



CLUSTER
Human Settlement, Engineering, and Transport

UNIT
Engineering

DEPARTMENT
Roads Provision

PROCUREMENT DOCUMENT
PROFESSIONAL SERVICES

Documents are to be obtained, free of charge, in electronic format, from the National Treasury's eTenders website or the eThekweni Municipality's website.

Contract No: 1R-30827

Contract Title: Professional Services Contract for Paved Road Pavement Surveillance Measurements

CLARIFICATION MEETING AND QUERIES

Clarification Meeting: Compulsory Clarification Meeting

Meeting Location, Date, Time: Boardroom 213, 2nd Floor, ETA Building, 30 Archie Gumede Place, Durban, 15 April 2025, 10:30am

Queries can be addressed to: Name: Mr Ebrahim Zoutenberg
The Employer's Agent's: Tel: 031 311 7444
Representative: eMail: Ebrahim.Zoutenberg@durban.gov.za. Consolidated answers to questions will be uploaded 30 April 2025

TENDER SUBMISSION

The Tender Offer ("hard copy") shall be delivered to:

Delivery location: The Tender Box in the foyer of the Municipal Building, 166 KE Masinga Road, Durban

Tenderers are also required to make an **electronic submission** via the eThekweni Municipality **JDE System (SSS Module)**.

- Tenderers must ensure that the hard copy and electronic submission are the same, failing which the submission will be deemed invalid.
- Tenderers are responsible for resolving all access rights and submission queries on the **JDE System** before the tender closing date/ time.

JDE Queries Contact: Lindo Dlamini: Tel: 031-322-7133 / 031-322-7153
Email: supplier.selfservice@durban.gov.za

Closing Date/ Time: Friday, 09 May 2025 at 11h00

Tender Offers submitted via any means other than that stated in the Tender Data will be deemed invalid

Issued by:

ETHEKWINI MUNICIPALITY

Deputy Head: Roads Provision

Date of Issue: 04/04/2025

Document Version : 23/10/2024

FOR OFFICIAL USE ONLY

Tenderer Name:			VAT Registered: Yes No
	Price (excl)	VAT	Price (incl)
Submitted: R	R		R
Corrected: R	R		R

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PART T1: TENDERING PROCEDURES**T1.1.1: TENDER NOTICE AND INVITATION TO TENDER**

Tenders are hereby invited for Professional Services to paved road surveillance and condition assessment data over a period of 36 months. The appointed service provider will be responsible for conducting profile measurements, FWD measurements, images and road pavement conditions assessments in accordance with TMH 9.

Subject	Description	Tender Data Ref.
Employer	The Employer is the eThekweni Municipality as represented by: Deputy Head: Roads Provision	F.1.1.1
Tender Documents	Documentation is to be downloaded the National Treasury's eTenders website or the eThekweni Municipality Website: <ul style="list-style-type: none"> • https://www.etenders.gov.za/ • https://www.durban.gov.za/pages/business/procurement 	F.1.2
Clarification Meeting	Boardroom 213, 2nd Floor, ETA Building, 30 Archie Gumede Place, Durban, 15 April 2025, 10:30am	F.2.7
Seek Clarification	Queries relating to these documents are to be addressed to the Employer's Agent's Representative whose contact details are: Name: Mr Ebrahim Zoutenberg Tel: 031 311 7444 eMail: Ebrahim.Zoutenberg@durban.gov.za	F.2.8
Submitting a Tender Offer	The Tender Offer shall be delivered to: The Tender Box in the foyer of the Municipal Building, 166 KE Masinga Road, Durban Tenderers are also required to make an electronic submission via the eThekweni Municipality JDE System (SSS Module) . <ul style="list-style-type: none"> • Tenderers must ensure that the hard copy and electronic submission are the same, failing which the submission will be deemed invalid. • Tenderers are responsible for resolving all access rights and submission queries on the JDE System before the tender closing date/ time. • Reference should be made to Part T1.1.2 and Clause F.2.13 of the Tender Data. 	F.2.13
Closing Time	The Tender Offer ("hard copy") shall be delivered, and the electronic submission completed, both on or before Friday, 09 May 2025 , at or before 11h00 .	F.2.15
Evaluation of Tender Offers	The 80/20 Price Preference Point System, will be applied in the evaluation of tenders. Refer to Clause F.3.11 of the Tender Data for the Specific Goal(S) for the awarding of Preference Points, and other related evaluation requirements.	F.3.11

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

T1.1.2: INFORMATION REGARDING THE ETHEKWINI JDE SYSTEM

This Section (T1.1.2) is for information purposes only. Compliance requirements are stated in **Part T1.2: Tender Data**.

eThekwini Municipality Bids, Tenders and Quotations (hereafter referred to as Tenders) are going to be submitted using the JDE System.

This JDE System will be used for:

- Viewing of available (open) Tenders,
- Downloading procurement documentation for Tenders,
- Uploading completed and signed Tender documentation,
- Completion and submission of Tenders electronically,
- Viewing the Tender opening schedule.

Registrations

To be granted access to the **JDE System** prospective service providers must be registered on the **National Treasury's Central Supplier Database (CSD)**, the **eThekwini Municipality Supplier Portal**, and the **eThekwini Municipality JDE System**.

National Treasury: Central Supplier Database

- Registration can be made on <https://secure.csd.gov.za> .
- Service Providers will be issued a "MAAA" number when registered.

eThekwini Municipality Supplier Portal

- Registration can be made on <https://www.durban.gov.za> by following these links:
>Business >Supply Chain Management (SCM) >Accredited Supplier & Contractor Database.

eThekwini Municipality JDE System

- Service providers requiring access must send an email to supplier.selfservice@durban.gov.za
The following information is required:
 - Copy of the **Director's ID**.
- On receipt of this email, the SCM Unit will respond with the login credentials and a link to the **JDE System**.

Assistance with using the JDE System

The following SCM Official(s) can be contacted in connection with any queries regarding the use of the **JDE System**:

- Lindo Dlamini Tel: 031 322 7153 or 031 322 7133
 Email: supplier.selfservice@durban.gov.za

Viewing of available tenders

By following link <https://rfq.durban.gov.za/jde/E1Menu.maf> prospective Service Providers will be able to view available (open) Tender opportunities without signing into the system. However, Service Providers will not be able to respond to a Tender without being signed into the system using a JDE User ID and Password.

Tender documentation

By accessing the **JDE System** (using <https://rfq.durban.gov.za/>) and viewing any available Tenders, prospective Service Providers will be able to download the relevant Tender documentation.

The Tender documentation consists of the **TENDER** and **CONTRACT Parts**, as described in the INDEX, and will include any drawings and other information (if applicable). Referred to or included in the documentation are the **Standard Conditions of Tender (and associated Tender Data)**, and the **Conditions of Contract (and associated Contract Data)** which will govern the tendering and contract processes respectively.

Submission of tender offers

Tender Offers are to be delivered, in “hard copy” format, to the Delivery Location as stated in the Tender Data F.2.13.

In addition to the above, **Tender Offers are also to be SUBMITTED ELECTRONICALLY** (uploaded) on the eThekwini Municipality JDE System (Supplier Self Service (JDE-SSS) Module).

Bidders are responsible for resolving all access rights and submission queries on the JDE System before the tender closing date/ time, as stated in the Tender Data.

Reference is to be made to **Clause F.2.13 of the Tender Data** that specifies compliance requirements.

Viewing the Tender opening schedule

Users on the **JDE System** will be able to view the **Tender Opening Schedule** for each closed Tender.

The tender opening schedule will also be made available on the eThekwini Municipal website at URL:

<https://www.durban.gov.za/pages/business/publication-of-received-bids>

T1.1.3: NOTES TO TENDERERS

These “**Notes to Tenderers**” are intended to provide guidance to Tenderers regarding tendering obligations and requirements. Compliance requirements are stated in the relevant parts of the **Tender Data (T1.2)**.

eThekwini Supply Chain Management Policy (SCMP)

The requirements as stated in the Employer’s SCM Policy include, but are not limited to, the following:

1) Clause 14(4): ETM Supplier Database

The eThekwini Supply Chain Management Policy requires suppliers/ service providers/ contractors to be registered on the eThekwini Municipality’s Supplier Database (Vendor Portal).

In the event of the Tenderer not being registered on the eThekwini Municipality’s Supplier Portal, the Tenderer must register on the internet at www.durban.gov.za by following these links:

- Business
- Supply Chain Management (SCM)
- Accredited Supplier and Contractor’s Database.

The following is to be noted:

- The information for registration as in the possession of the eThekwini Municipality will apply.
- It is the Tenderer’s responsibility to ensure that the details submitted to the Municipality are correct.
- Tenderers are to register prior to the submission of tenders.

2) Clause 20(1)(d)(i): Audited Financial Statements

Audited Financial Statements (prepared for auditing) are required to be submitted if the value of the tender offer exceeds R10 million (incl VAT).

3) Clause 20(1)(d)(iii): Contracts Awarded during the past 5 Years

Tenderers are to include with their submission a listing of any contracts awarded to the Tenderer during the past 5 years, including particulars of any material non-compliance or dispute concerning the execution of the contracts. Tenderers are referred to **Returnable Form T2.2.3**.

4) Clause 20(1)(d)(ii), Clause 28(1)(c) and Clause 29(10): Municipal Fees

Tenderers are to refer to **Returnable Form T2.2.12: “Declaration of Municipal Fees”**, to certify that they have no undisputed commitments for municipal services towards any municipality. Prior to an award, a Tenderer’s municipal rates and taxes cannot be in arrears. Should a Tenderer be in arrears with respect to municipal services and has formalised an agreement with the respective municipality to offset the arrears, the agreement must be in place at time of tender closing.

5) Clause 28(2)(d), Clause 28(2)(h) and Clause 29(12): Certifications and Registrations

CIDB Registration and Status, B-BBEE Certificates, and Tax Compliance Status PINs must be valid at tender closing, and before final award.

The Tenderer’s Tax Compliance Status, CIDB Registration and Status (if required), and B-BBEE Level Status (if required), will be verified using the National Treasury Central Supplier Database (CSD). Tenderers are referred to **Returnable Form T2.2.1**.

It is the Tenderer’s responsibility to ensure that their data on the CSD is kept updated and correctly reflects the status of the tendering entity.

6) Clause 28(1)(e): Joint Ventures (JV)

Each party of a JV must submit separate Tax Compliance Status PINs.

Also, and unless otherwise stated, the requirements for a single entity submission in terms of documentation requirements, will apply to each member of a JV making a submission.

As proof that a JV has been formalised, or that the parties to the JV agree to formalise the JV should they be successful in being recommended for the award of this tender, Tenderers are referred to **Returnable Form T2.2.10**.

CIDB Regulation 25(8) (if applicable)

- 7) It should be noted that this contract is not part of a **Targeted Development Programme (TDP)**. The CIDB provisions in relation to a Contractor's **Potentially Emerging (PE) status** do not apply. Tenderers are referred to **CIDB Inform Practice Note #32: "Application of the Potentially Emerging (PE) Status"**.

Conditions of Tender**8) F.3.8: Test for Responsiveness**

In this regard, Tenderers are referred to **Clause F.3.8 of the Tender Data**.

PART T1: TENDERING PROCEDURES

T1.2: TENDER DATA

T1.2.1 STANDARD CONDITIONS OF TENDER

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

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

T1.2.2 TENDER DATA

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

F.1: GENERAL

F.1.1 The employer: The Employer for this Contract is the eThekweni Municipality as represented by: Deputy Head: [Roads Provision](#)

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

- 1) This procurement document.
- 2) The “Standard Professional Services Contract – 3rd Edition July 2009” published by the Construction Industry Development Board (CIDB). This document is obtainable separately, and Tenderers shall obtain their own copies.
- 3) In addition, Tenderers are advised, in their own interest, to obtain their own copies of the following acts, regulations, and standards referred to in this document as they are essential for the Tenderer to get acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and the participation of targeted enterprise and labour.
 - The Employer’s current (as at advertising date) Supply Chain Management Policy.
 - The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (2022).
 - The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).
 - The Construction Industry Development Board Standard for Uniformity in Construction Procurement (July 2015).
 - Any other eThekweni Policy documents referenced in the Tender Documents.
 - CIDB Standard for Developing Skills through Infrastructure Contracts (CSDG) GG 48491 (2023-04-28).

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

- <https://www.etenders.gov.za/>
- <https://www.durban.gov.za/pages/business/procurement>

The entire downloaded document should be printed on white A4 paper (single-sided) and suitably bound by the tenderer.

F.1.4 Communication and employer's agent: The Employer's Agent's Representative is:

Name: Mr Ebrahim Zoutenberg
Tel: 031 311 7444
eMail: Ebrahim.Zoutenberg@durban.gov.za

The Tenderer's contact details, as indicated in the Contract Data: Clause C1.2.2.2 "Data to Be Provided by Contractor", shall be deemed as the only valid contact details for the Tenderer for use in communications between the Employer's Agent and the Tenderer.

F.2: TENDERER'S OBLIGATIONS**F.2.1 Eligibility: General**

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

- (a) the Tenderer submitting the tender is under restrictions or has principles who are under restriction to participate in the Employer's procurement due to corrupt or fraudulent practices.
- (b) the Tenderer does not have the legal capacity to enter into the contract.
- (c) the Tenderer does not comply with the legal requirements as stated in the Employer's current SCM Policy.
- (d) the Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.
- (e) In the event of a Compulsory Clarification Meeting:
 - i) the Tenderer fails to attend the Compulsory Clarification Meeting.
 - ii) the Tenderer fails to have form "Certificate of Attendance at Clarification Meeting / Site Inspection" (in T2.2) signed by the Employer's Agent or his representative.
- (f) Submission is made by a Joint Venture.
- (g) at the time of closing of tenders, the Tenderer is not registered on the **National Treasury Central Supplier Database (CSD)** as a service provider.
- (h) The tender fails to complete and sign the Declaration of Municipal Fees in T2.2: "Returnable Documents" and submits the required documentation. Reference is to be made to Returnable Document T2.2.12.
- (i) The Tenderer cannot demonstrate that it possesses the necessary expertise and competence, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract;
- (j) The Tenderer fails to submit an approach paper which responds to the scope of work and outlines the detailed proposed approach / methodology and work plan, complete with time frames, to ensure quality and timely delivery of the project deliverables.
- (k) The Tenderer fails to provide previous experience of the company with respect to specific aspects of the project / comparable projects, with details of similar projects successfully implemented and contact details of the clients.

