ROADS & TRANSPORT DEPARTMENT

TRANSPORT INFRASTRUCTURE DESIGN & CONSTRUCTION DIVISION

TENDER REFERENCE: RTD 02-2025/26

RTD 02-2025/26: TENDER FOR THE APPOINTMENT OF A CONTRACTOR FOR THE UPGRADING OF ROADS AND STORMWATER SYSTEMS IN MABOPANE BLOCK U: PHASE 1 FOR A DURATION OF 12 MONTHS

VOLUME 1

A Tender for Category 7CE or higher CIDB registered Contractors

ISSUED BY:	**PREPARED BY:**
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Registered Name of Tenderer:	
Trading Name of Tenderer:	
Registration No. of Entity:	CoT Vendor No:
CIDB CRS Number (s):	CSD Number (s):
Contact Person:	
Tel. No:	E-Mail Address:
Cell No:	Fax No:

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In compliance with the CIDB Standard for Uniformity

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PORTION 1: TENDER

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

RTD 02-2025/26

CITY OF TSHWANE
ROADS AND TRANSPORT DEPARTMENT

TENDER FOR THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF ROADS AND STORMWATER SYTEMS IN MABOPANE BLOCK U: PHASE 1 FOR A DURATION OF 12 MONTHS

Tenders are hereby invited for the above tender.

Tenderers should have a CIDB contractor grading designation of **7CE** or higher.

The tender documents will be available on the City of Tshwane and national treasury official website (www.tshwane.gov.za) or www.etenders.gov.za

Tenders will be evaluated on the basis of awarding points for the **80/20 *Preference*** Point System will be applied to this tender.

A **COMPULSORY BRIEFING MEETING** with a representative of the Employer will take place at the boardroom of the **Sammy Marks Council Chamber, 1st Floor, Sammy Marks Square, cnr Lilian Ngoyi and Madiba Street, Pretoria on the 26 August 2025 at 10h00.**

The lowest or any tender will not necessarily be accepted, and the Municipality reserves the right to accept any tender as a whole or in part or no tender.

Tenders must remain valid for a DURATION OF **90 days** after the closing date for the submission of tenders, during which period a tender may not be amended or withdrawn and may be accepted at any time by the Municipality.

The closing time for receipt of tenders is **10h00 on the 19 September 2025.** Tenders will be received on the closing date and time shown, must be enclosed in sealed envelopes bearing the applicable tender heading and reference number, as well as the closing time and due date, and must be addressed to the DIVISIONAL HEAD, SUPPLY CHAIN MANAGEMENT, PRETORIA, 0001 and must be submitted in the tender box situated at **Tshwane House, 320 Madiba Street, Pretoria, 0002**. Tenders will be opened at the latter address at the time indicated.

Only bidders registered on the central supplier database (CSD) and with a CSD number will be considered for this tender, as this is a requirement from the National Treasury.
"Note: Bidders are required to submit electronic copies of the bid either by memory stick/USB flash drive together with the hard copy of the Bid/Proposals".

ENQUIRIES:	Employers Agent:	**Mr. Goodman Mhlongo**
	Tel (Office):	**012 358 7693**
	E-Mail:	goodmanm2@tshwane.gov.za

T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in **Annexure C** of **Standard for Uniformity in Engineering and Construction Works Contracts (Board Notice 423 Government Gazette No 42622 of 8 August 2019)**, bound into Section T1.2

The Standard Conditions of Tender makes several references to the Tender Data. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender to which it mainly applies.

CLAUSE NUMBER		TENDER DATA
C.1.1	Actions	The Employer is **City of Tshwane Metropolitan Municipality**
C.1.2	Tender Documents	Volume 1: Tender Document **THE TENDER** **Part T1: Tendering Procedures** T1.1 – Tender Notice and Invitation to Tender T1.2 – Tender data T1.3 – Standard Conditions of Tender **Part T2: Returnable documents** T2.1 – List of returnable documents T2.2 – Returnable schedules **THE CONTRACT** **Part C1: Agreements and contract data** C1.1 – Form of offer and acceptance C1.2 – Contract data C1.3 – Form of guarantee C1.4 – Guarantee (Cash deposit) C1.5 – Health and safety agreement C1.6 – Adjudicators contract **Part C3: Scope of work** C3 – Scope of work **Part C4: Site information** C4 – Site information *Volume 2: Tender Drawings*
C.1.3 *C.1.3.4*	Interpretation	**Add** the following new clause: *The tender documents have been drafted in English. The contract arising from the invitation to tender shall be interpreted and construed in English*
C.1.4	Communication and Employer's Agent	Agent: ***ROMH Consultants*** Address: **50 Tegel Avenue** **Highveld** ***CENTURION*** ***0157*** Tel: **010 035 1460** E-Mail: info@romh.co.za

CLAUSE NUMBER		TENDER DATA
C.2.1	Eligibility	Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contract grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 7***CE or higher*** class of construction work, are eligible to submit tenders.
		Joint Ventures are eligible to submit tenders provided that: 1. Every member of a joint venture is registered with the CIDB not later than 21 working days from the closing date for tenderers; 2. The lead partner has a contractor grading designation in the 6***CE* or higher** class of construction work; and 3. The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor designation in accordance with the sum tendered for a 7***CE or higher*** class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations.
C.2.2	Cost of Tendering	The employer **<u>will not</u>** compensate the tenderer for any costs incurred in attending interviews or making any submissions in the office of the employer.
C.2.5	Reference Documents	**Add the following:** Unless specified otherwise in this document, the following standards and conditions of contract will be applicable under this Contract: • The document **"*Standard Specifications for Municipal Civil Engineering Works", Third Edition, 2005*"** issued by the Divisional Head: Roads and Stormwater of the City of Tshwane. This document is obtainable free of charge on the website www.tshwane.gov.za. • The latest print version as current at 30 days before close of tenders of the document **"*General Conditions of Contract for Construction Works 3rd Edition, 2015*"** including corrections thereto as current at 30 days before close of tenders, as published by the *South African Institution of Civil Engineering.* The document may be purchased in hard copy from the *South African Institution of Civil Engineering* or may be purchased online as an electronic reference document in PDF format by following the relevant links on www.saice.org.za. The corrections may be downloaded from the SAICE website www.saice.org.za.
C.2.7	Briefing meeting	The arrangements for a **<u>compulsory</u>** briefing meeting are as stated in the tender notice and invitation to tender Confirmation of attendance will be recorded on site in the attendance register to be signed by all tenderers. Addenda will be issued to and tenders received from those tendering entities appearing on the attendance register. Tender documents will be made available in the City of Tshwane website(www.tshwane.gov.za).
C.2.8	Seek clarification	**<u>Replace</u>** the clause with the following: *Request clarification of the tender documents, if necessary, by notifying the employer at least <u>7</u>* **<u>(seven) working days</u>** *before the closing time stated in the tender data.*

CLAUSE NUMBER		TENDER DATA
C.2.9	Insurance	**Add** the following to the clause *Accept that the submission of a tender shall be construed as an acknowledgement by the tenderer that he is satisfied with, where applicable, the insurance cover the Employer will affect under the contract.*
C.2.12	Alternative offers	Alternative tender offers will **not** be considered.
C.2.13	Submitting a tender offer	• The tender offer **shall be completed in non-erasable black ink** • Any entry made by the tenderer in the document which the tenderer desires to change, **shall not be erased or painted out**. A line shall be drawn through the incorrect entry and the correct entry shall be written above in **non-erasable black ink** and the **full signature** of the tenderer shall be placed next to the correction.
C.2.13.2		**Replace** the contents of the clause with the following: *Return all volumes of the tender document to the Employer after completion of the relevant sections of each volume in their entirety, either electronically (if they were issued in electronic format) or by writing in black ink.* *All volumes are to be left intact in original format and no pages shall be removed or re-arranged*
C.2.13.3		Parts of each tender offer communicated on paper shall be submitted as **an original, plus a scanned copy in PDF format on a Memory stick/flash disc (USB).** **In addition to the hard copy submission, each tenderer is required to submit a scanned copy of the fully completed and signed tender submission document.** **This is to be on a flash disc (USB) attached to the original tender submission documents, adequately identifiable as belonging to the tenderer, be in PDF format scanned, and be in full colour.**
C.2.13.4		**Add** the following to the clause *Only authorised signatories may sign the original and all copies of the tender offer where required.* *In the case of a **ONE-PERSON CONCERN** submitting a tender, this shall be clearly stated.* *In the case of a **COMPANY** submitting a tender, include a copy of a **resolution by its board of directors** authorising a director or other official of the company to sign the documents on behalf of the company.* *In the case of a **CLOSE CORPORATION** submitting a tender, include a copy of a **resolution by its members** authorising a member or other official of the corporation to sign the documents on each member's behalf.* *In the case of a **PARTNERSHIP** submitting a tender, **all the partners** shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case **proof of such authorisation** shall be included in the Tender.*

CLAUSE NUMBER	TENDER DATA
	*In the case of a **JOINT VENTURE/CONSORTIUM** submitting a tender, include **a resolution of each company** of the joint venture together with a **resolution by its members** authorising a member of the joint venture to sign the documents on behalf of the joint venture.* ***Accept that failure to submit proof of authorisation to sign the tender shall result in the tender offer being regarded as non-responsive.***
C.2.13.5	The identification details are: Tender/Reference: **RTD 02 2025/26** Tender Description: **Tender for the appointment of a Contractor for the Upgrading of Roads and Stormwater Systems in Mabopane Block U: Phase 1 for a duration OF 12 Months** Closing Time: **10:00am** Closing Date: **19 September 2025** Each tender shall be enclosed in a sealed envelope, bearing the correct identification details and shall be submitted (HAND DELIVERED) at: **Supply Chain Management** **Tshwane House** **320 Madiba Street** **Pretoria CBD** **0002** Please note that the tender box is open 24 hours. Please ensure that all required compliance documents are included upon submission as no additional documents will be requested from bidders after closing. **BIDDERS MUST PLEASE ENSURE THAT THEY SIGN THE SUBMISSION REGISTER UPON HANDING IN THE DOCUMENTS.**
C.2.13.9	**Telephonic, telegraphic, telex, facsimile or e-mailed offers will not be accepted**
C.2.13.10	**Add** the following sub- clause C.2.13.10: *Accept that all conditions, which are printed or written upon any stationery used by the Tenderer for the purpose of or in connection with the submission of a tender offer for this Contract, which are in conflict with the conditions laid down in this document shall be waived, renounced and abandoned.*
C.2.14 Information and data to be completed in all respects	**Add** the following to the clause: *The Tenderer is required to enter information in the following sections of the document:* *Section T2.2 : Returnable Schedules* *Section C1.1 : Form of Offer and Acceptance* *Section C1.2 : Contract Data (Part 2)* *Section C2.2 : Pricing Schedule* *The above sections shall be signed by the Tenderer (and witnesses where required). Individual pages should only be initialled by the successful Tenderer and by the witnesses after acceptance by the Employer of the Tender Offer.*

