time based cost proposal submitted by the Service Provider and accepted by the Employer

The services to be provided in terms of this contract are inextricably linked to the Employer's budget, and it should be noted that while the Employer has every intention of completing the full Scope of Work making full use of the budget allocation, the Employer's budget is subject to periodic review. Should it become necessary to vary the scope of work or even suspend or terminate this contract, such variation, suspension or termination shall be dealt with in accordance with the provisions of the Standard Professional Services Contract as amended by the Contract Data.

4. USE OF REASONABLE SKILL AND CARE

The Service Providers' attention is drawn to the fact that the safety of persons and property is of paramount importance, closely followed by the minimisation of disruption and inconvenience to the local authority and public.

The Service Provider is therefore required to provide all aspects of the Service with all reasonable care, diligence and skill in accordance with generally accepted professional techniques and standards, and ensure that all legal requirements are met, and that all legal processes are adhered to.

[redacted]

5. PROJECT BRIEF

5.1 Terms of Reference

The Employer's objective is to:

(i) perform repairs, renovations, alterations and additions from time to time on some of the properties and services under its custodianship. These properties are located in all areas of the City of Cape Town.
(ii) execute new capital projects or services.

In order to design, procure and manage these projects the Employer requires various professional services to be provided. All services would be performed in complete compliance with the respective guidelines or tariffs of fees.

In general, it is the Employer's intention for the Service Provider to provide all stages of services (Stages 1-6) for a particular Works Project.

The Service Provider will furthermore be required to procure, on instruction from the Employer, any other specialist services as may be required for the successful implementation of this project, in terms of a sub-consultancy or sub-contract agreement.

5.2 Specific Requirements

5.2.1 Professional Consulting Services

5.2.1.1 Planning, Studies, Investigations and Assessments

The Service Provider shall carry out all of the studies and investigations necessary to determine a scope of work for each facility. A Preliminary report on the technical and financial feasibility of the project together with preliminary proposals in this regard shall be submitted.

The payment for Planning, Studies, Investigations and Assessments shall be at the tendered Time-Based fees for the professional services required.

5.2.1.2 Normal, Standard and Building & Engineering Works Services

Where a Quantity Surveyor is not part of the team for a particular Works Project, the cost estimates shall be completed by the other relevant disciplines for each Stage (as applicable) and the cost thereof shall be deemed to be included in the tendered rates for that discipline.

Stage 1: Inception

The Works Project Brief will generally have been agreed before the Works Project commences.

The Service Provider shall provide a Works Project Proposal, as detailed in clause 4.8 of Part C1.2: Contract Data, to the Employer for approval.

Stage 2: Concept and Viability

The Service Provider shall provide a preliminary design.

Stage 3: Design Development

The Service Provider shall provide those services necessary to finalise the detailed scope of work, design, specifications, detailed estimate and updated programme for the project and shall co-ordinate the input from all members of the professional team in this regard. The Project Leader shall be responsible for ensuring that the time, cost and quality parameters are adhered to. The Project Leader's name for the particular Works Project must be clearly stated in the Works Project Proposal.

The Service Provider shall be responsible for all service enquiries, wayleave applications and obtaining the necessary authority or permission from the relevant service authorities to carry out all work in terms of this project. All applications in this respect must be carried out timeously.

The design development shall take cognisance of all design requirements as may be imposed by the local authority or any other authority whose services are impacted upon by the proposed work.

The design development shall consider and minimise disruption to the working environment of staff adjacent to renovated areas. A form of screening at public entrances, corridors and private working areas must be considered to minimise loss of privacy and entry into the properties and those immediately adjacent.

A set of documents, consisting of a scope of work, draft plans/drawings and specifications shall be submitted to the Employer for comment and approval prior to going out to tender. All plans must be thoroughly checked by the Service Provider's Project Leader prior to submission. On approval of the detail design drawings and council approved drawings, two sets of paper prints of each must be submitted to the Employer for signature. One set will be kept by the Employer and the other returned to the Service Provider. All other prints issued thereafter shall carry the words "Initial version signed on *(date)*" at the signature location in the title block.

A revised cost estimate shall be submitted to the Employer.

Stage 4: Documentation and Procurement

The Service Provider shall provide those services necessary for the preparation of procurement documentation, advertising of tenders, and the evaluation of tenders received. The Service Provider shall confirm the Employer's procurement (Supply Chain Management) policies and procedures prior to the preparation of any procurement documentation.

The construction contract document shall be prepared in the Construction Industry Development Board's (CIDB) or non-CIDB format (as applicable). The Service Provider shall confirm with the Employer which Conditions of Contract (GCC, FIDIC, JBCC, National Treasury, etc.) will be applicable to each Works Project. The Service Provider shall liaise with the Employer during the preparation of the contract document to determine any other specific requirements that the Employer may have in this regard.

Specifications shall include, inter alia, Health and Safety Specifications, and an Environmental Management Plan.

The Service Provider should note that it is the Employer's preference that all payment items must be measured out in the Bills of Quantities, as opposed to the use of provisional sums or prime cost items. Should provisional sums or prime cost items of greater value than R300 000 (incl. VAT) be included in the Bills of Quantities, the Service Provider will be expected to follow an open competitive process in respect of these items, on behalf of the contractor. This will include the preparation of a tender document, advertising and receiving tenders, and evaluating same on behalf of the contractor.
A draft contract document shall be submitted to the Employer for scrutiny at least four weeks prior to the Bid Specification Committee meeting taking place. The Service Provider shall attend Bid Specification Committee meetings (as required) prior to the finalisation of the contract document and the advertising of tenders. All comments of the committee shall be incorporated into the final contract documents.

Once the contract document has been finalised, the Service Provider shall supply the Employer with an electronic copy of the documents and drawings.

The Service Provider shall be responsible for providing the Employer with the required number of copies of plans and tender documents for tender purposes (both hard copy and on a flash drive).

The Service Provider shall, during the tender period, attend and preside over a tender clarification meeting, and respond to all queries received during this period. This will include the preparation of any Notice to Tenderers

Once tenders close, the Service Provider shall prepare a technical evaluation report for consideration by the Employer's Bid Evaluation Committee (BEC). The Service Provider may be required to attend the BEC Meeting and may be asked to respond to any queries the committee may raise and follow up on any issues requiring attention/action.

Once approved by the Employer, the Service Provider shall facilitate the signing up of the construction contract, in consultation with the Employer.

Working drawings, including reinforcement drawings and Bending Schedules, shall be finalised as part of Stage 4 unless otherwise agreed with the Employer.

- **Reticulation**

  A number of Works Projects for the **Reticulation Branch** will be initiated under their pipe rehabilitation programme. For these Works Projects, the design would have been done by the branch and the Service Provider will be required to implement Stages 4 (if applicable), 5 and 6 using a panel of Contractors which the branch has already pre-approved.

Stage 5: Contract Administration and Inspection

The Service Provider shall provide those services as required to manage, administer and monitor the construction contract, including co-ordination of the inspection of the works by the other members of the professional team, as and when necessary.

The service to be provided shall include, where necessary detailed drawings prepared by the contractor for manufacture and installation.

The Service Provider shall prepare any further plans, designs and drawings (over and above the tender drawings), which may be necessary for the execution of the works. The preparation of any shop drawings required for manufacture and installation, or the detailed checking of such, where prepared and submitted by the construction contractor, shall form part of the normal services to be provided by the Service Provider.

The Service Provider shall also, in particular, ensure that all payment certificates, preferential procurement and labour returns, and contract participation expenditure reports are timeously submitted.

Stage 6: Close-Out

The Service Provider shall complete the project close-out as described in the guideline scope of services.

As-built plans/drawings shall be submitted to the Employer in electronic format (preferably .dwg, otherwise .dxf) as well as one complete set of paper prints.

The Service Provider shall also compile a project close-out report for submission to the Employer, which includes, *inter alia*, technical details of the project, the project team, project cost, completion dates, construction details and design changes, delays and the reasons thereof, problems encountered and the solution thereof, conclusions and recommendations.

5.2.1.3 Additional Services

Payment for the following services will be deemed to be included in the tendered percentage rates unless specifically itemised or excluded:

Service Enquiries/Wayleave Applications

The Service Provider shall be responsible for all initial service enquiries/wayleave applications from the various service authorities, the requirements of whom shall be carried through into the designs and tender documentation as necessary. Payment for this service will be time-based.

Preferential Procurement and Targeted Participation

The Service Provider shall provide all services related to preferential procurement and targeted participation in respect of the construction contract (as set out in the Employer's example CIDB documents for Civil (or other) construction contracts including but not limited to:

(a) the incorporation into the contract documentation of:

  i) preferential procurement requirements in respect of B-BBEE and, if applicable, local production and content, and
  ii) targeted participation goals in respect of targeted labour and/or resources.

(b) the monitoring and verification of compliance with (i) and (ii) in (a) above during the construction contract (including the receiving and collation of documentary evidence submitted by the contractor in this regard).

Construction Monitoring

Construction monitoring will be required for many projects, requiring the full time input of experienced individuals on site. The level of construction monitoring required will be stated in the Works Project Brief.

The Service Provider shall, when called upon to do so by the Employer, submit a fully motivated proposal for such construction monitoring to the Employer for approval.

The proposal shall name the individual(s) proposed, provide details of their experience in relation to the particular Works Project, the anticipated duration of their involvement and the monthly cost in respect thereof. The cost shall include all benefits, overhead charges and profit as well as any overtime costs, if applicable. Construction monitoring staff will be paid over the year end break, if applicable.

The Service Provider's proposal may be accepted or rejected at the sole discretion of the Employer.

Act as the Employer's agent in terms of the Occupational Health and Safety Act

The Service Provider, in submitting a tender for this professional services contract, shall be deemed to have acknowledged acceptance of the appointment as the Employer's Construction Health and Safety Agent in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the Construction Regulations, 2014, should the Employer accept the tender. The Service Provider shall, as such, execute all of the duties of the client as contemplated in the Construction Regulations.

The Service Provider's attention is also drawn to the responsibilities of the designer of a structure in terms of the Construction Regulations, and shall comply with all requirements in this regard.

The Service Provider shall, apart from conducting his own activities in compliance with the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and Construction Regulations, 2014, ensure that any sub-consultants/contractors employed by the Service Provider also comply with the requirements of the Act and Regulations. The Service Provider shall enter into an agreement with the Employer in this regard before the commencement of any work related to this contract (Form C1.3, Part C1, refers).

Environmental Control Officer

Where required for a specific Works Project, the Service Provider shall provide from within its own organisation or, if necessary, appoint as a sub-consultant, a suitably experienced Environmental Control Officer (ECO) whose responsibilities shall be as follows:

(a) to prepare a project specific Construction Environmental Management Programme (specification) (EMPr) for inclusion into the construction tender/contract documents.
(b) to assist the Employer's Agent/Engineer/Principal Agent in ensuring that any necessary permits are obtained.
(c) to convey the contents of the EMPr to the contractor's site team, and discuss the contents in detail with the contractor, as well as to conduct induction and environmental awareness training sessions to the contractor's and sub-contractor's workforces, as and when necessary.
(d) to monitor and verify that the EMPr is adhered to at all times, and to inform the Employer's Agent/Engineer/Principal Agent if the specifications are not followed.
(e) to review construction method statements for approval by the Employer's Agent/Engineer/Principal Agent.
(f) to assist the Employer's Agent/Engineer/Principal Agent and contractor in finding environmentally responsible solutions to problems.
(g) to provide a report on environmental compliance issues (with photographic evidence, if applicable) at the monthly site meetings or any other meetings that may be called regarding environmental matters.
(h) to ensure that all activities/incidents concerning the environment are recorded in the site records, to monitor and review such records and advise the Employer's Agent/Engineer/Principal Agent of any action necessary.
(i) to inspect the site and surrounding areas with regard to compliance with the EMPr.
(j) to advise the Employer's Agent/Engineer/Principal Agent on the imposition of penalties or fines specified in the EMPr, or the removal of person(s) and/or equipment not complying with the specifications.

The frequency of site visits/inspections shall be as and when necessary, but not less than at monthly intervals.

Training of Personnel

The Employer may require that the Service Provider provide training and transfer knowledge to one or more of the Employer's staff, described as a Trainee for the purposes of this Contract.

The preferred situation will be that the Trainee is incorporated into the Service Provider's team for a particular Works Project. The Trainee should be given specific design tasks to complete under the supervision of an experienced and relevant engineer, referred to as the Supervisor.

The Supervisor will be required to:

- Guide and instruct the Trainee in the execution of the tasks
- Monitor the Trainee's progress
- Provide monthly feedback on the Trainee's progress

Payment will be made for the effective time spent by the engineer in the supervision and training of the Trainee. Payment will also be made for the provision of a Personal Computer (PC) for the sole use by the Trainee for the execution of the task(s) allocated to the Trainee. The PC shall be appropriate for the task(s) and have the necessary software required for the execution of the task(s). Appropriate payment items have been allowed in the Schedules of Rates.

5.3 Time Frames/Milestones

Milestones set by the Employer typically revolve around budget cycles and the need to spend the budget in any given financial year. The important milestones are therefore the financial year ends (30 June each year) and the Service Provider will be expected to establish a project programme, in consultation with the Employer that takes cognisance of the budgets available and the budget cycles. Once agreed, the Service Provider is expected to ensure that the programme is adhered to, and to intervene timeously if necessary.

The Service Provider shall submit a revised programme as and when required by the Employer.

5.4 Places for the Performance of Specific Tasks

It is anticipated that the majority of the work involved in the reporting, preliminary design and detail design and tender stages will be undertaken at the Service Provider's local office. The construction monitoring service will take place at the site of the project.

The Service Providers personnel will however be required to attend meetings in the Cape Metropolitan area or at the location of the Works Projects as and when required, and it may be necessary to carry out inspections at the contractor's (or sub-contractor's) yard(s) wherever they may be.

5.5 Reporting Requirements

Aside from the three particular reports required in terms of the brief above (the Preliminary Technical & Feasibility Report, Tender Evaluation Report and Project Close-Out Report), the Service Provider may be required to prepare, or contribute to, ad hoc reports on specific aspects of the project.

Furthermore, the Service Provider shall submit monthly cost reports to the Employer showing expenditure in respect of both the Service Provider's appointment and the construction contractor's contract; together with the anticipated spend to the end of the financial year in question.

The Conceptual Planning Report shall be submitted within the time frames agreed to by the Employer.

The Tender Evaluation Report shall be submitted to the Employer within two weeks of tenders for the construction works having been received.

A preliminary Project Close-Out Report shall be submitted to the Employer within three months of the Certificate of Completion having been issued, which shall be updated as necessary and re-submitted within three months of the issue of the Final Approval Certificate.

6. APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS

The Service Provider shall ensure that cognisance of all applicable national and international standards are taken in the execution of his/her own work and that of his/her sub-consultants in the design and compilation of specifications for this project. International standards should only be used where no national standards exist, or where it is the norm to use or refer to international standards.

7. APPROVALS

The Service Provider shall be responsible for obtaining the following approvals:

(a) Approval of the implementation programme from the Employer,
(b) Approval of the conceptual and preliminary designs from the Employer,
(c) Approval of the project from Heritage Western Cape (*if required*),
(d) Approval (authorisation) of the project from the Department of Environmental Affairs and Development Planning (*if required*),
(e) Approval of the detail design, drawings and contract document from the Employer,
(f) Wayleave approval from all service authorities,
(g) Approval of the Engineers Representative from the Employer,
(h) In respect of time based services, approval of the allocation of staff from the Employer,
(i) Approval for the employment of specialist sub-consultants from the Employer,

(j) Approval of plans from Department of Planning and Building Development within City of Cape Town in accordance with the National Building Regulations and Building Standards Act (Act 103 of 1977) and all necessary certifications,
(k) Approval for the employment of specialist sub-consultants and their applicable costs/hourly rates from the Employer,
(l) Approval of the accommodation of traffic plans from the Traffic Manager.

Notwithstanding any approval received from the Employer, the Service Provider shall remain responsible for all work carried out by the Service Provider and its sub-consultants in terms of this contract.

8. PROCUREMENT

8.1 Preferential Procurement

The Works shall be executed in accordance with the conditions associated with the granting of preferences detailed in the **Preference Schedule** where preferences are granted in respect of B-BBEE contribution.

Financial penalties, as described in the **Preference Schedule**, shall be applied in the event that the Service Provider is found to have breached the conditions contained in the **Preference Schedule** (unless proven to be beyond the control of the Service Provider).

Notwithstanding the application of penalties, the Service Provider's attention is drawn to other sanctions that may be applied by the Employer (listed in the **Preference Schedule**) with due consideration to the circumstances.

8.2 Monitoring the use of sub-contractors/sub-consultants and joint ventures

Notwithstanding the restriction on sub-contracting as described on the **Preference Schedule**, it is recognised that sub-contracting is an integral part of the built environment, which the conditions of contract make provision for.

In order, however, to comply with the requirements of the **Preference Schedule**, the Service Provider shall submit to the Employer's Agent, on a monthly basis, a **B-BBEE Sub-contract Expenditure Report**. The format of this report is provided in Annex 2 attached.

The Service Provider shall submit to the Employer's Agent documentary evidence in accordance with the applicable codes of good practise of the B-BBEE status level of every sub-contractor employed by the Service Provider. Until such time as documentary evidence as described above has been submitted to the Employer's Agent, a sub-contractor shall be deemed to be a non-compliant contributor.

The Service Provider shall furthermore, on the written request of the Employer's Agent, provide documentary evidence showing the value of work sub-contracted to any or all of the sub-contractors employed by the Service Provider.

8.3 Forms for contract administration

The Service Provider shall complete, sign and submit with each monthly statement for payment, the following updated returns (the format of which are attached in C3.2 Annexes as amended from time to time):

- B-BBEE Sub-contract Expenditure Report (Annex 1)
- Joint Venture Expenditure Report (Annex 2)

The **B-BBEE Sub-contract Expenditure Report** is required for monitoring the prime contactor's compliance with the sub-contracting conditions of the **Preference Schedule**.

The Joint Venture Expenditure Report is required for monitoring the joint venture's compliance with the percentage contributions of the JV partners as tendered, where the joint venture has been awarded preference points in respect of its consolidated B-BBEE scorecard.

In respect of Annexes 1 and 2, the Employer shall, in addition to any other sanctions available to it, apply the financial penalties applicable to breach of preferencing conditions in the **Preference Schedule** Preference Schedule in Part T2.2 Returnable Schedules. In the case of joint ventures (Annex 2), the contractor shall prove his compliance with item 6) in Section 2 of the Preference Schedule by providing a consolidated scorecard at his own cost on instruction from the Employer's Agent.

9. FORMAT OF COMMUNICATION

All requests for formal approval from the Employer, or any other body, shall be submitted in writing in hardcopy format. Interim payment claims shall be submitted in the same format, accompanied by an original tax invoice. Ad-hoc communication between the Employer and the Service Provider may be conducted per facsimile or in electronic format (e-mail). Electronic copies shall also be submitted for the record.