SCM Policy (CI.14(4)) requires suppliers/ service providers/ contractors to be registered on the **eThekwini Municipality Central Supplier Database**.

In the event of the Tenderer not being registered on the eThekwini Municipality's Central Supplier Database, the tenderer must register on the internet at www.durban.gov.za by following these links:

- Business
- Supply Chain Management (SCM)
- Accredited Supplier and Contractor's Database.

The following are to be noted regarding registration on the **eThekwini Municipality Central Supplier Database**:

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

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

"Documents are to be obtained, free of charge, in electronic format, from the **National Treasury's eTenders website** or the **eThekwini Municipality's Website**. The entire electronically downloaded document should be printed on white A4 paper (single-sided) and suitably bound by the tenderer.

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

"Addenda will be published on the **eThekwini Municipality website** as stated in Clause F.1.2. Tenderers are to ensure that the website is consulted for any published addenda pertaining to this tender up to three days before the tender closing time as stated in the Tender Data."

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

F.2.7 Clarification meeting:

Boardroom 213, 2nd Floor, ETA Building, 30 Archie Gumede Place, Durban, 15 April 2025, 10:30am

In the event of a Compulsory Clarification Meeting, Tenderers must sign the attendance register in the name of the tendering entity. The Tenderer's representative(s) at the clarification meeting must be able to clearly convey the discussions at the meeting to the person(s) responsible for compiling the entity's tender offer.

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

F.2.13 Submitting a tender offer:

The signed Tender Offer ("hard copy") is to be sealed in an envelope, addressed to the City Manager, marked with the **identification details** and be delivered to the **delivery address**, both as stated below.

Tender Offers are to be delivered, in "hard copy" format, to **delivery address**:

[the Tender Box in the foyer of the Municipal Building, 166 KE Masinga Road, Durban](#)

Identification details to be shown on the hard copy package are:

- Contract No. : **1R-30827**
- Contract Title : **Professional Services Contract for Paved Road Pavement Surveillance Measurements**

In addition to the above, Tender Offers are also to be **SUBMITTED ELECTRONICALLY** (uploaded) on the eThekweni Municipality **JDE System** (Supplier Self Service (SSS Module)). For information pertaining to the JDE System, Tenderers are referred to Section T1.1.2.

The Tender documentation, issued by the eThekweni Municipality (refer to F.1.2), is to be printed in its entirety. Printing should be done on white A4 paper, with printing on only one side of the paper. (It is suggested that the Tender documentation is not stapled, or punched for filing, prior to scanning, as this could affect the scanning process.)

After completion and signature (using **BLACK INK**), the entire Tender document is to be scanned to a single PDF (**P**ortable **D**ocument **F**ormat) document, at a resolution of 300 DPI (dots per inch). The PDF document is to be uploaded via the (Tender specific) upload option on the JDE System (SSS Module).

- Tenderers must ensure that the hard copy and electronic submission are the same, failing which the submission will be deemed invalid.
- Tenderers are responsible for resolving all access rights and submission queries on the JDE System before the tender closing date/ time (F.2.15).

Tender Offer delivery, and the electronic submission on the JDE System, are both to be completed on or before the closing date/ time stated in the Tender Data.

The submission of Tender Offers via any means other than that stated above will not be accepted, and those that are will be deemed invalid.

The submission of Tender Offers via any means other than that stated above will not be accepted, and those that are will be deemed invalid.

F.2.15 Closing date and time:

The closing time is:

- **Date** : **Friday, 09 May 2025**
- **Time** : **11h00**

The **delivery of the hard copy** **AND** the completion of the requirements on the **JDE System (SSS Module)** must be completed prior to the Tender **closing date and time** as stated above. Any Tender Offer submitted thereafter will not be considered.

F.2.16 Tender offer validity: The Tender Offer validity period is 120 Days from the closing date for submission of tenders.

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

Tenderers are to include, at the back of their tender submission document, a printout of the required documents/ certificates.

The Form of Offer (C1.1.1), Data to be provided by the Contractor (C1.2.2.2), and the Bill of Quantities (C2.2) are also required to be completed in full.

Tax Clearance

Refer also to returnable form in T2.2.3: "Tax Compliance Status PIN".

SARS has introduced a new Tax Compliance Status System. Tenderers must submit a **Tax Compliance Status PIN** (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN

can be used by third parties to certify the taxpayer's real-time compliance status. This TCS PIN is to be entered on Returnable Document T2.2.1: "Compulsory Enterprise Questionnaire".

Central Supplier Database (CSD)

Refer also to returnable form in T2.2.12: "CSD Registration Report".

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

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

F.3: THE EMPLOYER'S UNDERTAKINGS

F.3.1.1 Respond to requests from the tenderer: Replace the words "five working days" with "three working days".

F.3.2 Issue addenda: Add the following paragraph:

"Addenda will be published on the **eThekweni Municipality Website** (refer to **Clause F.1.2**).

F.3.4 Opening of Tender Submissions:

Tenders will be opened immediately after the closing time for tenders. The public reading of tenders will take place in the SCM Boardroom, 6th Floor, Engineering Unit Building, 166 KE Masinga Road, Durban.

The tender opening schedule will also be made available on the eThekweni Municipal website at URL: <https://www.durban.gov.za/pages/business/publication-of-received-bids>

F.3.11 Evaluation of Tender Offers:

Eligibility

Tenders will be checked for compliance with the ELIGIBILITY requirements, as specified in Clause F.2.1. Tenderers not in compliance will be deemed non-responsive.

Functionality

FUNCTIONALITY will be evaluated to determine the responsiveness of tenders received. The minimum score for FUNCTIONALITY is 70 points. Those tenders not achieving the minimum score will be deemed non-responsive.

The functionality Criteria, Sub-Criteria, Points per Criteria/ Sub-Criteria, Returnable Documentation and Schedules, Method of Evaluation, and Prompts for Judgement are as specified at the end of F.3.11.

Preference Point System

The procedure for the evaluation of responsive tenders is **PRICE AND PREFERENCE** in accordance with the Employer's current SCM Policy.

Price Points

The 80/20 preference points system (80/20 PPS) will be applied. The Formula used to calculate the Price Points (max. 80) will be according to the SCM Policy.

Preference Points

Refer to T2.2.6: "MBD 6.1: Preference Points Claim".

The Preference Points 20 will be derived from points allocated/ claimed for **Specific Goals** as indicated in the table(s) below, according to the specified **Goal/ Category Weightings**.

- **Ownership Goal**
Goal Weighting: 80%

The tendering entity's **Percentage Ownership**, in terms of the **Ownership Category(s)** listed below, is to be used in the determination of the tenderer's claim for **Preference Points**.

Ownership Categories	Criteria	80/20 PPS
Race: Black (w1)	Equals 0%	0
	Between 0% and 51%	4.8
	Greater or equal to 51% and less than 100%	9.6
	Equals 100%	12
Gender: Female (w2)	Equals 0%	0
	Between 0% and 51%	1.6
	Greater or equal to 51% and less than 100%	3.2
	Equals 100%	4
Maximum Ownership Goal Points:		16

The Weightings of the Ownership Categories will be:

- w1 = 75%, w2=25% (where: w1 + w2 = 100%)

Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status)

- Companies and Intellectual Property Commission registration document (CIPC)
- CSD report.
- B-BBEE Certificate of the tendering entity.
- Consolidated BBBEE Certificate if the tendering entity is a Consortium, Joint Venture, or Trust (Issued by verification agency accredited by the South African Accreditation System).
- Agreement for a Consortium, Joint Venture, or Trust.

- **RDP Goal: The promotion of South African owned enterprises**
Goal Weighting: 20%

The tendering entity's **Address** (as stated on the National Treasury Central Supplier Database (CSD) or on the eThekweni Municipality Vendor Portal) is to be used in the determination of the tenderer's claim for **Preference Points** for this Specific Goal.

Location	80/20 PPS	
Not in South Africa	0	
South Africa	1	
Kwa Zulu Natal	2	
eThekweni Municipality	4	
Maximum Goal Points:		4

Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status)

- CSD report

Functionality

- The Functionality criteria and maximum score in respect of each of the criteria are as follows:

Quality criteria	Sub-criteria	Maximum number of points
Tenderer's experience	Experience of service provider in running events of similar type and scale (Case study)	50
Experience of Key Resources in executing work of similar nature	General experience and qualifications in relation to the service	50
Maximum possible score for quality (M_s)		100

- Each evaluation criteria will be assessed in terms of five indicators – no response, poor, satisfactory, good and very good. Scores of 0, 40, 70, 90 or 100 will be allocated to no response, poor, satisfactory, good and very good, respectively;

Level	pts	Criterion: Tenderer's Experience
0	0	No Submission or Submission of no substance / irrelevant information provided
1	40	To have successfully completed 1 to 3 <u>projects</u> of a similar nature within the past 10 years.
2	70	To have successfully completed 4 to 7 <u>projects</u> of a similar nature within the past 10 years.
3	90	To have successfully completed 8 to 10 <u>projects</u> of a similar nature within the past 10 years.
4	100	To have successfully completed 11+ <u>projects</u> of a similar nature within the past 10 years.

Criterion: Experience of Key Resources in executing work of similar nature								
Job Title	Minimum Qualification Required	Professional Registration Required	Number of Years' Relevant Experience on projects of a similar nature					Total Points
			Level 0 0 pts	Level 1 40 pts	Level 2 70 pts	Level 3 90 pts	Level 4 100 pts	
Project Manager	BTech (Civil)	Pr Tech Eng	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	40
Assessor	NDip (Civil)	N/A	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	40
Assistant	N/A	N/A	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	20

Note 1: "experience" implies experience on projects of a similar nature with respect to the Scope
Note 2: "accredited degree / diploma" implies a minimum 3 yr qualification within the built environment, from a registered University or Institute of Technology.

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

- (a) The Tenderer's municipal rates and taxes are not in arrears, or they have made arrangements to meet outstanding municipal fee obligations.
- (b) The Tenderer's tax compliance status has been verified, or they have made arrangements to meet outstanding tax obligations.
- (c) If required to be so registered, the Tenderer is **registered and is in good standing with the compensation fund or with a licensed compensation insurer**, as applicable to the requirements of The Occupational Injuries and Diseases Act.
- (d) The Tenderer or any of its directors/ shareholders are **not listed on the Register of Tender Defaulters** in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.
- (e) The Tenderer has not:
 - i) Abused the Employer's Supply Chain Management System; or
 - ii) Failed to perform on any previous contract and has been given a written notice to this effect.
- (f) The tenderer has completed **Returnable Document T2.2.1: "Compulsory Enterprise Questionnaire"** and there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process.

The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound to provide any quantities stipulated in the specification.

F.3.17 Copies of contract: The number of paper copies of the signed contract to be provided by the Employer is **ONE (1)**. Tenderers are referred to the requirements as stated in Clause F.2.13 of the Tender Data.

T1.2.3 ADDITIONAL CONDITIONS OF TENDER**T1.2.3.1 Appeals**

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

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

T1.2.3.2 Prohibition on awards to persons in the service of the state

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

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

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

PART T2: RETURNABLE DOCUMENTS

T2.1 LIST OF RETURNABLE DOCUMENTS

T2.1.1 General

The Tender Submission Documentation must be submitted in its entirety. All forms must be properly completed as required.

The Tenderer is required to complete each and every Schedule and Form listed below to the best of their ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the Schedules and Forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is non-responsive.

T2.1.2 Returnable Schedules, Forms and Certificates

Entity Specific

T2.2.1	Compulsory Enterprise Questionnaire	17
T2.2.2	Certificate of Attendance at Clarification Meeting	18
T2.2.3	Tax Compliance Status PIN	19
T2.2.4	MBD 4: Declaration of Interest	20
T2.2.5	MBD 5: Declaration for Procurement Above R10 Million	22
T2.2.6	MBD 6.1: Preference Points Claim Form ITO the Preferential Regulations.....	23
T2.2.7	MBD 8: Declaration of Bidder’s Past SCM Practices	25
T2.2.8	MBD 9: Certificate of Independent Bid Determination	27
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Technical or Functionality Evaluation

T2.2.12	Tenderer’s Experience	33
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Equipment Related

T2.2-A	EQUIPMENT SPECIFICATIONS	36
T2.2-B	EQUIPMENT CALIBRATION, VALIDATION, CERTIFICATION	43
T2.2-C	TOTAL CONTRACT QUALITY PLAN	46

T2.2 RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

The returnable schedules, forms, and certificates, as listed in T2.1.2, can be found on pages [17](#) to [46](#).

NOTE

The **Form of Offer** (C1.1.1), The **Data to be Provided by Contractor** (C1.2.2.2), and the **Bill of Quantities** (C2.2) are also required to be completed by the tenderer.

T2.2.1 COMPULSORY ENTERPRISE QUESTIONNAIRE

Ref	Description	Complete or Circle Applicable	
1.1	Name of enterprise		
1.2	Name of enterprise's representative		
1.3	Email address of representative		
1.4	Contact numbers of representative	Tel:	Cell:
1.5	National Treasury Central Supplier Database Registration number	MAAA	
1.6	VAT registration number, if any:		
1.7	CIDB registration number, if any:		
1.8	Department of Labour: Registration number		
1.9	Department of Labour: Letter of Good Standing Certificate number		

2.0 Particulars of sole proprietors and partners in partnerships (attach separate pages if more than 4 partners)			
	Full Name	Identity No.	Personal income tax No. *
2.1			
2.2			
2.3			

3.0 Particulars of companies and close corporations	
3.1	Company registration number, if applicable:
3.2	Close corporation number, if applicable:
3.3	Tax Reference number, if any:
3.4	South African Revenue Service: Tax Compliance Status PIN:

4.0 **MBD 4, MBD 6, MBD 8, and MBD9** issued by National Treasury must be completed for each tender and be included as a tender requirement.

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

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

NAME (Block Capitals):

Date

SIGNATURE:

.....

T2.2.2 CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING / SITE INSPECTION

Reference is to be made to Clauses F.2.1(c) and F.2.7 of the Tender Data.

This is to certify that:

(tenderer name):

of (address):

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

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

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

Particulars of person(s) attending the meeting:

Name:	Name:
Signature:	Signature:
Capacity:	Capacity:

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

Name:

Signature:

Date:

T2.2.3 TAX COMPLIANCE STATUS PIN

Reference is to be made to Clauses F.2.23 and F.3.13(a) of the Tender Data.