CLAUSE NUMBER		TENDER DATA
		The Tenderer shall complete and sign the Form of Offer prior to the submission of a Tender Offer. *The Schedule of Deviations (if applicable) shall be signed by the successful Tenderer after acceptance by the Employer of the Tender Offer.* *Accept that failure on the part of the Tenderer to submit any one of the Returnable Documents listed in Part T2 – Returnable Documents within the period stipulated, shall be just cause for the Employer to consider the tender offer as being regarded as non-responsive.* *Accept that the Employer shall in the evaluation of tender offers take due account of the Tenderer's past performance in the execution of similar engineering works of comparable magnitude, and the degree to which he possesses the necessary technical, financial and other resources to enable him to complete the Works successfully within the contract period. Satisfy the Employer and the Engineer as to his ability to perform and complete the Works timeously, safely and with satisfactory quality, and furnish details in Part T2 – Returnable Documents.* *Accept that submitting inferior and inadequate information relating to health and safety (as required in clause 2.23) shall be regarded as justifiable and compelling reasons not to accept the Tender Offer of the Tenderer scoring the highest number of tender evaluation points.*
C.2.15	Closing time	The closing time for submission of tender offers is stated in the tender notice and invitation to tender.
C.2.16	Tender offer validity	The tender offer validity period is ***90 days***. **Add** the following new clause
C.2.16.5		*If the tender validity period expires on a Saturday, Sunday or public holiday, the tender offer shall remain valid and open for acceptance until closure of business on the following working day.*
		Add the following new clause:
C.2.16.6		*Accept that should the Tenderer unilaterally withdraw his tender during the tender validity period, the Employer shall, without prejudice to any other rights he may have, be entitled to accept any less favourable tender for the Works from those received, or to call for fresh tenders, or to otherwise arrange for execution of the Works, and the Tenderer shall pay on demand any additional expense incurred by the Employer on account of the adoption of the said courses, as well as either the difference in cost between the tender withdrawn (as corrected in terms of clause 3.9 of the Conditions of Tender) and any less favourable tender accepted by the Employer, or the difference between the tender withdrawn (as corrected) and the cost of execution of the Works by the Employer as well as any other amounts the Employer may have to pay to have the Works completed*
C.2.18	Provide other material	The tenderer shall, when requested by the employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.

CLAUSE NUMBER		TENDER DATA
C.2.19	Inspections, tests and analysis	**Add** the following at the end of the clause: *….or upon written request.*
C.2.20	Submit securities, bonds, policies, etc.	The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the performance bond to the format included in **Section C1.3** of Part C1 Agreements and Contract Data of this document.
C.2.23	Certificates	Refer to **Part T2** of this procurement document for a list of the documents that are to be returned with the tender.
C.2.24	*Conditions Associated with the Granting of Preferences*	**Add** the following new clause *The Tenderer, undertakes to:* *a) engage one or more Targeted Enterprises / Targeted Labour in accordance with the provisions of the SANS 1914 as varied in the Procurement Section of the Scope of Works;* *b) deliver to the Employer, within 5 working days of being requested in writing to do so, a Targeted Enterprise Declaration Affidavit in respect of all Targeted Enterprises engaged at prime contract level to satisfy Contract Participation Goal requirements;* *c) accept the sanctions set out in the Scope of Works should such conditions be breached.*
2.25	*Canvassing and obtaining of additional information by tenderers*	**Add** the following new clause *The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employers' officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon.* *The Tenderer shall not make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.*
C2.26	*Prohibitions on awards to persons in service of the state*	**Add** the following new clause *The Employer is prohibited to award a tender to a person -* *a) who is in the service of the state; or* *b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or* *c) a person who is an advisor or consultant contracted with the municipality or municipal entity.* ***In the service of the state** means to be -* *a) a member of:-* *• any municipal council;* *• any provincial legislature; or* *• the National Assembly or the National Council of Provinces;* *b) a member of the board of directors of any municipal entity;* *c) an official of any municipality or municipal entity;* *d) an employee of any national or provincial department;* *e) provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);* *f) a member of the accounting authority of any national or provincial public entity; or* *g) an employee of Parliament or a provincial legislature.*

CLAUSE NUMBER		TENDER DATA
		In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.
C2.27	*Awards to close family members of persons in the service of the state*	**Add** the following new clause *Accept that the notes to the Employer's annual financial statements must disclose particulars of any award of more than R2000 to a person who is a spouse, child or parent of a person in the service of the state (defined in clause F2.25), or has been in the service of the state in the previous twelve months, including -* *a) the name of that person;* *b) the capacity in which that person is in the service of the state; and* *c) the amount of the award.* In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in Part T2 of this procurement document must be completed.
C2.28	*Vendor registration*	**Add** the following new clause *The contractor will required registering as a supplier/ service provider on the City of Tshwane's vendor register before any payment can be done.* *If the tenderer is already registered as a vendor, it is required to record the vendor number in space provided on the cover page of this Tender document.* *Vendor registration documents are available from the Procurement Advice Centre or can be downloaded from* *All parties of a joint venture or consortium submitting a tender shall comply with the requirements of this* http://www.tshwane.gov.za/business/Supplychain/vendor registration *clause.*
C2.29	*Tax*	**Add** the following new clause ***National Treasury SCM Instruction no. 7 of 2017/18 clause 4 application during SCM Processes state that:*** *The designated official(s) must verify the tenderer's tax compliance status prior to the finalisation of the award of the tender or price quotation.* *Where the recommended tenderer is not tax compliant, the tenderer should be notified of their non- compliant status and the tenderer must be requested to submit to the municipality or municipal entity, within 7 working days, written proof from South African Revenue Services of their tax compliance status or proof from SARS that they have made an arrangement to meet their outstanding tax obligations. The proof of tax compliance status submitted by the tenderer to the municipality or municipal entity must be verified via the Central Supplier Database or eFiling* *Accept that the tenderer will be rejected if such tenderer fails to provide proof of tax compliance status in terms of clause 4.2 of National Treasury SCM Instruction no. 7 of 2017/18*
C.3.1	Respond to requests from the tenderer	

CLAUSE NUMBER		TENDER DATA
C.3.1.1		The employer will respond to requests for clarification up to 7 **(seven) working days** before the tender closing time.
C.3.4	Opening of tender submissions	Upon request tenders will be opened immediately after the closing time for tenders. Bidders are also requested to refer to the City's website were there closing register will be published.
C.3.8 C.3.8.2	Test for responsiveness	**Add** the following to the sub-clause: Failure on the part of the Tenderer to submit a tender offer as stipulated in clause C2.13 prior to the closing time as stipulated in clause C2.15 shall be just cause for the Employer to consider the tender offer as being non-responsive. Failure on the part of the Tenderer to submit any one of the returnable documents or certificates listed in clause C2.23 within the period stipulated shall be just cause for the Employer to consider the tender offer as being non-responsive.
C.3.9	Arithmetical errors, omissions and discrepancies	Replace the contents of the clause with the following: Check responsive tender offers for arithmetical errors, correcting them in the following manner: a) If a bill of quantities (or schedule of quantities or schedule of rates) applies and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the unit rate shall govern and the line item total shall be corrected. b) Where there is an error in the total of the prices, either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the corrected total of the prices shall govern. c) Where there is a discrepancy between the amount indicated in the Tenderer's tender offer and the corrected amount obtained after completing the above steps, the corrected amount shall govern. Notify a tenderer upon written request received after the closing date of tenders of all arithmetical errors made by that particular tenderer.
C.3.11	Evaluation of tender offers	***Add*** *the following new clause:* ***Stages of Evaluation.*** *The following stages of evaluation will be applicable for this tender* *Stage 1: Administrative Compliance* *Stage 2: Mandatory Requirements* *Stage 3: 80/20 Preference Points System Price* ***1.1 STAGE 1: ADMINISTRATIVE COMPLIANCE*** *All the bids will be evaluated against the administrative responsiveness requirements as set out in the list of returnable documents.*

CLAUSE NUMBER	TENDER DATA		
	Compulsory Returnable Documentation (Submission of these are compulsory)	***Submitted (YES or NO)***	***Checklist (Guide for Bidder and the Bid Evaluation Committee)***
	a) To enable The City to verify the bidder's tax compliance status, the bidder must provide; • *Tax compliance status PIN.* *or* • *Central Supplier Database (CSD)*		*Tax status must be compliant before the award.*
	b) A copy of their Central Supplier Database (CSD) registration; or indicate their Master Registration Number / CSD Number;		*CSD must be valid.*
	c) Confirmation that the bidding company's rates and taxes are up to date: Original or copy of Municipal Account Statement of the Bidder (bidding company) not older than 3 months and account must not be in arrears for more than ninety (90) days; or ,signed lease agreement or In case of bidders located in informal settlement, rural areas or areas where they are not required to pay Rates and Taxes a letter from the local councillor confirming they are operating in that area		*Was a Municipal Account Statement or landlord letter provided for the bidding company? The name and / or addresses of the bidder's statement correspond with CIPC document, Address on CSD or Company profile? Are all payment(s) up to date (i.e. not in arrears for more than 90 days?*
	d) In addition to the above, confirmation that all the bidding company's owners / members / directors / major shareholders rates and taxes are up to date: • Original or copy of Municipal Account Statement of all the South African based owners / members / directors / major shareholders not older than 3 months and the account/s may not be in arrears for more than ninety (90) days; or a signed lease agreement of owners / members / directors / major shareholders or In case of bidders located in informal settlement, rural areas or areas where they are not required to pay Rates and Taxes a letter from the local councillor confirming they are residing in that area		*Was a Municipal Account Statement or landlord letter provided for the bidding company? The name and / or addresses of the bidder's statement correspond with CIPC document, Address on CSD or Company profile? Are all payment(s) up to date (i.e. not in arrears for more than 90 days?*
	e) Duly Signed and completed MBD forms (MBD 1, 4, 5, 8 and 9) The person signing the bid documentation must be authorized to sign on behalf of the bidder. Where		*All documents fully completed (i.e. no blank spaces)? All documents fully signed by (any director / member /*