All plans and contract documents submitted for approval shall be in hardcopy and electronic format.

10. KEY PERSONNEL

More than the minimum number of key personnel stated below may be required in order to fulfil the Service Provider's obligations.

KEY PERSONNEL						
NOTE: Refer to Clauses 2.1, 2.2, 2.3, 2.4 and 2.5 in Part C3.1: Scope of Work for Typical Works Projects lists.						
Service	**Profession**	**Branch**				
		Bulk Water	**Catchment Stormwater and River Management**	**Engineering and Asset Management**	**Reticulation**	**Wastewater Treatment**
Civil Engineering	A minimum of 2 (two) registered **professional Civil Engineers (PrEng) or professional Civil Engineering Technologists (PrTechEng) or other proven equivalent registration**, each with at least 8 (eight) years verifiable postgraduate experience in the analysis, design, control and monitoring of civil and infrastructural works similar to those listed in Typical Works Projects lists.	✓	✓	✓	✓	✓
Structural Engineering	A minimum of 2 (two) registered **professional Structural Engineers (PrEng) or professional Structural Engineering Technologists (PrTechEng) or other proven equivalent registration**, each with at least 8 (eight) years verifiable postgraduate experience in the analysis, design, control and monitoring of structural works pertaining to all types of construction work similar to those listed in Typical Works Projects lists.	✓	✓	✓	✓	✓
Mechanical Engineering	A minimum of 2 (two) registered **professional Mechanical Engineers (PrEng) or professional Mechanical Engineering Technologists (PrTechEng) or other proven equivalent registration**, each with at least 8 (eight) years verifiable postgraduate experience in the analysis, design, control and monitoring of all works related to all types of construction work similar to those listed in Typical Works Projects lists.	✓	✓	✓	✓	✓
Electrical Engineering	A minimum of 2 (two) registered **professional Electrical Engineers (PrEng) or professional Electrical Engineering Technologists (PrTechEng) or other proven equivalent registration**, each with at least 8 (eight) years verifiable postgraduate experience in the analysis, design, control and monitoring of all works related to all types of construction work similar to those listed in Typical Works Projects lists.	✓	✓	✓	✓	✓

KEY PERSONNEL						
NOTE: Refer to Clauses 2.1, 2.2, 2.3, 2.4 and 2.5 in Part C3.1: Scope of Work for Typical Works Projects lists.						
Service	Profession	Branch				
		Bulk Water	Catchment Stormwater and River Management	Engineering and Asset Management	Reticulation	Wastewater Treatment
Electronic Engineering	A minimum of 1 (one) registered **professional Electronic Engineer (PrEng) or professional Electronic Engineering Technologist (PrTechEng) or other proven equivalent registration**, with at least 8 (eight) years verifiable postgraduate experience in PLC and SCADA programming and in the analysis, design, control and monitoring of all works related to all types of construction work similar to those listed in Typical Works Projects lists.	✓	✓	✓	✓	✓
Process Design Engineer "A"	A minimum of 1 (one) **Process Design Engineer** who is a registered **professional Civil or Chemical Engineer (PrEng) or professional Civil or Chemical Engineering Technologist (PrTechEng) or other proven equivalent registration**, who has experience in the analyses and design of Water Treatment Plants (10Mℓ/day or larger), **and** has either: (i) a Postgraduate qualification in Water Treatment with a minimum of 8 (eight) years verifiable experience in the analyses and design of Water Treatment Plants, 5 (five) of which must be post Postgraduate experience, or (ii) 20 (twenty) years verifiable experience in the analyses and design of Water Treatment Plants.	✓	*	*	*	*
Process Design Engineer "D"	A minimum of 1 (one) **Process Design Engineer** who is a registered **professional Civil or Chemical Engineer (PrEng) or professional Civil or Chemical Engineering Technologist (PrTechEng) or other proven equivalent registration**, who has experience in the analyses and design of Wastewater Treatment Plants (10Mℓ/day or larger), **and** has either: (i) a Postgraduate qualification in Wastewater Treatment with a minimum of 8 (eight) years verifiable experience in the analyses and design of Wastewater Treatment Plants, 5 (five) of which must be post Postgraduate experience, or (ii) 20 (twenty) years verifiable experience in the analyses and design of Wastewater Treatment Plants.	*	*	*	*	✓
Hydraulic Engineer "A"	A minimum of 1 (one) registered **professional Civil Engineer (PrEng) or professional Civil Engineering Technologist (PrTechEng) or other proven equivalent registration**, with at least 8 (eight) years postgraduate experience in the design of large diameter pipelines and in surge analyses and must have undertaken, and taken responsibility for, the design of a minimum of 5 (five) pipeline projects (including surge analyses) with a diameter larger than 500mm.	✓	*	*	*	*

KEY PERSONNEL						
NOTE: Refer to Clauses 2.1, 2.2, 2.3, 2.4 and 2.5 in Part C3.1: Scope of Work for Typical Works Projects lists.						
Service	Profession	Branch				
		Bulk Water	Catchment Stormwater and River Management	Engineering and Asset Management	Reticulation	Wastewater Treatment
Hydraulic Engineer "B"	A minimum of 1 (one) registered **professional Civil Engineer (PrEng) or professional Civil Engineering Technologist (PrTechEng) or other proven equivalent registration**, with at least 8 (eight) years postgraduate experience in the design of pipelines and in surge analyses and must have undertaken, and taken responsibility for, the design of a minimum of 5 (five) pipeline projects (including surge analyses) with a diameter larger than 300mm.	*	*	*	✓	✓
Hydraulic Engineer "C" (Hydrology and open channel hydraulics and engineering)	A minimum of 1 (one) registered **professional Civil Engineer (PrEng) or professional Civil Engineering Technologist (PrTechEng) or other proven equivalent registration**, with at least 8 (eight) years verifiable postgraduate experience in this specialised field and specifically rainfall-runoff-water quality modelling, river (and floodplain) and open channel flow modelling, stormwater network modelling, analysis of river and rainfall data for flood management and stormwater harvesting, hydraulic engineering structures, and Sustainable Urban Drainage Systems (SUDS).	*	✓	*	*	*
Geohydrologist	A minimum of 1 (one) Geohydrologist **(PrSciNat) or other proven equivalent registration**, with at least 10 (ten) years verifiable postgraduate experience in Groundwater management. The Geohydrologist must have at least a NQF level 8 (including an Honours degree) in geohydrology or similar earth/water science field of expertise and must have extensive knowledge in geohydrological investigations, wellfield development and operations, and monitoring (including water quality).	✓	*	*	*	*
Quantity Surveying	A minimum of 1 (one) registered **professional Quantity Surveyor (PrQS) or other proven equivalent registration**, with at least 8 (eight) years verifiable postgraduate experience in providing a quantity surveying service for all types of construction work similar to those listed in Typical Works Projects lists.	✓	*	✓	✓	✓
Architectural	A minimum of 1 (one) registered **professional Architect (PrArch) or professional Senior Architectural Technologist (Pr SArch T) or other proven equivalent registration**, with at least 8 (eight) years verifiable postgraduate experience in providing an architectural service for all types of construction work similar to those listed in Typical Works Projects lists.	✓	*	✓	✓	✓

KEY PERSONNEL						
NOTE: Refer to Clauses 2.1, 2.2, 2.3, 2.4 and 2.5 in Part C3.1: Scope of Work for Typical Works Projects lists.						
Service	**Profession**	**Branch**				
		Bulk Water	**Catchment Stormwater and River Management**	**Engineering and Asset Management**	**Reticulation**	**Wastewater Treatment**
Project Management	A minimum of 1 (one) registered **professional Construction Project Manager (PrCPM) or Project Management Professional (PMP) or other proven equivalent registration**, with at least 8 (eight) years verifiable postgraduate experience in the management of all works related to all types of construction works similar to those listed in Typical Works Projects lists.	✓	✓	✓	✓	✓
Occupational Health and Safety	A minimum of 1 (one) **professional Construction Health and Safety Agent (PrCHSA)** registered with the **South African Council for Project and Construction Management Professions (SACPCMP)** with the necessary competencies and resources to act as the Employer's Agent in terms of the Occupational Health and Safety Act.	✓	✓	✓	✓	✓
Environmental	A minimum of 1 (one) **Environmental Assessment Practitioner (EAP)** registered with the **Environmental Assessment Practitioner's Association of South Africa (EAPASA)** or who meets the criteria for registration (and has applied for registration) with the **Environmental Assessment Practitioner's Association of South Africa (EAPASA).** The EAP must have at least 8 (eight) years verifiable experience in the undertaking of all environmental works related to all types of construction work similar to those listed in the Typical Works Projects lists. The EAP must have acted in a lead role in at least (2) two Full Scoping/Environmental Impact Assessment (EIA) reports and at least (5) five Basic Assessments of a project or type proven to the Typical Works Projects list.	✓	✓	✓	✓	✓
Freshwater Ecologist	A minimum of 1 (one) **Freshwater Ecologist** registered with the **South African Council for Natural Scientific Professions (SACNASP) or other proven equivalent registration** with at least 8 (eight) years verifiable postgraduate experience in this specialised field and specifically providing aquatic ecological advisory services and undertaking all work necessary to acquire the authorisations (including General Authorisations or Water Use Licences) or permits required in terms of the National Water Act No. 36 of 1998.	✓	✓	*	✓	✓

Key personnel will be expected to operate out of the local office, as the exigencies of this project require.

Should it become necessary to replace any of the key personnel listed at the time of tender during the course of this contract, they may only be replaced by individuals with similar or better qualifications and experience, who satisfy the minimum requirements and then only with the written approval of the Employer. (Note that 'verifiable experience' is interpreted as experience in that particular service. This must be clearly demonstrated in the CVs provided. Postgraduate years of experience is defined as experience gained from the time of obtaining a baccalaureus qualification).

11. MANAGEMENT MEETINGS

11.1 Management Meetings

During the initial stages of projects (Planning, Studies, Investigations and Assessments; Inception; Concept and Viability and Design Development) the Service Provider will be expected to attend monthly management meetings with the Employer's project management team (PMT), convened for the purpose of managing these projects. The Project Leader will present the Service Provider's proposals at these meetings, and take direction from the PMT in this regard.

11.2 Community/Stakeholder Meetings

The Service Provider will also be expected to contribute to and attend community/stakeholder meetings, presenting proposals at these forums, and taking cognisance of input from the various interested and affected parties in the conceptual and detail design development, where possible. It is anticipated that it will be necessary to continue with community/stakeholder participation through the construction period, including to respond to any individual queries/concerns that may be raised.

11.3 Supply Chain Management (SCM) Committee Meetings

During the course of the Documentation and Procurement stage, the Service Provider shall attend and participate in the SCM Bid Specification and Bid Evaluation Committee meetings in order to present the contract document and tender evaluation report to the Employer.

The Service Provider shall plan to attend two BSC meetings and two BEC meetings. The number of meetings can vary depending on the complexity and extent of interest shown in the tender.

11.4 Site/Technical Meetings

During the Contract Administration and Inspection stage of these projects, the Service Provider shall convene and run monthly site meetings at which the Employer and contractor will be present, as well as any technical meetings with the contractor as may be required to ensure the successful implementation of these projects.

11.5 Ad-hoc Meetings

The Service Provider will be expected to attend ad-hoc meetings from time to time, with the Employer, stakeholder groups, or service or other authorities, in order to address specific issues as and when the need arises.

11.6 General

The Service Provider shall be represented at all meetings by at least one of the key personnel, preferably the Project Leader. The Service Provider shall provide secretarial services (for record keeping purposes) at all management, community/stakeholder, site/technical, and ad-hoc meetings.

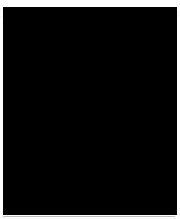
All charges in respect of the provision of secretarial services shall be deemed to be included in the tendered Time-based fees.

12. CLAIMS FOR PAYMENT

The Service Provider may submit interim claims for payment (invoices) as the work in terms of this contract progresses, but not more frequently than at monthly intervals. All interim claims must be accompanied by an original tax invoice. Payment will be effected within 30 days of the date on the tax invoice.

13. EMPLOYER'S RIGHT TO RECOVER COSTS

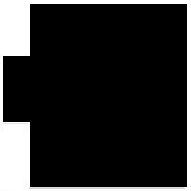
The Employer reserves the right to recover, by way of a deduction from any amount due to the Service Provider, any additional cost which the Employer incurs arising out of non-performance/negligence of the Service Provider.



14. INTELLECTUAL PROPERTY RIGHTS AND CONFIDENTIALITY

Any intellectual property (including but not limited to source documents, designs, maps, drawings, reports, statistics, recordings, photography, computer software, electronic documents, etc.) that may result from the project will be the sole property of the City of Cape Town.

In alignment with the above, any information arising from or within a project will be treated as confidential and no information is to be divulged, provided to or mentioned to persons or parties not involved in the project except where permission is granted in writing for that specific purpose.



C3.2 Annexes

ANNEX 1: SCHEDULE OF DEVIATIONS

ANNEX 2: SCHEDULE 11: KEY PERSONNEL [Extracted from tender submission]

ANNEX 3: SCHEDULE 11(A): SPECIFIC EXPERIENCE OF KEY PERSONNEL [Extracted from tender submission]

ANNEX 4: SCHEDULE 12: SUPPORT RESOURCES [Extracted from tender submission]

ANNEX 5: SCHEDULE 18: ADDITIONAL PERSONNEL SCHEDULE [Extracted from tender submission]

ANNEX 6: SCHEDULE 19: ORGANISATIONAL STRUCTURE [Extracted from tender submission]

ANNEX 7: SCHEDULE 20: PROPOSED DEVIATIONS AND QUALIFICATIONS BY TENDERER [Extracted from tender submission]

ANNEX 8: SCHEDULE 23: PREFERENCE SCHEDULE TO BE USED IN TERMS OF THE AMENDED CODES FOR MEASURING BROAD-BASED BLACK ECONOMIC EMPOWERMENT IN THE CONSTRUCTION SECTOR (2017) [Extracted from tender submission]

ANNEX 9: B-BBEE SUB-CONTRACT EXPENDITURE REPORT

ANNEX 1

SCHEDULE OF DEVIATIONS

[redacted]

Schedule of Deviations

Notes:

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

NONE

By the duly authorised representatives signing the Contract Agreement, the Employer and the Service Provider agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents, as well as any confirmation, clarification or changes to the terms of the offer agreed to by the Employer and the Service Provider during this process of offer and acceptance.

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

[redacted]

ANNEX 2

SCHEDULE 11: KEY PERSONNEL

[redacted]

SCHEDULE 11: KEY PERSONNEL

SERVICE	NAME	EMPLOYER (COMPANY)
Civil Engineering Services (Minimum 2 professionals)	[redacted]	iX Engineers
		iX Engineers
		iX Engineers
		iX Engineers
Structural Engineering Services (Minimum 2 professionals)		iX Engineers
		iX Engineers
Mechanical Engineering Services (Minimum 2 professionals)		iX Engineers
		iX Engineers
		Proxa Water
Electrical Engineering Services (Minimum 2 professionals)		iX Engineers
		iX Engineers
Electronic Engineering Services (Minimum 1 professional)		iX Engineers
		iX Engineers
Process Design Engineer "A" (Minimum 1 professional) **(Bulk Water Branch only)**		PROXA Water
Process Design Engineer "D" (Minimum 1 professional) **(Wastewater Treatment Branch only)**		iX Engineers
		iX Engineers
Hydraulic Engineer "A" (Minimum 1 professional) **Bulk Water Branch**		iX Engineers
		iX Engineers
		iX Engineers

CV's PART 1

[redacted]

TENDER NUMBER: 194C/2020/21
TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

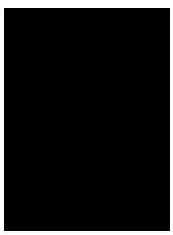
Hydraulic Engineer "B" (Minimum 1 professional) **(Reticulation and Wastewater Treatment Branches only)**	[redacted]	iX Engineers
		iX Engineers
		iX Engineers
SERVICE	**NAME**	**EMPLOYER (COMPANY)**
Hydraulic Engineer "C" (Hydrology and open channel hydraulics and engineering) (Minimum 1 professional) **(Catchment and Stormwater Management Branch only)**	NOT TENDERED	
Geohydrologist (Minimum 1 professional) **(Bulk Water Branch only)**	[redacted]	Umvoto
		Umvoto
Quantity Surveying Services (Minimum 1 professional)		Talani Quantity Surveyors (Pty) Ltd
Architectural Services (Minimum 1 professional)		Creative Axis
		Creative Axis
Project Management Services (Minimum 1 professional)		iX Engineers
		iX Engineers
Occupational Health and Safety Services (Minimum 1 professional)		Eppen-Burger & Associates
Environmental Assessment Practitioner (Minimum 1 professional)		Guillaume Nel Environmental Consultants
		Umvoto
Freshwater Ecologist (Minimum 1 professional) **(Bulk Water, Catchment and Stormwater Management, Reticulation and Wastewater Treatment Branches only)**		Umvoto

CV'S PART 2

[redacted]

ANNEX 3

SCHEDULE 11(A): SPECIFIC EXPERIENCE OF KEY PERSONNEL



TENDER NUMBER: 194C/2020/21
TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Schedule 11A — Specific Experience of Key Personnel

CIVIL ENGINEERING SERVICES (MINIMUM 2 PROFESSIONALS
CIVIL ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Post Graduate Experience
IX ENGINEERS (PTY) LTD Professional Civil Engineering Technologist Engineering and Asset Management	B.Tech (Civil)	ECSA: [redacted]	30

Relevant Fields of Specialization, Experience and Comparable Projects

PLEASE REFER TO CV ATTACHED

RELEVANT FIELDS OF SPECIALISATION: Design, Procurement and Management and Administration of civil engineering projects execution. Designing of civil engineering services for buildings, housing and sporting developments and industrial development zones.

EXPERIENCE: [redacted] is a professional Engineering Technologist with more than 30 years of experience in designing and project management of civil and municipal infrastructure. He has extensive experience in the role out of civil engineering projects, which includes management of processes to obtain authorization for developments and manage the required processes to be followed for developments. Mr Rossouw provides clients with advice with regards to resolution of disputes, preparation of variations on projects, general monitoring of construction activities and materials for compliance. He furthermore certifies work completed and compile payment certificates and record drawings of completed works. [redacted] is responsible for evaluating contractors commissioning procedures and tests performed, as well as final performance and/or on-site acceptance testing. He is responsible for analysis of networks, design, and supervision of civil and municipal services.
[redacted] managed the design, procurement of contractors for sporting facilities and managed various water polo swimming and sporting grounds for different municipalities.
He furthermore had been part of different teams, providing engineering services for buildings and schools, including health facilities for the Departments of Health and Public Works.