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

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

The TCS PIN(s) are to be entered under item 3.4 on form **T2.1.2.1: Compulsory Enterprise Questionnaire**.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.4 MBD 4: DECLARATION OF INTEREST

MSCM Regulations: **“in the service of the state”** means to be:

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

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

- 1 No bid will be accepted from persons **in the service of the state**¹.
- 2 Any person, having a kinship with persons **in the service of the state**, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to **persons in service of the state**, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.
- 3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Name of enterprise	Complete T2.1.2.1 Item 1.1
Name of enterprise’s representative	Complete T2.1.2.1 Item 1.2
3.2 ID Number of enterprise’s representative	Complete T2.1.2.1 Item 1.3
3.3 Position enterprise’s representative occupies in the enterprise	Complete T2.1.2.1 Item 1.4
3.4 Company Registration number	Complete T2.1.2.1 Item 3.1 or 3.2
3.5 Tax Reference number	Complete T2.1.2.1 Item 3.3
3.6 VAT registration number	Complete T2.1.2.1 Item 1.7

3.7 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted.

	Circle Applicable	
3.8 Are you presently in the service of the state?	YES	NO
If yes, furnish particulars: .....	.....
3.9 Have you been in the service of the state for the past twelve months?	YES	NO
If yes, furnish particulars: .....	.....

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?

YES	NO
-----	----

If yes, furnish particulars:

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

YES	NO
-----	----

If yes, furnish particulars:

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

YES	NO
-----	----

If yes, furnish particulars:

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

YES	NO
-----	----

If yes, furnish particulars:

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

YES	NO
-----	----

If yes, furnish particulars:

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

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

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

.....

SIGNATURE:

.....

**T2.2.5 MBD 5: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION
(ALL APPLICABLE TAXES INCLUDED)**

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

	Circle Applicable	
1.0 Are you by law required to prepare annual financial statements for auditing?	YES	NO
1.1 If YES, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.		
2.0 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?	YES	NO
2.1 If NO, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.		
2.2 If YES, provide particulars.		
3.0 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?	YES	NO
3.1 If YES, provide particulars.		
4.0 Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?	YES	NO
4.1 If YES, provide particulars.		

If required by 1.1 above, tenderers are to include, at the back of their tender submission document, a printout of their audited annual financial statements.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and, if required, that the requested documentation has been included in the tender submission.

NAME (Block Capitals): **Date**

SIGNATURE:

T2.2.6 **MBD 6.1: PREFERENCE POINTS CLAIM** **In terms of THE PREFERENTIAL PROCUREMENT REGULATIONS (2022)**

Reference is to be made to Clause F.3.11 of the Tender Data.

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

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

1.0 GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to invitations to tender:
- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included).
- 1.2 Preference Points for this tender shall be awarded for:
- **Price and Specific Goals:** 80 (price) and 20 (specific goals), in terms of 1.2 above.
 - The total Preference Points, for Price and Specific Goals, is 100.
- 1.3 Failure on the part of the tenderer to submit the required proof or documentation, in terms of the requirements in the Conditions of Tender for claiming specific goal preference points, will be interpreted that preference points for specific goals are not claimed.
- 1.4 The Municipality reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard of preferences, in any manner required by the Municipality.

2.0 DEFINITIONS

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

3.0 FORMULA FOR CALCULATION OF PREFERENCE PRICE POINTS

3.1 PROCUREMENT OF GOODS AND SERVICES

POINTS AWARDED FOR PRICE: A maximum of 80 points is allocated for price on the following basis:

80 / 20 Points System

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

Where:

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

4.0 POINTS AWARDED FOR SPECIFIC GOALS

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

TABLE 1: Specific Goals for the tender and maximum points for each goal are indicated per the table below.

Tenderers are to indicate their points claim for each of the Specific Goals in the shaded blocks.

The Specific Goals to be allocated points in terms of this tender	Maximum Number of points ALLOCATED (80/20 system)	Number of points CLAIMED (80/20 system)
Ownership Goal: Race (black)	12	
Ownership Goal: Gender (female)	4	
RDP Goal: The promotion of South African owned enterprises.	4	
Total CLAIMED Points (20 Maximum)		

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, certify that the points claimed, based on the specific goals as specified in the tender, qualifies the tendering entity for the preference(s) shown.

I acknowledge that:

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

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.7 MBD 8: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

4.1 Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?

(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer / Authority of the institution that imposed the restriction after the audi alteram partem rule was applied.)

The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.

Circle Applicable	
YES	NO

4.1.1 If YES, provide particulars.

.....

.....

4.2 Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?

The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.

YES	NO
-----	----

4.2.1 If YES, provide particulars.

.....

.....

4.3 Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?

YES	NO
-----	----

4.3.1 If YES, provide particulars.

.....

.....

4.4 Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?

YES	NO
-----	----

4.4.1 If YES, provide particulars.

.....

.....

4.5 Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?

YES	NO
-----	----

4.5.1 If YES, provide particulars.

.....

.....

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

I accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

NAME (Block Capitals):

Date

.....

SIGNATURE:

.....

T2.2.8 MBD 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION**NOTES**

- ¹ Includes price quotations, advertised competitive bids, limited bids and proposals.
- ² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.
- ³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

- 1.0 This Municipal Bidding Document (MBD) must form part of all **bids**¹ invited.
- 2.0 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or **bid rigging**).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3.0 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
- a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4.0 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of **bid rigging**.
- 5.0 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of:

(Name of Bidder)

that:

1. I have read and I understand the contents of this Certificate.
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect.
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation.
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience.
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement, or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

-
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices.
 - (b) geographical area where product or service will be rendered (market allocation).
 - (c) methods, factors or formulas used to calculate prices.
 - (d) the intention or decision to submit or not to submit, a bid.
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid.
 - (f) bidding with the intention not to win the bid.

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

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

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

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.9 RECORD OF ADDENDA TO TENDER DOCUMENTS

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

ADD.No	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

It is also confirmed that the requirements, as stated on the Addenda, have been complied with.

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.10 DECLARATION OF MUNICIPAL FEES

Reference is to be made to Clause F.2.1(f)(ii) of the Tender Data.

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

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

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

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

<u>Account</u>	<u>Account Number: to be completed by tenderer</u>											
Consolidated Account												
Electricity												
Water												
Rates												
JSB Levies												
Other												

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears.

- Where the tenderer’s place of business or business interests are outside the jurisdiction of eThekweni municipality, a copy of the accounts/ agreements from the relevant municipality are to be provided.
- Where the tenderer’s Municipal Accounts are part of their lease agreement, then a copy of the agreement, or an official letter to that effect, is to be provided.

Tenderers are to include, at the back of their tender submission document, a printout of the above account’s and or agreements signed with the municipality.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.11 CSD REGISTRATION REPORT

Reference is to be made to Clauses F.2.1(e) and F.2.23 of the Tender Data.

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

CSD Registration Reports can be obtained from the National Treasury’s CSD website at <https://secure.csd.gov.za/Account/Login>.

The date of obtaining the printout is to be indicated on the printout.

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

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

Tenderers are to include, at the back of their tender submission document, a printout of their (full) CSD Registration Report.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.12 TENDERER'S EXPERIENCE

The experience of the tendering entity or joint venture partners in the case of an unincorporated joint venture or consortium, as opposed to the key staff members / experts, in projects of similar type over the last ten years will be evaluated. Tenderers must provide details of their knowledge of the local area and previous experience with key local stakeholders.

Tenderers should very briefly describe their experience in this regard and attach this to this schedule. Proof of participation / case studies and contact details of clients of the relevant projects must also be provided

The description should be put in tabular form with the following headings:

Employer, contact person and telephone number, where available	Description of event	Detail of work undertaken, nature of work & value	Date undertaken
---	-----------------------------	--	------------------------

The scoring of the tenderer's experience will be as follows:

Level	pts	Criterion: Tenderer's Experience
0	0	No Submission or Submission of no substance / irrelevant information provided
1	40	To have successfully completed 1 to 3 <u>projects</u> of a similar nature within the past 10 years.
2	70	To have successfully completed 4 to 7 <u>projects</u> of a similar nature within the past 10 years.
3	90	To have successfully completed 8 to 10 <u>projects</u> of a similar nature within the past 10 years.
4	100	To have successfully completed 11+ <u>projects</u> of a similar nature within the past 10 years.

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

NAME : (Block Capitals)

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

T2.2.14 EXPERIENCE OF KEY STAFF

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

- 1) General experience, level of education and training and positions held of each operational area team leader.
- 2) The skills and experience of the assigned staff in the specific operational areas. Linked to the scope of work.
- 3) The key staff members' / experts' knowledge of issues which the tenderer considers pertinent to events e.g. local conditions, legislation, techniques etc.

CVs of the team director, and team leaders of **not more than 2 pages each** should be attached to this schedule: (define which CV's are required). Each CV should be structured under the following headings:

Personal particulars	Qualifications	Skills	Name of current employer and position in enterprise	Outline of recent assignments / experience that has a bearing on the scope of work
----------------------	----------------	--------	---	--

The scoring of the experience of key staff will be as follows:

Experience of Key Resources in executing work of similar nature								
Job Title	Minimum Qualification Required	Professional Registration Required	Number of Years' Relevant Experience on projects of a similar nature					Total Points
			Level 0 0 pts	Level 1 40 pts	Level 2 70 pts	Level 3 90 pts	Level 4 100 pts	
Project Manager	Btech/BEng (Civil)	PrTech Eng/Pr Eng	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	40
Assessor	NDip (Civil)	N/A	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	40
Assistant	N/A	N/A	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	20

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

NAME : (Block Capitals)

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

T2.2-A EQUIPMENT SPECIFICATIONS

Tenderers shall provide information for both their profilers and deflectometers.

PROFILE MEASUREMENTS

The required device for the survey is a Class 2 high speed profiler, capable of measuring a precision profile of both wheelpaths, a transverse profile of the road, and the surface (macro) texture in the left wheelpath while moving at speeds of 80 to 100km/h. At the same time, a right-of-way video shall be taken, while the position of the vehicle is recorded by GPS and the data collected is referenced to a kilometre position on the road by a distance measuring system.

Tenderers shall record details of their profiler equipment specifications in this section. Tenderers are referred to the South African document: TMH10, Guidelines for Network Level Measurement of Road Roughness, Version 1.0 or later, April 2007 or later, of the Committee of Transport Officials (COTO), compiled under the auspices of the COTO Road Network Management Systems (RNMS) Committee, for clarification of terminology or procedures regarding road roughness measurements.

A copy of the above document can be found here: <http://www.nra.co.za/content/Blogin/TMH10.pdf>

Tenderers are also referred to the following documents:

- TMH13 Guidelines for Network Level Measurement of Road Roughness, Version 1.1, July 2007
- TMH13 Guidelines for Network Level Measurement of Rutting, First Draft Version 0.0, October 2010
- TMH13 Guidelines for Network Level Measurement of Skid Resistance and Texture, First Draft Version 0.0, December 2008

The TMH13 Guidelines are not yet officially issued by COTO, but will be used in this tender.

Global Positioning System (GPS)

A GPS shall be used to:

- Verify that the correct road was tested.
- Verify that the correct direction was tested.
- Act as roadmap to identify the correct start and end positions of a road link.
- Act as a validation system to resolve data discrepancies due to the passing of vehicles and in general to verify the wheel path followed.

GPS coordinates shall be collected in addition to location referencing as discussed above. The GPS system shall be validated by plotting the GPS coordinates obtained from each 'Verification Section' on which roughness validation is performed. The location details of these Verification Sections will be agreed with the Tenderers. GPS coordinates shall be submitted together with verification data as well as network profile data.

All GPS data should be submitted using the Geographic Coordinate System: GCS_WGS_1984

A summary of the required GPS equipment specifications is provided in Table 1. A column is provided for the Tenderer to supply technical specifications of the GPS he intends to use.

Table 1: GPS Equipment Specification

Description	Minimum specification	Tenderer's specification (to be completed by the Tenderer)
Equipment Type	Differentially corrected GPS	
Resolution (Static)	1 m (horizontal and vertical)	
Sample interval / frequency	10 Hz	
Repeatability (Static)	5 m (horizontal and vertical)	
Operating Temperature Range	0°C to 50°C	

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

The Tenderer shall describe the method of applying differential correction on the GPS system as part of the Total Contract Quality Plan.

In the case of real time differential correction, the Tenderer shall describe the method used for applying correction when no signal is received.

The Tenderer shall also describe the inertial system for use when no GPS signal is available, and shall indicate what satellite network will be used for GPS data collection.

Longitudinal profiler

A summary of the required minimum equipment specifications is provided in Table 2. A column is provided for the Tenderer to supply technical specifications of the profiler he intends to use. The Survey Vehicle's Registration Number shall also be entered.

Table 2: Equipment Specifications: Longitudinal Profiler

Description	Minimum specification	Tenderer's specification (to be completed by the Tenderer)
Survey vehicle registration number:		
Equipment Type	Class 2 inertial profilometer	
Method of Measurement	Laser – IMS combination	
Number of Sensors	2 (1 in each wheel path)	
Measurement Speed	80 km/h	
Vertical Resolution	0.05 mm	
Longitudinal Sample Interval	50 mm	
Measuring Range	200 mm	
Repeatability	0.1 mm	
Operating Temperature Range	0°C to 50°C	
Lateral Spacing Between Sensors	1700 to 1800 mm	

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

The longitudinal profile shall be recorded in both wheel paths of the measured lane. An individual and mean IRI value of both wheel paths of the measured lane shall be reported for every 100 metres.

The profile operator shall aim to drive 600 mm to the left of the centre line of the road. This is required to ensure that the data is collected in the same longitudinal path year after year, irrespective of the position of the rut.

The profiler shall have the capacity to calculate profiles and IRI values during the course of measurement in order for the operator to detect equipment failure during the survey.

The computer screen shall show a graphical display of the measurement of the height sensor and the accelerometer to enable the operator to assess the correct working of these components during the course of the survey.

The Tenderer shall supply a detailed description of the device used for recording longitudinal profiles, and shall describe the data collection method and algorithms for the computation of the IRI.

Transverse profiler

The Tenderer shall stipulate the specifications of the transverse profiler in Table 3. A column is provided for the Tenderer to supply technical specifications of the profiler he intends to use.