CLAUSE NUMBER	TENDER DATA		
	the signatory is not a Director / Member / Owner / Shareholder of the company, an official letter of authorization or delegation of authority should be submitted with the bid document. ***NB: Bidders must ensure that the directors, trustees, managers, principal shareholders, or stakeholders of this company, declare any interest in any other related companies or business, whether or not they are bidding for this contract. <u>See Question 3.14 of MBD 4. Failure to declare interest will result in a disqualification</u>***		*trustee as indicated on the CIPC document, alternatively a delegation of authority would be required? Documents completed in black ink (i.e. no "Tippex" corrections, no pencil, no other colour ink, or **non-submission of the MBD forms**, will be considered)?*
	f) Audited Financial Statements for the most recent three (3) years or Audited Financial Statements from date of existence for companies less than three years old. ***NB**: The bidder must submit signed audited annual financial statements for the most recent three years, or if established for a shorter period, submit audited annual financial statements from date of establishment.* *If the bidder is not required by law to prepare signed annual financial statements for auditing purposes, then the bidder must submit proof that the bidder is not required by law to prepare audited financial statements.*		*Applicable for tenders above R10m in conjunction with MBD 5)* *Are Audited financial statements provided (Audited financials must be signed by auditor) Or proof that the bidder is not required by law to prepare audited financial statements.*
	g) Joint Ventures (JV) – (Only applicable when the bidder tenders as a joint venture) Where the bidder bids as a joint venture (JV), the required or relevant documents as per (a) to (f) above must be provided for all JV parties. In addition to the above the bidder must submit a Joint Venture (JV) agreement signed by the relevant parties. ***NB**: It is a condition of this bid that the successful bidder will continue with the same Joint Venture (JV) for the duration of the contract unless prior approval is obtained from the City.*		*If applicable. JV agreement provided? JV agreement complete and relevant?* *Agreement signed by all parties? All required documents as per (i.e. a to f) must be provided for all partners of the JV.*

CLAUSE NUMBER	TENDER DATA

h) *Bidder attended a compulsory briefing session where applicable*		*A compulsory briefing register must be signed by the bidder.* ***Bidders will be disqualified should they fail to attend compulsory briefing session***
i) *Pricing schedule (All items must be quoted for in pricing schedule and if not, all items are quoted the bidder will be disqualified). Unless the tender is awarded per item or per section where the bidder only quoted the items or sections, they are interested in.*		*Incomplete pricing schedule results in totals being incomparable. Bidder must be disqualified.* ***Bidder will be disqualified should they make corrections on the price schedule without attaching a signature or initialising thereto.*** ***Bidder will be disqualified should they use tippex/ correction ink, on the price schedule.***

1.2 MANDATORY REQUIREMENTS

The following information is mandatory, failure to provide any of them, will render the bidder disqualified:

Mandatory criteria	***Supporting evidence***
CIDB Grading of 7CE or higher.	*Valid CIDB grading certificate*
Company's Experience	*The tendering company must have experience of at least two successfully completed roads and stormwater systems project with the largest of these projects valued at a minimum of R 9 million* ***(attach appointment letters and completion certificates as proof).***
Performance Guarantee	*Letter of intent – performance guarantee*
Construction Manager - The Construction Manager must have a minimum qualification of a National Diploma in Civil	*Curriculum vitae and certified copy of qualification*

CLAUSE NUMBER	TENDER DATA

Engineering or equivalent qualification coupled with a minimum 10 years' experience.	
Health and Safety Officer must be registered with the South African Council for Project and Construction Management Professions (SACPCMP) as a Construction Health and Safety Officer (CHSO).	*Certified copy of SACPCMP Registration Certificate*

1.3 PREFERENCE POINT SYSTEM

The preferential point system used will be the 80/20 points system in terms of the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000) Regulations 2022

- *80 points for price*
- *20 points for specific goals*

Add the following new clause:

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million:

The following formula must be used to calculate the points for price in respect of tenders with a Rand value below R50 million (all applicable taxes included):

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

Where

P_s = Points scored for comparative price of tender or offer under consideration;
Pt = Comparative price of tender of offer under consideration; and
Pmin = Comparative price of lowest acceptable tender or offer.

- A maximum of 20 points may be awarded to a tenderer for the specific goal specified for the tender.
- The points scored for the specific goal must be added to the points scored for price and the total must be rounded off to the nearest two decimal places.
- Subject to section 2(1)(f) of the Act, the contract must be awarded to the tenderer scoring the highest points.

20 points for Specific goals (service provider to submit the certified copy of the specific goals). Refer to Table 1 below:

CLAUSE NUMBER	TENDER DATA

Specific goals	80/20 preference point system	Proof of specific goals to be submitted
BB-BEE score of companies • Level 1 • Level 2 • Level 3 • Level 4 • Level 5 • Level 6 • Level 7 • Level 8 • Non-compliant	• 8 Points • 7 Points • 6 Points • 5 Points • 4 Points • 3 Points • 2 Points • 1 Point • 0 Points	Valid Certified copy of BBBEE certificate. Sworn Affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises or CIPC BBBEE certificate.
EME and/ or QSE	2 Points	Valid Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises or CIPC BBBEE certificate
At least 51% of Women-owned companies	2 Points	Certified copy of Identity Document/s **and** proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership)
At least 51% owned companies by People with disability	2 Points	Medical Certificate with doctor's details (Practice Number, Physical Address, and contact numbers) and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership
At least 51% owned companies by Youth	2 Point	Certified copy of Identity Document/s **and** proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership
Local Economic Participation • City of Tshwane	4 Points	Municipal Account statement/Lease agreement.

CLAUSE NUMBER		TENDER DATA
		• Gauteng • National | 2 Points 1 Point |
C.3.13	Acceptance of Tender Offer	Tender offers will only be accepted if: a.) the tenderer has complied in full with all the eligibility criteria b.) the tenderer is able to provide proof of tax compliance status in terms of clause 4.2 of National Treasury SCM Instruction no.7 of 2017/18 c.) the tenderer submits a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Section C1.3 of this procurement document; d.) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation. e.) the tenderer is not in arrears for more than 3 months with municipal rates and taxes and municipal service charges; f.) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; g.) 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. h.) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract; i.) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; j.) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2003, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.
C.3.17	Copies of Contract	**One** signed copy of contract shall be provided by the Employer to the successful Tenderer.

T1.3 STANDARD CONDITIONS OF TENDER

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C.1 General

C.1.1 Actions

C.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 C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

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

Note:

1) *A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.*

2) *Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.*

C.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.

C.1.2 Tender Documents

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

C.1.3 Interpretation

C.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.

C.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.

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

a) **conflict of interest** means any situation which:

   i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
   ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
   iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.

b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;

c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the Employer or his staff or agents in the tender process;

d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the Employer, including collusive practices intended to establish prices at artificial levels;

C.1.4 Communication and Employer's agent

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

C.1.5 Cancellation and re-invitation of tenders

C.1.5.1 An organ of state may, prior to the award of the tender, cancel the tender if-

(a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or

(b) funds are no longer available to cover the total envisaged expenditure;

(c) no acceptable tenders are received; or

(d) there is a material irregularity in the tender process.

C.1.5.2 The decision to cancel the tender must be published in the same manner in which the original tender invitation was advertised.

C.1.5.3 An Employer may only with the prior approval of the relevant treasury cancel a tender invitation for a second time.

C.1.6 Procurement procedures

C.1.6.1 General

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

C.1.6.2 Competitive negotiation procedure

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

C.1.6.2.2 All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of C.2.17, the Employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

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

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

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

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

C.1.6.3.2 Option 2

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

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

C.2 Tenderer's obligations

C.2.1 Eligibility

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

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

C.2.2 Cost of tendering

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

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

C.2.3 Check documents

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

C.2.4 Confidentiality and copyright of documents

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

C.2.5 Reference documents

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

C.2.6 Acknowledge addenda

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

C.2.7 Clarification meeting

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

C.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the Employer at least five (5) working days before the closing time stated in the tender data.

C.2.9 Insurance

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

C.2.10 Pricing the tender offer

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

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

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

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

C.2.11 Alterations to documents

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

C.2.12 Alternative tender offers

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

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

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

C.2.13 Submitting a tender offer

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

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

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

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

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

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

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

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

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

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

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

C.2.15 Closing time

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

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

C.2.16 Tender offer validity

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

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

C.2.16.3 Accept that a tender submission that has been submitted to the Employer may only be withdrawn or substituted by giving the Employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the Employer evaluating tender, the Contractor reserves the right to review the price based on Consumer Price Index (CPI).

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

C.2.17 Clarification of tender offer after submission

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

Note: *Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.*

C.2.18 Provide other material

C.2.18.1 Provide, on request by the Employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the Employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the Employer's request, the Employer may regard the tender offer as non-responsive.

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

C.2.19 Inspections, test and analysis

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

C.2.20 Submit securities, bonds and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other tender documents

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

C.2.23 Certificates

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

C.3 The Employer's undertakings

C.3.1 Respond to requests from the tenderer

C.3.1.1 Unless otherwise stated in the Tender Data respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

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

a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;

b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or

c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

C.3.2 Issue addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

C.3.3 Return late tender offers

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

C.3.4 Opening of tender submissions

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

C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices.

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

C.3.5 Two-envelope system

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

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

C.3.6 Non-disclosure

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

C.3.7 Grounds for rejection and disqualification

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

C.3.8 Test for responsiveness

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

a) complies with the requirements of these Conditions of Tender,

b) has been properly and fully completed and signed, and

c) is responsive to the other requirements of the tender documents.

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

a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or

c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

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

C.3.9 Arithmetical errors, omissions and discrepancies

C.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:

a) the gross misplacement of the decimal point in any unit rate;

b) omissions made in completing the pricing schedule or bills of quantities; or

c) arithmetic errors in:

i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or

ii) the summation of the prices.

C.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.

c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

C.3.10 Clarification of a tender offer

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

C.3.11 Evaluation of tender offers

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer’s obligations in submitting a tender and the Employer’s undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require Employers to conduct the process of offer and acceptance in terms of a set of standard procedures

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	**Qualitative interpretation of goal**
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

a) Open and record tender offers received
b) Determine whether or not tender offers are complete
c) Determine whether or not tender offers are responsive
d) Evaluate tender offers
e) Determine if there are any grounds for disqualification
f) Determine acceptability of preferred tenderer
g) Prepare a tender evaluation report
h) Confirm the recommendation contained in the tender evaluation report

C.3.11.1 General

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

C.3.12 Insurance provided by the Employer

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

C.3.13 Acceptance of tender offer

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

a) is not under restrictions, or has principals who are under restrictions, preventing participating in the Employer’s procurement,

b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial

resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,

c) has the legal capacity to enter into the contract,

d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,

e) complies with the legal requirements, if any, stated in the tender data, and

f) is able, in the opinion of the Employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

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

a) addenda issued during the tender period,

b) inclusion of some of the returnable documents, and

c) other revisions agreed between the Employer and the successful tenderer.