COMPARABLE PROJECTS: 1) Industrial Development Zone: Saldanha
2) Symphony Way Housing project.
3) Numerous Sporting facilities in Drakenstein
4) Water and Sanitation Head Office : Bellville

[redacted]

Schedule 11A — Specific Experience of Key Personnel

CIVIL ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
IX ENGINEERS (PTY) LTD Professional Civil Engineering Technologist	B.Tech (Civil)	ECSA: [redacted]	23

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
[redacted] is a Professional Civil Engineering Technologist with 23 years' experience in the analysis, design, control, administration and monitoring of civil engineering infrastructure projects and related works in South Africa.
He joined IX Engineers (heritage V3 Consulting Engineers) in 1997 and started his work in Germiston, before re-locating to Pretoria (2000), Randburg (2001), Kimberley (2003) and Vredenburg (2012 - 2014) to take up the position as office manager. During 2015, Fritz relocated to Cape Town to assume the responsibility of Project Engineer/Manager within the Urban Infrastructure division.

EXPERIENCE: His expertise includes a wide range of roles and responsibilities, from planning, field investigations, surveying, materials testing to feasibility studies & funding applications, preliminary & final designs, tender documentation & evaluation, construction supervision and contract administration & management. He has worked for a variety of clients including public, provincial, district and local authorities as well as private developers

COMPARABLE PROJECTS:
Vanryhnsdorp Roads and Stormwater Upgrade: Maskamsig – Phase 4: Verifying existing services, preliminary & detail design, detailed drawings and tender documentation, contract administration & site supervision. 2020

Graafwater Raw: Upgrading of Oxidation Ponds: Management of project i.e. planning, liaison with Funder, local authority, co-ordination and approval of designs, detailed drawings, tender documentation & evaluation, contract administration and site supervision. Occupational Health and Safety Regulations on the project also required. 2019

Graafwater Raw Water Upgrade: Construction of a new Raw Water Storage Dam: Manage design team, liaison with Client & Funder, review designs & detailed drawings, tender documentation. Assist with contract administration and site related matters. 2019
Graafwater Raw Water Upgrade: Bulk Water Pipelines and Borehole: Manage design team, liaison with Client & Funder, review designs & detailed drawings, tender documentation. Assist with contract administration and site related matters. 2019

[redacted]Vredenburg, Louwville Housing – 200 Erven: Client liaison, Verifying existing services, Manage subconsultants, Funding applications & approvals, preliminary & detail Design coordination, detailed drawings, tender documentation and contract administration. 2018

Schedule 11A **Specific Experience of Key Personnel**

Vredendal North Housing, Phase 5: Verifying existing services, client liaison, design, detailed drawings, tender documentation and contract administration. Clerk of Works assists with site supervision. 2019

CIVIL ENGINEER/ TECHNOLOGIST (NAME): [redacted] **MULTI-DISCIPLINARY FOCUSSED ON PROCESS ENGINEERING**

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
IX ENGINEERS (PTY) LTD Professional Civil Engineer – Water and Wastewater Treatment	B.Eng (Civil)	ECSA: [redacted]	20

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION: I am proficient in the detailed design of roads, sewer and water reticulation, storm water infrastructure as well as water – and waste water treatment works. My experience also includes the preparation of tender documents, evaluation and adjudication of tenders, construction supervision and quality control, contract administration and commissioning of works.I have over 8 years' experience in contract and project management with particular emphasis on the co-ordination and integration of various contracts associated with water and wastewater treatment works which also includes the delivery of payment certificates, fee accounts and budget updates. I am a good cross-cultural communicator and have acted as negotiator in resolving labour and financial disputes while working with different cultures in South Africa, Botswana and Canada.

EXPERIENCE: I am a Professional Engineer with over 10 years' experience after graduation working in multi-disciplinary engineering environments in South Africa and Botswana. I have also gained valuable financial management experience while working for the Ontario Government in Canada. My experience includes 3 years working as a Site Engineer for an international construction company on projects such as the construction of the Palapye Water Treatment Works in Botswana and the Saldanha Steel Mill in South Africa. During this time I developed and monitored construction work schedules, combining computer literacy with strong practical skills.

COMPARABLE PROJECTS:

Upgrading of the Steynsburg WTWUpgrading of the Hopetown WTW-Construction of a new 5.6Ml/day WTW consisting of rapid sand filters, clarifiers, filter building, clear water pump station, sludge drying beds, chemical dosing building, chlorination building and interconnecting pipework: 2009 -2013: Engineer/Project Manager: Amatola Water

Upgrading of the Hopetown WTWUpgrading of the Hopetown WTW-Construction of a new 5.6Ml/day WTW consisting of rapid sand filters, clarifiers, filter building, clear water

Schedule 11A [redacted] **Specific Experience of Key Personnel**

pump station, sludge drying beds, chemical dosing building, chlorination building and interconnecting pipework: 2012- 2015: Engineer/Project Manager: Thembilihle Muncicpality

Upgrading of the Colesberg WTWUpgrading of the Colesberg WTW-Construction of 5.2Ml/day WTW : rapid sand filters, clarifiers, filter building, clear water pump station, sludge drying beds, chemical dosing building, chlorination building and interconnecting pipework: 2012- 2014: Engineer/Project Manager: Umsobomvu Municipality

Upgrading of the Norvalspont WTWUpgrading of the Norvalspont WTW-0.5Ml/d upgrade and refurbishment of the existing WTW mechanical, electrical and civil infrastructure: 2015- 2017: Engineer/Project Manager: Umsobomvu Municipality: [redacted]

Koeberg SWRO Desalination PlantDesign of a 20MLD SWRO plant at the Koeberg nuclear power station including pipelines; inlet screens and pump station; pre-treatment and chemical dosing; intermediate tanks; RO system; RO and appurtenant buildings and fencing and civil infrastructure. 2016- 2018: Engineer/Project Manager: City of Cape Town [redacted]

CIVIL ENGINEER/ TECHNOLOGIST (NAME): [redacted] **MULTI-DISCIPLINARY FOCUSSED ON PROCESS ENGINEERING**

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
IX ENGINEERS (PTY) LTD Professional Civil Engineer: HOD Water Department	B.Eng (Civil)	ECSA : Pr. Eng. [redacted]	25

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
[redacted]s a Professional Engineer with over 25 years' diverse experience on multi-disciplinary projects. This includes detailed engineering experience on bulk hydraulic, water treatment, wastewater treatment, AMD treatment, dewatering, monitoring, instrumentation and SCADA aspects thereof and strategic master planning processes.

EXPERIENCE:
He is experienced in the compilation of contract documentation in the FIDIC, GCC and NEC formats as well as the contract management of the resulting projects. He is involved in the overall multidisciplinary integration of process and control into the detailed design of engineering projects by a team of specialized chemical, civil, mechanical and electrical engineers using internal and sub-contracted experts in line with individual project requirements

[redacted]

Schedule 11A — Specific Experience of Key Personnel

COMPARABLE PROJECTS:

Withoogte – Backwash: Responsible for conceptual, preliminary and detail design, specifications and contract documentation of the civil, mechanical and electrical works. 2008

Upgrade of the Still Bay Wastewater Treatment Works: Project Lead responsible for conceptual, preliminary and detail design, specifications and contract documentation of the civil, mechanical and electrical works. 2020

Upgrade of the Sewage Treatment Plant at Sasol Synfuels: Technical lead of multi-disciplinary team. 2018

Extensions to the Boskrans Wastewater Treatment Works: Detail engineering design for civil and mechanical works. 2011

[redacted]

Schedule 11A — Specific Experience of Key Personnel

STRUCTURAL ENGINEER/ TECHNOLOGIST (NAME): [redacted]			
Employer and Current Job Title	**Qualifications**	**Association and Professional Registration No.**	**No. of Years Specified Experience**
IX ENGINEERS (PTY) LTD Professional Structural Engineer	Masters Diploma Structural Engineering	ECSA: [redacted]	25

Relevant Fields of Specialization, Experience and Comparable Projects

PLEASE REFER TO CV ATTACHED

RELEVANT FIELDS OF SPECIALISATION AND EXPERIENCE:

[redacted] is a registered professional structural engineering technologist with 25 years of marine structures with varied building and civil structures design experience.

[redacted] has been responsible for the design of structural components for a wide variety of projects, ranging from coastal-offshore structures to vessels, commercial and residential buildings. In March 2006, he was appointed as director of ZLH consulting Engineers to assist in the managing and development of the marine structures and land based commercial buildings divisions including other management portfolios within the company inclusive of HR functions. He continued this function into the consultancy RLH International Consulting Engineers which was started in 2010.

From the year 2006 to the end of 2015 he has worked in a senior management role on the design and monitoring of marine structures projects around the globe ranging from Malaysia, Indonesia, Middle east, USA, Puerto Rico, West and East Africa

COMPARABLE PROJECTS:
DHL Distribution Warehouse 2020
Alugas Industrial Manufacturing Building 2020
Copperton Wind Farm 2020
Mvula Primary School 2020
Momma Mozambique 2015

[redacted]

Schedule 11A **Specific Experience of Key Personnel**

STRUCTURAL ENGINEER/ TECHNOLOGIST (NAME): [redacted]			
Employer and Current Job Title	**Qualifications**	**Association and Professional Registration No.**	**No. of Years Specified Experience**
iX Engineers (Pty) Ltd: Senior Structural Engineer	BSc (Civil), University of Cape Town, 2003	(ECSA): Pr Eng, [redacted]	20

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
[redacted] is a Professional Structural Engineer with more than 20 years' experience in the field of structural design and construction in South Africa.

EXPERIENCE:
Her experience includes on-site construction activities, structural design and project management (from sketch plan design to completion), site supervision and liaison with other professionals on a wide variety of projects. She is experienced in the design of commercial, residential and light industrial structural buildings and water retaining projects. She has comprehensive design experience including timber, steel and concrete design for a variety of structures. She also has one year's experience in the design of roads and services for urban developments, as an Engineering Technician.

COMPARABLE PROJECTS:
Koeberg Original Steam Generator Interim Storage Facility: 2020 to 2020 (in progress): Temporary storage facility for 6 steam generators at Koeberg Nuclear Power Station, Western Cape: Lead Structural Engineer: Production of concrete construction drawings and reinforcement layouts based on structural design provided by client

SBIDZ Alugas: 2019 to 2020 (in progress): New warehouse and office structure in Saldanha Bay, Western Cape: Senior Structural Engineer: Structural design of steel portal frame for warehouse, RC slab & beam design for office block

Graafwater Water Treatment Works: 2019 to 2020 (in progress): Upgrade to an existing water treatment works in Graafwater, Western Cape: Lead Structural Engineer: Structural design and detailing supervision of new RC raw water reservoir

Boskrans Wastewater Treatment Works: 2019 to 2020 (in progress): Upgrade to an existing water treatment works in Middelburg, Gauteng: Lead Structural Engineer: Structural design and detailing supervision of new RC raw water reservoir

Hout Bay Community Day Centre: 2018 to 2020 (in progress): Design and construction of a new Community Day Clinic in Hout Bay, Western Cape: Lead Structural Engineer Structural design (reinforced concrete, structural steelwork) and detailing, construction supervision.

[redacted]

Schedule 11A Specific Experience of Key Personnel

MECHANICAL ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
Employer: iX Engineers Pty Ltd Job title: Principal Mechanical Engineer	B.Sc Eng	ECSA Pr. [redacted] Green Star Accredited Professional SAIRAC [redacted]	14

Relevant Fields of Specialization, Experience and Comparable Projects

Please refer to CV also

RELEVANT FIELDS OF SPECIALISATION:

- Pump Station Projects (Potable water, Sewer and treatment plants),
- Air-Conditioning, Ventilation,
- Building Management Systems,
- Refrigeration,
- Wet-Services,
- Medical Gas, LPG installations,
- Lifts and other associated mechanical building services.

EXPERIENCE:

[redacted]s a Principal Mechanical Engineer for Public Infrastructure, Buildings and Services. A registered Professional Engineer (9 years post registration), a Green Star SA Accredited Professional and a registered Competent Person – Energy. He has over 13 years' combined experience in Engineering Consulting (Building Services), the Nuclear Power Plant Industry and Bulk Water Pump Stations.

COMPARABLE PROJECTS:

- Please refer to CV also.
- City of Cape Town, Water and Sanitation Department, New Office Building - A 5 Star Rated Building, with the GBCSA. This project involved mechanical engineering related services for the new office building comprising HVAC, BMS, Wet-Services and Lifts.
- ACSA, Cpt International Airport – Southern Office Block Reconfiguration - full office reconfiguration, which included completely new fit out of office internals, electrical and

[redacted]

Schedule 11A **Specific Experience of Key Personnel**

mechanical systems.

- Construction of ALUGAS (SA) Industrial Building - The construction of a new manufacturing facility for ALUGAS SA to produce LPG storage cylinders. Mechanical Engineering services include HVAC, process cooling and heating water supply, Wet Services and Fire protection, including sprinklers.
- V&A Silo 5 Office Building - A 6 Star Rated Building, with the GBCSA. This project involved the detailed design and construction supervision for mechanical engineering related services for the new office block for the V&A Waterfront. HVAC Systems included integration with chilled, heating and precooling water supply from the District cooling plant and the associated BMS systems, variable air volume AHU's, smoke extract systems, gas suppression, fire protection. This office facility consists of 5 levels and 16 040 m2 of usable area
- Vredenberg Hospital - New Hospital addition, including the following mechanical services: HVAC, fire protection, medical gas and LPG, lift installation, bulk water storage and pumps, kitchen equipment, refrigeration and shelving and wet services.
- Upgrading of The Bientang Sewer Pump Station and Rising Main, Hermanus - Mechanical works included all mechanical pumping equipment, electrical and controls for a submersible sewer pump station, duty 77l/s
- Jozini Ingwavuma Water Supply - Design and construction of mechanical and electrical services for a new water distribution network. There were 8 to 10 pump stations (Portable Water and Raw Water) as part of this project and the flow rates ranged from 180 l/s to 60 l/s per pump station; Associated mechanical works included all mechanical pumping equipment, electrical and controls.
- Moorreesburg Pump Station Upgrading - Construction of new pump station building, new pumps and switchgear.
- Gansbaai Central Business District Sewer Reticulation - Construction of sewer pump station with a static head of 25 m and a pump rate of 60 l/s, a 600 m long rising main with a diameter of 315 mm and a gravity mains, 14200 m long with a diameters of 160-355 mm. (Phase 1 - 3).
- George New Raw Water Pump Station - Construction of civil, electrical and mechanical services for 550 l/s raw water pump station.

MECHANICAL ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
[redacted] Employer: iX Engineers Pty Ltd Job title: Principal Mechanical Technologist	B.Tech Eng	ECSA: Pr. Tech. Eng [redacted] Green Star Accredited Professional SAIMechE [redacted] CIBSE [redacted]	22

Schedule 11A — Specific Experience of Key Personnel

Relevant Fields of Specialization, Experience and Comparable Projects

Please refer to CV also.

RELEVANT FIELDS OF SPECIALISATION:

- Heating, Air-Conditioning, And Ventilation (HVAC),
- Renewable Energy Systems and General Energy Saving Measures Such as Solar Heating, Natural/Passive Ventilation, Accurate Demand-Control Systems, Heat Recovery Systems, Earth-Tubes and Geothermal Heat Transfer, Ice Storage, Seawater Cooling,
- Fire Protection (Deemed-To-Satisfy), Gaseous Fire Suppression Systems, Smoke Control Ventilation, Staircase Pressurisation,
- Wet Services Including Hot Water Generation – Heat Pumps, Gas Boilers, Solar Heating Installations (Domestic, Commercial and Industrial), Hot and Cold-Water Piping Reticulation, Cold Water Storage And Pumping Installations, Internal Sanitary Waste Drainage,
- Medical Gas, LPG Installations, Industrial Compressed Air, Natural Gas Supplies,
- Cold Rooms and Freezer Rooms,
- Kitchen and Laundry Equipment,
- Airport Terminal Baggage Handling Equipment and Conveyors, Lifts and Escalators

EXPERIENCE:

Herman has 22 years' experience in the construction industry, all fields of mechanical building services, in South Africa as well as overseas. He also has appropriate experience and is proficient in managing multi-discipline engineering projects as overseeing project manager. His experience and exposure comprise a wide variety of project types, from the most basic, to iconic and prestigious buildings in various sectors such as:

- Healthcare – Hospitals and Clinics
- Educational - Schools and Universities
- Laboratories
- Airports
- Industrial Warehouses, Factories, Workshops
- Commercial and Mixed-Use (Office, Hotels, Shopping Centres)
- Residential Developments

Managing/Commercial experience include: General management of contracts, finances, and operations, Quality assurance systems implementation, Project resources allocation, training and skills-development of engineers, technical reviews, Managing of project contract finances, Experienced in foremost PSP and construction contracts, such as JBCC, NEC, PROCSA, CIDB.