Table 3: Equipment Specifications: Transverse Profiler

Description	Minimum specification	Tenderer's specification (to be completed by the Tenderer)
Method of Measurement	Laser	
Resolution	0.05 mm	
Longitudinal sample interval	50 mm	
Measuring range	200 mm	
Repeatability	0.1 mm	
Frequency Response	DC to 16 kHz	
Operating Temperature	0°C to 50°C	
Long Term Drift	< 0.3 %	
Number of sensors	≥ 13	
Measurement width	≥ 3.4 m	
Stand-off Distance	≥ 30 mm	
Straight edge length used for rut depth calculation	2 metres	

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

The individual and mean rut depth of both wheel paths of the measured lane shall be reported per 100 m.

The Tenderer shall supply a detailed description of the device used for recording transverse profiles. The Tenderer shall also describe the data collection method and algorithms for the computation of rutting. The Tenderer shall also describe the procedures used to correct transverse profile data when narrow roads, kerbs or narrow bridges result in the outer sensors measuring artificially high values.

Texture profiler

The Tenderer shall stipulate the specifications of the texture profiler in Table 4 below.

Table 4: Equipment Specifications: Texture Profiler

Description	Minimum specification	Tenderer's specification (to be completed by the Tenderer)
Sensor type	Laser	
Number of Sensors	1 (in left wheel path)	
Sensor Measuring Range	0 to 200 mm	
Sensor Accuracy	0.1 mm	
Sensor Repeatability	0.02 mm	
Frequency Response	DC to 32 kHz	
Resolution	0.05 mm	
Operating Temperature	0°C to 50°C	

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

The Mean Profile Texture Depth (MPD) of the left wheel path shall be reported in intervals of every 100 m.

Distance measuring device

The Tenderer shall stipulate the specifications of the distance measuring device in Table 5 below.

Table 5: Equipment Specifications: Distance Measurement Device

Description	Minimum specification	Tenderer's specification (to be completed by the Tenderer)
Equipment type	Transducer	
Number	1	
Accuracy	Better than 0.2%	
Resolution	>1800 pulses per wheel revolution	

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

Video imaging device

The Tenderer shall stipulate the specifications of the video imaging device in Table 6 below. The purpose of the imaging is to view the full pavement width in front of the vehicle (Right of Way format) and the imaging set-up should correspond with this requirement.

Table 6: Equipment Specifications: Imaging Device

Description	Minimum specification	Tenderer's specification (to be completed by the Tenderer)
Camera type	Progressive scan	
Number of cameras	1	
Image size	Minimum VGA (640 x 480)	
View	RoW	
Field of view	50° to 60°	
Imaging interval	10m	
Compression	Jpeg (90%)	
File size per image	Approx. 50Kb	

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

DEFLECTION MEASUREMENTS

The required device for the survey is a Falling Weight Deflectometer, with a split or segmented loading plate, with a patterned rubber membrane footing (≥ 5 mm) and 300 mm in diameter. In addition, the system shall be equipped with a thermometer (typical accuracy: $\pm 0.5^{\circ}\text{C}$), and Distance Measuring Instrument (typical accuracy: $\leq 0.1\%$ of true distance).

Tenderers shall record details of their equipment specifications in this section. Tenderers are referred to the South African document: Draft TMH13, Guidelines for Network Measurement of Pavement Deflection, Version 0.0 December 2009.

A summary of the FWD displacement sensors specification requirements is provided in Table 7. A column is provided for the Tenderer to supply technical specifications of the FWD displacement sensors he intends to use.

Table 7: Displacement Sensors

Parameter	Displacement Sensors	Tenderer's specification (to be completed by the Tenderer)
Component Type	Geophone, accelerometer or equivalent	
Number and positions	9 at off-sets (mm): 0, 200, 300, 450, 600, 900, 1200, 1500, 1800	
Resolution	0.1 μm	
Measuring Range	0 to 2000 μm	
Repeatability	5 μm	
Recorded Resolution	1 μm	
Frequency Response	DC to 1 kHz	
Temperature Stability	50 ppm/ $^{\circ}\text{C}$	
Operating Temperature	0 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$	
Long Term Drift	< 0.25%	
Legend: ppm = parts per million		

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

A summary of the FWD load cell specification requirements is provided in Table 8. A column is provided for the Tenderer to supply technical specifications of the FWD load cell he intends to use

Table 8: Load Cell

Parameter	Load Cell	Tenderer's specification (to be completed by the Tenderer)
Component Type	Strain Gauged Bridge	
Number and positions	At 0 mm offset	
Resolution	50 N	
Measuring Range	0 to 120 kN	
Repeatability	0.5%	
Recorded Resolution	100 N	
Frequency Response	DC to 1 kHz	
Temperature Stability	50 ppm/ $^{\circ}\text{C}$	
Operating Temperature	0 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$	
Long Term Drift	<0.25%	
Legend: ppm = parts per million		

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

A summary of the FWD data acquisition system specification requirements is provided in Table 9. A column is provided for the Tenderer to supply technical specifications of the FWD data acquisition system he intends to use.

Table 9: Data Acquisition System

Parameter	Data Acquisition System	Tenderer's specification (to be completed by the Tenderer)
Component Type	Supply information in required format	
Number and positions	Not applicable	
Resolution	16 Bit	
Measuring Range	> Sensor Output	
Repeatability	± 1 LSB	
Recorded Resolution	Not Applicable	
Frequency Response	Sample Rate ≥ 100 kHz	
Temperature Stability	25 ppm/ $^{\circ}$ C	
Operating Temperature	0 $^{\circ}$ C to 50 $^{\circ}$ C	
Long Term Drift	<0.02% \pm LSB	
Legend: LSB = Least Significant Bit; ppm = parts per million		

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

Global Positioning System (GPS)

GPS coordinates should be linked directly to the data. Tenders are to fill in their equipment specifications, in Table 10, against those recommended in THM 13.

A GPS shall be used to:

- Verify that the correct road was tested.
- Assist to identify the correct start and end positions of a road link.
- Act as a validation system to resolve data discrepancies due to various factors and in general to verify the wheel path followed.

GPS coordinates shall be collected in addition to location referencing. The GPS system shall be validated by plotting the GPS coordinates obtained from each 'Verification Section' on which FWD measurement accuracy validation is performed. The location details of these Verification Sections will be agreed with the Tenderers. GPS coordinates shall be submitted together with verification data as well as network FWD data.

All GPS data should be submitted using the Geographic Coordinate System: GCS_WGS_1984

A summary of the required GPS equipment specifications is provided in Table 10. A column is provided for the Tenderer to supply technical specifications of the GPS he intends to use.

Table 10: Global positioning System

Description	Minimum specification	Tenderer's specification (to be completed by the Tenderer)
Instrument Type	Differential GPS (Inertial Navigation System for areas with no or lost GPS coverage)	
Resolution	Data to be provided with a minimum of 12 significant digits in decimal degrees	
Accuracy	98% of readings within 1m	
Minimum Sampling Interval/Frequency	10 Hz	
Repeatability	5m	

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

The Tenderer shall describe the method of applying differential correction on the GPS system as part of the Total Contract Quality Plan.

In the case of real time differential correction, the Tenderer shall describe the method used for applying correction when no signal is received.

The Tenderer shall also describe the inertial system for use when no GPS signal is available, and shall indicate what satellite network will be used for GPS data collection.

Signed on behalf of the Tenderer:

T2.2-B EQUIPMENT CALIBRATION, VALIDATION AND CERTIFICATION**Individual equipment component calibration**

Calibration deals with conformance of individual equipment components with international standards. Tenderers shall record details of their equipment component calibration in Tables 1 and 2 below for all critical components. Any calibration documentation mentioned in the table shall be referenced and copies supplied in the Total Contract Quality Plan. A certificate or declaration stating the date and outcome of the most recent equipment component calibration shall be submitted, also stating the name of the accredited body that issued the calibration certificates. The Survey Vehicle's Registration Number (for profiler equipment) and Trailer's Registration Number (for deflection equipment) shall also be entered in the relevant tables.

PROFILER EQUIPMENT

Equipment component	Description of calibration / executed by / date?	Calibration document reference (to Total Contract Quality Plan)
<i>Survey vehicle registration number:</i>		
<i>Longitudinal profiler</i>		
2 height sensors		
2 accelerometers		
<i>Transverse profiler</i>		
13 height sensors		
<i>Texture profiler</i>		
1 height sensor		
<i>GPS</i>		
GPS device		
<i>Distance measuring device</i>		
Distance measuring transducers		
<i>Imaging equipment</i>		

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

System validation of profiling device

Equipment validation deals with the checks to ensure the accuracy of the measurement system as a whole. They are detailed below.

- a) Pre-validation report: The 'Individual equipment component calibration' section above requires details regarding the calibration of components. It states that the Tenderer shall provide the details and attach the calibration certificates to the Total Contract Quality Plan. The Employer shall be satisfied that the device calibration is up to date and that the device is capable of the required accuracy. The Employer therefore reserves the right to request outstanding or more recent calibration certificates before commencement of the survey of the appointed Service Provider.

- b) Evidence of previous validations: Tenderers are typically used extensively for similar surveys and may have had validations done the last year or two. If these validations comply with the requirements of validation as stated in TMH10/13 for roughness and rut measurements, (Table 9: Validation requirements for Longitudinal Profilers; Table 4-1: Validation requirements for Transverse Profilers) Tenderers are requested to submit the relevant validation reports. If no validations as documented in TMH10/13 have been done the past two years, Tenderers shall specifically state so in the table below. Validation Reports shall be attached to the Total Contract Quality Plan.

Note that validations are typically done against reference equipment of Class 1.

Have any validations been done the past two years? Yes / No:
 If Yes, complete the table below.

Table 1: Profiler Equipment Validation Record

Validation date	Validation details (roughness, rut depth, DMD, GPS etc)	Validation report reference (to Total Contract Quality Plan)
Survey vehicle registration number:		

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

- c) Equipment validations in terms of TMH10/13: Should no validations have been done the past two years, or the submitted validation reports are not acceptable to the Employer, the Employer may request that validation be executed prior to the start of the contract. The Guidelines for Validation Acceptance Criteria of Table 10 and Table 4-2 of TMH10/13 will be used for this validation.

DEFLECTION EQUIPMENT

Individual equipment component calibration

Equipment component	Description of calibration / executed by / date?	Calibration document reference (to Total Contract Quality Plan)
Survey vehicle / trailer registration number:		
FWD component		
Displacement sensors		
Load cell		
Data acquisition system		
GPS		
GPS device		

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

System validation of FWD device

Equipment validation deals with the checks to ensure the accuracy of the measurement system as a whole. They are detailed below.

- a) Pre-validation report: The ‘Individual equipment component calibration’ section above requires details regarding the calibration of components. It states that the Tenderer shall provide the details and attach the calibration certificates to the Total Contract Quality Plan. The Employer shall be satisfied that the device calibration is up to date and that the device is capable of the required accuracy. The Employer therefore reserves the right to request outstanding or more recent calibration certificates before commencement of the survey of the appointed Service Provider.
- b) Evidence of previous validations: Tenderers are typically used extensively for similar surveys and may have had validations done the last year or two. Validation essentially comprises a referencing exercise conducted on predetermined validation (or reference) sites. If these validations comply with the requirements of validation as stated in draft TMH 13 for FWD measurements, Tenderers are requested to submit the relevant validation reports. If no validations as documented in TMH13 have been done the past two years, Tenderers shall specifically state so in the table below. Validation Reports shall be attached to the Total Contract Quality Plan.

Have any validations been done the past two years? Yes / No: If Yes, complete the table below.

Table 2: Profiler Equipment Validation Record

Validation date	Validation details	Validation report reference (to Total Contract Quality Plan)
Survey vehicle / trailer registration number:		

(The table above to be completed by the Tenderer and provided as part of the Tender Response)

- c) Equipment validations in terms of TMH13: Should no validations have been done the past two years, or the submitted validation reports are not acceptable to the Employer, the Employer may request that validation be executed prior to the start of the contract. The Guidelines for Validation Chapter 4-2 and 4-3 of TMH13 will be used for this validation.

Signed on behalf of the Tenderer:

T2.2-C TOTAL CONTRACT QUALITY PLAN

Tenderers shall submit a draft Total Contract Quality Plan, consisting of the following for each of the profiler and deflection surveillance measurements:

- a) Equipment calibration and validation information
Refer T2.2-B for information to be provided.
- b) Operational procedures
Description of daily, weekly, monthly checklists.
- c) Draft Quality Control Plan
Tenderers must submit a draft Quality Control Plan for the execution of the work together with their tenders. The draft Quality Control Plan shall provide evidence of the Tenderer's planning regarding the following aspects of quality control and include at least the following headings:
 - Quality control planning for surveys
 - Quality control procedures during execution of the surveys
 - Quality control compliance record keeping, during and after execution of the surveys

The Employer and/or Employer's agent will assess the draft Quality Control Plan and comment to the successful tenderers on the acceptability of the plan and any shortcomings. The draft plan must then be updated to the satisfaction of the Employer before the Service Provider commences any surveys.

- d) For more details regarding the contents of the quality plan, refer to the Scope of Works.
- e) Visual condition assessments: The visual condition assessments are carried out bi-annually on the paved road network in terms of the TMH9 "Standard Visual Assessment Manual for Flexible Pavements. The consistency of data collection is ensured through a testing and calibration session held for the service provider's assessors before the start of the assessments and a 10% quality control survey done by an independent assessor during the surveys.

Signed on behalf of the Tenderer:

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

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

Contract No: **1R-30827**
 Contract Title: **Professional Services Contract for Paved Road Pavement Surveillance Measurements**

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

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

*** The offered total of the prices inclusive of Value Added Tax is:**

R..... (In words
)

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

For the Tenderer:

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

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

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

Capacity (*of Signatory*) :

Address :
 :

Witness:

Signature :

Name(*in capitals*) : :

Date :

Notes:

*** Indicates what information is mandatory.**
Failure to complete the mandatory information and sign this form will invalidate the tender.

C1.1 : FORM OF OFFER AND ACCEPTANCE

C1.1.2 : FORM OF ACCEPTANCE

This Form will be completed by the Employer

By signing this part of the Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in:

- Part C1 : Agreement and Contract Data, (which includes this Agreement)
- Part C2 : Pricing Data, including the Bill of Quantities
- Part C3 : Scope of Work
- Part C4 : Site Information

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

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

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

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

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

Name (*of signatory in capitals*) :

Capacity (*of Signatory*) :

Name of Employer (*organisation*) :

Address :

:

Witness:

Signature : **Date** :

Name(*in capitals*) : :

C1.1 : FORM OF OFFER AND ACCEPTANCE
C1.1.3 : SCHEDULE OF DEVIATIONS

This form will be completed by THE EMPLOYER and ONLY THE SUCCESSFUL TENDERER

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

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

FOR THE TENDERER

FOR THE EMPLOYER

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

C1.2 : CONTRACT DATA

C1.2.1 CONDITIONS OF CONTRACT

C1.2.1.1 GENERAL CONDITIONS OF CONTRACT

The Conditions of Contract are the Standard Professional Services Contract (Third edition: July 2009) published by the Construction Industry Development Board. (see www.cidb.co.za - copied for ease of reference in C4.2).