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

C.3.15 Complete adjudicator's contract

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

C.3.16 Registration of the award

An Employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the CIDB Register of Projects.

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

C.3.17 Provide copies of the contracts

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

C.3.18 Provide written reasons for actions taken

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

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T2.1 LIST OF RETURNABLE DOCUMENTS

RD.A MANDATORY RETURNABLE DOCUMENTS

Note: ***Failure to submit, fully complete and sign the applicable documents and submit all required attachments will result in the tender offer being disqualified from further consideration***

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Compulsory Enterprise Questionnaire	Form RD.A.1	
MBD 4: Declaration of interest in tender of persons in service of state	Form RD.A.2	
MBD 8: Declaration of tenderer's past supply chain management practises	Form RD.A.3	
MBD 9: Certificate of independent tender determination	Form RD.A.4	
Certificate of authority of signatory	Form RD.A.5	
Certificate of authority of signatory for joint ventures and consortia	Form RD.A.6	
Proof of registration in terms of the Project and Construction Management Profession Act 48 of 2000	Form RD.A.7	

RD.B RETURNABLE DOCUMENTS REQUIRED FOR PREFERENTIAL PROCUREMENT EVALUATION PURPOSES

Note: ***Failure to submit, fully complete and sign the applicable documents and submit all required attachments will result in the tender offer being awarded 0 (zero) preference points***

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Valid B-BBEE Status Level of Contributor Certificate	Form RD.B.1	
MBD 6.1: Preference points claim form in terms of the Preferential Procurement Regulations, 2022	Form RD.B.2	
B-BBEE Exempted Micro Enterprise – Sworn Affidavit	Form RD.B.3	
Promotion of local enterprises (Local Economic Participation)	Form RD.B.4	
Certified copy of Identity Document/s proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership	Form RD.B.5	
Medical Certificate with doctor's details (Practice Number, Physical Address and contact numbers) proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership	Form RD.B.6	

RD.C ADDITIONAL RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Proof of registration on CSD with National Treasury	RD.C.1	
MBD 5: Declaration for procurement above R10 million (all applicable taxes included)	RD.C.2	
Proof of Registration with CIDB	RD.C.3	
Compliance with OHSA (Act 85 of 1993)	RD.C.4	
Record of services provided to organs of state	RD.C.5	
Schedule of plant and equipment	RD.C.6	
Status of concern submitting tender	RD.C.8	
Classification of business	RD.C.9	
Letter of intent to provide a performance bond	RD.C.10	

RD.D OTHER DOCUMENTS THAT WILL FORM PART OF THE CONTRACT

Note: ***Failure to submit, fully complete and sign the applicable documents and submit all required attachments will result in the tender offer being disqualified from further consideration***

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Record of addenda to tender documents	RD.D.1	
Mandatory requirements (key Personnel)	RD.D.2	
Curriculum vitae of key personnel	RD.D.3	
Company's experience	RD.D.4	
Form of offer and acceptance	Section C1.1	
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FORM RD.A.1 COMPULSORY ENTERPRISE QUESTIONNAIRE

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

Section 1: Name of Enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: CSD number:

Section 5: Particulars of sole proprietors and partners in partnerships:

Name*	**Identity Number***	**Personal Income Tax Number***

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

Section 6: Particulars of companies and close corporations

Company registration number:

Close corporation number:

Tax reference number:

Section 7: MBD4 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 9: MBD8 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 10: MBD9 issued by National Treasury must be completed for each tender and be attached 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; and

v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed:		**Date:**	
Name:		**Position**	
Enterprise Name:			

FORM RD.A.2 MBD 4: DECLARATION OF INTEREST

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.

3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full name of bidder or his/her representative: _____

3.2 Identity Number: _____

3.3 Position occupied in Company: (director, trustee, shareholder[2]) _____

3.4 Company Registration Number: _____

3.5 Tax Reference Number: _____

3.6 VAT Registration Number: _____

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

[1] MSCM Regulations: "in the service of the state" means to be –
(a) a member of –
  (i) any municipal council;
  (ii) any provincial legislature; or
  (iii) the national Assembly or the national Council of provinces;

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

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

3.8 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, principal 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, principal 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. Full details of directors / trustees / members / shareholders:

Full Name	Identity Number	State Employee Number

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.

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RD.A.3 MBD 8: DECLARATION OF TENDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTISES

1. This municipal tender document must form part of all tenders invited.
2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The tender of any tenderer may be rejected if that tenderer, or any of it's directors have:

    a. abused the municipality's/municipal entity's supply management system or committed any improper conduct In relation to such system;
    b. been convicted for fraud or corruption during the past five years;
    c. wilfully neglected, reneged on or failed to comply with any government, Municipal or other public sector contract during the past five years; or
    d. been listed in the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act, 2004 (Act 12 of 2004).

4. In order to give effect to the above, the following questionnaire must be completed and submitted with the tender:

Item	Question	Response	
4.1	Is the tenderer, any of it's directors listed on the National Treasurer's database as a company or persons prohibited from doing business with the public sector? **(Companies for persons who are listed on this database were informed in writing of this restriction by the National Treasury after the *audi alteram partem* rule was applied)**	**YES**	**NO**
	If so, furnish particulars:		
4.2	Is the tenderer or any of it's directors listed on the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act, 2004 (Act 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**
	If so, furnish particulars:		
4.3	Was the tenderer 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**
	If so, furnish particulars:		

Item	Question	Response	
4.4	Does the tenderer 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**
	If so, furnish particulars:		
4.5	Was any contract between the tenderer 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**
	If so, furnish particulars:		

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.

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

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RD.A.4 MBD 9: CERTIFICATION OF INDEPENDENT TENDER DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids [3]invited.

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

3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

    a. Take all reasonable steps to prevent such abuse;
    b. Reject the tender of any tenderer if that tenderer 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 tendering process or the execution of the contract.

4. This will serve as a certificate of declaration that would be used by institutions to ensure that, when tenders are considered, reasonable steps are taken to prevent any form of tender-rigging.

5. In order to give effect to the above, the attached Certificate of Tender Determination must be completed and submitted with the tender.

[3] Includes price quotations, advertised competitive bids, limited bids and proposals.

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

CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying tender:

RTD 02-2025/26: Tender for the appointment of a Contractor for the Upgrading of Roads and Stormwater Systems in Mabopane Block U phase 1 for a duration of 12 months

in response to the invitation for the tender made by

City of Tshwane Metropolitan Municipality

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

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

1. I have read and understand the contents of this certificate;

2. I understand that the accompanying tender will be disqualified if this certificate is found not to be true and complete in every aspect;

3. I am authorised by the tenderer to sign this certificate, and to submit the accompanying tender, on behalf of the tenderer;

4. Each person whose signature appears on the accompanying tender has been authorised by the tenderer to determine the terms of, and to sign, the tender, on behalf of the tenderer;

5. For the purposes of this Certificate and the accompanying tender, I understand that the word "competitor"" shall include any individual or organization, other that the tenderer, whether or not affiliated with the tenderer who:

    a. Has been requested to submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
    b. Could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer.

6. The tenderer has arrived at the accompanying tender independently form, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium[3][5] will not be construed as collusive tendering.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement of arrangement with any competitor regarding:

    a. Prices;
    b. Geographical area where product of services will be rendered (market allocation);
    c. Methods, factors of formulas used to calculate prices;
    d. The intention or decision to submit or not to submit, a tender;
    e. The submission of a tender which does not meet the specifications and conditions of the tender; or
    f. Tendering with the intention not to win the tender.

[5] 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.

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

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

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practises related to tenders and contracts, tenders 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 form conduction 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.

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.

Person authorized to sign the tender:

Full name (in BLOCK letters):	
Signature:	
Date:	

FORM RD.A.5 CERTIFICATE OF AUTHORITY OF SIGNATORY

RESOLUTION of the a meeting of the *Board of Directors/Members/Partners of

_____

_____

(Legally correct full name and registration number, if applicable, of the enterprise)

Held at: _____ (place)

On: _____ (date)

RESOLVED that:

1. The enterprise submits a tender to the Tshwane Metro Municipality in respect of the following project:

Tender Number:	**RTD 02-2025/26**
Tender Description:	**Tender for the appointment of a Contractor for the Upgrading of Roads and Stormwater Systems in Mabopane Block U phase 1 for a duration of 12 months**

2. *Mr/Ms: _____

in *his/her capacity as _____

and who will sign as follow:

Proof signature	Proof signature

be, and is hereby authorised to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender for the enterprise mentioned above

NAME	CAPACITY	SIGNATURE

Note:	Enterprise stamp
1. *Delete which is not applicable. 2. IMPORTANT: This resolution must be signed by all the directors/members/ partners of the tendering enterprise. 3. Should the number of directors/members/partners exceed the space available above, additional names and signatures must be supplied on a separate page.	

FORM RD.A.6 CERTIFICATE OF AUTHORITY OF SIGNATORY FOR JOINT VENTURES AND CONSORTIA

*Joint venture/consortium name: _____

We, the undersigned, are submitting this tender in a *joint venture/consortium and hereby authorise *Mr/Ms _____ authorised signatory of the enterprise _____ acting in the capacity of lead partner to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender for the *joint venture/consortium mentioned above.

Registered name of enterprise	Registration number	% of contract value	Address	Duly authorised signatory	Mark with (x) for lead partner

Note:

1. *Delete which is not applicable.
2. IMPORTANT: This resolution must be signed by all the parties of the joint venture/consortium and every duly authorised signatory for each party to the joint venture/consortium must complete a Form RD.C.15.
3. Should the number of directors/members/partners exceed the space available above, additional names and signatures must be supplied on a separate page.

FORM RD.A.7 PROOF OF REGISTRATION IN TERMS OF THE PROJECT AND CONSTRUCTION MANAGEMENT PROFESSION ACT 48 OF 2000

The tenderer must provide proof of persons in their **full-time employ** that are registered in terms of Construction Management Profession Act, 2000 (Act 48 of 2000). The tenderer must confirm that registered employees are in their full-time employ by means of a declaration to this effect on the company's letterhead and duly signed.

NAME	REGISTRATION			Confirm full time employed
	Professional Category	Discipline	SACPCMP Number	

(Attach required documentary proof to this page)

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

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RD.B.1 VALID B-BBEE STATUS LEVEL OF CONTRIBUTOR CERTIFICATE

Submit B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA).

NOTE:

1. Attach original copy of B-BBEE Verification Certificate to this page.

2. In the case of a joint venture / consortium parties must each attach original copy of their B-BBEE Verification Certificates.