Schedule 11A — Specific Experience of Key Personnel

COMPARABLE PROJECTS:

- Please refer to CV also
- Corobay Corner (EMIRA Developers) – 15000 sqm New office Building, R208 million, Chilled water and LPHW fan coil unit system with heat recovery chillers, thermal wheels on fresh air units and variable volume chilled and heating water. Close control server room with fire gas suppression system.
- City of Cape Town, Water and Sanitation Department, New Office Building - A 5 Star Rated Building, with the GBCSA. This project involved mechanical engineering related services for the new office building comprising HVAC, BMS, Wet-Services and Lifts.
- V&A Waterfront Silo District Cooling - Centralised Chilled water, Hot Water and pre-cooling water plant utilising sea water for chiller condenser water and pre-cooling of buildings.
- British Embassy - Tbilisi, Tazewell County, Georgia - R100 million heavy construction and secure new embassy building. Mechanical services included: Air-conditioning comprised 4-pipe floor mounted FCU's and ceiling concealed FCU's. Solar panels on the roof, packaged chillers with free-cooling capability, gas heating boilers with flue dilution, diesel storage and pumped diesel supply. Underfloor heating and floor FCU's for ambassador's residence. Earthtube feeding air handling unit. Boosted CWS and solar hot water system (8 Viessmann panels and 1500 Litres tanks)
- Clinix Health Group – DR NMM Private Hospital - Managing, design assistance, peer reviews and general overseeing of mechanical involvement for HVAC, Medical Gas, Kitchen Equipment and Wet Services
- TUT Engineering Auditoriums and Learning Centre - Mechanical designer and responsible for mechanical HVAC, Wet Services and Fire Protection from project start to completion. Solar hot water generation, VAV air handling units with economy cycles and ground-to-air heat exchanger earth-tubes for free cooling.
- St Helena Airport – St Helena Island - Lead mechanical designer of VRV air conditioning, heat recovery air handling units, natural ventilation through automated windows and CO2/temperature controls, Fire protection, Wet services (industrial solar water heating)
- Thai Summit RSA Factory - R220 million, Managing, designs, peer reviews and general overseeing of mechanical involvement for HVAC, Compressed Air, Process Cooling Water, CO2 piping and Wet Services
- Dr Oetker New Factory - Wet Services. Food-grade water storage and supply. Drainage suitable for cooking effluent with grease traps, stainless steel floor drains and channels, suitable for regular dismantling and cleaning, stainless steel water reticulation, high pressure cleaning and disinfectant wash-down system, Gas supply system to pizza ovens
- VALE (CLN) Workshops – Mozambique - Lead mechanical responsible for designs and overseeing work of other engineers. Services included HVAC, Fume ventilation, Spray booth ventilation, Compressed Air (industrial), Domestic Water Services, High Pressure water system with recycling for train washing.
- Anadarko Afungi Resettlement Village, Mozambique - New resettlement village in remote area in Mozambique, with various buildings and new infrastructure, such as dwellings, clinic, church, police station, school, community centre. Managing, design assistance and reviews, and general overseeing of mechanical involvement for HVAC, Fire Protection and Wet Services

Schedule 11A — Specific Experience of Key Personnel

- Casa Mia 1&2 Residential High rise - Renovation, upgrade and additions for residential multi-storey apartment buildings. Managing, design reviews and general overseeing of mechanical involvement for HVAC and Lift services
- ACSA ORT Bussing Gates - Construction and renovation of new and existing bussing terminal at OR Tambo International Airport. HVAC, Fire Protection, Lifts, Escalators and Wet Services
- Cydna Offices and Laboratories for JHB Water SOC - Complete refurbishment. Phased into 3 stages to allow occupancy during construction works. Combination of offices, conference rooms, laboratories and testing rooms. HVAC, Lifts, Fume ventilation, Coldrooms and Fire Protection

MECHANICAL ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
PROXA SA; Mechanical Engineering Manager	B.Eng (Mechanical) Stellenbosch. 2007	Professional Engineer, registered at ECSA; Pr.Eng [redacted]	13

Relevant Fields of Specialization, Experience and Comparable Projects

Please refer to CV also.

RELEVANT FIELDS OF SPECIALISATION AND EXPERIENCE:

- Project engineer, multi discipline engineering interface management and planning
- Project manager and project planning assistance and interface management
- Subcontract (civil, mechanical & electrical) management and implementation

COMPARABLE PROJECTS:

Project Engineer – Mafube: Plant involvement overview: 1.5MLD Colliery water treatment plant with Zero Liquid Discharge (ZLD)

Project Engineer & acting Project Manager – New Vaal Brine Expansion: Plant involvement overview: 14.5MLD Colliery water treatment plant with Zero Liquid Discharge (ZLD)

[redacted]

Schedule 11A — Specific Experience of Key Personnel

Project Engineer – Various Water Treatment & SWRO Plants for I&J, Cape Town: Plant involvement overview: Specific project and plant development to suite the client's final requirements Systems integration into existing plant and infrastructure Plant, process and space optimization for both construction, operation and maintenance Process and

mechanical interfacing with the following systems:

- Seawater desalination; inclusive of open intake, ceramic UF pre - treatment, RO, etc.
- Brackish water treatment; inclusive of borehole feed system, media filtration, RO, etc.
- Potable and fire hydrant storage and distribution; inclusive of sectional tank design and installation, associated management, etc.
- Dosing systems to support the above
- All civil related interfacing and design guidance

Mechanical Engineering Manager – Zandvliet: Plant Overview: 10MLD water reclamation (direct potable from reuse) project consisting of clarification, UF, RO, AOP with supporting pumping, storage, dosing and other facilities. Functions included: Engineering management and support for design and execution functions. Aqua Mobile, clarifiers and packages integration into plant. Several optimization implementation and strategy steering for future improvements.

Mechanical Engineering Manager – Monwabisi 7MLD and Strandfontein 7MLD Seawater Desalination Plants Functions included: Engineering management and support for design and execution functions. Aqua Mobile, clarifiers and packages integration into plant. Several optimization implementation and strategy steering for future improvements.

[redacted]

Schedule 11A — Specific Experience of Key Personnel

ELECTRICAL ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
IX ENGINEERS (PTY) LTD Snr. Professional Electrical Engineer	BEng (Electrical)	ECSA: [redacted]	19

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION AND EXPERIENCE:

[redacted] is a Professional Engineer with over 16 years' experience in the design and supervision of electrical reticulation and distribution networks, electrical infrastructure and electrical services for buildings in South Africa. His engagement in electrical engineering works has been varied and includes the installation, refurbishment and line inspection of 11 kV and 22 kV distribution networks, the installation of overhead and underground reticulation networks and the electrification of residential, commercial and industrial sectors in both rural and urban areas. His experience includes the provision of power supply, lighting, fire detection, access control, public address systems, standby generators and uninterrupted power supply systems. He is also experienced in the design and supervision of airport runway approach lighting systems.
His involvement in electrical engineering projects covers all the key elements of design and project management from feasibility study, report writing and tender documentation to all major aspects of contract administration and construction supervision. In 2009 he received, on behalf of KV3, the ACSA Airport Managers Feather Award for the upgrade of the East London Airport in which he played a key role.

COMPARABLE PROJECTS:

City of Cape Town 35C/2016/17 – Term contract for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town – EAM Branch, Various projects from 2017 to 2020

City of Cape Town 35C/2016/17 – Term contract for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town – Bulk Water Branch, Various projects from 2017 to 2020

Tygerberg Hospital: 11kV Main Substation and Generator Panel UpgradeReport stage, Preliminary design, Detail design, Contract Administration, Close-out

Birkenhead 66kV Substation: Report stage, Preliminary design, Detail design, Contract Administration, Close-out

National Oil Storage Facilities Project: Walvis Bay, Namibia: Construction Support

Electrification of Housing Project Erf 360, McGregor: Report stage, Preliminary design, Detail design, Contract Administration, Close-out

Schedule 11A — Specific Experience of Key Personnel

Airport Precinct Housing: DevelopmentReport stage, Preliminary design, Detail design, Contract Administration, Close-out

SC1382/2013: MV AND LV NETWORK UPGRADING IN GANSBAAI & FRANSKRAAL Report stage, Preliminary design, Detail design, Contract Administration, Close-out

SC1488/2014: MEDIUM AND LOW VOLTAGE UPGRADING IN GANSBAAI, FRANSKRAAL AND STANFORD: Report stage, Preliminary design, Detail design, Contract Administration, Close-out

Ithemba West Housing DevelopmentReport stage, Preliminary design, Detail design, Contract Administration, Close-out

SC1622/2015: UPGRADING OF MEDIUM AND LOW VOLTAGE ELECTRICAL NETWORK IN GANSBAAI, FRANSKRAAL AND STANFORD, PHASE 3 Report stage, Preliminary design, Detail design, Contract Administration, Close-out

T57/2018: REROUTE MCGREGOR 11kV LINE AT MCGREGOR SPORT FIELDS Report stage, Preliminary design, Detail design, Contract Administration, Close-out

SC1719/2016: UPGRADING OF MINISUB, CCTV, SCADA AND MV/LV IN GANSBAAI AND STANFORD Report stage, Preliminary design, Detail design, Contract Administration, Close-out

Ithemba East Housing DevelopmentReport stage, Preliminary design, Detail design, Contract Administration, Close-out

SC 1900/2018: GANSBAAI SUPPLY AREA: MV/LV AND RMU UPGRADE Report stage, Preliminary design, Detail design, Contract Administration, Close-out

SC1748/2016: MEDIUM AND LOW VOLTAGE UPGRADING AND REPLACEMENT IN HERMANUS, HAWSTON AND KLEINMOND Report stage, Preliminary design, Detail design, Contract Administration, Close-out

SC 1816/2017: MV AND LV UPGRADE AND REPLACEMENT IN THE OVERSTRAND AREA Report stage, Preliminary design, Detail design, Contract Administration, Close-out

SC1899/2018: MV AND LV UPGRADE AND REPLACEMENT IN HERMANUS, HAWSTON AND KLEINMOND Report stage, Preliminary design, Detail design, Contract Administration, Close-out

SC1898/2018: ELECTRIFICATION OF HOUSING IN HAWSTON Report stage, Preliminary design, Detail design, Contract Administration, Close-out

Du Noon Housing DevelopmentReport stage, Preliminary design, Detail design, Contract Administration, Close-out

SC1817/2017 : RE-ELECTRIFICATION OF MANDELA SQUARE, ZWELIHLE, HERMANUS Report stage, Preliminary design, Detail design, Contract Administration, Close-out

Electrification of 84 informal houses in Masakhane, Gansbaai Report stage, Preliminary design, Detail design, Contract Administration, Close-out

Schedule 11A — Specific Experience of Key Personnel

Gansbaai Masterplanning: Report

Langeberg Municipality Masterplanning : Report

Hermanus area Masterplanning :Report

Maintenance Policy and Plan Review and Update Maintenance plans

242280 : ELECTRICAL SERVICES FOR VREDENDAL NORTH INFORMAL HOUSING (PHASE 2) Report stage, Preliminary design, Detail design, Contract Administration, Close-out

Robertson Substation 66/11kV Transformenr ReplacementReport stage, Preliminary design, Detail design, Contract Administration, Close-out

T58/2018: UPGRADE 11kV LINE TO BUITEKANT STREET, MCGREGORReport stage, Preliminary design, Detail design, Contract Administration, Close-out

ELECTRICAL ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
iX Engineers Pty) Ltd: Senior Electrical Technologist	B.Tech (Electrical)	(ECSA): Pr. Tech, [redacted]	14

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
[redacted] is a Registered Professional Engineering Technologist with 14 years' experience in the design and supervision of electrical engineering projects in Southern Africa

EXPERIENCE:
[redacted] has been involved in the successful completion of Medium and Low Voltage (overhead and underground) distribution networks, residential (low cost and upmarket) electrification projects and building services projects for government and private sector (covering school, hospital, hostel, commercial and industrial projects). Involvement in these projects included the initial feasibility, planning, costing, design, compilation of tender and contract documents (including specifications and bills of materials), tender evaluation/adjudication and appointment of successful candidate, quality assurance, regulatory compliance, construction supervision and contract administration.

Schedule 11A — Specific Experience of Key Personnel

COMPARABLE PROJECTS:
New 2,5MWp Photo Voltaic Plant at Cape Town International Airport (CTIA): 2019 to current: Conduct feasibility study including glint and glare, detail designs and implementation for a 2,5MWp PV plant. Project Inception and Preliminary Design: Design Engineer

City of Cape Town 35C/2016/17 – Term contract for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town – EAM Branch, Various projects from 2017 to 2020

City of Cape Town 35C/2016/17 – Term contract for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town – Bulk Water Branch, Various projects from 2017 to 2020

Extension and Replacement of Perimeter Fence at Cape Town International Airport (CTIA): 2018 to current: The upgrade and extension of the perimeter fence at Cape Town International Airport: Design Engineer: Project Inception, Preliminary Design, Detailed Design and Technical Specification

Aprons Bravo South Phase 1A Upgrade at Cape Town International Airport: 2018 to current : Extension of Bravo South Apron to accommodate 3 x Code C aprons.: Design Engineer: Project Inception and Preliminary Design

Saldanha Bay Industrial Development Zone (SBIDZ): 2019 to current : Electrical and Electronic Engineering Services : Design Engineer: Project Inception and Preliminary Design

iThemba Housing Development: 2017 to current: Electrification of 2276 formal houses: Design Engineer: Project Inception, Preliminary Design and Detailed Design

ELECTRONIC ENGINEER / TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
IX ENGINEERS (PTY) LTD Electrical Engineer	B.Eng (Electrical)	ECSA: [redacted]	11
Relevant Fields of Specialization, Experience and Comparable Projects			

[redacted]

Schedule 11A — Specific Experience of Key Personnel

RELEVANT FIELDS OF SPECIALISATION AND EXPERIENCE:

[redacted] is an Electrical Engineer with 11 years' experience in the design and supervision of electrical, control and instrumentation projects in Africa. His main focus is on low voltage (LV) switchboards and motor control centres (MCCs) for the public and private sectors. His experience also includes the provision for power supply, building small power and lighting, standby generator and uninterruptible power supply systems. He has been involved over the entire lifecycle of projects and he has acquired skills in writing standards and specifications as well as compiling single line diagrams, general arrangements, circuit schematics, data sheets, bill of quantities and cable schedules. He is experienced in tender evaluation/adjudication, quality assurance, regulatory compliance, construction supervision and contract management.

COMPARABLE PROJECTS:

Underberg Water Phase 2: New Raw Water Pump Station New 180m³/h @ 183m bulk water lift pump station to pump raw water from the river to the existing Water Treatment Works, electrical scope included bulk electrical supply upgrade, standby generator with automatic change-over, new motor control centre with hard wired control logic and radio telemetry to relay the signals from the WTW to the lift pump station: 2018 – 2019

City of Cape Town 35C/2016/17 – Term contract for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town – EAM Branch, Various projects from 2017 to 2020

City of Cape Town 35C/2016/17 – Term contract for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town – Bulk Water Branch, Various projects from 2017 to 2020

Ebenhaeser Water Treatment Works UpgradeUpgrade and increase capacity of existing water treatment works. Including new MCC with PLC control and HMI as operator interface. Process included flocculation, chlorination, filtration, backwash and high lift pump stations. 2018-Current

Rosetta Water Treatment Works: Phase 1Greenfields 20Ml/d Water Treatment Works with multiple Motor Control Centres controlled by Programmable Logic Controllers and SCADA view nodes as operator interface at each MCC. New SCADA at central control room. 2018-Current

Stanford Wastewater Treatment Works UpgradeUpgrade and increase capacity of existing wastewater treatment works. Including new MCC with PLC control and HMI as operator interface. 2018-Current

Upgrading of Suurbraak Bulk Water Supply Scheme: Phase 1Upgrading existing Suurbraak water treatment works. Supply and install mechanical and electrical equipment, including new pole mounted transformer, new motor control centre with telemetry and SCADA upgrade to interface with the existing raw water pump station and SCADA at the Swellendam municipal central control station. 2018 - 2019

Upgrading of Bientang Sewage Pump StationSupply and installation of mechanical and electrical equipment for Bientang sewage pump station including standby generator, motor control centre with hard wired control logic, including telemetry and SCADA upgrade to interface with central control station at Preekstoel Water Treatment Works. 2018

Aan't Oewer Aftree Oord Sewage Pump StationSupply and installation of mechanical and electrical equipment for Aan't Oewer sewage pump station including new motor control centre with telemetry and SCADA to interface with the existing SCADA at the Vredendal municipal central control room. 2018

Schedule 11A — Specific Experience of Key Personnel

ELECTRONIC ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
iX Engineers (PTY) LTD Senior Electrical Technologist	B.Tech (Electrical)	ECSA: Pr Tech Eng [redacted]	14

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
[redacted] is a Senior Professional Engineering Technologist with over 14 years' experience in the field of Electrical services provisions in South Africa and Africa.

EXPERIENCE:
As Senior Design Technologist his experience includes reticulation services, building services, electrical designs for medical locations, access control, fire detection & public address systems, closed circuit television systems, standby generator & UPS installations. Jamie has also gained skills in the design of renewable energy solar designs in Southern Africa and is registered with the South African Qualification & Certification Committee (SAQCC) as a registered Level 5 Fire Detection Designer. As Project Manager on a number of electrical projects, he has been involved in all aspects of design and project management including developing conceptual and detailed design solutions in line with the Client brief, carrying out detailed electrical services design and calculations using design software i.e. Relux, project management to achieve Client satisfaction and profitability for the business, identify and manage allocated resources to achieve project requirements, commercially aware including financial management and reporting responsibility on project costs, technical and quality reviews of project production information to maintain high standards, production/writing of electrical specifications, schedules, reports, and professionally representing the business at a wide range of meetings from Client, design team and site.

COMPARABLE PROJECTS:
Observatory Forensics Laboratory Replacement – OFPL: 2017 to current : New State of the Art Forensics Laboratory for PGWC: Senior Professional Technologist - Design, tender, construction stage supervision and hand-over of internal electronic services works, including fire detection & PA, access control, intercom and CCTV systems, as well as design for a 630kVA standby generator including 5000L bulk fuel tank installation.

City of Cape Town 35C/2016/17 – Term contract for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town – EAM Branch, Various projects from 2017 to 2020

City of Cape Town 35C/2016/17 – Term contract for the provision of multidisciplinary professional services for the Water and Sanitation Department of the City of Cape Town – Bulk Water Branch, Various projects from 2017 to 2020

[redacted]

Schedule 11A — Specific Experience of Key Personnel

Tygerberg Hospital: 2018 to current: Upgrades to the fire detection and alarm systems for the main Tygerberg Hospital, as well as the Nurse's and Doctors' Residences Senior Professional Technologist - Design, tender, construction stage supervision, inspections and handover of a new fire detection and alarm system for Protea Court and Doctors' Residence, including financial management and Professional Fee invoicing. Detail design for the replacement of the fire detection & Public Address and Evacuation System for the main Tygerberg Hospital.

Tygerberg Hospital: 2018 to current: X Block UPS Replacement: Senior Professional Technologist - Design, tender, construction stage supervision, inspections and handover of a replacement 600kVA UPS System for the X Block at Tygerberg Hospital.

New Vredenburg Community Day Clinic: 2019 to current: Building of a new CDC Vredenburg. Senior Professional Technologist - Design, tender, construction stage supervision, inspections and handover/closeout of internal and external electrical & electronic works including electrical installation, CCTV System, Access Control and Intruder Alarm System, Financial management and Professional Fee invoicing.

[redacted]

Schedule 11A [redacted] **Specific Experience of Key Personnel**

Construction of a 700-, 600 and 500 mm diameter Welded Steel Pipeline in Montana: May 2004 - Dec 2004: Construction of Welded Steel Pipelines in Montana, valve chambers, pipe jacking. Civil Engineer - Prepare the preliminary and detail design as well as the applications for wayleaves. City of Tshwane

HYDRAULIC ENGINEER "B" (RETICULATION AND WASTEWATER TREATMENT BRANCES ONLY)
HYDRAULIC ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
IX ENGINEERS (PTY) LTD Professional Civil Engineer (Water)	BEng (Civil), BSc	ECSA: [redacted]	33

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
[redacted] is a Professional Engineer with more than 39 years' experience in the field of civil and municipal engineering services provision in South Africa, Lesotho, Mozambique and Algeria

EXPERIENCE:
His experience includes bulk water supply schemes, stormwater management and flood lines, township water and sewer reticulation systems, township stormwater infrastructure, water and wastewater treatment facilities, pump stations, pumping and gravity mains and water reticulation systems in buildings.
His involvement in projects includes studies and investigations, reporting, construction cost estimation, client liaison, compilation of contract documentation, managing the tender process and tender adjudication and all aspects of construction supervision and contract administration.