The Contract Data (including variations and additions) shall amplify, modify or supersede, as the case may be, the Standard Professional Services Contract, to the extent specified below, and shall take precedence and shall govern.

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

C1.2.2 CONTRACT DATA

C1.2.2.1 DATA TO BE PROVIDED BY THE EMPLOYER

The Employer is the eThekweni Municipality as represented by : Deputy Head : **Roads Provision**

3.4 & The authorised and designated representative of the Employer is: Ebrahim Zoutenberg

4.3.2 The contact details of the authorised and designated representative are:

- Telephone : 031 311 7444
- Fax : [031 311 7321](tel:0313117321)
- e-mail : Ebrahim.zoutenberg@durban.gov.za

The address for the Receipt of communications is: Ebrahim.zoutenberg@durban.gov.za

1 The Project is : **1R-30827**
: **Professional Services Contract for Paved Road Pavement Surveillance Measurements**

1 Period of Performance : **36 MONTHS**

1 Start Date : **7 days from receipt of Road assessment data**

3.4.1 Communications by e-mail / facsimile **is** permitted.

3.5 The location for the performance of the Project is: **eThekweni Metropolitan Area**

3.6 The Service Provider may not release public or media statements or publish material related to the Services or Project under any circumstances.

3.9.2 The time-based fees used to determine changes to the Contract Price are as stated in the Pricing Data.

3.12 The penalty per Day payable is: **R 5000.00**

3.15.1 The programme shall be submitted within **7 Days** of the award of the Contract.

3.15.2 The Service Provider shall update the programme at intervals not exceeding **1 weeks**.

3.16 The time-based fees shall not be adjusted for inflation.

4.3.1(d) The Service Provider is not required to assist in the obtaining of approvals, licenses and permits from the state, regional and municipal authorities having jurisdiction over the Project.

- 5.4.1 The Service Provider is required to provide Professional indemnity in an amount as set out in the Professional Indemnity Schedule.
1. Insurance against : **Errors and omissions**
 Cover is : **R 5 000 000.00**
 Period of cover : **Covering the period of the contracts**
- 5.5 The Service Provider is required to obtain the Employer's prior approval in writing before taking any of the following actions:
- 1) **Appointing subcontractors for the performance of any parts of the Services**
 2) **Using alternative system or software not approved in writing by the Employer following a replacement of validated equipment.**
- 7.2 The Service Provider is required to provide personnel in accordance with the provisions of clause 7.2 and to complete the Personnel Schedule.
- 8.1 The Service Provider is to commence the performance of the Services within **7 Days** of date that the Contract becomes effective.
- 8.2.1 The Contract is concluded when: **The Service Provider has completed all Deliverables in accordance with the Scope of Work.**
- 8.4.3(c) The period of suspension under clause 8.5 is not to exceed **8 months**
- 9.1 Copyright of documents prepared for the Project shall be vested with the **Employer**
- 11.1 A Service Provider may subcontract any work which he has the skill and competency to perform.
- 12.1 Interim settlement of disputes is to be by **Mediation**
- 12.2/3 Final settlement is by **Arbitration.**
- 12.2.1 In the event that the parties fail to agree on a mediator, the mediator is nominated by : **Consulting Engineers South Africa (CESA).**=
- 12.3.3 The adjudicator is the person appointed by: **Consulting Engineers South Africa (CESA).**
- Tel Fax
- 12.4.1 In the event that the parties fail to agree on an arbitrator, the arbitrator is nominated by: **Consulting Engineers South Africa (CESA).**
- 13.1.3 All parties in a joint venture or consortium shall carry a minimum professional indemnity insurance of **R 5 000 000.00.**
- 13.4 Neither the Employer nor the Service Provider is liable for any loss or damage resulting from any occurrence unless a claim is formally made within **36 months** from the date of termination or completion of the Contract.
- 13.5.1 The provisions of 13.5 do not apply to the Contract.
- 13.6 The provisions of 13.6 do not apply to the Contract.
- 14 Remuneration and reimbursement of the Service Provider will be on the following basis:
 Final payment will be based on the actual kilometres of Paved roads for which profile and deflection measurements were carried out. Payment will not be made for roads considered to be unmeasurable due to condition and those sections of road that were under construction at the time and therefore not surveyed.
 The instalments of payment will be on the following basis (payment schedule):

- 50% with handing in of finalised profile and deflection data of the surveys, maps and road link identification with corrections made on the maps and road link identification as required. Full compliance with the requirement for submission of the initial programme and weekly programmes and progress reports is also required.
- The remainder of the money to be paid pro rata based on the quality of the Service Provider's survey as assessed with the quality verification and acceptance procedures described in this Contract.

15 The interest rate will be prime interest rate of the Employers bank at the time that the amount is due.

16 **Penalty Clause for Non-Compliance with Contract Skills Development Goal (CSDG)**

In the event that the Service Provider fails to achieve the Contract Skills Development Goal (CSDG) as specified in the CIDB Standard for Developing Skills Through Infrastructure Contracts (Gazette Notice No. 48491 of 28 April 2023), and fails to provide a reasonable explanation to the Employer for such non-compliance, the following penalties will apply:

- a) **Penalty Amount:** A penalty of R32 333.34 (2 x Monthly CSDG Committed amount) (excluding VAT) per month shall be imposed for each month of non-compliance.
- b) **Duration of Penalty:** The penalty will be applicable for a period until the Service Provider achieves compliance with the CSDG.
- c) **Compliance Review:** The Employer will assess the Service Provider's compliance status at regular intervals, and any penalties imposed will be reassessed upon demonstration of compliance.

C1.2.3 ADDITIONAL CONDITIONS OF CONTRACT

The additional conditions of contract are:

C1.2.3.1 PERFORMANCE MONITORING OF SERVICE PROVIDERS

For contract awards that are greater than R10m, the Service Provider shall be subjected to “Performance Monitoring” assessments in terms of the applicable Section of the Council’s current Supply Chain Management Policy.

C1.2.3.2 EMPOWERMENT INITIATIVE

The service provider shall, in the performance of the contract, achieve the **Contract Skills Development Goal** (CSDG) established in the CIDB Standard for Developing Skills Through Infrastructure Contracts, published in Gazette Notice No. 48491 of 28 April 2023.

Reference is to be made to Section C.3.3: “**CIDB SKILLS STANDARD**”

The awarded tender is to provide work integrated learning opportunities for University of Technology or Comprehensive University unemployed student completing their National Diploma. The unemployed learner working is to carryout work related to the scope for the period as calculated in C2.2 (Item 8). The Service provider shall achieve in the performance of the contract skills development goal established in the above-mentioned standard for developing skills through this contract as laid out in Section 4.2 subsection 4.2.5

The minimum prescribed reimbursement of the learner shall be as per **Method 3** of Table 3 of the standard. The current hourly notional cost (**Rate**) for the learner as per “GOVERNMENT GAZETTE, APRIL 2023” is **R93.26 excluding Vat**, calculated using an average of **21.67** working days per month.

- Where the unemployed learner is employed directly by the service provider, the service provider shall pay the stipend directly to the learner.
- Where the unemployed learner is sourced through an SDA, training provider or skill development facilitator, the service provider may pay the stipend to the SDA, training provider or skill development facilitator who in turn will pay the learner.
- The role and function of a cidb SDA is outlined in Annexure C3.3.3
- The proposed notional cost of the providing training opportunity will be reviewed as and when required. The new, revised costs will be published as revised in a Gazette Notice.

C1.2.3.3 VISUAL CONDITION ASSESSMENT

The profiling and visual assessment for the entire municipal paved road network is to be conducted and to be concluded within 6 months of appointment and then again within the first 6 months in last 12 months of this contract or as directed in writing by the employer. This should be reflected in the programme.

PART C2 : PRICING DATA
C2.1 : PRICING INSTRUCTIONS

C 2.1.1 The Service Provider is required to provide all the services necessary to undertake the project requirements in accordance with the Scope of Work. This includes all things necessary and incidental to providing the Services, including appointment and payment of subcontractors.

C 2.1.2 The sole basis for the remuneration of the Service Provider to be appointed to proceed with the project shall be:

C 2.1.2.1 The following words shall have the meanings hereby assigned to them:

Unit: The unit of measurement for each item of work for the services as defined in the Scope of Work

Quantity: The number of units of work for each item of the services

Rate: The payment per unit of work at which the Tenderer tenders to do the work for the services

Amount: The product of the quantity and the rate tendered for an item

C.2.1.2.2 The quantities set out in the Pricing Schedule are approximate quantities. The quantities of work accepted and certified for payment of the services, and not the quantities given in the Pricing Schedule, will be used to determine payments to the Service Provider. This amount could be more or less than the approximate quantities.

The validity of the Contract shall in no way be affected by differences between the quantities in the Pricing Schedule and the quantities finally certified for payment. Work for the services will be valued at the rates tendered, subject to the provisions of paragraphs 7 and 8 of this section.

C.2.1.2.3 The tendered rates are all-inclusive and covers the execution of the activities as listed, all accommodation, travelling expenses, all mandatory taxes and levies (excluding VAT), allowance for delays, validation of equipment during surveys, all liaison, project management, insurance against damage, compensation for loss as well as any other possible expenses which have not been specifically mentioned, but which may be related to the execution of the work for the services. Value added tax (VAT) shall be excluded from the rates and prices and provided for as the total VAT on the cost of the Works in the Pricing Schedule.

C.2.1.2.4 If the Tenderer has tendered a rate but omitted the amount, or vice versa, the missing amount or rate will, if possible, be determined in conjunction with the Tenderer from the available data, and the Tenderer must confirm his acceptance of these amounts and rates.

If the Tenderer groups a number of items together and tenders one lump sum for such group of items, this single tendered lump sum shall apply to that group of items and not to each individual item, or, should he indicate against any item that full compensation for such item has been included in another item, the rate for the item included in another item shall be deemed nil.

The tendered lump sums and rates shall be valid irrespective of any change in the quantities during execution of the Contract.

- C.2.1.2.5 The works executed are being measured for payment in accordance with the methods described in the Contract Documents under the various payment items, notwithstanding any custom to the contrary.
- C.2.1.2.6 The short descriptions of the payment items in the Pricing Schedule are given to identify the items and to provide specific details. Reference shall inter alia be made to the Scope of Work, Conditions of Contract and Special Conditions of Contract (if any) for more detailed information regarding the extent of the work entailed under each item.
- C.2.1.2.7 Subject to the conditions stated in paragraph 8 below, the rates and lump sums filled in by the Tenderer in the Schedule of Quantities shall be final and binding with regard to submitting the Tender, and may not be adjusted should there be any mistakes in the extensions thereof and in the total sums appearing in the Tender. Should there be discrepancies between the Tender Sum and the correctly extended and totalled Pricing Schedule, the Tender Sum will be deemed correct, and the Employer will have the right to make such adjustments to the Tender Rates as he deems necessary to reconcile the total of the Pricing Schedule with the Tender Sum.

In such an event the Tenderer will be consulted but, failing agreement between the parties, the decision of the Employer will be final and binding. Adjustment of the Tender Sum will take place only after acceptance of the Tender, but prior to the signing of the Contract. In their own interests Tenderers should make doubly sure of the correctness of their tendered rates, the extensions and the Tender Sum.

- C.2.1.2.8 A Tender may be rejected if the unit rates or lump sums for some of the items in the Pricing Schedule are in the opinion of the Employer, unreasonable or out of proportion and if the Tenderer fails within a period of seven (7) days of having been notified in writing by the Employer to adjust the unit rates or lump sums for such items to make such adjustments.
- C.2.1.2.9 All rates and sums of money quoted in the Pricing Schedule shall be in Rands and whole Cents. Fractions of a cent shall be discarded.
- C.2.1.2.10 The minimum prescribed reimbursement of the learner shall be as per **Method 3** of Table 3 of the standard. The current hourly notional cost (**Rate**) for the learner as per "GOVERNMENT GAZETTE, APRIL 2023" is **R93.26 excluding Vat**, calculated using an average of 21.67 working days per month.
- Where the unemployed learner is employed directly by the service provider, the service provider shall pay the stipend directly to the learner.
 - Where the unemployed learner is sourced through an SDA, training provider or skill development facilitator, the service provider may pay the stipend to the SDA, training provider or skill development facilitator who in turn will pay the learner.
 - The proposed notional cost of the providing training opportunity will be reviewed as and when required. The new, revised costs will be published as revised in a Gazette Notice.
 - Not more than 45 working hours can be claimed per week.

C2.2 : PRICING SCHEDULE**NB:**

TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN **BLACK INK**
 ALL RATES AND PRICES SHALL EXCLUDE VALUE-ADDED TAX

SCHEDULE A: SURVEILLANCE MEASUREMENTS OF PAVED ROAD

ITEM	CLAUSE	DESCRIPTION	UNIT	APPROXIMATE QUANTITY/ RATE	RATE (excl. VAT)	AMOUNT	
						R	c
1	C.3.2.1 C.3.2.3 C.3.2.4 C.3.2.8	Profile measurement of paved roads in eThekweni (RCAM Classes 1, 2, 3&4)	Lane km	12000			
2	C.3.2.4 C.3.2.3 C.3.2.4 C.3.2.8	Profiler Verification Section measurements (6 times minimum)	Number of sections	9			
3	C.3.2.9 C.3.2.10	Visual Condition Index using TMH9: 1992 (RCAM Classes 1, 2, 3, 4)	Lane km	12000			
4	C.3.2.2 C.3.2.3 C.3.2.4 C.3.2.11	Deflection measurement of paved roads in eThekweni (All classes of road)	Lane km	2000			
6	C.3.2.5 C.3.2.3 C.3.2.4	Verification Section measurements (6 times minimum)	Number of sections	9			
7	C3.2.14(e)	External verification Visual condition assessment	PC Sum	R 600 000.00 +	____%		
SUB-TOTAL						R	
8	C.1.2.3.2 C.2.1.2.10	Skills Cost	Sub-Total (Rm) x 150	____Hrs		R	

*Note: (Rm) Rand in millions, which should be used to calculate Hrs (e.g. R3 400 000.00/1000000 = R3.4m)
 (e.g. Hrs = R3.4m x 150 = 510Hrs)

	TOTAL (EXCL VAT)	R	
	VALUE ADDED TAX	R	
	TOTAL (INCL VAT): TENDER AMOUNT CARRIED FORWARD TO THE FORM OF OFFER AND ACCEPTANCE (FORM C1.1)		R

THE TOTAL OF SCHEDULE A MUST BE TRANSFERRED TO THE FORM OF OFFER AND ACCEPTANCE, FORM C1.1 ON PAGE 51.