FORM RD.B.2 **PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022**

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

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

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

1.2 **To be completed by the organ of state**

a) The applicable preference point system for this tender is the 80/20 preference point system.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

(a) Price; and

(b) Specific Goals.

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
TOTAL POINTS FOR PRICE AND SPECIFIC GOALS	**100**

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

(a) **"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;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right) \quad \text{or} \quad Ps = 90\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.2.1. POINTS AWARDED FOR PRICE

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

80/20 **or** **90/10**

$$Ps = 80\left(1 + \frac{Pt - P\,max}{P\,max}\right) \quad \text{or} \quad Ps = 90\left(1 + \frac{Pt - P\,max}{Pmax}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. 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 goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

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

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

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

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

Specific goals	**80/20 preference point system**	**Number of points claimed (80/20 system)** **(To be completed by the tenderer)**
BB-BEE score of companies • Level 1 • Level 2 • Level 3 • Level 4 • Level 5 • Level 6 • Level 7	• 8 Points • 7 Points • 6 Points • 5 Points • 4 Points • 3 Points • 2 Points	

Specific goals	**80/20 preference point system**	**Number of points claimed (80/20 system)** **(To be completed by the tenderer)**
• Level 8 • Non-compliant	• 1 Point • 0 Points	
EME and/ or QSE	2 Points	
At least 51% of Women-owned companies	2 Points	
At least 51% owned companies by People with disability	2 Points	
At least 51% owned companies by Youth	2 Point	
Local Economic Participation • City of Tshwane • Gauteng • National	4 Points 2 Points 1 Point	

N.B For points to be allocated as per above the tenderers will be required to submit proof of documentation as evidence for claims made. Any tenderer that does not submit evidence as stated in the bid document to claim applicable points will be allocated zero points.

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm……

4.4. Company registration number: ……..

4.5. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that

the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution, if deemed necessary.

……
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: ……
DATE: ……

ADDRESS: ……

……

……
……

FORM RD.B.2 VALID B-BBEE STATUS LEVEL OF CONTRIBUTOR CERTIFICATE

Submit B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA).

NOTE:

1. Attach original copy of B-BBEE Verification Certificate to this page.

2. In the case of a joint venture / consortium parties must each attach original copy of their B-BBEE Verification Certificates.

FORM RD.B.3 B-BBEE EXEMPTED MICRO ENTERPRISE – SWORN AFFIDAVIT

I, the undersigned

Full Name & Surname																
Identity Number							-					-			-	

Hereby declare under oath as follow:

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

Enterprise Name	
Trading Name	
Registration Number	
Enterprise Address	

3. I hereby declare under oath that:

- The enterprise is _____ % black owned;
- The enterprise is _____ % black woman owned;
- Based on the audited management accounts and other information available on the _____ financial year, the income did not exceed R 10,000,000 (ten million rands);
- Please confirm on the below the B-BBEE level contributor, by ticking the applicable box.

100% Black owned	**Level One** (135% B-BBEE procurement recognition)	
More than 51% Black owned	**Level Two** (125% B-BBEE procurement recognition)	
Less than 51% Black owned	**Level Four** (100% B-BBEE procurement recognition)	

4. The entity is an empowering supplier in terms of the dti Codes of Good Practice
5. I know and understand the contents of the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.
6. The sworn affidavit will be valid for a period of 12 (twelve) month from the date signed by the commissioner.

Deponent Signature:	Date:
Commissioner of oaths (Signature and stamp)	

FORM RD.B.4 PROMOTION OF LOCAL ENTERPRISES

The City of Tshwane has mandated the promotion of local enterprises. To comply with this the tenderer must provide proof of the type of business unit and whether the unit resides within the Tshwane and will be scored as follow:

80/20 preference point system applies:

	Promotion of local enterprises
No Response (score 0)	**The tenderer did not respond or comply with this evaluation schedule. A score of 0 will also be awarded for any misrepresentation made in this regard,**
Satisfactory (score 1)	**The tenderer operates a head office or fully staffed office or his sole office outside the boundaries of Gauteng Province. (I.e. no business unit or office resides within the boundaries of Tshwane Metropolitan Municipality)**
Good (score 2)	**The tenderer's office resides within the boundaries of Gauteng Province. (I.e. no business unit or office resides within the boundaries of Tshwane Metropolitan Municipality)**
Very good (score 4)	**The tenderer's office resides within the boundaries of the Tshwane Metropolitan Municipality.**

Municipal Rates & Taxes not older than three months from tender advertisement date or Valid Lease Agreement should be attached as evidence.

(If necessary the tenderer will be requested to present the office / business unit to officials of the City)

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

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date:

FORM RD.B.5 AT LEAST 51% WOMEN OWNED COMPANIES AND AT LEAST 51% OWNED COMPANIES BY YOUTH

The City of Tshwane has mandate for the promotion At least 51% Women owned companies and At least 51% owned companies by youth. To comply with this the tenderer must provide Certified copy of Identity Document/s that proof that company is 51% owned by Women or youth

	Promotion of At least 51% Women owned companies and At least 51% owned companies by youth
No Response (score 0)	The tenderer did not respond or comply with this evaluation schedule. A score of 0 will also be awarded for any misrepresentation made in this regard,
Good (score 2)	Certified copy of Identity Document/s that proof that company is 51% owned by Women and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership
Good (score 2)	Certified copy of Identity Document/s that proof that company is 51% owned by youth and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership

FORM RD.B.6 AT LEAST 51% OWNED COMPANIES BY PEOPLE WITH DISABILITY

The City of Tshwane has mandate for the promotion of At least 51% owned companies by People with disability. To comply with this the tenderer must provide Medical Certificate with doctor's details (Practice Number, Physical Address and contact numbers that proof that company is 51% owned by People with disability

	Promotion of At least 51% owned companies by People with disability
No Response (score 0)	The tenderer did not respond or comply with this evaluation schedule. A score of 0 will also be awarded for any misrepresentation made in this regard,
Good (score 2)	Medical Certificate with doctor's details (Practice Number, Physical Address and contact numbers and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership

(If necessary the tenderer will be requested to present the office / business unit to officials of the City)

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

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date:

FORM RD.C.1 PROOF OF REGISTRATION ON CSD WITH NATIONAL TREASURY

1. Attach original or certified copy of CSD registration certificate to this page.

2. In the case of a joint venture / consortium (excluding consulting engineering partners) the joint venture / consortium must attach original or certified copy of their CSD registration certificate to this page.

FORM RD.C.2 MBD 5: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION

1. The tenderer is required by law to prepare annual financial statements for auditing their audited annual financial statements:

   i) for the past three years; or

   ii) Since the establishment if established during the past three years.

   Indicate whether these have been included in the tender:

YES	NO

2. Does the tenderer have any undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days?

YES	NO

   If so, state particulars _____

3. Has any contracts been awarded to the tenderer by an organ of state during the past five years?

YES	NO

   If so, state particulars _____

4. Has there been any material non-compliance or dispute concerning the execution of such contract?

YES	NO

   If so, state particulars _____

5. Is any portion of the goods or services expected to be sourced from outside the Republic?

YES	NO

   If, so state what portion and whether any portion of payment from the municipality is expected to be transferred outside of the Republic.

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.

I accept that the state may act against me should this declaration prove to be false.

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RD.C.3 PROOF OF REGISTRATION WITH THE CIDB

1. Attach original or certified copy of CIDB registration certificate to this page.

2. In the case of a joint venture / consortium (excluding consulting engineering partners) parties must each attach original or certified copy of their CIDB registration certificate.

Firm	**CRS Number**	**CIDB Grading**	**Lead Partner** (Indicate with X)
Combined CIDB Grading for Joint Venture / Consortium:			

(Calculator is available at https://registers.cidb.org.za/common/jvcalc.asp)

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.

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RD.C.4 COMPLIANCE WITH OHSA (ACT 85 OF 1993)

Tenderers are required to satisfy the employer and the engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below.

(Tick applicable box)

1. Are your company familiar with the OHSA (ACT 85 of 1993) and its Regulations?	**YES**	**NO**
2. Who will prepare your company's Health and Safety Plan? Provide a copy of the person/s curriculum vitae/s or company profile.		
3. Do your company have a health and safety policy? If **YES** provide a copy.	**YES**	**NO**
4. How is this policy communicated to your employees? Provide supporting documentation.	**YES**	**NO**
5. Do your company keep record of safety aspects of each site where work is performed? If **YES** what records are kept?	**YES**	**NO**
6. Do your company conduct monthly safety meetings? If **YES**, who is the chairperson of the meeting, and attend these meetings?	**YES**	**NO**
7. Do your company have a safety officer in its employment, responsible for overall safety of your company? If **YES**, explain his duties and provide a copy of his CV	**YES**	**NO**
8. Do your company have trained first aid employees? If **YES**, indicate who.	**YES**	**NO**
9. Do your company have a safety induction training programme in place? If **YES**, provide a copy.	**YES**	**NO**
10. Does your company conduct medical surveillance for its employees?	**YES**	**NO**

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.

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RD.C.5 RECORD OF SERVICES PROVIDED TO ORGANS OF STATE

Tenderers are required to complete this record in terms of the Supply Chain Management Regulations issued in terms of the Municipal Finance Management Act of 2003.

Include only those contracts where the tenderer identified in the signature block below was directly contracted by the employer. Tenderers must not include services provided in terms of a sub-contract agreement.

Where contracts were awarded in the name of a joint venture and the tenderer formed part of that joint venture, indicate in the column entitled "Title of the contract for the service" that was in joint venture and provide the name of the joint venture that contracted with the employer. In the column for the value of the contract for the service, record the value of the portion of the contract performed (or to be performed) by the tender.

Complete the record or attach the required information in the prescribed tabulation

	ALL SERVICES COMMENCED OR COMPLETED TO AN ORGAN OF STATE IN THE LAST FIVE YEARS			
	Organ of state, i.e. national or provincial department, public entity, municipality or municipal entity.	**Title of contract for the service**	**Value of contract for service incl. VAT (Rand)**	**Date completed (State current if not yet completed)**
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

(Attach additional pages if more space is required.)

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.