COMPARABLE PROJECTS:
Khumani Groundwater Augmentation Project: Current: The main objective of the project was to investigate alternative bulk water supply options to augment the existing water sources of the mine to reduce water supply interruptions causing production losses. A detail design was conducted to utilize and link the groundwater sources (new and existing) to the current bulk water supply infrastructure of the mine. A total volume of 40 ℓ/s groundwater was successfully developed. Principal Engineer - Design engineer and project manager: Preparation of designs and tender documentation for the procurement phase of the project. Responsible for hydraulic and civil design of the pipelines and pump stations and the preparation of tender documentation.

Rand Water H39 Pipeline: October 2015 – current: The H39 Rand Water Pipeline forms part of the Rand Water distribution system. The pipeline is a gravity pipeline between the

Schedule 11A **Specific Experience of Key Personnel**

Rand Water Klipfontein and Brakfontein Reservoirs. The pipeline is a DN1700 pipeline manufactured from Grade X42 steel. Design Engineer: WorleyParsons was appointed as design engineers and project managers for the design of a 5.4km section of the pipeline, the preparation of tender documentation and for the procurement phase of the project. Member of the project team responsible for hydraulic and structural design, preparation of tender documentation and reviewing of work done by other team members. The structural design comprised external earth and live load calculations, an assessment of pipe buckling and pipe deflections, pipeline handling and installation requirements and determination of pipeline wall thickness.

Hopewell Mine Bulk Water Supply (Reconnaissance Investigation): June 2015 – September 2015: WorleyParsons was awarded the contract by Global Platinum Resources for a pre-feasibility study into viability of establishing a new platinum mine in Zimbabwe. One of the components was an investigation of options to supply bulk water to the mine. The work comprised the identification of bulk supply water supply options (Dams and river sources), demand determination, hydraulic analyses, pipeline and pump station sizing, lifecycle costing of the identified options and report preparation. Infrastructure requirements comprised raising of dam crest level, pipelines of diameter 400 – 450 mm and total length of 54 km and pump stations up to 150 kW in size. Project manager for bulk water supply component of the contract and team member Identification of bulk water supply options, demand determination, hydraulic analyses, pipeline and pump station sizing, lifecycle costing of identified options and report preparation.

Bulk Water Supply Options for the Vaal Gamagara Scheme and the City of Kimberley (Reconnaissance Investigation): January 2015 – June 2015: Existing Vaal Gamagara Water Supply Scheme (VGWS) consists of an abstraction works on Vaal River at Delportshoop, a water treatment works (36.36 Ml/day), three high lift pump stations, 11 reservoirs and 370km of pipelines, from Delportshoop to Blackrock in the Northern Cape, that delivers water to industrial and local authority users. A feasibility study to upgrade the scheme was previously done by WorleyParsons and others. Subsequent to the completion of the feasibility study, WorleyParsons was appointed to investigate additional scenarios of combining the upgrading requirements of the scheme with a supply of water to the city of Kimberley. Identification of water supply scenarios, demand determination, hydraulic analyses, pipeline sizing and a life cycle costing analyses of the identified scenarios. Upgrading and new infrastructure requirements comprised pipelines of diameter 600 – 1800 mm and pump stations up to 14 000 kW in size. Member of the project team Responsible for hydraulic analyses, pipeline and pump station sizing and lifecycle costing of the identified scenarios.

Schedule 11A **Specific Experience of Key Personnel**

HYDRAULIC ENGINEER "B" (RETICULATION AND WASTEWATER TREATMENT BRANCES ONLY)
HYDRAULIC ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
IX ENGINEERS (PTY) LTD Hydraulic Engineer	B Eng (Civil)	ECSA: [redacted]	33

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
[redacted] is a hydraulic specialist and a highly proficient Professional Civil Engineer with over 33 years' experience in design of water engineering projects and infrastructure in South Africa and abroad. His work on water schemes and projects included the investigation, analysis and hydraulic design applicable to bulk water supply schemes, gravity and rising mains, water and wastewater treatment installations, aquifer abstraction, sea water desalination, pump stations, booster pump stations, reservoirs and water reticulation networks. He has worked on projects for private developers and governmental authorities at national, regional, municipal and local levels and is held in high regard for his extensive expertise in the analysis and design of large diameter water pipelines up to 1,300 mm in diameter including surge protection, as well as specialized thrust blocks for large diameter pipelines up to 1,900 mm in diameter. As a water pipeline specialist, he has performed numerous complex designs in difficult terrain conditions and feasibility studies for large pipeline schemes up to 2,500 mm in diameter. International hydrocarbon projects include water and sewer utilities for onshore oil terminals, railway facilities and an international airport.

EXPERIENCE:
His experience includes bulk water supply schemes, stormwater management and flood lines, township water and sewer reticulation systems, township stormwater infrastructure, water and wastewater treatment facilities, pump stations, pumping and gravity mains and water reticulation systems in buildings. His involvement in projects includes studies and investigations, reporting, construction cost estimation, client liaison, compilation of contract documentation, managing the tender process and tender adjudication and all aspects of construction supervision and contract administration. His involvement in water engineering projects covers all the key elements of design and project management including investigatory studies and project identification, field and feasibility studies, master planning studies, project fund sourcing and applications, report writing, preliminary and detailed analyses and design, cost estimation, tender and contract documentation, tender evaluation and adjudication, construction supervision and all major aspects of contract administration including commissioning of works. As Principal Engineer, Kobus is responsible for the overall project design and management, as well as review of water engineering projects controlled from the Cape Town centre.

COMPARABLE PROJECTS:
Stellenbosch Municipality: Replacement of reticulation pipes for water and sewer networks in Stellenbosch. Replacement of reticulation pipes for water and sewer networks ranging from 110mm dia to 160mm dia. 2012- 2015. Project Manager

Overstrand Municipality: Replacement of water meters and leak repairs in the towns of Overstrand: Replacement of water meters and leak repairs at indigent houses of Hermanus, Onrus meter installations new meter installations in Sandbaai, Vermont Fisherhaven, Gansbaai, Kleinmond and Bettysbaai. Leak repairs in Gansbaai and Stanford. 2013- 2016

Schedule 11A — Specific Experience of Key Personnel

Project Manager

Frandevco: Franschhoek Country Estate reticulation network: Feasibility studies, preliminary and detail design, tender documents, tender evaluations, contract administration and construction monitoring for Franschhoek Country Estate. 2002- 2010 - Project Manager

HYDRAULIC ENGINEER "B" (RETICULATION AND WASTEWATER TREATMENT BRANCES ONLY)
HYDRAULIC ENGINEER/ TECHNOLOGIST (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
IX ENGINEERS (PTY) LTD Professional Civil Engineer (Water)	BSc Hons (Geohydrology) (Cum Laude), B.Eng (Civil) (Cum Laude),	ECSA: [redacted]	21

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
[redacted] is a Professional Engineer with more than 21 years' experience in the field of water and wastewater engineering services provision.

EXPERIENCE:
Her experience includes design and supervision of bulk and distribution infrastructure projects from feasibility and investigation phases, through detailed design and tender documentation to construction supervision, quality control and contract administration. She has also been responsible for the Civil Engineering Discipline of Hydrocarbon projects, including Feasibility Studies, Basic Engineering, Detailed Engineering and Construction Phases.

COMPARABLE PROJECTS:
Upgrading of the Bulk Water Supply to the Greater Mamusa Area: October 2011 – Current: The project comprises a combined pumped/gravity bulk supply scheme over a distance of 60km to supply treated water to the Greater Mamusa Area. The scheme will comprise two pump stations, each with a total pump head of approximately 170 m, pumplines with a diameter of 355 mm over a distance of 48 km and a gravity section with a diameter of 400/355 mm, delivering a flow of 89 l/s to an end point reservoir. The construction of valve chambers, a river crossing, road and railway crossings by means of pipe jacking. Civil Engineer: Route determination, horizontal and vertical alignment, system cost optimization, pipelines hydraulic design, overseeing drawings. Preliminary and details design drawings and reports. Preparation of tender documentation, including scope of works,

specifications and bills of quantities.

Emergency Overflow Pipeline, River Outlet and Associated Works: January 2011 – Current: Preliminary and detail design, tender documentation and evaluation for a 1200/1300 mm welded steel pipeline, from the Zuikerbosch Station Purification Works to the Vaal River. The construction of valve chambers, an energy dissipator, river outlet and a road crossing by means of pipe jacking. Civil Engineer - Route determination, vertical and horizontal alignment, pipeline hydraulics, overseeing the preparation of drawings and preparing a tender document.

Upgrading and Replacement of a Bulk Water Pipeline in Simon Vermooten Road: Jul 2007 - Jan 2009: Upgrading and replacement of an existing bulk water pipeline with 400 mm ND and 600 mm ND steel pipelines, complete with cathodic protection. Project Manager - Project management, tender adjudication, contract administration and overhead site supervision. Design road and railway crossings by means of pipe jacking.

Construction and Upgrading of National Route N17 Section 3: Wildebeestfontein (km 23.02) to leven (km 26.36) (total length 3.34km): Sept 2009 - Apr 2010: The installation of 750 mm and 900 mm ND steel pipelines, as well as a 200 mm uPVC pipeline. The construction of valve chambers and the crossing of roads by means of pipe jacking. Civil Engineer - Review the tender/contract document (project specifications and bills of quantities) for the supply and installation of 900 mm ND and 750 mm ND steel pipelines, as well as a 200 mm ND uPVC pipeline and check the drawings. Liaise with the stakeholders. Design and generate longitudinal sections for the pipelines. Comprehensive variation order. Perform general contract administration.

Rising Main from the Roodeplaat Water Treatment Works to the Wallmannsthal Reservoir: Jan 2005 - Oct 2006: Proposal, preliminary and detail design, tender documentation and evaluation, site supervision for a 350 mm GRP pipeline, from the Roodeplaat Water Treatment Works to the Wallmannsthal Reservoir. Civil Engineer - Proposal, preliminary and detail design, tender documentation/drawings/report. Wayleave applications. Perform project management, contract and supervision.

Construction of a 700-, 600 and 500 mm diameter Welded Steel Pipeline in Montana: May 2004 - Dec 2004: Construction of Welded Steel Pipelines in Montana, valve chambers, pipe jacking. Civil Engineer - Prepare the preliminary and detail design as well as the applications for wayleaves. City of Tshwane

Schedule 11A Specific Experience of Key Personnel

2017 – date City of Cape Town: New Water Programme: Development of the Table Mountain Group Aquifer Schemes: Initiated current New Water Projects for Emergency Groundwater supply to augment the water supply to city during recent 1:600 year drought. Technical adviser since Umvoto appointed in 2017 to continuation of Table Mountain Group Aquifer Feasibility Study and Pilot Project

2017 – date City of Cape Town New Water Programme: Development of the Cape Flats Aquifer Management Scheme - Technical Adviser

2017 – date City of Cape Town New Water Programme: Optimisation and Augmentation of the Atlantis Water Resource Management Scheme - Technical Adviser

2020 – date Government of Eritrea: Project Adviser on potential for groundwater and conjunctive use supply and capacity building and management requirements in rural villages in Eritrea

2020 – date SMEC South Africa: Project Manager and Hydrogeologist on Scoping study for NEOM Mountain Lake and Lake Village Project, Saudi Arabia

2002 – 2018 City of Cape Town: Table Mountain Group Aquifer Feasibility Study and Pilot Project - Task Leader for Risk Management studies (2002 – 2007). Task Leader and Principal Hydrogeologist. (2002 – 2007), Groundwater Project Director (2010 – 2016), Technical Adviser (2017 – 2018).
Together with Dr Chris Hartnady, initiated initial study, established international and multi-disciplinary team to tender/undertake study and responsible for project design, review and technical input to hydrogeological, risk management, environmental and water resource monitoring, numerical modelling and related tasks and reports.

QUANTITY SURVEYOR (NAME): Christopher Steffen

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
Talani Quantity Surveyors (Pty) Ltd Director	BSc QS (UCT) 11 December 1990	SACQSP [redacted] PrQS, PMAQS, MRICS ASAQS RICS	30

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION & EXPERIENCE:

We have extensive experience in all aspects of quantity surveying from financial viability, planning and estimating, procurement, contract administration and close out. Our experience cuts across all sectors of construction, retail, industrial, commercial, mining, institutional, education, residential. We also have experience in building condition surveys

Schedule 11A **Specific Experience of Key Personnel**

and preparation of maintenance plans.

COMPARABLE PROJECTS:

CoCT – Athlone Waste Water Treatment Works – New Scientific Services building, estimating for other upgrades, repairworks and new buildings

CoCT, Cape Flats and Mitchells Plein Waste Water Treatment Works – Repairs and alterations to existing buildings - Estimating

CoCT, Melkbosstrand Waste Water Treatment Works – Repairs and alterations to existing buildings – Estimating

CoCT, Borcherds Quarry Waste Water Treatment Works – Conversion of existing building into Stercus facility – Estimating, procurement, construction

CoCT, Borcherds Quarry Waste Water Treatment Works – Renovation of existing offices and new extension – Estimating, procurement, construction

CoCT, Borcherds Quarry Waste Water Treatment Works – Managed Aquifer Recharge Treatment Plant - Estimating

CoCT, Potsdam Waste Water Treatment Works – Direct Potable Re-use Scheme – Estimating

CoCT Coastal Park Materials Recovery facility – Estimating, procurement

Schedule 11A — Specific Experience of Key Personnel

ARCHITECHTURAL SERVICES (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
Creative Axis: Lead Architect	B.Arch, Pr. Arch	Professional Architect, SACAP: PrArch: [redacted]	37

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION AND EXPERIENCE:
[redacted] has been actively involved in architecture for the last 37 years, always taking the lead role on projects. Anil has worked on several large projects both locally and in Australia. In Australia, work was carried out on the following projects: WA Police Academy, Oral Health Centre and Christ Church Hospitals. The project values were in excess of R 500 000 000 and experience was gained in working together with big teams. In South Africa, experience was gained on several large projects such as The Innovation Hub, Civitas Building refurbishment and various other projects.

COMPARABLE PROJECTS:

Savanna City Developments [redacted]	Savanna City	Dec 2017	Varies	Project Architect	Housing Units at Savanna City	Project completed successfully
NEW ANCHOR [redacted]	Buy, Build and Sell Park	October 2018 – 13 Dec 2019	125 000 000	Project Architect	Retail Park	
SOIC [redacted]	New Multi-Purpose Hall and Admin Building in Sishen Kathu.	28/10/2014 To 31/01/2019	R37 000 000 (E)	Project Architect	Working documentation, details and specifications	Challenges faced were soil conditions

[redacted]

Schedule 11A — Specific Experience of Key Personnel

CROWIE DEVELOPMENTS [redacted]	Mega Office Development	Feb 2019-Dec2019	70 000 000	Project Architect	Design and Construction Supervision for New Office Development	
PRASA [redacted]	Saulsville Station	October 2011 to current	60 000 000	Project Architect	New Intermodal facility with commercial trade	Integrated Commercial and Intermodal Transport facility with various stakeholders input required
Department of Public Works [redacted]	Repairs and Renovations to Military Base, Mafikeng	June 2012 to Current	118 000 000 (E)	Project Architect	Repairs and renovations to existing facilities and provision of new Transport park.	The Construction of a new transport park consisting of large steel structures is required.

ARCHITECHTURAL SERVICES (NAME): [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
Creative Axis: Director	M. Arch Profession	Professional Architect, SACAP: PrArch: [redacted]	17

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION AND EXPERIENCE:

[redacted] has experience in numerous public and private sector projects across South Africa ranging from basic office buildings to complex intermodal stations. His experience in South Africa is spread over a number of projects, including the 85 Anderson rehabilitation project in the Johannesburg CBD, student residences, the Park Station intermodal station upgrade (Braamfontein) and the Kopanong Precinct Project. In each of the mentioned projects, the design was influenced by the environment, the community and most importantly the input received from the client which served as a guiding tool in ensuring that the design was aligned to all the external and internal operational requirements. The success of the various projects is often influenced by the close working relationship between the contractor and the professional team.

[redacted]

Schedule 11A — Specific Experience of Key Personnel

COMPARABLE PROJECTS:

Eskom [redacted]	5 Eskom Customer Network Centres	June 2016-Sept 2018	Varies	Project Architect	Tender Documentation and Construction Supervision Of 5 Eskom Customer Network Centres	Project completed successfully
JOSHCO [redacted]	Fraser House High-Density Residential Conversion	2017 – Aug 2019	42 000 000	Project Architect	Conversion into Housing	Project completed successfully
JDA [redacted]	Midrand BRT Depot	June 2014-Current	300 000 000	Project Architect	Design and Construction Supervision of Midrand BRT Depot	Major Transport Interchange Layover Facility
Department of Public Works [redacted]	Jan Kempdorp Magistrate Court	March 2015 to Current	100 000 000	Design Architect	Design and Construction supervision of New Magistrates Court	New Magistrates Court facility
ACSA [redacted]	O.R Tambo Bussing Gates	Jan2016-Current	80 000 000	Project Architect	Design and Construction for The Additions & Alterations	Project put on hold at Stage 4 due to budgetary issues.
ACSA [redacted]	Baggage Carousel & Charlie 24 Building	Jan2016-Current	60 000 000	Project Architect	Design and Construction for The Additions & Alterations to Terminal A	Project nearing completion (August 2019)

[redacted]

Schedule 11A — Specific Experience of Key Personnel

Turner & Townsend [redacted]	Kopanong Precinct Project Johannesburg CBD	2016-Current	7 000 000 000	Project Architect	Architectural Programmer Space Planning Norms, Office Standards, Output Specifications for a PPP.	On-Going

PROJECT MANAGEMENT SERVICES (NAME): [redacted]			
Employer and Current Job Title	**Qualifications**	**Association and Professional Registration No.**	**No. of Years Specified Experience**
IX ENGINEERS (PTY) LTD Pr. Tech Eng, Pr CPM / Principal Technologist	ND: (Civil)	ECSA: [redacted] SAPCMP: [redacted]	28

Relevant Fields of Specialization, Experience and Comparable Projects

[redacted] is a Professional Technologist and Professional Construction Project Manager with over 28 years' experience in the construction and design of civil and municipal engineering infrastructure in South Africa. Project management of municipal engineering infrastructure projects for several township developments and provision of civil engineering services for low-cost housing schemes. Undertook several investigatory and engineering feasibility studies in identification of projects for various local authorities and has drafted business plans for various municipalities to attract project funding. As part of South Africa's Local Government Development and Support Programme, he compiled water services development plans for some municipalities and has, in collaboration with various programme task teams, drafted modules of training materials and conducted training courses for Managers and technical staff of municipalities in the operation and maintenance of water supply and wastewater reticulation systems. He was the Vice-Chairman of the Northern Cape committee of the South African Institution of Civil Engineering (SAICE).