NOTE:

- 1) **Value Added Tax (VAT) is to be excluded** in the above tendered rates.

- 2) The Service Provider shall include in his rates for the following:
 - a) Attendance for all meetings with the Employer.
 - b) Execution of an equipment validation exercise, if so, required by the Employer.
 - c) Finalisation of a Total Contract Quality Plan.
 - d) Finalisation of a Health and Safety Plan.
 - e) All costs involved in executing and completing the pavement surveillance measurements of all the paved roads irrespective of any differences in the kilometres of road measured with that of the Schedule of Quantities.
 - f) Execution of verification surveys on the established verification sections (3 sections, twice measured) for each of the two surveys.
 - g) Insurance of equipment.
 - h) All other costs that may be incurred in completing all the work specified to the satisfaction of the Employer.
 - i) Schedule of assessments critical to this contract as follows.
 - The profiling and visual assessment for the entire municipal paved road network (approx. 6000km) is to be conducted, in accordance with the scope, and to be concluded within 6 months of appointment and then again within 6 months in year 3 of this contract.

- 3) Only the actual kms of paved roadway profiled and on which deflection measurements were done will be measured for payment. No payment will be made for roads not measured.

- 4) The rates tendered are fixed for the duration of the Contract. Tenderer should ensure that the tendered rates make allowances for any changes in costs for the duration of the contract.

NAME : (Block Capitals)

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

PART C3 : SCOPE OF WORK

C3.1 BACKGROUND

C3.1(a) Introduction

The Roads Provision Department of the eThekweni Municipality is desirous to obtain the services of a consultant experienced in the operation of a surveillance measurements to collect data for inclusion into the PMS system.

Interested service provider should provide proof of comparable experience in road surveillance for similar roads authorities in South Africa, provide proof of capability of using ArcGIS.

These specifications / scope of work form an integral part of the contract documents and specify in detail the manner in which the services are to be carried out.

Survey objectives

The work to be carried out under the Contract comprises the execution of network level condition survey on the paved roads in the eThekweni Municipal Area. It is the intention of the Employer to appoint Service Providers for specified condition data, which shall serve as input to the Pavement Management System of the Employer. The network level data as such collected will assist to:

- Provide a summary of the current network condition.
- Identify, prioritise and optimise maintenance and rehabilitation actions on the network.

Required services

It is the intention of the Employer to appoint a single Service Provider for the surveillance measurement of the paved roads under its jurisdiction in eThekweni.

The required services will consist of:

- Attendance of all meetings with the Employer and / or his representative, prior to, during and after completion of the measurements.
- For profiler equipment, execution of an equipment validation exercise, if so required by the Employer, according to the TMH10 / TMH13 Guidelines. Such validation exercise will be executed against a Class I profiler.
- Finalisation of a Total Contract Quality Plan.
- Finalisation of a Health and Safety Plan.
- Executing of verification surveys of three chosen verification sections prior to the start of the network surveys, for both the profiler and deflectometer (may be different sections for each measurement type).
- Executing the profile measurements of all specified eThekweni paved roads.
- Executing the deflection measurements of all specified eThekweni paved roads.
- Execution of verification surveys on the three verification sections at the conclusion of the contract, for both the profiler and deflectometer.
- Processing and submission of collected data in the format specified.
- Conduct visual condition assessments as per TMH 9

The eThekweni paved roads to be measured will be the following, as listed in the data to be provided to the

Service Provider and the GIS of road centrelines:

- Single carriageway road: Only measure the lane in the direction of increasing kilometres (i.e. start of road to end of road according to successive link descriptors). Do not measure the opposite lane in the negative direction (i.e. end to start of road).
- Dual carriageway road: Measure only the slow lane of each of the two carriageways (each carriageway of a dual carriageway road is considered a separate road).
- Ramps of eThekweni interchanges: Measure the slow ramp lane where there are more than one ramp lane, or the only lane if there is only one lane. Crossroads, over or under bridges, and within the boundary of the interchange, shall also be measured. The lane to be measured shall typically be one of the slow lanes.

Management of the survey

The Employer will be assisted by a management consultant who is currently involved in the development and implementation of the Road Asset Management System of the Department.

C3.1(b) Brief Description of GIS data conventions used in the PMS

The core of the PMS is a fully integrated GIS. A lengthy process of “cleaning” and improving the roads spatial dataset using aerial photography was recently undertaken to improve its integrity and suitability for integration with the road asset management system. The road network is broken down into links that are described by inter alia, start and end descriptions, start and end kilometres, road type and road classification.

The relevant GIS data convention used in the PMS is discussed below:

- **Road Link** - By definition a road link is defined as a road segment occurring between nodes. A node can be considered to be a road intersection or change in physical pavement type e.g. paved to unpaved.
- **Road Line** - Within the eThekweni municipal environment the definition of a road line is a series of consecutive road links occurring between the physical start position of a road and its end position.
- **Road** – Within the eThekweni municipal environment the definition of a road is based on the physical naming that has taken place. A road will in general fulfil the definition of a road line (above), but in some special cases names were allocated in a manner that does not satisfy this definition and for this reason the road definition is different to that of the road line.
- **ROAD_ID** – This is a unique identifier allocated per road name.
- **LINE_ID** – The LINE_ID represents the unique number of a road line and is important for linear referencing of data and enabling dynamic segmentation capabilities. The format of the LINE_ID is a 6-digit alpha numeric code. The numbers range from R00001 to approximately R23040. No two road lines can have the same LINE_ID. It is also important that every link on a specific road line has the same LINE_ID. An allocated LINE_ID must never be changed without informing all peripheral systems about the change.
- **LINK_ID** – The LINK_ID represents the unique number of a road link. The format of the LINK_ID is a 6-digit alpha numeric code. The numbers range from L00001 to approximately L55534. No two road links can have the same LINK_ID. An allocated LINK_ID must never be changed without informing all peripheral systems about the change. If an existing road link needs to be split, of the two links created, the link closest to the start of the road must maintain the original LINK_ID and the new link closest to the end of the road must be allocated a new LINK_ID.
- **LINK_SEQ** – The LINK_SEQ represents the sequence of the road links on the road line. The link at the start of a road will have a sequence value of 1 with subsequent links having higher numbers until

the last link is reached. The last link will have the highest sequence number. The link sequence field allows the user to sort the road links in the order that they actually occur on the road. The initial increments between links will be units of 10 to allow for links to be inserted without affecting sequencing on the rest of the road.

C3.1(c) The PMS Operations

The extent of the Municipality's paved road network is approximately 6 000 km.

The activities for the paved roads are as follows:

Visual condition assessments: The visual condition assessments are carried out bi-annually on the paved road network in terms of the TMH9 "Standard Visual Assessment Manual for Flexible Pavements".

Profiling measurements: The Department implemented a profile measurement programme to obtain inter alia, riding quality and rut depths for the paved road network, etc.

Processing of data and calculation of indices: The Department uses its PMS to calculate the condition indices and generate a priorities list of roads with proposed maintenance interventions.

Consequence analysis: A strategic analysis of consequences of various budget scenarios, and if necessary, also policy scenarios, is done. The benefit function used is aimed at maximising the condition of the paved road network, by maximising the area under the condition curves, in an approach known as the Area-Under-Condition curve.

Combination of projects: Once agreement is reached on the available budgets a draft optimised preventive maintenance and rehabilitation plan (M&R) is prepared. The software is used to combine proposed treatments into viable projects as far as possible, but this is only possible per individual road. As a further step to combine treatments into viable projects, roads crossing and joining the roads under consideration are also considered. At this point in time, non-pavement related issues are also considered. Typically, various reports on the raw condition assessment data, processed data and current needs are also used during this activity.

Reporting and presentation: The consequence analyses are documented in detail, and final M&R plan included in a comprehensive strategic report.

C3.1(d) Maintenance of Roads Database and GIS Stick map

C3.2(d)-1 Associated with the geo-database and capture methodology is a requirement for the Department to inform Corporate GIS when road links need to be formalised. The existing Workflow System needs to be revised to deal with inter-departmental communication and work requests. For example, the Roads and Stormwater Maintenance Department is reliant on an updated Road_Links database for their operations.

C3.2(d)-3 All the road links are broken down into visual assessment segments based on length. The visual assessment segment length is 500m long, measured from the start of the link. In instances where the road link is less than 500m, the visual assessment segment is equal to the road link. In instances where the road link is greater than 500m, the visual assessment segment must not exceed 750m.

C3.2 EMPLOYER'S OBJECTIVES

C.3.2.1 PROFILE MEASUREMENTS

The successful Tenderer (Service Provider) shall perform road profile measurements, GPS coordinate gathering and road right-of-way image collection on urban paved roads under the jurisdiction of the eThekweni Roads Authority. These measurements and data gathering shall be performed by means of instrumentation (specified in this tender by the Tenderer, if acceptable to the Employer) mounted on a special vehicle to be supplied by the Tenderer.

C.3.2.1(a) Roads to be measured

The roads to be measured are paved urban roads within eThekweni Municipality boundary and under the jurisdiction of the eThekweni Roads Authority. The total length of paved roads under the jurisdiction of the Employer classified as RCAM Classes 1, 2, 3 & 4 is approximately 6000 km. The Employer will provide a GIS map in ESRI shapefile format to the Service Provider, which defines the full road network and its links requiring profile measurements.

Where a road is undergoing maintenance or construction, it shall not be surveyed, but its status shall be noted and will be reflected in the electronic data set to be provided to the Employer.

Appendix 3 contains a map showing the paved road network under jurisdiction of the eThekweni Municipality. These are all the roads to be measured.

C.3.2.1(b) Measurements required

The work to be carried out under the Contract comprises the execution of network level profile measurements. Tenderers are referred to the South African document: TMH10, Guidelines for Network Level Measurement of Road Roughness, Version 1.0 or later, April 2007 or later, of the Committee of Transport Officials (COTO), compiled under the auspices of the COTO Road Network Management Systems (RNMS) Committee, for clarification of terminology or procedures regarding road roughness measurements. A copy of the above document can be found here:

<http://www.nra.co.za/content/Blogin/TMH10.pdf>

Tenderers are also referred to the following documents regarding road roughness, rutting and texture measurements:

- TMH13 Guidelines for Network Level Measurement of Road Roughness, Version 1.1, July 2007 or later
- TMH13 Guidelines for Network Level Measurement of Rutting, First Draft Version 0.0, October 2010 or later
- TMH13 Guidelines for Network Level Measurement of Skid Resistance and Texture, First Draft Version 0.0, December 2008 or later

The TMH13 Guidelines issued by COTO, will be used in this contract. Latest version of all guidelines available at the start on the contract are to be used throughout the period of this contract.

The purpose of the measurements is to obtain the following data:

- Longitudinal road profiles from which road roughness can be calculated and reported in IRI units

- for each wheel path and per measured lane.
- Transverse Profiles from which the mean rut depth in each wheel path and per measured lane can be derived and reported in mm.
 - Texture Profile measured in the left wheel path from which the Mean Profile Depth (MPD) can be derived and reported in mm.
 - Right-of-Way image survey.
 - GPS coordinate data to confirm the location of the sections measured.

Road roughness measurements (expressed in IRI - International Roughness Index) and rutting measurements (in millimetres) are required to be taken in both wheel paths of the designated lane for each road surveyed. The survey shall be performed in the positive road direction for each road, unless otherwise directed by the Employer. Survey measurements are required to be taken and reported at a maximum of 100 m intervals.

C.3.2.1(c) Survey equipment requirements

The Tender document specifies the minimum requirements for the equipment to be used for the surveys, and the Tenderer shall fill the forms provided thoroughly, allowing the Employer to assess the suitability of the equipment offered. The specification as well as component calibration details shall be provided. The basic requirement is that of a Level 2 Profiler that can measure all the required parameters in one go. It excludes any Response Type Road Roughness Measuring Devices.

A successful tenderer is not allowed to offer one Profiler for the tender evaluation and then use another without informing the Employer by letter of the reasons for the replacement of the Profiler. As for the tender evaluation, the service provider will have to provide all specification and validation information of the new Profiler. Failure to provide this will invalidate the contract. Likewise, should a service provider have to replace his approved equipment during the survey due to whatever reasons, all specification and validation details have to be provided of the replacement equipment.

It is preferable that operators of equipment not be changed during the surveys. The Employer shall be informed in writing in such cases, prior to the change.

C.3.2.2 DEFLECTOMETER MEASUREMENTS

The Service Provider shall perform Falling Weight Deflectometer (FWD) measurements and GPS coordinate gathering for test positions on paved rural, peri-urban and urban roads within the eThekweni and under the jurisdiction of the Roads Provision Department. These measurements and data gathering shall be performed by means of instrumentation (specified below) mounted on a vehicle or a trailer to be supplied by the Service Provider.

C.3.2.2(a) Roads to be measured

Non-destructive testing in the form of FWD measurements and GPS coordinate gathering at 50m intervals are to be performed on paved roads classified as RCAM Classes 1, 2, 3 and 4 in eThekweni Municipality region. Note that FWDs shall only be measured as and when requested by the client representative.

An electronic Geographical Information System (GIS) map in ESRI using feature classes format which shall be supplied to the Service Provider, which defines the full road network and links. The roads to be measured shall be specifically highlighted. These roads, and their road identifications, start and end kilometre (chainage) distances shall be used as the basis of measurements and all measurements shall be related to these road identifications and kilometre distances.

Where a road is undergoing maintenance or construction, it shall not be surveyed, but its status shall be noted and will be reflected in the electronic data set to be provided to the Employer.

Appendix 3 contains a map showing the category classified paved road network under jurisdiction of the eThekweni road Authority.