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RD.C.6 SCHEDULE OF PLANT AND EQUIPMENT

The following are lists of the major items of relevant equipment that I/we presently own/lease and will have available for this contract or will hire/acquire for this contract as proof of the requirements for Clause C.3.13 b) of the Conditions of Tender

Major equipment owned/leased that is immediately available for the execution of the works	
Quantity	**Description, size, capacity etc.**

(Attach additional pages if more space is required)

Major equipment that will be hired or acquired for the execution of the works	
Quantity	**Description, size, capacity etc.**

(Attach additional pages if more space is required)

FORM RD.C.8 STATUS OF CONCERN SUBMITTING TENDER

1. General

State whether the tenderer is a company, a closed corporation, a partnership, a sole practitioner, a joint venture/consortium or a co-operative

Public Company	
Private Company	
Closed Corporation	
Partnership	
Sole Proprietary	
Joint Venture / Consortium	
Co-operative	

(Mark the appropriate option)

2. Information to be provided

If the Tendering Entity is a:		**Documentation to be submitted with the tender**
1	Closed Corporation, incorporated under the Close Corporation Act,1984, Act 69 of 1984	CIPRO CK1 or CK2 (Certified copies of the founding statement) and list of members
2	Private Company incorporated with share capital, under the companies Act, 1973, Act 61of 1973 (Including Companies incorporated under Art 53 (b))	Certified copies of: a) CIPRO CM 1 - Certificate of Incorporation b) CIPRO CM 29 – Contents of Register of Directors, Auditors and Officers c) Shareholders Certificates of all Members of the Company, plus a signed statement of the Company's Auditor, certifying each Member's ownership/shareholding percentage relative to the total.
3	Private Company incorporated with share capital, under the companies Act, 1973, Act 61of 1973 in which any, or all, shares are held by another Closed Corporation or company with, or without, share capital.	Certified copies of documents referred to in 1 and/or 2 above in respect of all such Closed Corporations and/or Companies
4	Public Company incorporated with share capital, under the companies Act, 1973, Act 61of 1973 (Including Companies incorporated under Art 21)	A signed statement of the Company's Secretary confirming that the Company is a public Company.
5	Sole Proprietary or a Partnership	Certified copy of the Identity Document of: a) such Sole Proprietary, or b) Each of the Partners in the Partnership Certified copy of the Partnership agreement.

If the Tendering Entity is a:		**Documentation to be submitted with the tender**
6	Co-operative	CIPRO CR2 - Certified copies of Company registration document.
7	Joint Venture / Consortium	All the documents (as described above) as applicable to each partner in the joint venture / consortium as well as a certified copy of the joint venture / consortium agreement.

Note:

1. If the shares are held in trust provide a copy of the Deed of Trust (only the front page and pages listing the trustees and beneficiaries are required) as well as the Letter of Authority as issued by the Master of the Supreme Court wherein trustees have been duly appointed and authorised
2. Include a certified copy of the Certificate of Change of Name (CM9) if applicable.

3. Registered for VAT proposes in terms of the Value-Added Tax Act (89 of 1991)

Yes	
No	

(Make an X in the appropriate space)

REGISTRATION NO: _____

FORM RD.C.9 CLASSIFICATION OF BUSINESS

1. The Small Businesses are defined in the National Small Business Act, 1996 (Act 102 of 1996).

2. Information furnished with regard to the classification of Small businesses

(b.) Indicate whether the company/entity is defined as a small, medium or micro enterprise by the National Small Business Act.

YES	NO

(Tick appropriate box)

(c.) If the response to 2.(a.) is **YES**, the following must be completed:

i. Sector/sub-sector in accordance with the Standard Industrial classification:

_____

ii. Size or class:

_____

iii. Total full-time equivalent of paid employees:

_____

iv. Total annual turnover:

_____

v. Total gross asset value (fixed property excluded):

_____

(A schedule indicating the different sectors is attached to this form.)

(d.) The tenderer should substantiate the information provided by submitting the following documentation:

i. A letter from the tenderer's auditor or an affidavit from the South African Police Services confirming the correctness of the abovementioned information,

ii. Company profile indicating the tenderer's staff compliment, and

iii. 3 year financial statement or since their establishment if established during the past 3 years.

SCHEDULE OF SECTORS

SIZE OF CLASS	THE TOTAL FULL-TIME EQUIVALENT OF PAID EMPLOYEES	TOTAL TURNOVER	TOTAL GROSS ASSET VALUE (FIXED PROPERTY EXCLUDED)
AGRICULTURE			
Medium	100	R 5 mil	R 5 mil
Small	50	R 3 mil	R 3 mil
Very Small	10	R 500 000	R 500 000
Micro	5	R 200 000	R 100 000
MINING AND QUARRYING			
Medium	200	R 39 mil	R 23 mil
Small	50	R 10 mil	R 6 mil
Very Small	20	R 4 mil	R 2 mil
Micro	5	R 200 000	R 100 000
MANUFACTURING			
Medium	200	R 51 mil	R 19 mil
Small	50	R 13 mil	R 5 mil
Very Small	20	R 5 mil	R 2 mil
Micro	5	R 200 000	R 100 000
ELECTRICITY, GAS & WATER			
Medium	200	R 51 mil	R 19 mil
Small	50	R 13 mil	R 5 mil
Very Small	20	R 5.1 mil	R 1.9 mil
Micro	5	R 200 000	R 100 000
CONSTRUCTION			
Medium	200	R 26 mil	R 5 mil
Small	50	R 6 mil	R 1 mil
Very Small	20	R 3	R 500 000
Micro	5	R 200 000	R 100 000
RETAIL AND MOTOR TRADE & REPAIR SERVICES			
Medium	200	R 39 mil	R 6 mil
Small	50	R 19 mil	R 3 mil
Very Small	20	R 4 mil	R 600 000
Micro	5	R 200 000	R 100 000
WHOLESALE TRADE, COMMERCIAL AGENTS AND ALLIED SERVICES			
Medium	200	R 64 mil	R 10 mil
Small	50	R 32 mil	R 5 mil
Very Small	20	R 6 mil	R 600 000
Micro	5	R 200 000	R 100 000
CATERING, ACCOMMODATION AND OTHER TRADE			
Medium	200	R 13 mil	R 3 mil
Small	50	R 6 mil	R 1 mil
Very Small	20	R 5.1 mil	R 1.9 mil
Micro	5	R 200 000	R 100 000
TRANSPORT, STORAGE & COMMUNICATIONS			
Medium	200	R 26 mil	R 6 mil
Small	50	R 13 mil	R 3 mil
Very Small	20	R 3 mil	R 600 000
Micro	5	R 200 000	R 100 000
FINANCE & BUSINESS SERVICES			
Medium	200	R 26 mil	R 5 mil
Small	50	R 13 mil	R 3 mil
Very Small	20	R 3 mil	R 500 000
Micro	5	R 200 000	R 100 000
COMMUNITY, SOCIAL AND PERSONAL SERVICES			
Medium	200	R 13 mil	R 6 mil
Small	50	R 6 mil	R 3 mil
Very Small	20	R 1mil	R 600 000
Micro	5	R 200 000	R 100 000

FORM RD.C.10 LETTER OF INTENT TO PROVIDE A PERFORMANCE BOND

It is hereby agreed that a Performance Bond drafted **exactly** as set out in the attached examples (See Section C1.3: Form of Guarantee) will be provided by the Surety named below:

Name of Surety (Bank or Insurer) _____

Address: _____

_____

_____

Signed:

_____

Name: _____

Capacity: _____

On behalf of Tenderer (name of tenderer) _____

Date: _____

CONFIRMED BY Surety's Authorised representative

Signature(s):

_____

Name (print): _____

Capacity _____

On behalf of Surety (Bank or Insurer)

_____

Date: _____

Note: Refer to the Annexure to **C1.3 Form of Guarantee** for the List of Institutions from who Contract/Deposit Guarantees will be accepted.

FORM RD.D.1 RECORD OF ADDENDA TO TENDER DOCUMENTS

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

	DATE	REFERENCE	TITLE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

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.

Person authorized to sign the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RD.D.2 KEY PERSONNEL

The tenderer shall list in the table below the key personnel to be engaged for this project.

Refer to clause C.3.11 of Part T1: Evaluation of tender offers (mandatory requirements)
Note: Form RD.D.3 must be complete for each person listed below.

	NAME	PROFESSIONAL REGISTRATION CATEGORY	Number of years post registration experience
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

(Attach additional pages if more space is required)

FORM RD.D.3 CURRICULUM VITAE OF KEY PERSONNEL

Note: This form should be completed for each key person listed in Form RD.D.2(attach a comprehensive C.V, and proof of Registration).

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional membership:	
Number of years post registration experience:	
Name of employer (firm):	
Current position:	**Years with firm:**
Employment record: (list in chronological order starting with earliest work experience)	
Experience record pertinent to project scope:	
Certification: **I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications, and my experience.** _____ _____ *(Signature of person named in schedule)* Date:	

FORM RD.D.4 COMPANY EXPERIENCE

The tendering company must have experience of at least two successfully completed roads and stormwater systems project with the largest of these projects valued at a minimum of R 9 million. **(attach appointment letters and completion certificates as proof).**

Refer to clause C.3.11 of Part T1: Evaluation of tender offers (mandatory requirements)
Note: Form RD.D.4 must be complete for <u>each</u> project.

	ALL COMPLETED PROJECTS TO BE CONSIDERED			
	Employer, contact person and telephone number	**Description of contract**	**Value of contract incl. VAT (Rand)**	**Date completed**
1.				
2.				
3.				

PORTION 2: CONTRACT

PART C1: AGREEMENTS AND CONTRACT DATA

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C1.1 FORM OF OFFER AND ACCEPTANCE

STAMP

OFFER

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

RTD 02 - 2025/26: Tender for the appointment of a Contractor for the Upgrading of Roads and Stormwater Systems in Mabopane Block U: Phase 1 for a period of 12 months

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 Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.

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

THE OFFERED TOTAL OF PRICES INCLUSIVE OF VALUE ADDED TAX IS

R _____ *(in figures)*

_____

(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 including the Schedule of Deviations (if any) 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 AND ON BEHALF OF THE TENDERER:

NAME:
(In BLOCK letters) _____

CAPACITY:
(Of authorized agent) _____

SIGNATURE:
(Of authorized agent) _____

SIGNED at _____ on this _____ day of _____

WITNESSES:
(Full name in BLOCK letters and signature)

1. _____ _____

2. _____ _____

ACCEPTANCE

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

The terms of the contract, are contained in:

Part C1 Agreements and Contract Data
Part C2 Pricing Data
Part C3 Scope of Work
Part C4 Site Information

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

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The Tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the 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.

FOR AND ON BEHALF OF THE EMPLOYER:

NAME:
(In BLOCK letters) _____

CAPACITY:
(Of authorized agent) _____

SIGNATURE:
(Of authorized agent) _____

SIGNED at _____ on this _____ day of _____

WITNESSES:
(Full name in BLOCK letters and signature)

1. _____ _____

2. _____ _____

SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the tender documents issued by the employer prior to the tender closing date is limited to those permitted in terms of the conditions of tender;

2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such, letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of, offer and acceptance, the outcome of such agreement shall be recorded here;

3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the parties becomes an obligation of the contract shall also be recorded here;

4. Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the contract.