[redacted]

Schedule 11A Specific Experience of Key Personnel

PROJECT MANAGEMENT SERVICES (NAME): [redacted]			
Employer and Current Job Title	**Qualifications**	**Association and Professional Registration No.**	**No. of Years Specified Experience**
IX ENGINEERS (PTY) LTD Professional Construction Project Manager (PrCPM)	BEng (Electrical)	ECSA: [redacted]	32

Relevant Fields of Specialization, Experience and Comparable Projects

[redacted] is a Professional Engineer and Professional Construction Project Manager (PrCPM) with over 32 years' experience in the design, supervision and project management of electrical engineering projects in South Africa and Southern Africa.

His wide and extensive experience covers all aspects of electrical distribution and reticulation including building electrical installations, emergency power generation, fire detection, public address and access control systems, bulk electrical supply connections, medium- and low-voltage electrical distribution networks, electrical substations and switching stations, power distribution, electrification and low-cost reticulation, electrical network and power management as well as control and lighting installations.

Well-organised and with exceptional managerial skills, he has been responsible for the project management of numerous electrical engineering projects and is widely experienced in all aspects of the provision of electrical engineering services including planning and feasibility studies, investigations, analysis and reports, preliminary and detailed design, compilation and preparation of contract and tender documentation, tender adjudication and reports, contract and construction stage administration, construction supervision, inspections and project management.

Thorough and methodical in his approach, he has managed projects for a wide and diverse range of clients from both private and government sectors. Recently he has been responsible for extensions and alterations to electrical installations at Vredenburg Provincial Hospital, and the terminal buildings at Cape Town International Airport amongst other projects.

At present he is the Sales Lead, Southern Region, is a senior member of the South African Institute of Electrical Engineers, a Member of the South African Federation of Hospital Engineers and the mandated principal in representing IX Engineers in Consulting Engineers South Africa.

[redacted]

Schedule 11A — Specific Experience of Key Personnel

OCCUPATIONAL HEALTH AND SAFETY SERVICES (MINIMUM 1 PROFESSIONAL)

CONSTRUCTION HEALTH ANDSAFETY: [redacted]

Employer and Current Job Title	Qualifications	Association and Professional Registration No.	No. of Years Specified Experience
Eppen-Burger & Associates	B Ing (Mech) (Hon)		

Relevant Fields of Specialization, Experience and Comparable Projects

[redacted] is currently a member of a OHS consultancy firm operating in the construction industry with 13 years of experience as an OHS Agent for Clients. Prior to that he was working as an Occupational safety Inspector for the Dept of Labour for almost 12 years and serviced all industries wrt OHS legislation and investigated an estimated 7000 industrial accidents and attended several court cases regarding OHS accident recommended prosecutions.

[redacted]

Schedule 11A **Specific Experience of Key Personnel**

ENVIRONMENTAL SERVICES (MINIMUM 1 ENVIRONMENTAL ASSESSMENT PRACTITIONER): GUILLAUME NEL				
ENVIRONMENTAL ASSESSMENT PRACTITIONER (NAME): Guillaume Nel & Euonell Visagie				
NAME	[redacted]		**NO. OF YEARS POSTGRADUATE EXPERIENCE**	
EMPLOYER AND CURRENT JOB TITLE	**Guillaume Nel Environmental Consultants (GNEC) - Director**		**Qualification** Master (MSc) Environmental Management B.Hons Environmental Management B Environmental Management	**Date obtained** 2007 1999 1997
Registered with EAPASA	**Yes, Registration No.**	[redacted]	E. Visagie – Registered EAP	
	No, but application submitted (date)	Dec 2020 Registered Auditor	Registered Environmental Auditor – [redacted]	

PARTICULAR EXPERIENCE				
LIST OF RELEVANT PROJECTS (Specify Full Scoping EIA or Basic Assessment	**DURATION OF PROJECT**		**EAPs ROLE IN THE LISTED EIA/ASSESSMENT**	**CLIENT REFERENCE & CONTACT DETAILS**
[redacted] has undertaken more than 300 EIA processes during the last 18 Years	**Start (Month /year)**	**End (Month /year)**		
Vlakkeland Residential Development – **Full EIA** Process (3200 Units)	2016	2017	Full Scoping and EIA. Managing and Compiling Documents and Applications Management of Specialists	[redacted] Head of the Department Human Settlements [redacted]
Transhex Residential Development (8800 Units) **Full EIA**	2016	2018	Full Scoping and EIA. Managing and Compiling Documents and Applications Management of Specialists	[redacted] Head of the Department Human Settlements
[redacted] R269 – Shaws Mountain	2010	2011	Full Scoping and EIA. Managing and	[redacted]

Schedule 11A **Specific Experience of Key Personnel**

Pass and Hemel and Aarde Road **Full EIA**			Compiling Documents and Applications Management of Specialists	Director – Road Design Department Transport and Public Works
				[redacted]
Fishhoek Electrical Depot **Basic Assessment**	2016	2017	Basic Assessment – Process and Applications Management of Specialists	
Paarl South Water Main – **Basic Assessment**	2017	2018	Basic Assessment – Process and Applications Management of Specialists	[redacted]
Gouda WWTW Upgrade **Full EIA Process**	2014	2015	Full Scoping and EIA. Managing and Compiling Documents and Applications Management of Specialists	
Saron WWTW Upgrade **Full EIA Process**	2014	2015	Full Scoping and EIA. Managing and Compiling Documents and Applications	
Pentz Street Pump Station and Sewage Main **Full EIA Process**	2010	2011	Full Scoping and EIA. Managing and Compiling Documents and Applications Management of Specialists	
Oosbosch Bridge Widening **Basic Assessment**	2014	2015	Basic Assessment – Process and Applications Management of Specialists	

[redacted]

Schedule 11A **Specific Experience of Key Personnel**

DR1111 Road Upgrade **Basic Assessment**	2015	2016	Basic Assessment – Process and Applications Management of Specialists	[redacted]
MR265 **Basic Assessment**	2015	2015	Basic Assessment – Process and Applications Management of Specialists	[redacted]
WESTBANK SEWAGE PIPELINE - PAARL – **Basic Assessment**	2010	2011	Basic Assessment – Process and Applications Management of Specialists	[redacted]

Note 1: List of relevant projects for which EAP has undertaken environmental authorization applications (2 Full scoping EIAs and 5 Basic Assessments, minimum)

ENVIRONMENTAL SERVICES (MINIMUM 1 ENVIRONMENTAL ASSESSMENT PRACTITIONER): [redacted]			
Employer and Current Job Title	**Qualifications**	**Association and Professional Registration No.**	**No. of Years Specified Experience**
UMVUTO Environmental Scientist, Climatologist	B Sc Hons (Environmental Science/Climatology)	SACNASP, Pr Sci Nat [redacted]	30
Relevant Fields of Specialization, Experience and Comparable Projects			

[redacted]

Schedule 11A — Specific Experience of Key Personnel

Paul is the Senior Environmental Scientist and Climatologist at Umvoto Africa. He joined Umvoto having returned from an over-wintering year in the Antarctic as the Expedition Leader and Senior Meteorological Officer at the South African Base, working for the Department of Environmental Affairs, and the South African Weather Service.

Prior to climatological work in the Antarctica, Paul worked as private environmental consultant and built up 15 years' experience as an environmental practitioner, managing the Environmental Impact Assessment process and compiling Environmental Management Reports and Basic Assessment Reports. He specialised in the Exploration, Prospecting and Mining Industry. His skills include, preparatory work for developer and miners in the Environmental Authorisation and Application process, Performance Assessments, Quantum of Rehabilitation Analysis, Mine Works Programs and Mine
Production Audits. As an Environmental consultant to the industry, he developed extensive experience in the rehabilitation process, specifically in the preparation of rehabilitation programs and as the Ecological Site Officer on developments. He is an accredited professional environmental practitioner with the EAPSA board. GIS and mapping is also part of his experience
base. Currently at Umvoto, Paul is the Hydro-geological Technician for the Hermanus-Gateway, Stanford-Kouevlakte and Oudtshoorn-Blossoms Well fields. In this capacity he works closely with the Overstrand and Oudtshoorn Municipalities in providing logistical and technical support to the operation. He also heads up the Umvoto Environmental Department, in which his areas of responsibility include the management of ecological field teams for drill sites, monitoring of ecological sites and infrastructure and development of well fields. The Umvoto Environmental Department also manages applications for a range of licenses from the Department of Environment and Planning and the Department of Mineral Resources,

He is also project managing a Water Research Council project on Climate Change Adaptation and Disaster Risk Reduction in the Eastern Cape. In this work he has acted in an advisory capacity to the Chris Hani District Municipality in providing guidance and recommendation on climate change mitiation for the rural village of Tsengewe. The project was central to Umvoto Africa's award on the World Design Capital 2014 program and instructional videos of the outcomes have been featured in the Sundance Institute Short Film Challenge, sponsored by the Bill and Melinda Gates Foundation. Prior to environmental consulting, Paul worked in management training and facilitated and developed programs based on improving performance in teams and workgroups. He is particularly and specifically experienced in the scope of outdoor experiential field and adventure programs. He is currently developing an interactive learning program for Climate Change and Disaster Risk Reduction. Specifically for use in participatory workshops in rural South Africa. Owing to his years of experience in the environmental field, climatology, climate change and weather forecasting together with extensive travels to unusual destinations, he is requested to deliver have talks and public lectures. These have included radio and TV, societies and forums and the UCT Summer School program. His ease and comfort with public speaking has aided him in facilitating stakeholder and public participation processes with regard to the EIA and Scoping procedures. He is the Umvoto front man on public presentations and communiqué.

[redacted]

Schedule 11A — Specific Experience of Key Personnel

FRESHWATER ECOLOGIST (MINIMUM 1 PROFESSIONAL): [redacted]			
Employer and Current Job Title	**Qualifications**	**Association and Professional Registration No.**	**No. of Years Specified Experience**
Sole proprietor (Inland Waters Consultancy) - Associate of Freshwater Research Centre NPC.	B.Sc, University of Cape Town (UCT) - 1996 • B.Sc Hons (Ocean & Atmosphere Science), First Class, UCT - 1997 • M.Phil (Environmental Science), UCT - 2000 • M.Sc (Ecological Assessment), with Distinction, Stellenbosch University - 2004	• Certified Professional Natural Scientist (Pr.Sci.Nat.) with South African Council for Natural Scientific Professions (SACNASP); Registration number: [redacted] • Member of Southern African Society of Aquatic Scientists. • Member of International Association for Impact Assessment (South Africa). • Member of South African Wetland Society (ex Board Member).	20

Relevant Fields of Specialization, Experience and Comparable Projects

RELEVANT FIELDS OF SPECIALISATION:
20 years of experience in the environmental sciences, with approximately 16 years specialising in aquatic (freshwater) science. Work experience includes:

- Specialist aquatic ecology input into environmental impact assessments;
- Water quality and aquatic ecosystem situation assessments;
- River and wetland "health" assessments;
- Water quality and freshwater ecological monitoring;
- Coordination of 3rd-year undergraduate course in Inland Water Ecosystems at University of Cape Town (2004 – 2005/6);
- Delivering lectures to university students;
- Assistance with the running of training courses (e.g. SASS5 aquatic invertebrate assessment method);
- Co-supervision of Honours and Masters students with projects relating to Freshwater Ecology;
- Reviewing of consulting reports and academic papers;
- Delivery of presentations at international and national conferences;

[redacted]

Schedule 11A **Specific Experience of Key Personnel**

• Coordination and management of consulting projects (including budgeting, financial administration, management of sub-consultants, coordination of field work, overseeing report-writing, etc.); and
• Involvement in and management of research projects relating to inland aquatic ecosystems, including the testing and development of assessment "tools".

COMPARABLE PROJECTS:

• Water quality situation assessment of the Berg River System in Drakenstein Municipal Area, for incorporation into Drakenstein Municipality's Year 2004 State of Environment Report (for Environmental Evaluation Unit, University of Cape Town): 2004.
• Coordination and management of the development of a classification system for wetlands and other aquatic ecosystems in South Africa (for South African National Biodiversity Institute): 2005 to 2013.
• Coordination of curriculum development for a series of modules in Integrated Environmental Water Management and coordination of short courses (for Department of Water Affairs, under the auspices of the Framework Programme for Education and Training in the Water Sector [FETWater]): 2005–2010.
• Freshwater ecological input into baseline assessment, water quality monitoring and environmental impact assessment for Mothae Diamond Mine, Lesotho (for Mothae Diamonds (Pty) Ltd): 2006–2012.
• Involvement in desktop mapping and ground-truthing for City of Cape Town's Wetlands Map: 2007–2009.
• Coordination and management of a review and risk assessment of the proposed acquisition of additional land for the expansion of the Harold Porter National Botanical Garden, Betty's Bay, Western Cape (for South African National Biodiversity Institute): 2008.
• Involvement in evaluations of implementation of the Ecological Reserve for the Palmiet and Koekedouw Rivers (for C.A.P.E. Ecological Reserve Implementation Programme): 2008–2009.
• Involvement in Table Mountain Group Aquifer baseline monitoring (for City of Cape Town): 2008–2011.
• Freshwater ecology and water quality impact assessment for proposed upgrading of the Piketberg Wastewater Treatment Works (for Aurecon South Africa): 2009–2010.
• Freshwater ecology impact assessments for proposed Langhoogte and Wolseley Wind Farms (for GIBB (Pty) Ltd): 2012–2013.
• Freshwater ecology input into Environmental Management Programme for Kappa-Omega 765 kV Eskom power line (for Acer (Africa) Environmental Management Consultants): 2013.
• Freshwater ecology and water quality input for Millennia Park office park "Green Star" accreditation with the Green Building Council of South Africa (for Bornman & Associates (Pty) Ltd): 2010 to 2013.
• Development of a Decision Support Protocol for the assessment of wetland condition (Water Research Commission project): 2012 to 2014.
• Compilation of the Water Quality module, and assistance with the compilation of the Aquatic Ecology module for Phase 2 of the project to develop a FET Water Masters curriculum (for the Water Research Commission, under contract to the University of Johannesburg): 2013 to 2014.
• Involvement in Freshwater Ecology Specialist Study for Strategic Environmental Assessment (SEA) for Phase 1 of the Square Kilometre Array (SKA) project (for CSIR): 2015 to 2016.
• Development of a refined suite of tools for assessing the Present Ecological State of wetland ecosystems (Water Research Commission project): 2016 to 2019.
• Member of Freshwater Ecosystems Committee for National Biodiversity Assessment 2018 (NBA-2018) project: 2016 to 2019.
• Coordination of Water Use Licence Application (WULA) for Klawer Wind Energy Facility, incl. completion of specialist freshwater ecology studies (for Building Energy South Africa (Pty) Ltd): 2017 to 2018.
• Provision of freshwater ecological specialist input into numerous (>50) environmental assessment and water use authorisation projects.

[redacted]

ANNEX 4

SCHEDULE 12: SUPPORT RESOURCES

[redacted]

iX engineers
Infrastructure Excellence

TENDER NO: 194C2020/21 TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN		
NAME OF PACKAGE	**DESCRIPTION**	**CURRENTLY OWNED/ LICENCED OR OTHER**
SCHEDULE 12: SUPPORT RESOURCES		
Hydraulic Analysis Software Packages available for use		
Civil Designer	Pipeline (Sewer and Water) Hydraulics design package	Currently owned/ licenced by iX Engineers
AutoCAD Civil 3D	Civil 3D Design package for sewer and water hydraulic designs	Currently owned/ licenced by iX Engineers
Wadiso	Water system analysis package	Currently owned/ licenced by iX Engineers
Surge 2010	Water hammer (surge) analysis package	Currently owned/ licenced by iX Engineers
Structural Analysis Software Packages available for use		
Prokon (Full Package)	Package for design of **concrete and steel structures**, frames and slabs, slab / beam elements on elastic supports / soil, beams, columns, pad footings and crack widths	Currently owned/ licenced by iX Engineers
MEP Design and other Software		
Autodesk REVIT 2019, 2020, 2021	3D modelling software	Currently owned/ licenced by iX Engineers
Carrier HAP	Heating and Cooling Loads, Energy Usage	Currently owned/ licenced by iX Engineers
BIM 360	Autodesk collaboration software	Currently owned/ licenced by iX Engineers
Designbuilder	Dynamic thermal simulations	Currently owned/ licenced by iX Engineers
Other Software Packages available for use		
AutoCAD	AutoCAD drawing package	Currently owned/ licenced by iX Engineers
	AutoCAD Inventor for 3D drawings	Currently owned/ licenced by iX Engineers
Biowin	Process modelling package	Currently owned/ licenced by iX Engineers
UCTPHO / UCTOLD	Process modelling package	Currently owned/ licenced by iX Engineers
Stasoft	Process modelling package	Currently owned/ licenced by iX Engineers
ArcView	GIS package	Currently owned/ licenced by iX Engineers
Microsoft Office 2010	Microsoft Excel, Word, Powerpoint, Outlook, etc.	Currently owned/ licenced by iX Engineers
Microsoft Windows 7	Microsoft operating system	Currently owned/ licenced by iX Engineers
Bill	Bills of Quantities package	Currently owned/ licenced by iX Engineers
Hardware available for use		
Computer workstations	Computers running the above packages in order to complete the project	Currently owned/ licenced by iX Engineers
Printers	Printers used to print documents	Currently owned/ licenced by iX Engineers
Plotters	Printers used to print large drawings / plans	Currently owned/ licenced by iX Engineers

[redacted]

ANNEX 5

SCHEDULE 18: ADDITIONAL PERSONNEL SCHEDULE

[redacted]

CITY OF CAPE TOWN TENDER

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TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

SCHEDULE 18

ADDITIONAL PERSONNEL OTHER THAT KEY PERSONNEL

[redacted]

SCHEDULE 18: ADDITIONAL PERSONNEL SCHEDULE

The Tenderer is referred to clause C.2.1.4.6 of the Tender Data and shall insert in the spaces provided below details of the additional personnel required to be in its permanent employment at the close of tender. Alternatively, signed undertakings from specialist consultants/firms having the required additional personnel, stating that they will undertake the necessary work on behalf of the tenderer in terms of sub-consultant agreements, will be acceptable. Such undertakings must be attached to this schedule.

Different individuals must be identified for each of the additional personnel listed. The Service Provider may propose to use the same additional personnel for different branches when tendering to provide multidisciplinary professional services for more than one branch.

A brief curriculum vitae (maximum of 3 pages is preferred) of all additional personnel (including sub-consultants), must also be submitted with the tender submission, appended to Schedule 18.

SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
Civil Engineering Services	[redacted]	B Tech (civil) 1997	Design Engineering services	20 Years	iX Engineers
			Management projects	5 Years	
			Feasibility and Readiness Reports	10 Years	
			Procurement Engineering services		
			Liaison clients	15 Years	
			Technical reporting	15 Years	
			Cost estimation	15 Years	
			Construction Monitoring	20 Years	
				20 Years	

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	B Tech (civil) 2011	Design Engineering services Management projects Procurement Engineering services Liaison clients Technical reporting Cost estimation Construction Monitoring	9 Years 5 Years 5 years 7 Years 9 Years 9Years 7 years	iX Engineers
Civil Engineering Services Water	[redacted]	BEng (Civil), 2006 ECSA: Pr. Eng. [redacted]	Diverse experience on multi- disciplinary projects. This includes detailed engineering hydraulic structures, pumps and pipelines, hydraulic re-mining infrastructure, Acid Mine Water treatment, Potable water treatment, Wastewater treatment and Project management and Project Management experience. Ian leads the 3D parametric design modelling of pump stations, water treatment works, waste water treatment works and mine water treatment works. As Project Manager on large multi-disciplinary projects, Ian has experience with contract management of the GCC, FIDIC (plant and Design Build) as well as GCC for Mechanical and Electrical works projects.	13	iX Engineers

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	B.Eng (Civil), 2008 Pr Eng, [redacted]	His main focus is on bulk water and sewer as well as water and sewer reticulation systems for private developers and governmental authorities. He is familiar with water and sewer modelling software, CAD and Surge software. He is experienced in Contract Administration according to the General Conditions of Contract (GCC), while also being involved in New Engineering Contract (NEC) projects, and Site Supervision on water and sewer projects. He also administrated and supervised largescale water meter audits in excess of 30,000 erven for Overstrand and Drakenstein Municipalities	11	iX Engineers
	[redacted]	MEng: Water Quality Engineering, 2020 BTech: Civil Engineering, 2009 Pr Tech Eng [redacted]	He has a master's degree in the field of Water and Wastewater Treatment specialising in Process design of Water and Waste Water Treatment Plants. During the first 3 years of his career, experience was acquired in the design of civil services including storm water, roads, sewer networks, water networks for a number of urban development projects. Experience was also gained in Contract Administration. Site experience includes full time supervision for 6 months on a Solar Plant Project in Upington, supervising the construction of all the civil services.	11	iX Engineers

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	B.Tech (Civil), 1998 Pr Tech Eng, [redacted]	[redacted] is a Professional Engineering Technologist with over 23 years' experience in the field of water supply and sewer reticulation projects. Vilhelm is experienced and thoroughly sound in the analysis, design, control and monitoring of multidisciplinary civil and infrastructural works. His experience includes the analysis and design, tender and contract documentation as well as construction supervision of bulk water supply and sewerage reticulation schemes comprising reinforced concrete reservoirs, water mains, sewer gravity mains and pump stations. Specializing in water-hammer analyses, he is responsible for applying his knowledge in this field for various projects in other offices of the company country-wide.	23	iX Engineers
Structural Engineering Services	[redacted]	MScEng (Civil), 2003 BEng (Civil), 1996 ECSA:Pr Eng [redacted]	His experience includes on-site construction activities, research and development, structural design and project management (from sketch plan design to completion), site supervision and liaison with other professionals on a wide variety of projects.	24	iX Engineers

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	BTech Degree, 2005 ECSA: Pr Tech Eng, [redacted]	His experience includes structural design (from sketch plan design to completion), site supervision and liaison with other professionals on a wide variety of projects. His experienced in the design of infrastructure, educational, industrial, healthcare, commercial and residential buildings. He has comprehensive design experience including concrete, steel and timber design for a variety of structures.	16	iX Engineers
	[redacted]	B.Eng (Civil), 2003 M.Eng (Civil), 2005 ECSA:Pr.Eng, [redacted]	Experience in the detail design and detailing of reinforced concrete, foundation and structural steel structures. He has extensive experience in high order finite element analysis while being involved in the development of structural engineering and detailing software tools.	11	iX Engineers
Mechanical Engineering Services	[redacted]	M. Eng (Mech), 2017 B.Eng (Mech), 2012	Designs, Contract Admin and Site duties for: HVAC, Wet Services, Medical Gas, Fire protection Refer also to CV	7	iX engineers
	[redacted]	B.Tech (Mech), 2015	Designs, Contract Admin and Site duties for: HVAC, Wet Services, Industrial Compressed Air Refer also to CV	6	iX engineers

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	B. Eng Hons (Mech), 2007 ECSA Pr. Eng [redacted]	Project Management, Designs, Contract Admin and Site duties for: HVAC, Wet Services, Medical Gas, Fire Protection, Lifts, Escalators, Automatic baggage conveyance, Sterilisation and Dental equipment, Industrial compressed air, High pressure washing systems, LPG installations Refer also to CV	13	iX engineers
Electrical Engineering Services	[redacted]	B.Tech (Elec) 2008 Pr Tech Eng, [redacted]	[redacted] is a Professional Engineering Technologist with over 11 years' experience in the design and supervision of electrical reticulation and distribution networks. His experience includes the surveying of existing low voltage overhead and underground electrical networks, detail design of 11kV indoor and outdoor switchgear, medium- and low voltage underground and overhead networks, sports field lighting and street lighting and he has also been involved in the compilation of tender documentation including specifications, bills of quantities and contractual documentation, cost estimates, tender evaluation and adjudication. Experience was also gained in pumping stations including motor control centres with telemetry/SCADA system monitoring and building services including power, lighting, data/IT, access control, fire detection systems and UPS units.	11	iX engineers

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	National Diploma (Electrical), 1993 Pr Tech Eng [redacted]	[redacted]s a Professional Technologist with over 30 years' experience in the design, supervision and project management of electrical engineering projects. His experience covers all aspects of building electrical installations, emergency power generation, fire detection, public address systems, bulk electrical supply connections, medium- and low-voltage electrical distribution networks and lighting installations. Berend approaches his work in a detailed manner and has been responsible for project management of many electrical engineering projects.	30	iX engineers
	[redacted]	B.Tech (Electrical), 2010 (ECSA): Candidate Technologist [redacted]	[redacted]s an Electrical Technologist with 11 years' experience in the design and supervision of electrical, control and instrumentation projects in Africa. His main focus is on Low Voltage (LV) switchboards and Motor Control Centres (MCCs) for the public and private sectors. His experience includes the provision for power supply, building small power and lighting, standby generator, and uninterruptible power supply systems.	11	iX engineers
Quantity Surveying Services	[redacted]	BSc QS (UCT) 8 December 2008	Cost estimates, measurement of BOQ, site and client meetings, overall cost control, preparing valuations and fee accounts. General contract administration	12	Talani Quantity Surveyors (Pty) Ltd

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	BSc (Hons) QS (UCT) 15 December 2014	Cost estimates, measurement of BOQ, site and client meetings, overall cost control, preparing valuations and fee accounts. General contract administration	5	Talani Quantity Surveyors (Pty) Ltd
Architectural Services	[redacted]	B.Tech Architectural Management, 2014 Professional Registration: T0933	Actively involved in architecture for 20 years experience in on-site supervision and technical drawings	20	Creative Axis
	[redacted]	Master of Architecture (Professional) 2015 BAS Hons 2013 BAS 2010 Pr.Arch: [redacted]	Experience and exposure are acquired from local, regional and international platforms which includes: Health Care, Educational, Hotel and Leisure, Residential, Office, Retail, Industrial, Urban design + Planning and Heritage/Art Museum	14	Creative Axis
	[redacted]	ND:Architectural Technology, 2016	3D and 2D Software such as Lumion, ArchiCAD, Revit and AutoCAD	8	Creative Axis

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
CAD Operator/ Draughting personnel	[redacted]	Multi-Disciplinary National Draughting Certificate (N4 & N5) obtained from Academy IDT	[redacted] is a 3D Designer with 7 years' experience in the civil engineering environment. His experienced in modelling projects with Autodesk products that includes Civil 3D, Revit and 3D Studio Max. Involvement as a BIM coordinator/ modeler integrating with Autodesk BIM360. He has provided training for Autodesk products and has been involved in the design and plan production of civil infrastructure projects including bulk storm water, sanitary sewer, pressure systems, water and wastewater treatment plants, structural building, and civil infrastructure. Extensive experience in 3D rendering using 3D Studio Max and Unity3D to create Virtual Reality Simulations/Analyses for the promotion and design communication of projects to stake holders.	7	iX Engineers (Pty) Ltd

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	MDDOP (N5) Member, South African Institute of Draughting (SAID) Member, South African National Institute of Rock Engineering (SANIRE)	His key responsibilities are in assisting Engineers by producing drawings for various projects following the project specifications and quality standards. As well as the creation and maintenance of drawing templates, pipe catalogues, parametric Revit families and software functions, creating 3D models and assisting with designs for Virtual Reality as well as post processing of Aerial Surveys.	4	iX Engineers (Pty) Ltd
	[redacted]	ND (Civil), 2017	[redacted] is a resourceful civil technician with more than 4 years of experience on Multi-disciplinary projects for the public, mining and oil and gas sectors. The experience includes detailed engineering experience and involvement on hydraulic structures, bulk water and wastewater treatment, pump stations and pipelines, detailing and design as well as roads. Areas of expertise consist of 3D Parametric modelling, high level detailed design 2D drawings, terrain modelling, shaping, and performing quantities using Autodesk Civil 3D, Technical report writing, knowledge of data manipulation and processing, tendering, evaluation and cost estimation.	4	iX Engineers (Pty) Ltd

[redacted]

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SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
GIS Technician	[redacted]	BA (Hons) GIS (Analysis and Decision Making), University of Stellenbosch, 2003	[redacted] is a Technical Assistant and Senior GIS Professional with 15 years' experience in the fields of Engineering and Environmental Services and Town and Regional Planning. He has extensive experience with data capture, modelling, spatial analysis, remote sensing, map production, management of spatial data and report writing for various engineering and environmental projects. He is also experienced in the town and regional planning sector, compiling spatial and attribute data and preparing plans for projects, such as spatial development frameworks (SDFs), structure plans and zoning schemes. During recent years, Rian has been involved in projects in the water services sector, assisting with the compilation of Audit and Development Reports for various municipalities in the Western Cape.	15 years	iX Engineers (Pty) Ltd

[redacted]

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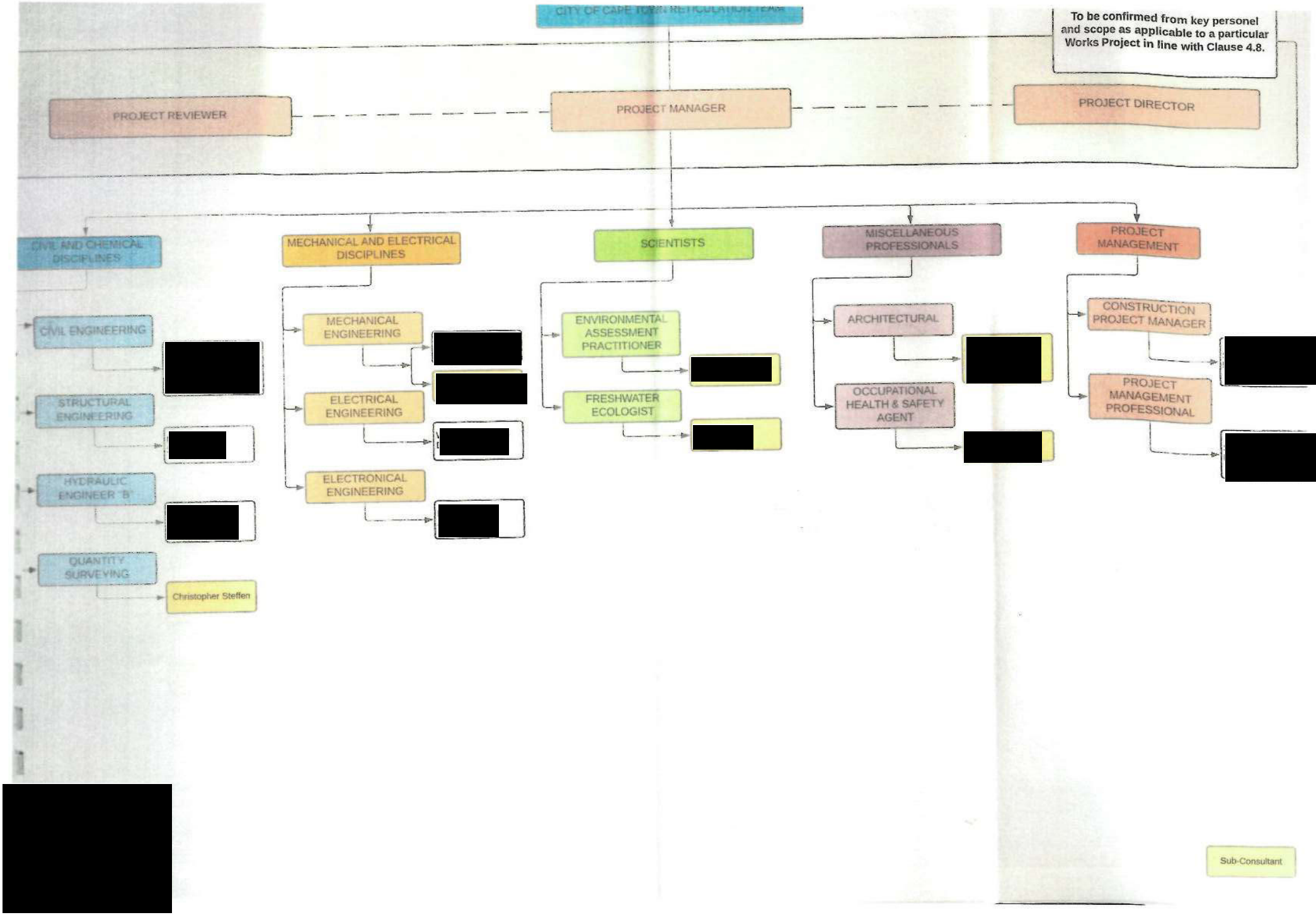
SERVICE	NAME	QUALIFICATION AND DATE	AREA(S) OF EXPERTISE (with years of experience, where applicable)	YEARS OF EXPERIENCE	EMPLOYER/ COMPANY
	[redacted]	BA (Hons) Geographic Information Systems, Stellenbosch University (2013) BA Socio Informatics, Stellenbosch University (2012)	[redacted] is a GIS practitioner with over 7 years' experience in the field of consulting engineering services. While being employed at iX engineers, experience has been gained in various water, treatment, urban infrastructure, electrical, environmental, roads and multidisciplinary engineering projects, where he has been responsible for the acquisition, digitizing, capturing, conversion, manipulation and analysis of spatial data, as well as the production of maps, web maps, plans and reports. He took lead in setting up and managing the company's GIS and is a member of the company's BIM Committee, where he is responsible for the integration between GIS and BIM. He has been involved with projects for private clients, government departments and municipalities.	7	iX Engineers (Pty) Ltd

[redacted]

ANNEX 6

SCHEDULE 19: ORGANISATIONAL STRUCTURE

[redacted]


CITY OF CAPE TOWN RETICULATION TEAM
To be confirmed from key personel and scope as applicable to a particular Works Project in line with Clause 4.8.
PROJECT REVIEWER
PROJECT MANAGER
PROJECT DIRECTOR
CIVIL AND CHEMICAL DISCIPLINES
MECHANICAL AND ELECTRICAL DISCIPLINES
SCIENTISTS
MISCELLANEOUS PROFESSIONALS
PROJECT MANAGEMENT
CIVIL ENGINEERING
STRUCTURAL ENGINEERING
HYDRAULIC ENGINEER 'B'
QUANTITY SURVEYING
Christopher Steffen
MECHANICAL ENGINEERING
ELECTRICAL ENGINEERING
ELECTRONICAL ENGINEERING
ENVIRONMENTAL ASSESSMENT PRACTITIONER
FRESHWATER ECOLOGIST
ARCHITECTURAL
OCCUPATIONAL HEALTH & SAFETY AGENT
CONSTRUCTION PROJECT MANAGER
PROJECT MANAGEMENT PROFESSIONAL
Sub-Consultant

ANNEX 7

SCHEDULE 20: PROPOSED DEVIATIONS AND QUALIFICATIONS BY TENDERER

[redacted]

iX engineers
Infrastructure Excellence

[redacted]

11 December 2020

Enquiries : 194C CoCT
Our ref.:
Your ref.:
File ref.:

City of Cape Town SCM
Civic Centre
12 Hertzog Boulevard
Cape Town
8001

For Attention: Supply Chain Management

TENDER NUMBER: 194C/2020/21: TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

Please note that the statement below is not a qualification of the tender, but a clarification.

Given the fact that the "basket of hours" used for tender evaluation purposes by the CCT is unknown iX engineers at this time, iX engineers cannot predict the effect that use of sub-consultants will have on tender evaluation in terms of BBBEE and the total percentage of sub-consulted work. To manage this uncertainty, iX engineers hereby clarify our approach to actively manage the work coming out of this tender. iX engineers commit to manage the work in such a way that no more than 25 % of the work on the project will be sub-consulted to entities who are not on level 1 BBBEE contribution. iX engineers intend to manage the BBBEE and total percentage of work requirements of the tender by appointing key staff with similar or better experience and qualifications than that offered in our tender via the sub-consultancy approach should it be necessary.

Yours faithfully

[redacted]

[redacted]

[redacted]

ANNEX 8

SCHEDULE 23: PREFERENCE SCHEDULE TO BE USED IN TERMS OF THE AMENDED CODES FOR MEASURING BROAD-BASED BLACK ECONOMIC EMPOWERMENT IN THE CONSTRUCTION SECTOR (2017)

[redacted]

CITY OF CAPE TOWN

WATER AND SANITATION

CONTRACT NO. 194C/2020/21

TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

SCHEDULE 23: PREFERENCE SCHEDULE TO BE USED IN TERMS OF THE AMENDED CODES FOR MEASURING BROAD-BASED BLACK ECONOMIC EMPOWERMENT IN THE CONSTRUCTION SECTOR (2017)

Preference Schedule where preferences are granted in respect of B-BBEE contribution

1 Definitions

The following definitions shall apply to this schedule:

All applicable taxes: Includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

Applicable Code: Shall be either the Amended Codes of Good Practise (published on 11 October 2013) or Sector Specific Codes as indicated in the tender conditions

B-BBEE: Broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act.

B-BBEE status level of contributor: The B-BBEE status of an entity in terms of a code of good practice on black economic empowerment issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act.

Bid (Tender): A written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals.

Black Designated Groups: The meaning assigned to it in the codes of good practice issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003, (Act 53 of 2003).

Black People: The meaning assigned to it in section 1 of the Broad-Based Black Economic Empowerment Act.

Broad-Based Black Economic Empowerment Act: The Broad-Based Black Economic Empowerment Act, Act 53 of 2003.

Consortium or Joint Venture: 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.