C.3.2.2(b) Survey equipment requirements

The Tender document specifies the minimum requirements for the equipment to be used for the surveys, and the Tenderer shall fill the forms provided thoroughly, allowing the Employer to assess the suitability of the equipment offered. The specification as well as component calibration details shall be provided.

The FWD equipment to be used shall have geophones or sensors at least the following offsets from the centre of the load plate: 0mm, 200mm, 300mm, 450mm, 600mm, 900mm and 1200mm.

The Service Provider shall stipulate the specifications of the Falling Weight Deflectometer in T2.2A for submission with the tender.

The successful Tenderer is not allowed to offer one FWD for the tender evaluation and then use another without informing the Employer by letter of the reasons for the replacement of the FWD. As for the tender evaluation, the Service Provider will have to provide all specification and validation information of the new FWD. Failure to provide this will invalidate the contract. Likewise, should the Service Provider have to replace his approved equipment during the survey due to whatever reasons, all specification and validation details have to be provided of the replacement equipment.

It is preferable that operators of equipment not be changed during the surveys. The Employer shall be informed in writing in such cases, prior to the change.

C.3.2.3 SURVEY PROCEDURE

C.3.2.3(a) Location referencing: both profiler and deflectometer surveys

The basis of the data collection shall be the road identification system according to the electronic GIS map of the eThekweni roads, with tabular link description information for every road, supplied to the Service Provider by the Employer.

All data collection shall be uniquely referenced in relation to road Link and lane measured. Where continuous measurement of a road is not possible, due to 'non-measurable' sections, the subsequent link's start metres, as provided, shall be used as the base (starting point) for reference of subsequent measurements.

All data collected shall be referenced to a longitudinal position on the road (km position) to within an accuracy of ± 1 m from the start of the road, or, where not possible due to non-measurable lengths, from the start metre of the successive link. Global Positioning System (GPS) data is to be recorded simultaneous to the survey to enable later verification of road locations and measured sections on a road by the Employer.

Additionally, for all deflection data collected, the location referencing shall specify the road width, as well as the transverse offset of the center of the load plate, measured from the road centreline, perpendicular to the road centerline, and expressed in metres.

The accuracy of the location referencing system must be unaffected by the travelling speed of the equipment or by the road geometry.

C.3.2.3(b) Direction of measurement: both profiler and deflectometer surveys

As mentioned it is envisaged that measurements shall only be taken in one direction per carriageway, generally the direction of increasing road chainages. However, the Employer may require the measurements from end to start for certain roads, and these requirements (if any) will be communicated to the Service Provider prior to the start of the surveys.

C.3.2.3(c) Measurement speed: profiler survey

The average speed at which the survey is conducted shall be recorded and reported at the same interval at which the respective data is reported. The suggested speed for data collection is 80 km/h. However, due to the urban nature of the road network this may not be continuously possible on all roads and the tolerance for speed will not be unduly applied.

The average speed shall be measured to within an accuracy of 1 km/h. The average speed shall be reported in km/h.

C.3.2.3(d) Testing positions in road lanes: deflectometer survey

Measurements are to be conducted on the loaded area of the pavement. For two-way single carriageway roads, deflection testing should be made at the outer left wheel path (as these carry the most heavy-vehicle traffic and the pavement structure directly underneath the wheelpath is typically the weakest in the road) and in the direction of increasing kilometres. If such testing cannot be performed in the wheelpaths, a reason must be supplied in the output data's Comments field.

C.3.2.3(e) Testing load and number of drops: deflectometer survey

The default testing load shall be 40kN, unless the deflections measured at the outermost sensors are too small for practical use under the 40kN load, in which case the testing load shall be increased in 10kN increments until a satisfactory deflection can be measured. The testing load shall be captured at each testing point.

At each testing point, drops shall be repeated until the maximum difference in deflection at each sensor is less than 5%, but with a minimum of 3 drops per testing location. The values obtained from the first drop shall be omitted from the analysis results in all cases.

C.3.2.3(f) Uneven surfaces: deflectometer survey

The Service Provider shall ensure that the FWD plate and sensors are placed on fairly level and even road surfaces and not for example in deep wheel ruts. The base plate and sensors shall be in proper contact with the surface at all positions. The Service Provider shall also ensure that there is no loose debris or standing water underneath the plate or sensors when performing testing.

C.3.2.3(g) Temperature: deflectometer survey

The minimum and maximum air temperatures during which deflection measurements may be carried out are 0 and 30 degrees Celsius respectively. Should the air temperature be outside the range, the Service Provider shall defer testing until the air temperature is within these limits again.

The Service Provider shall describe how his equipment and algorithms make provision for differences in pavement surface temperature, for example when calculating surface layer stiffness. During the measurements road surface temperature will be recorded and included in the data output file.

More aspects of the survey procedure are discussed in the next three chapters.

C.3.2.4 VALIDATION REQUIREMENTS (BOTH PROFILER AND DEFLECTOMETER)

C.3.2.4(a) Validation requirements – tender stage

It is a specific requirement of the tender that a pre-validation report be submitted for each of the profiler and deflector, refer T2.2-B.

The 'Individual equipment component calibration' section of Form T2.2-B requires details regarding the calibration of components. It states that the Tenderer shall provide the details and attach the calibration certificates to the Total Contract Quality Plan. The Employer shall be satisfied that the device calibration is up to date and that the device is capable of the required accuracy. The Employer therefore reserves the right to request outstanding or more recent calibration certificates before commencement of the survey of the appointed Service Provider.

Form T2.2-B also requests that evidence of previous validations be attached to the Total Contract Quality Plan. This request is based on the premise that Tenderers are typically used extensively for similar surveys and may have had validations done the last year or two. If these validations comply with the requirements of validation as stated in TMH10/13 for roughness and rut measurements (Table 9: Validation requirements for Longitudinal Profilers; Table 4-1: Validation requirements for Transverse Profilers) Tenderers are requested to submit the relevant validation reports. If no validations as documented in TMH10/13 have been done the past two years, Tenderers shall specifically state so in the table in T2.2-B.

Similarly, for deflectometers, Tenderers are expected to supply at least 3 (three) examples of validated FWD data sets that were collected during previous projects of similar or larger scope, implemented at other roads authorities within southern Africa. These shall all be submitted along with the Tender in the form of an electronic and paper-based data set, as well as a letter from the applicable client body, i.e. an independent road authority, certifying the veracity of the paper printout of the data. These results shall apply to the same equipment that the Tenderer is proposing to use on this project.

Should no validations have been done the past two years, or the submitted validation reports are not acceptable to the Employer, the Employer may request that validation be executed prior to the start of the contract. The Guidelines for Validation Acceptance Criteria of Table 10 and Table 4-2 of TMH10/13 for profilers will be used for this validation. For deflectometers, the Guidelines for Validation Acceptance Criteria as specified in Section 4.2 of TMH13 for network level measurement of pavement deflection will be used.

C.3.2.4(b) Validation criteria

Should a validation have to be done, then the validation criteria of TMH10/13 for roughness and rut measurements, as contained in Table 9: Validation requirements for Longitudinal Profilers; and Table 4-1: Validation requirements for Transverse Profilers, shall apply. The requirements for 'lower reliability' will apply. For deflectometers, Section 4.2 of TMH13 shall apply.

C.3.2.4(c) Validation of positioning equipment

GPS validation shall be checked by comparing coordinates at several benchmark locations, to be agreed with the Employer. The purpose is to check the dynamic accuracy of the GPS, as described in TMH13, chapter 5.3. The GPS coordinates should be within 5m of the horizontal benchmark values, and for repeat dynamic measurements, this accuracy shall be achievable 90 percent of the time.

Distance Measuring System validation shall be checked on three sections of 200 m length on straight and tangent sections of road. The distance validation check should also be done at different measuring speeds.

C.3.2.5 CONTROL TESTING

C.3.2.5(a) Profiler equipment

Control testing will concern the establishment of three verification sections, which have to be measured twice, i.e. at least before commencement of the surveys, and after completion of the surveys in both year 1 (one) and year 3(three). The Service Provider may measure the sections during the survey as well.

The purpose of the three sections is to show that the measurements prior to the start of the surveys, and on completion of the surveys, are within the guidelines for validation acceptance criteria of Table 10 (longitudinal profiler) and Table 4-2 (transverse profiler) of TMH10/13. The initial survey will then serve as benchmark, to which the second survey will be compared.

The three sections will comply with the validation requirements for profilers, as described in Table 9 (longitudinal profiler) and Table 4-1 (transverse profiler) of TMH10/13 for lower reliability validation.

The three sections will be identified by the Employer and Service Provider together from the visual assessment condition and include one in good condition, one in fair condition and one in poor condition, all in line with the requirement of measurable sections. The Service Provider will mark these sections as needed. Once surveyed, the data shall be made available to the Employer.

In between measurements of the three sections are recommended to lower the risk of the Service Provider. Should the last survey indicate non-compliance to the guidelines for validation acceptance criteria of TMH10/13, the full survey will be in jeopardy. If any interim surveys have been done, these can serve as proof that at least a part of the survey has been done with acceptable equipment.

Should replacement equipment be introduced during the survey, they first, before commencing production surveys, have to survey the three sections and the data shall be immediately made available to the Employer.

C.3.2.5(b) Deflectometer equipment

Control testing shall be performed from time to time during the survey to ensure that the equipment output is still valid, and that the accuracy and precision of the device is still within specification.

Short and long-term repeatability shall be proven. Service Provider can recommend a repeatability protocol, alternatively the following shall be followed. This is apart from the daily deflection repeatability check.

Repeatability measurements shall be performed on 'Validation Sections' prior to and after the main survey has been completed. These Validation Sections shall be designated by the Employer.

The Service Provider shall perform FWD tests at no fewer than 3 validation sites, each with a minimum of

three test positions. Prior to the start of the network survey, and on completion of the network survey, the Service Provider shall perform the FWD tests. Apart from the compulsory two surveys, it is also recommended that the Service Provider conduct FWD testing on the same three sites halfway through the contract. The sets of results will be compared to one another to establish if the results that were obtained are in general agreement.

The Service Provider shall present these results in the form of a Quality Control / Assurance (QA) Report to the Employer. The maximum allowable deviation in test deflections shall be determined by the Engineer at the time of testing and acceptance of these results will be at the Engineer's discretion.

C.3.2.5(c) Operational control procedures

The operators of measurement devices should have an in-depth understanding of the influence of all operational elements on the measurement process. As part of the Total Contract Quality Plan, the Service Provider shall submit a detailed checklist which should outline daily checks that will be performed.

Operational procedures shall be described in the Total Contract Quality Plan, and shall include at least the daily checks on general maintenance, warm-up time, checking of electronic components, output and data collection, bounce test, height sensor accuracy check, straightedge test. It is a specific requirement of the Total Contract Quality Plan that a record be kept of the checks. Similar checks shall be described for deflectometer equipment.

C.3.2.6 TOTAL CONTRACT QUALITY PLAN

The Tenderer shall submit a draft Total Contract Quality Plan (TCQP) with the tender (refer T2.3-B). The TCQP will facilitate integration between the contract document and the Service Provider's Quality Management System. The plan shall include at least the following, but should not be limited to these items only:

- A full description of the survey equipment
- Software to be used and methods for validating software accuracy (for transverse profiles, handling of anomalies introduced by kerbs and shoulder drop-offs)
- Data processing details, sampling intervals, anti-aliasing and other filters (profilers)
- Transverse profile analysis and method to be used
- Procedure and details of training of personnel to conduct the survey
- Quality control checklists to be completed on a daily, weekly and monthly basis (provide examples)
- Contingency plans to cover data back-up, equipment breakdown, change of personnel, etc
- Procedures and methods that will be followed during the survey, including start and end procedures at each road
- Ongoing checks to ensure the distance measurement is accurate and valid
- Data reporting formats
- Control procedures to ensure accuracy of data processing, backup, and prevention of file corruption

The Employer will assess the comprehensiveness and completeness of the draft TCQP on award of the contract, and inform the Service Provider of its acceptability, or not. The Service Provider shall then finalise the plan and submit it for final verification by the Employer. No surveys shall commence until the TCQP is finalised to the satisfaction of the Employer.

C.3.2.7 HEALTH AND SAFETY PLAN

The Tenderer shall submit a draft Health and Safety Plan with the tender (refer T2.3-A). The plan shall support the Section 37(2) contract to be concluded between the Employer and Service Provider. The plan shall include at least the following, providing evidence of the Tenderer's planning regarding the following aspects of health and safety and include at least the following headings (but should not be limited to these items only):

- Safety precautions for surveys
- Safety procedures during execution of the surveys
- Emergency procedures in cases of incidents
- Compliance with OHSA as relevant

The Employer and/or Employer's agent will assess the draft Health and Safety Plan and comment to the successful tenderer on the acceptability of the plan and any shortcomings. The draft plan must then be updated to the satisfaction of the Employer before the Service Provider commences any surveys.

At least one orange, rotating safety lamp and suitable warning signs, adequate for ensuring his own safety, must be fitted by the Service Provider at all relevant times to the vehicle(s) used for carrying out the surveys. The Service Provider shall obtain permission for the use of rotating and flashing lights from the appropriate authorities within eThekweni. The Employer accepts no responsibility for any eventuality that may occur during execution of the surveys, whether for tendering purposes or after appointment. The Service Provider is to perform the work entirely at his own risk and must ensure that suitable safety precautions are taken at all times, these shall include appropriate warning signs on the vehicle(s) and the road where necessary, and wearing of approved high visibility safety vests.

The use of a separate vehicle accompanying the Deflection survey vehicle and which carries sufficient warning signs and lights and forms a buffer between the stationed FWD equipment and the oncoming traffic from the back is highly recommended.

The Tenderer shall be responsible for providing his own comprehensive insurance that covers all equipment and risks. To the maximum extent permissible in law, the Tenderer shall indemnify the Employer against all claims or liability arising from the work the Tenderer shall perform as part of this project.

DATA FORMATS

C.3.2.8 PROFILER EQUIPMENT

All survey results shall be presented to the Employer in an electronic format. All results shall be provided with a reference back to the GIS network dataset, referenced by road link, and metre distance along the road.

C.3.2.8(a) *Tabular data*

For tabular road profile data measurement results, the required format is a Microsoft Excel database, with tables within the database for each separate data item (e.g. longitudinal profile, rutting or texture). The Excel database shall contain the GIS dataset's attribute data table as a master table, and where applicable resulting tables containing field measurements shall contain a reference to the GIS master table.