4.1 Subject: _____

_____

Details: _____

_____

4.2 Subject: _____

_____

Details: _____

_____

4.3 Subject: _____

_____

Details: _____

_____

4.4 Subject: _____

_____

Details: _____

_____

4.5 Subject: _____

_____

Details: _____

_____

By the duly authorised representatives signing this agreement, the employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from the 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.

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

FOR AND ON BEHALF OF THE TENDERER:

NAME:
(In BLOCK letters) _____

CAPACITY:
(Of authorized agent) _____

SIGNATURE:
(Of authorized agent) _____

SIGNED at _____ on this _____ day of _____

WITNESSES:
(Full name in BLOCK letters and signature)

1. _____ _____

2. _____ _____

FOR AND ON BEHALF OF THE EMPLOYER:

NAME:
(In BLOCK letters) _____

CAPACITY:
(Of authorized agent) _____

SIGNATURE:
(Of authorized agent) _____

SIGNED at _____ on this _____ day of _____

WITNESSES:
(Full name in BLOCK letters and signature)

1. _____ _____

2. _____ _____

CONFIRMATION OF RECEIPT

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

FOR AND ON BEHALF OF THE CONTRACTOR:

NAME:
(In BLOCK letters) _____

CAPACITY:
(Of authorized agent) _____

SIGNATURE:
(Of authorized agent) _____

SIGNED at _____ on this _____ day of _____

WITNESSES:
(Full name in BLOCK letters and signature)

1. _____ _____

2. _____ _____

C1.2 CONTRACT DATA

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C.1.2.1 GENERAL CONDITIONS OF CONTRACT

The general conditions of contract applicable to this contract shall be **General Conditions of Contract for Construction Works, Third Edition (2015)** of the South African Institution of Civil Engineering (SAICE), read together with the Variations and Additions to the Conditions of Contract as well as the Data provided by Employer.

Tenderers, contractors and subcontractors shall obtain their own copies of the document **General Conditions of Contract for Construction Works, Third Edition (2015)** for tendering purposes and for use for the duration of the contract from the Secretary of the South African Institution of Civil Engineering, Private Bag X200, Halfway House, Midrand, 1685 and shall bear all expenses in this regard:

South African Institution of Civil Engineering (SAICE)
Telephone: 011 80505947 / 48 / 53
E-Mail: civilinfo@saice.org.za
Web: www.saice.org.za

C1.2.2 VARIATIONS AND ADDITIONS TO THE CONDITIONS OF CONTRACT

The following variations and additions to the **General Conditions of Contract for Construction Works, Third Edition (2015)**, shall apply to this contract:

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
1.1.1	Definitions	**1.1.1.3 Certificate of Completion** **Add** the following to the clause: *Unless specified otherwise in the Contract Data, separate Certificates of Completion will not be issued for portions or phases of the Works.*
		1.1.1.24 Practical Completion **Add** the following to the clause: *This clause shall apply mutatis mutandis to any portion or phase of the Works that may be described in the Scope of Works or in the Contract Data, or agreed subsequently between the Contractor and the Employer, and committed to in writing.*
		Add the following new clause: *1.1.1.35 Construction Work Permit* *Construction Work Permit" means a statutory permit as defined in the Construction Regulations 2014.*
1.2.1	Delivery of notices	**Add** the following to the clause: *1.2.1.3 Sent by facsimile, electronic or any like communication irrespective of time of transmission;* *1.2.1.4 posted to the Contractor's address, and delivered by the postal authorities; or* *1.2.1.5 delivered by a courier service or messenger, and signed for by the recipient or his representative.*
1.2.3	Authority of representatives	**Add** the following to the clause: *1.2.3.1 The Employer has authorised the **Divisional Head: Transport Infrastructure Design & Construction** to act on his behalf in respect of this Contract, save for such duties or functions:* *1.2.3.1.1 which other holders of office ex officio execute on behalf of the Employer; or* *1.2.3.1.2 for which the **Divisional Head: Transport Infrastructure Design & Construction** has no authority and the Employer's approval is required before execution thereof.*
2.4.1	Ambiguity or Discrepancy	**Delete** the contents of the clause and insert the following:

		The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence, listed from highest to lowest priority: *a) Form of Offer and Acceptance* *b) Contract Data* *c) General Conditions of Contract* *d) Drawings* *e) Scope of Work* *f) Standard Specifications* *g) Bill of Quantities* *h) any other documents forming part of the Contract* *Upon finding any ambiguity in, or discrepancy between, or otherwise any error in the documents, the Contractor shall forthwith advise the Employer's Agent thereof before applying an interpretation in accordance with the above priority. If, after applying the above priority, an ambiguity in, or discrepancy between, or otherwise any remaining error in the documents remains, the Employer's Agent shall provide the necessary clarification or instruction.*
3.2.3	Specific approval of the Employer required	**Replace** clause 3.2.3 with the following: *In addition to the functions or duties set out in the Contract Data under Data Provided By The Employer, the Employer's Agent is required to obtain the specific prior approval of the Employer for:* *3.2.3.1 certification of expenditure that exceeds the Contract Price in terms of Clause 1.1.1.10;* *3.2.3.2 issuing of an order to suspend the progress of the Works in terms of Clause 5.11.2, the extra cost resulting from which order is to be borne by the Employer or the effect of which is liable to give rise to a claim by the Contractor for an extension of time under Clause 5.12 of these conditions;* *3.2.3.3 issuing of an instruction or order to vary the nature or quantity of the Works in terms of Clause 6.3, the estimated effect of which will be to increase the Contract Price by an amount exceeding R100 000, the evaluation of all variation orders in terms of Clause 6.4 and the adjustment of the sum(s) tendered for General Items in terms of Clause 6.11; or* *3.2.3.4 approval of any claim submitted by the Contractor in terms of Clause 10.1.*
4.1.2	Contractor's liability for own design errors	**Add** the following to the clause: *The Contractor shall provide the following to the Employer's Agent for retention by the Employer or his assignee in respect of all works designed by the Contractor:*

		4.1.2.1 A Certificate of Stability of the Works signed by a registered Professional Engineer confirming that all such works have been designed in accordance with the appropriate codes of practice. *4.1.2.2 Proof of registration and of adequate and current professional indemnity insurance cover held by the designer(s).* *4.1.2.3 Design calculations should the Employer's Agent request a copy thereof.* *4.1.2.4 Engineering drawings and workshop details (both signed by the relevant professional engineer), in order to allow the Employer's Agent to compare the design with the specified requirements and to record any comments he may have with respect thereto.* *4.1.2.5 "As-Built" drawings in DXF electronic format after completion of the Works.* *The Contractor shall be responsible for the design of the Temporary Works.*
4.3	Legal Provisions	**Add** the following new sub-clause: *4.3.3 Wages and conditions of work:* *i. For conventional construction works the Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) shall apply and the minimum employment conditions which will apply shall be guided by the Bargaining Council for the Civil Engineering Industry Collective Agreement as published from time to time.* *ii. Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) as per Government Notice R63 of 25 January 2002, shall apply to works described in the Scope of Work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.*
		Add the following new sub-clause: *4.3.4 Notwithstanding any actions which the Employer may take, the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and all its regulations, including the Construction Regulations, 2014, for which he is liable as mandatory. By entering into this Contract it shall be deemed that the parties have agreed in writing to the above provisions in terms of Section 37(2) of the Act. The Contractor shall sign the Occupational Health and Safety Agreement for Contract Work in the City of Tshwane Metropolitan Municipality included in section C1.5.*
		Add the following new sub-clause: *4.3.5 The Employer retains an interest in all inquiries conducted under this Contract in terms of Section 31 and/or 32 of the Occupational Health*

		and Safety Act, 1993 (Act 85 of 1993) and its Regulations following any incident involving the Contractor and/or Sub-Contractor and/or their employees. The Contractor shall notify the Employer in writing of all investigations, complaints or criminal charges which may arise pursuant to work performed under this Contract in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Regulations.
		Add the following new sub-clause: *4.3.6 Contractor's Designer* *The Contractor and his designer shall accept full responsibility and liability to comply with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and the Construction Regulations, 2014 for the design of the Temporary Works and those part of the Permanent Works which the Contractor is responsible to design in terms of the Contract*
		Add the following new sub-clause: *4.3.7 Construction Work Permit* *Unless duly exempted or otherwise duly agreed with the Contractor, the Employer shall forthwith, where a Construction Work Permit in terms of Regulation 3(1) of the Construction Regulations 2014 is required to be obtained by the Employer without derogation from the Employer's duties, the Employer or his duly appointed Construction Health and Safety Agent in terms of Regulation 5(6) or otherwise, upon the Construction Work Permit becoming available, issue it to the Employer's Agent, who, in turn, shall forthwith issue it to the Contractor.* *Notwithstanding anything stipulated to the contrary in these Conditions, the Contractor shall not be entitled to any claim or extension of time arising from any delay in obtaining a Construction Work Permit which has been duly applied for, unless such delay exceeds 84 consecutive days.*
5.3.3	Time to instruct the commencement of the works	**Replace** both periods of "*7 days*" in Clause 5.3.3 with "*14 days*".
5.6.1	Programme of works	**Add** the following to the clause: *The Contractor shall have regard for the phases and sub-phases (if applicable) for the Works, which shall also be the order in which the Permanent Works shall be constructed, unless otherwise agreed between the parties and committed to writing. If phased construction is applicable, the phases and sub-phases will be described in the Scope of Works and/or will be indicated on the Phasing Plan which forms part of the Drawings.*
5.7.1	Rate of progress	**Delete** the last paragraph of the clause and replace with the following: *No instruction by the Employer's Agent to the Contractor to improve his rate of progress in this regard will qualify for additional compensation, unless the instruction explicitly states that the Contractor is entitled to additional*

		compensation and cites the amount of such compensation or the basis upon which it is to be determined.
5.9.2	Further drawings and instructions	**Add** the following to the clause: *All instructions shall be in writing*
5.12	Extension of time for Practical Completion	**Add** the following new sub-clause *5.12.5 Critical path provision* *A delay in so far as extension of time is concerned, will be regarded as a delay only if, on a claim by the Contractor in accordance with the General Conditions of Contract, the Employer's Agent rules that all progress on an item or items of work on the critical path of the approved programme for the execution of the Works by the Contractor, has been brought to a halt. Delays on normal working days only, based on a working week, of five normal working days, will be taken in account for the extension of time.*
		Add the following new sub-clause *5.12.6 Extension of time due to abnormal rainfall* *Extension of time due to abnormal rainfall shall be determined by means of Method 1, if rainfall records and/or values derived from rainfall records are supplied in the Scope of Work, otherwise Method 2 shall apply.* *<u>Method 1: Rainfall formula method</u>* *The rainfall records and/or values derived from rainfall records from a suitable rainfall station near the Site, which are supplied in the Project Specifications, shall be considered suitable for the determination of extension of time due to abnormal rainfall in accordance with this method.* *Extension of time arising from abnormal rainfall, shall be calculated separately for each calendar month or part thereof for the full period of completion of the Contract, including any extension thereof, in accordance with the rainfall formula given below:* $$V = (N_w - N_n) + \frac{(R_w - R_n)}{X}$$ *If V is negative and its absolute value exceeds N_n, then V shall be equal to minus N_n.* *If V is positive and greater than the number of calendar days in the calendar month under consideration, V shall be taken as equal to the number of calendar days in the relevant calendar month.*