Contract The agreement that results from the acceptance of a bid by an organ of state.

Co-operative: A co-operative registered in terms of section 7 of the Co-operatives Act, 2005 (Act no. 14 of 2005).

Designated Group: Black designated groups, black people, women, people with disabilities or small enterprises as defined in section 1 of the National Small Enterprises Act, 1996 (act no. 102 of 1996)

Designated Sector: A sector, sub-sector or industry or product that has been designated in terms of any relevant regulation of the Preferential Procurement Regulations, 2017.

Exempted Micro Enterprise (EME): An exempted micro enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act.

Firm Price: The price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract.

Functionality: The ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.

Military Veteran: The meaning assigned to it in section 1 of the Military Veterans Act, 2011 (Act No. 18 of 2011).

National Treasury: The meaning assigned to it in section 1 of the Public Finance Management Act, 1999 (Act No. 18 of 1999.

Non-firm prices: All prices other than "firm" prices.

Person: Includes a juristic person.

People with disabilities: The meaning assigned to it in section 1 of the Employment Equity Act, 1998 (Act No. 55 of 1998).

Price: Includes all applicable taxes less unconditional discounts.

Proof of B-BBEE status level of contributor: The B-BBEE status level certificate issued by an authorised body or person, a sworn affidavit as prescribed by the B-BBEE Codes of good Practice or any other requirement prescribed in terms of the Broad-Based Black Economic Empowerment Act.

[redacted]

Qualifying Small Enterprise (QSE): A qualifying small enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act.

Rand Value: means the total estimated value of a contract in Rand, calculated at the time of bid invitations.

Rural Area: A sparsely populated area in which people farm or depend on natural resources, including villages and small towns that are dispersed through the area or an area including a large settlement which depends on migratory labour and remittances and government social grants for survival, and may have a traditional land tenure system.

Stipulated Minimum Threshold: The minimum threshold stipulated in terms of any relevant regulation of the Preferential Procurement Regulations, 2017.

Sub-contract: The primary contractor's assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract.

The Act: The Preferential Procurement Policy Framework Act, 2000 (Act No 5 of 2000).

Total Revenue: Bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007.

Township: An urban living area that at any time from the late 19th century until 27 April 1994, was reserved for black people, including areas developed for historically disadvantaged individuals post 27 April 1994.

Treasury: The meaning assigned to it in section 1 of the Public Finance Management Act, 1999 (Act No. 18 of 1999).

Trust: The arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person.

Trustee: Any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

Youth: The meaning assigned to it in section 1 of the National Youth Development Agency Act, 2008 (Act No. 54 of 2008).

2 Conditions associated with the granting of preferences

A supplier that is granted a preference undertakes to:

1) accept that the number of preference points allocated will be based on the B-BBEE status level of contributor of the supplier as at the closing date for submission of quotation offers;
2) not sub-contract more than 25% of the value of the contract to sub-contractors that do not have an equal or higher B-BBEE status level of contributor than the supplier, unless the intended sub-contractors are exempted micro enterprises that have the capability and ability to execute the sub-contract works or unless otherwise declared in terms of Section 5 below;
3) accept that a contract may not be awarded if the price offered is not market related;
4) accept the sanctions set out in Section 3 below should Condition 2(2) be breached, or should the tenderer have submitted any false information regarding its B-BBEE status level of contributor, local production and content, or any other matter required in terms of this bid that will affect, or has affected the bid evaluation;
5) accept that, in order to qualify for preference points, it is the responsibility of the supplier to submit documentary proof of its BBBEE level of contribution in accordance with the Codes of Good Practise, 2013, to the CCT at the Supplier Management Unit located within the Tender Distribution Office, 2nd Floor (Concourse Level), Civic Centre, 12 Hertzog Boulevard, Cape Town (Tel 021 400 9242/3/4/5);
6) accept that, further to 5) above, Consortiums/Joint Ventures will qualify for preference points, provided that the entity submits the relevant certificate/scorecard in terms of the Preferential Procurement Regulations, 2017. Note that, in the case of unincorporated entities, a verified scorecard in the name of the consortium/Joint Venture must be submitted with the quotation (attached to this schedule);
7) accept that if it is found that, in the performance of the contract, the participation of the various partners in a Consortium/ Joint Venture differs substantially from that upon which the consolidated scorecard submitted in terms of 5) above was based, and the impact of which is that the Joint Venture would not have been awarded the contract in terms of the actual B-BBEE level of contribution achieved by the Joint Venture, then a financial penalty shall be applied (in addition to any other remedies that the CCT may have) in accordance with Section 3 below;
8) accept that the CCT will verify the B-BBEE level of contributor of the supplier as at the closing date for submission of tender offers, to determine the number of preference points to be awarded to the supplier. In the case of Consortiums/Joint Ventures which tender as unincorporated entities, a verified scorecard submitted with the tender and valid as at the closing date will be used to determine the number of preference points to be awarded to the supplier;

9) accept that, notwithstanding 8) above, a supplier will **not** be awarded points for B-BBEE status level of contributor if he indicates in his tender that he intends sub-contracting more than 25% of the value of the contract to sub-contractors that do not qualify for at least the points that the supplier qualifies for unless the intended sub-contractors are exempted micro enterprises that have the capability and ability to execute the sub-contract works;

10) accept that any subcontracting arrangements after the award of the tender may only be entered into upon the prior approval of the City of Cape Town; and

11) immediately inform the City of Cape Town of any change that may affect the tenderer's B-BBEE level of contribution upon which preference points will be or have been allocated.

3 Sanctions relating to breaches of preference conditions

The sanctions for breaching the conditions associated with the granting of preferences are:

1) disqualify the supplier from the quotation process;
2) recover costs, losses or damages the CCT has incurred or suffered as a result of the supplier's or contractor's conduct;
3) cancel the contract in whole or in part and claim any damages which the CCT has suffered as a result of having to make less favourable arrangements due to such cancellation;
4) restrict the supplier, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from the CCT for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied and inform the National Treasury accordingly;
5) forward the matter for criminal prosecution; and/or
6) financial penalties payable to the CCT, as set out below.

Financial penalty for breach of Condition 2 in Section 2 above:

The penalty to be applied for sub-contracting more than 25% of the value of the contract to sub-contractors that do not qualify for at least the preference points that the supplier qualified for (unless so declared or proven to be beyond the control of the supplier, or the sub-contractors are EMEs that have the capability and ability to execute the sub-contract works) shall be as provided for in the following formula:

Penalty = 0.5 x E(%) x P*

where:

E = The value of work (excluding VAT) executed by sub-contractors that do not qualify for at least the preference points that the supplier qualified for, expressed as a percentage of P*, less 25%

P* = Value of the contract

Financial penalty for breach in terms of condition 6 in Section 2 above:

The penalty to be applied where, in the performance of the contract, the participation of the various partners in a Consortium/ Joint Venture differs substantially from that upon which the consolidated scorecard submitted in terms of 5) in Section 2 above was based, and the impact of which is that the Joint Venture would not have been awarded that contract in terms of the actual B-BBEE level of contribution achieved by the Joint Venture, shall be as provided for in the following formula:

Penalty = 5/100 x ($B\text{-}BBEE^{a} - B\text{-}BBEE^{t}$) x P*

where:

$B\text{-}BBEE^{a}$ = The B-BBEE level of contribution that is achieved, determined in accordance with the actual participation of the Joint Venture partners in the performance of the contract

$B\text{-}BBEE^{t}$ = The B-BBEE level of contribution that was used to determine the number of preference points granted to the Joint Venture at the time of quotation evaluation

P* = Value of the contract

Financial penalty for breach in terms of condition 10 in Section 2 above:

The penalty to be applied where the supplier fails to disclose subcontracting arrangement after the award of the tender is up to a maximum of 10% of the value of the contract.

4 Level of Contribution in respect of enterprise status or structure of the tendering entity (the supplier)

In the interest of transparency, suppliers are required to complete Table 1: Level of Contribution below applicable to the Code they wish to be evaluated against.

Table 1: Level of Contribution: **Amended Codes for Measuring Broad-Based Black Economic Empowerment in the Construction Sector.**

Type of B-BBEE Contributor	Status (tick box(es) below as applicable)
Exempted Micro Enterprise (EME), 100% black-owned	☐
Exempted Micro Enterprise (EME), at least 51% but less than 100% black-owned	☐
Exempted Micro Enterprise (EME), at least 30% but less than 51% black-owned	☐
Exempted Micro Enterprise (EME), less than 30% black-owned	☐
Exempted Micro Enterprise B-BBEE Status Level of Contributor[1] ☐	☐
Qualifying Small Enterprise B-BBEE Status Level of Contributor[1] ☐	☐
Qualifying Small Enterprise (QSE), 100% black-owned	☐
Qualifying Small Enterprise (QSE), at least 51% but less than 100% black-owned	☐
Qualifying Small Enterprise (QSE), less than 51% black-owned	☐
Verified B-BBEE contributor B-BBEE Status Level of Contributor[1] 1	✓
Non-compliant contributor	☐

[1] If it is indicated that the company/firm/entity is a verified B-BBEE contributor, then the verified status level of contributor must be inserted in the box provided (insert a number from 1 to 8 as applicable)

5 Declarations

1) With reference to Condition 8 in Section 2 above, the supplier declares that:

   I/we hereby forfeit my preference points because I /we DO intend sub-contracting more than 25% of the value of the contract to sub-contractors that do not qualify for at least the points that I/we as supplier qualify for or are not exempted micro enterprises that have the capability and ability to execute the sub-contract works ☐

Note:

Tenderers who do not tick this box will be allocated preference points but the sanctions relating to breaches of preference conditions in Section 3 will be applicable if the tenderer contravenes the conditions in Section 2.

[redacted]

2) The undersigned, who warrants that he/she is duly authorized to do so on behalf of the supplier, hereby certifies that the preference claimed based on the B-BBEE status level of contribution indicated in Table 1, qualifies the supplier, subject to condition 8 in Section 2 above, for such preference claimed, and acknowledges that:

(i) the information furnished is true and correct;

(ii) the preference claimed is in accordance with the conditions of this schedule;

(iii) the supplier may be required to furnish documentary proof to the satisfaction of the CCT that the BBBEE level of contributor as at the closing date is correct; and

iv) he/she understands the conditions under which preferences are granted, and confirms that the supplier will satisfy the conditions pertaining to the granting of preferences.

[redacted]

11 DECEMBER 2020

Date

[redacted]

Name (PRINT)

(For and on behalf of the Supplier (duly authorised))

For official use.

[redacted]

[redacted]

ANNEX 9

CITY OF CAPE TOWN

CONTRACT NO. AND NAME: _____

CONTRACTOR (SERVICE PROVIDER): _____

B-BBEE SUB-CONTRACT EXPENDITURE REPORT BASED ON PAYMENT NO. .....

Value of the contract (as defined in the Preference Schedule (P*)	R	B-BBEE Status Level of Service Provider	

Name of Sub-consultant (list all Sub-consultants)	B-BBEE Status Level of Sub-consultant [1]	Total Value of Sub-consultant's contract (excl VAT)[1]	Value of Sub-consultant's work to date (excl VAT)[1]	Value of Sub-consultant's work to Sub-consultants with a lower B-BBEE Status Level than Service Provider
Sub-consultant A		R	R	R
Sub-consultant B		R	R	R
Sub- consultant C		R	R	R
			Total:	R
			Expressed as a percentage of P*	%

[1]Documentory evidence to be provided

Signatures

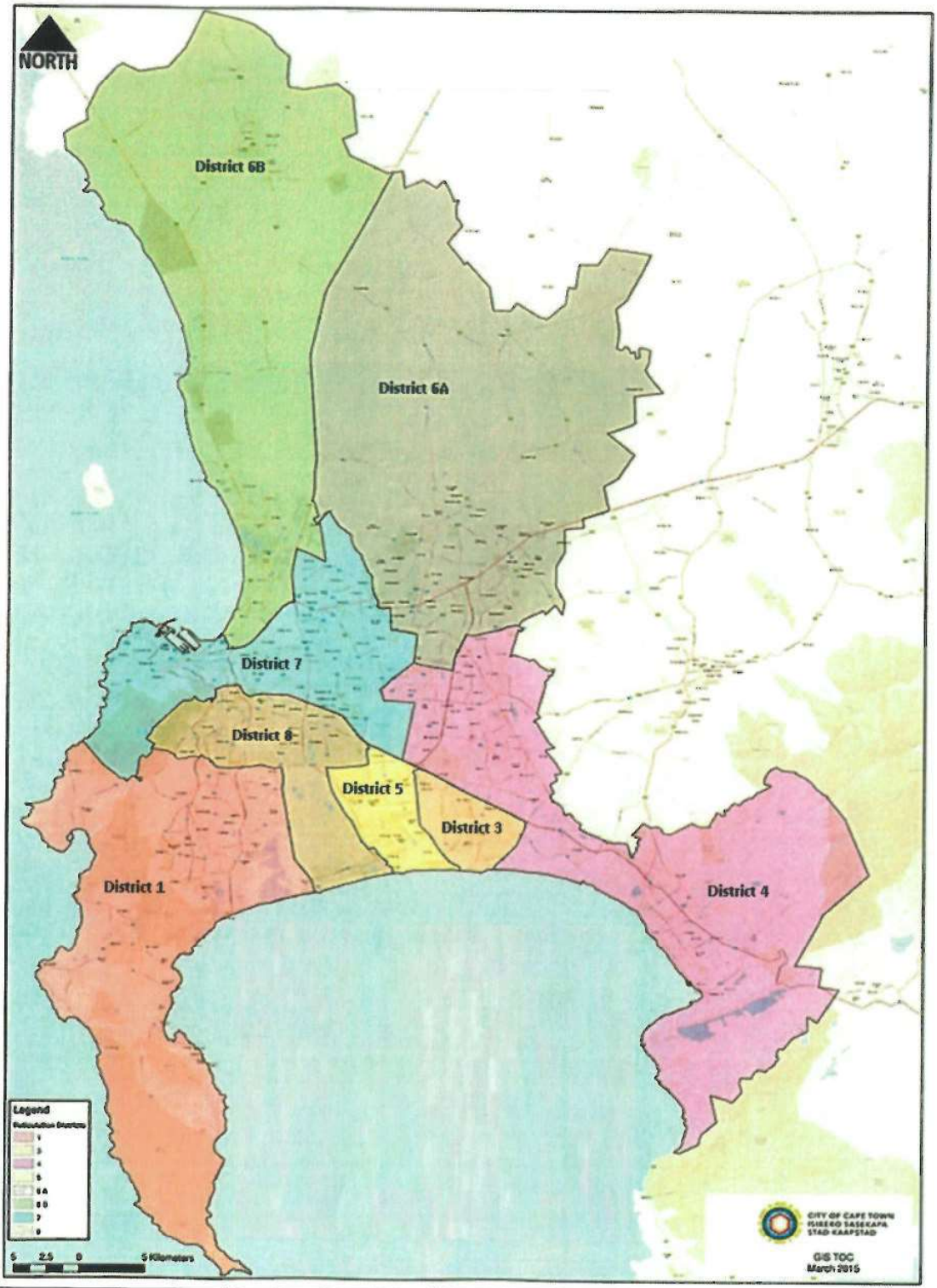
Declared by Contractor (Service Provider) to be true and correct: _____ Date: _____

Verified by Framework Contract Manager / Employer's Project Manager: _____ Date: _____

Part C4: Site Information

Pages

C4.1 Possible Locations of Works Projects – Reticulation Branch 70



POSSIBLE LOCATIONS OF WORKS PROJECTS
RETICULATION BRANCH

[redacted]

[redacted]

Enquiries:
Our ref.:
Your ref.:
File ref.: [redacted]

CONFIRMATION OF AUTHORITY TO SIGN DOCUMENTATION ON BEHALF OF iX engineers (PTY) LTD

REG NO.: [redacted]

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1. By virtue of a resolution of the Board of Directors taken at a meeting held on 01 June 2021, and a Delegation of Authority from the Chairperson of the Board of Directors authorised by that Resolution, [redacted] whose signature appears below, has authority to sign the following documentation on behalf of the Company:

   CITY OF CAPE TOWN

   TENDER NUMBER: 194C/2020/21

   TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

[redacted]

SIGNED ON BEHALF OF THE COMPANY

IN HER CAPACITY AS CHAIRPERSON OF THE BOARD

DATE: 08 October 2021

SIGNATURE OF SIGNATORY: [redacted]

[redacted]

[redacted]

2020010365

labour

Department:
Labour
REPUBLIC OF SOUTH AFRICA

CALL CENTER NO: 0860 105 350

REG NO [redacted]
FAX NO : 0123456789
ISSUE DATE : 2021-04-20
CERTIFICATE NO [redacted]

IX ENGINEERS PTY LTD
[redacted]

LETTER OF GOOD STANDING

COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT 130 of 1993 (AS AMENDED).

With reference to sections 80, 82, 86 and 89 of Compensation for Occupational Injuries and Diseases Act 130 of 1993 (As amended), I hereby certify that:
IX ENGINEERS PTY LTD
has complied with the requirement of the above Act and is at present in good standing with the Compensation Fund.

Nature of business :CONSULTING ENGINEERS
Expiry date :2022-04-30

IMPORTANT NOTICE:

Any fraudulently obtained Letter of Good Standing shall constitute a criminal offence.

The Compensation Commissioner shall institute criminal proceedings against any perpetrators who unlawfully alter or deface this letter with intend to defraud or misrepresent facts contained therein.

PLEASE, use the Below link (Website Address) to check if the Letter of Good Standing is valid:
https://cfonline.labour.gov.za/VerifyLOGS

Yours faithfully

[redacted]

COMPENSATION COMMISSIONER

ADV. NALEDI MORAGANE MAMPANE
Commissioner of Oaths - Ex Officio
277 The Hillside Street
Menlo Park
0081

CERTIFIED AS A
TRUE COPY
OF THE ORIGINAL

Compensation Fund

W.As. 48
Compensation House, Cnr Hamilton and Soutpansberg Road, PO Box 955, Pretoria, 0001 Fax:(012)357-1817 Website:http://www.labour.gov.za

0 8 OCT 2021

[redacted]

TENDER NO. 194C/2020/21

TERM TENDER FOR THE PROVISION OF MULTIDISCIPLINARY PROFESSIONAL SERVICES FOR THE WATER AND SANITATION DEPARTMENT OF THE CITY OF CAPE TOWN

Confirmation of Receipt

The tenderer (now service provider), identified in the offer part of this agreement hereby confirms receipt from the employer, identified in the acceptance part of this agreement, of one fully completed original copy of this agreement, including the schedule of deviations (if any) today:

the.....(day)

of.....(month)

20.....(year)

at .....(place)

For the Service Provider:

Signature(s) .....

Name(s) .....

Capacity .....

Signature and name of witness:

Signature .....

Name .....

[redacted]