The Service Provider shall ensure that there is a one-to-one correspondence between records in the GIS master table and the measurement data's records, i.e. there shall be no measurement data record that does not contain a reference to the road number and kilometre distance. Referential integrity shall be enforced in the Access database. There will, in other words, not be for example roughness measurements that are not associated with a road number and a chainage.

The table below provides an example set of columns to be provided in the Access database for roughness, rutting and MPD.

Column	Description
Date and time of record	The date and time of the measurement
Road Link	The road Link as contained in the road information table shall be mentioned in this column. The data format in this column shall be: text.
Lane No	The format of this column shall be an integer. (e.g. 1 or 2)
Direction	The format of this column shall be a single character text: e.g. + or -
GPS longitude Coordinate	The format shall be degrees, minutes and seconds for the end of the 100 metre measured section.
GPS latitude Coordinate	The format shall be degrees, minutes and seconds for the end of the 100 metre measured section.
GPS height Coordinate	The format shall be metres above sea level (two decimal places) for the end of the 100 metre measured section.
km Chainage	The km position of the measurement shall be stated. An IRI value is reported every 100 metres. The average IRI value calculated from data collected during the first 100 metres of a section shall be reported at the 0.1 m chainage. The data format in this column shall be: numeric with 3 decimal places (e.g. 6.520).
Wheel Path	Specify the left or the right wheel path measurement. The data format in this column shall be: single character text (e.g. L or R).
IRI m/km	The average IRI in m/km for the previous 100 metres is reported here. The data format in this column shall be: numeric with 2 decimal places (e.g. 2.32).
Rut mm	The average Rut value in mm for the previous 100 metres is reported here. The data format in this column shall be numeric with 1 decimal place (e.g. 4.5).
Mean Profile Depth	The Mean Profile Texture Depth for the previous 100 metres shall be reported here. The data format in this column shall be numeric with 2 decimal places (e.g. 2.67).
Speed km/h	The average operational speed (vehicle speed) is stated here. The data format in this column shall be: integer (e.g. 60 km/h with no decimal places).

*The Tenderer shall attach his planned data file layout to this page.

C3.2.9 TMH9 VISUAL CONDITION ASSESSMENTS

The visual condition assessments are carried to be out by a team comprising of an assessor who records the visual distress data. The prescribed way of capturing the visual assessment data is by TMH9 assessment process. For each link, the general road link and segment information will be already filled in and supplied to the service provider. Segments are to be subdivisions of links, defined as being 500 metres in length. Visual assessors must then complete the surveys in accordance with the segment definitions. The link data may in some instances be incorrect and may require editing and/or additions to the same. Any discrepancies or uncertainties must be cleared with the Employer. If segment data is not given for a particular road, the surveys must be done on the basis of 500 metre segment lengths maximum, but intersections with other roads must be included as node points and the segments surveyed accordingly. On roads where this is not possible, the Service Provider must make use of the starting GPS Coordinate of the road.

Visual condition surveys must be executed according to the requirements of the TMH9 Manual.

An ESRI feature class and Microsoft Excel database shall be provided containing an index table which links condition data with road in the GIS network, with the following fields:

Column	Description
Road_ID	Sequential, long integer image identifier / primary key
Link_ID	The road link as contained in the road information table shall be mentioned in this column. The data format in this column shall be: text.
ROAD_WIDTH	Road Width The format of this column shall be an integer. (e.g. 1 or 2)
GPS_Start	The format shall be degrees, minutes and seconds for the start of the road link
GPS_End	The format shall be degrees, minutes and seconds for the end of the road link
Length_m	The km position of the link shall be stated.
Date	Date of the assessment
Ward_No	The ward number were the road link is located
Surf_Type	Surface type of the road e.g. Asphalt, slurry seal, chip and spray etc.

Each Visual condition data set shall correspond to the LINK_ID in the table above. Data set will be provided to service provider.

C.3.2.10 IMAGE DATA

All images shall be provided in either JPEG or PNG format as individual files at each 10 m photographed location.

A ESRI feature class and Microsoft Excel database shall be provided containing an image index table which links image files with road in the GIS network, with the following fields:

Column	Description
ID	Sequential, long integer image identifier / primary key
Road link	The road link as contained in the road information table shall be mentioned in this column. The data format in this column shall be: text.
Lane No	The format of this column shall be an integer. (e.g. 1 or 2)
GPS longitude Coordinate	The format shall be degrees, minutes and seconds for the end of the 10 metre photographed section.
GPS latitude Coordinate	The format shall be degrees, minutes and seconds for the end of the 10 metre photographed section.
GPS height Coordinate	The format shall be metres above sea level (two decimal places) for the end of the 10 metre photographed section.
km Chainage	The km position of the image shall be stated.
Date and time	Date and time of the image
Image file name	File name – see numbering and naming convention below.

Each image file's name shall correspond to the ID in the table above, e.g. 1000.png or 1000.jpg, if the ID of its corresponding image index record is 1000.

The images shall contain the fields shown in the table above embedded at the top of each image in clearly visible text.

The Service Provider shall, for each road in the GIS dataset, generate a video of the road by means of concatenating the JPEG or PNG images into an AVI or MPEG video file. There shall be one video file for each road.

C.3.2.11 DEFLECTOMETER EQUIPMENT

All survey results shall be presented to the Employer in an electronic format. All results shall be provided with a reference back to the GIS network dataset, referenced by road number, and kilometre distance along the

road. Furthermore, the GPS coordinates of each FWD test point, i.e. the latitude and longitude of the center of the load plate, shall be supplied to the Employer.

For tabular FWD data measurement results, the required format is a Microsoft Access database. The Access database shall contain the GIS dataset's attribute data table as a master table, and where applicable resulting tables containing field measurements shall contain a reference to the GIS master table.

The Service Provider shall ensure that there is a one-to-one correspondence between records in the GIS master table and the measurement data's records, i.e. there shall be no measurement data record that does not contain a reference to the road Link and kilometre distance. Referential integrity shall be enforced in the Access database. There will, in other words, not be for example FWD measurements that are not associated with a road number and a chainage. Should there be any such measurements that are not properly referenced to the GIS element in the base network the dataset will not be accepted.

The table below provides an example set of columns to be provided in the Access database for rutting. The fields up to the km chainage field in the table below are required fields in all tables.

Column	Description
Date and time	Date and time of the measurement in the format yyyy/mm/dd hh:mm:ss
Operator Name	The name of the appointed operator shall be stated at the top of each file. The data format of this column shall be: text.
Road Link	The road number as contained in the road information table shall be mentioned in this column. The data format in this column shall be: text.
Lane No	The format of this column shall be an integer. (e.g. 1 or 2)
Carriageway direction for dual carriageway roads	e.g. "North" or "South"
GPS longitude Coordinate	The format shall be degrees, minutes and seconds North
GPS latitude Coordinate	The format shall be degrees, minutes and seconds East
GPS height Coordinate	The format shall be metres above sea level (two decimal places) for the FWD measurement point
km Chainage	The km position of the measurement shall be stated. The data format in this column shall be: numeric with 3 decimal places (e.g. 6.520).
Load cell position offset	The position of the load cell's center in meters, measured perpendicular to the road centerline from the centre of road surfacing.
Load cell position description	A description of the position of the load cell, for example "in left wheel rut." The Service Provider shall ensure that there is a consistent and uniform convention followed in describing load cell positions.
Road surface width	The width of the road's surfacing, from edge of surfacing to edge of surfacing, in meters.
Testing load	The testing load in kN.
Number of drops	The number of test drops until the maximum difference in deflection at any given sensor is less than 5%.
Deflection 0mm	Vertical deflection at center of FWD plate expressed in mm, once the deflection is satisfactory.
Deflection 200mm	Vertical deflection at 200mm offset.
Deflection 300mm	Vertical deflection at 300mm offset.
Deflection 450mm	Vertical deflection at 450mm offset.
Deflection 600mm	Vertical deflection at 600mm offset.
Deflection 900mm	Vertical deflection at 900mm offset.
Deflection 1200mm	Vertical deflection at 1200mm offset.
Surfacing temperature	The temperature of the road surfacing at the centre of the test plate.
Comments	Special comments that apply to the particular test, for example if the test was not performed in the wheel path due to physical impairments.

(The table above to be supplied by the Service Provider in Microsoft Access electronic format, with one row for each test point)

C.3.2.12 WORK PROGRAMME

The Service Provider must, within seven calendar days after the appointment, present a detailed programme of work for their proposed surveys. Weekly submission of progress in electronic format to the Employer is a requirement of the Contract. This is to enable the Employer to be fully aware of progress at all times during the contract period. Failure to provide weekly progress will result in penalties or in the worst case the termination of the Contract.

The detailed programme shall list the roads to be surveyed for every week of the programme. The submitted progress will be compared against the weekly programmes by the Employer for progress. It is thus expected from the Service Provider to submit a weekly report of progress, delays, reasons for delays, incidents, and the plan for catching up, should the Service Provider be behind programme.

C.3.2.13 DELIVERABLES OF THE CONTRACT

The following are the deliverables:

- Submission of draft Quality Control Plan (as part of tender), and after appointment, final Quality Control Plan (including Employer's comments).
- Submission of draft Health and Safety Plan (as part of tender), and after appointment, final Health and Safety Plan (including Employer's comments).
- Support to the Employer in establishing three verification sections for profiler verification.
- Support to the Employer in establishing three verification sections for FWD verification.
- Data as collected on the three verification sections at the start of the project, and again at the end of the project.
- Work programme and weekly progress as discussed in Section 10.
- Data as measured and processed according to the specified formats.
- The maps and road identification information should clearly indicate all corrections and/or additions made to the road data and should also be handed in.

C3.2.14 RATES AND PAYMENTS

C3.2.14(a) Inspection Rate

The rate to be paid to the Service Provider covers the execution of the activities as listed in the scope of the appointment, including all accommodation, traveling expenses, all mandatory taxes and levies, allowance for delays due to rain, attendance at the testing and calibration session, presence at evaluation of sections where the Employer's control surveys differ from those of the Service Provider, post-survey attendance of the panel inspections, all liaison, project management, insurance against damage, compensation for loss as well as any other possible expenses which have not been specifically mentioned, but which may be related to the execution of the work for the services.

The rate is thus inclusive of:

- Attendance at all meetings with the Employer.
- Attendance at the pre-survey Testing and Calibration sessions of all provisionally approved staff for 5 days.
- Attendance at the post-survey panel inspections by all assessors for 2 days.

- Travelling arrangements for attending the Testing and Calibration session and doing calibration assessments.
- Travelling and accommodation arrangements during the visual assessments.
- All costs involved in executing and completing the visual surveys of all the assigned paved/surfaced roads.
- All data capturing and data verification and submission of data and completed survey sheets, in an acceptable format to the Employer.
- All per diem costs and accommodation costs of staff.
- All other costs that may be incurred in completing all the work specified to the satisfaction of the Employer.
- All service/administration costs for executing the surveys.

The rate is fixed for the duration of the contract. Variation in the rate will however be made if there is a variation in the VAT rate.

C3.2.14(b) Penalties

Penalties will be applicable for the late completion of the condition surveys, as well as incomplete submission of deliverables.

The full network condition survey, including submission of all deliverables, must be completed by the date to be provided by the Department, unless specifically extended in writing by the Employer. Failure to complete the survey and submit the deliverables by the agreed date will result in a penalty of R5 000 per day or part thereof for late submission of deliverables. Service Providers can only claim extension of time on well motivated reasons, such as delays due to rain, provided that they have documented such delays in their weekly progress reports. No claim for extension of time will be accepted if weekly progress reports were not submitted during the Contract period.

Penalties / pro rata adjustments will be made for the following:

- Non submission of an initial programme;
- Non or late submission of finalised weekly electronic data;
- Non or late submission of weekly programmes and progress reports;
- The extent to which the survey failed the VCI and distress verification quality checks (number of significant distresses out of range).
- Milestone penalties will be applicable for failing to supply data as per the approved programme critical timelines.

C3.2.14(c) Payment Schedule and Deliverables

Remuneration will be subject to the submission of payment certificates at the end of each month. Payment will not be made for those sections of road that were under construction at the time and therefore not surveyed.

Final payment will be based on the actual kilometres of municipal paved roads for which visual surveys were actually carried out and the handing in of finalised visual assessment data of the very last week of surveys, maps and road link identification with corrections made on the maps and road link identification as required. A pro rata final amount will be paid based on the quality of the Service Provider's survey as assessed with the quality verification and acceptance procedures described in this Contract. Full compliance with the requirement for submission of the initial programme and weekly programmes and progress reports is also required.

C3.2.14(d) Reimbursement for Abnormal Safety Conditions

Where mutually agreed, the Service Provider may claim for costs incurred for abnormal safety conditions that warrant the use of a registered security company for protection against risk to life and property of the Service Provider.

The provision of security will be evaluated in terms of the provisions of the Municipality's Security Management Unit.

C3.2.14(e) External verification Visual condition assessment

External verification Visual condition assessment by means of an appointment of an external verifier. The employer reserves the right to appointment a qualified provider of a third-party quality assurer or attestation services or other independent expert/s with recognised extensive experience through a Variation order. The external verifier is to perform a verification function on services required to be performed by the service provider as per the requirements detailed in section C3.2.9. The external verification service is to provide the employer with a report on the findings of the assessments and will form part of the quality assurance of this contract and paid to the value of the PC Sum. The tenderer is required to provide the percentage (%) mark-up to make provision for the services of the external verifier.

C3.3 ANNEXURES

- 1. STANDARD CONDITIONS OF TENDER**
- 2. CIDB STANDARD PROFESSIONAL SERVICES OF CONTRACT**
- 3. CONTRACT SKILLS DEVELOPMENT GOAL. GAZETTE NOTICE NO. 48491 OF 28 APRIL 2023.**

C3.3.1 STANDARD CONDITIONS OF TENDER – CIDB SFU (2015)**Annex F**
(normative)**Standard Conditions of Tender****F.1 General****F.1.1 Actions**

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

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

Note:

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

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

F.1.2 Tender Documents

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

F.1.3 Interpretation

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

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

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

- a) **conflict of interest** means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
 - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or

C3.3.2 CIDB STANDARD PROFESSIONAL SERVICES OF CONTRACT

STANDARD PROFESSIONAL SERVICES CONTRACT

(July 2009)
(Third Edition of CIDB document 1014)




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Standard Professional Services Contract

C.3.3.3 **CONTRACT SKILLS DEVELOPMENT GOAL. GAZETTE NOTICE NO. 48491 OF 28 APRIL 2023.**




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