The symbols shall have the following meaning:

V = *Extension of time in calendar days in respect of the calendar month under consideration*

N_w = *Actual number of days during the calendar month on which a rainfall of Y mm or more has been recorded.*

R_w = *Actual rainfall in mm for the calendar month under consideration.*

N_n = *Average number of days as derived from existing rainfall records, on which a rainfall or Y mm or more has been recorded for the calendar month. Rainfall records and/or the derived values of N_n will be provided in the Specifications.*

R_n = *Average rainfall in mm for the calendar month, as derived from existing rainfall records. Rainfall records and/or the derived values of R_n will be provided in the Project Specifications.*

X = *20 unless otherwise provided in the Project Specifications*

Y = *10 unless otherwise provided in the Project Specifications*

The total extension of time shall be the algebraic sum of the monthly totals for the period under consideration. However, if the grand total is negative the time for completion shall not be reduced on account of abnormal rainfall. Extension of time for parts of a month shall be calculated by pro rata values of N_n and R_n being used.

The factor $(N_w - N_n)$ shall be considered to represent a fair allowance for variations from the average number of days during which rainfall exceeds Y mm and wet conditions prevented or disrupted work.

The factor $\frac{(R_w - R_n)}{X}$ *shall be considered to represent a fair allowance for variations from the allowance for variations from the average number of days when wet conditions further to that allowed for the factor $(N_w - N_n)$, prevented or disrupted work during the calendar month.*

Accurate rain gauging shall be taken at a suitable point on Site and the Contractor shall, at his own expense, take all necessary precautions to ensure that the rain gauges cannot be interfered with.

This formula does not take into account further on concurrent delays which could be caused by other abnormal climatic conditions such as floods, which have to be determined separately in accordance with Sub-Clause (5.12.5 Critical Plath Provision) hereof.

<u>Method 2: Expected delay method</u>

The Contractor shall make provision in his programme for the execution of the Works, for an expected delay of "n" normal working

		days (based on a working week of five normal working days) due to normal rainfall, for which he will not receive any extension of time. *Unless otherwise provided in the Project Specifications, the value of "n" shall be taken as equal to the tendered time for completion of the Works in months, rounded off to an integer.* *Extension of time during normal working days will be granted to the degree to which actual delays as determined in accordance with Sub-Clause (5.12.5 Critical Path Provision) hereof, exceed the number of "n" normal working days.* *The value of "n" does not take into account further or concurrent delays which are caused by other abnormal climatic conditions such as floods, which have to be determined separately in accordance with Sub-Clause (5.12.5 Critical Path Provision) hereof.*
6.1	Payment to Contractor	**Add** the following new sub-clause: *6.1.2 Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way of his obligations either in contract or in delict.*
		Add the following new sub-clause: *6.1.3 The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the Contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the employer. The Contractors invoices shall not be paid until all pending labour information has been submitted.*
		Add the following new sub-clause *6.1.4 The Contractor shall be paid at Pretoria in the currency of the Republic of South Africa only at the Office of the Chief Financial Officer of the CITY OF TSHWANE, unless otherwise stated in the Data provided by Employer.*
6.2	Security	**Add** the following new sub-clause: *6.2.4 As an alternative to a performance guarantee, the Contractor may deposit with the Employer a cash amount in a sum equal to the amount stated in the Data provided by Employer. All the provisions in respect of the guarantee apply mutatis mutandis to the cash deposit accept that the amount deposited will be repaid to the Contractor within 30 (thirty) days after the issue of the Certificate or Certificates of Completion in respect of the whole of the permanent works.*
8.6	Insurances	**Replace** clause 8.6 with the following:

8.6 Insurances

8.6.1 Without limiting the Contractor's/Sub-contractor's obligation in terms of the Contract, the Employer will effect and maintain for the duration of the Contract until the issuing of the Final Approval Certificate, the following insurances in the name of the Contractor (including all Subcontractors whether nominated or otherwise):

8.6.1.1 The Employer's insurer will indemnify the Contractor/Sub-contractor against physical loss of or damage to any part of the Property Insured not exceeding the maximum contract value or the final contract value estimated at inception including free issue materials were applicable as stated in the Contract Data:

- *a. Whilst in transit including loading and unloading whilst temporarily stored at any premises and route to or from the Contract Site within the Territorial Limits;*
- *b. From the time of unloading, dismantling or preparation at the Contract Site and thereafter until the Property Insured has been officially accepted by the Employer and becomes his responsibility by means of a notice of completion certificate or similar evidence of legal transfer of risk;*
- *c. During the contractual defects liability or Maintenance Period which shall not exceed the period reflected in the Schedule but only so far as the Contractors and/or Sub-Contractors may be liable for such loss or damage under the defects liability or maintenance condition/s of the Insured Contract;*
- *d. Removal of debris;*
- *e. Surrounding property*
- *f. Work away;*
- *g. Off-site storage*
- *h. Temporary repairs;*
- *i. Contribution clause – marine;*
- *j. Escalation during Contract Period;*
- *k. Post loss escalation;*
- *l. Automatic reinstatement;*
- *m. Principals maintenance;*
- *n. Property taken over;*
- *o. Beneficial occupation;*
- *p. Escalation due to currency fluctuation;*
- *q. Manufacturers guarantees*

8.6.1.2 The Employer's insurer will indemnify the Contractor/Sub-contractor against all sums for which the Contractor/Sub-contractor shall become legally liable towards third party claimants to pay for and in consequence of:

- *a. Accidental death of or bodily injury to or illness or disease contracted by any person (excluding employees of the Contractor/Subcontractor);*
- *b. Accidental physical loss or damage to tangible property occurring during the Period of Insurance and arising out of or in connection with the performance of the Insured Contract at the Contract Site as defined in the Schedule. The minimum limit of indemnity for any one event is R10-million*

		in respect of contracts with a contract value of up to R50-million (excluding VAT). *8.6.2 Insurance premium payable* *The Employer will pay the insurance premium for the works damage and public liability insurance cover. The insurance premium will be calculated based on the approved Capital Budget per financial year and the insurance premium will be charged out to the relevant departments by the Section: Insurance and Risk Management.* *8.6.3 Additional insurance by the Employer* *The Employer shall be free to effect at his own cost any additional insurance, which he deems necessary in own interest to cover loss or damage not insured in terms of the insurance policies of Sub-Clause 8.6.1.1 of this Clause.* *8.6.4 Additional insurance by the Contractor / Subcontractor* *The Contractor and Sub-contractor shall be free to effect and maintain at their own cost any additional insurance which the Contractor/Subcontractor deem necessary to cover damage, loss or injury not insured in terms of the insurance effected by the Employer's insurer. The cost of the additional insurance will be for the account of the Contractor/Subcontractor.* *8.6.5 Contractor satisfied with insurance* *The submission of a tender shall be construed as acknowledgement by the Contractor that he is satisfied with the insurance cover affected by the Employer.* *8.6.6 Contractor to observe conditions* *The Contractor shall give all notices and observe all conditions and requirements imposed by the relevant insurance policies, which shall be binding on the Contractor.* *8.6.7 Contractor to insure* *The Contractor/Sub-contractor must obtain for the duration of the contract until the issuing of the Final Approval Certificate, the following insurance policies at an insurance company within 14 (fourteen) days of the notification of acceptance of the tender and must pay all premiums and supply proof thereof to the relevant Employer's Agent, 30 (thirty) days before the inception of the contract, that the policies have been taken out and that all premiums have been paid:* *a. All Risk Insurance cover with regard to all Plant and Materials and Equipment, owned, leased or hired by the*

		Contractor that are used in the execution of the contract for the full replacement value thereof. *b. Motor Vehicle and Liability Insurance cover indicating the registration numbers of the vehicles owned, leased or hired by the Contractor that are used in the execution of the contract to the amount of at least R10-million per claim with the number of claims unlimited.* *c. SASRIA cover for motor vehicles and Plant and Materials and Equipment owned, leased or hired by the Contractor that are used in the execution of the contract for the full replacement value thereof.* *d. In respect of Plant and Materials and Equipment and Motor Vehicles brought onto the Site by or on behalf of Subcontractors, the Contractor shall be deemed to have compiled with the provisions of this Sub-Clause by ensuring that such Subcontractors have similarly insured such Plant and Materials and Equipment and Motor Vehicles.* *e. Proof must also be submitted that the Contractor complies with the conditions of the following legislation:* - *Compensation for Occupational Injuries and disease, 1993* - *Unemployment Insurance Act, 1996* - *The Contractor shall in respect of the Site of the contract works appoint in writing a Section 16 appointee to meet the requirements of the Health and Safety Act, No 85 of 1993 as amended.* *8.6.8 The Employer's Agent involved must furnish the required insurance documentation 30 (thirty) days before the inception of the contract to the Section: Insurance and Risk Management.* *8.6.9 Reporting of incidents* *In the event of an occurrence, which is likely to give rise to a claim under the insurance policy affected by the Employer, the Contractor / Subcontractors and Employer's Agent will adhere to the following procedures:* *a. In addition to any statutory obligations and/or requirements contained in the General Conditions of Contract, the Contractor shall notify the Employer and the Employer's Agent of every occurrence within 48 (forty-eight) hours giving the circumstances, nature and an estimate of the loss or damage.* *b. The Employer's Agent will be responsible to complete and submit the relevant claim documentation for each incident within 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management. Should the incident be reported by the Employer's Agent more than 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management, the claim will only be considered if the claim documentation is accompanied by a letter from the relevant Strategic Executive Director motivating the reason(s) for the late reporting of the incident, but the Employer's Agent must take note the*

		Insurer might repudiate the loss if it is found that the insurers rights have been compromised as a result of the late reporting. *c. The following documentation must be included with the claim documentation:* *- Photos of damages caused or suffered as proof or substantiation of the claims.* *d. In the event of Insured Property being damaged during the Contract Works beyond economical repair, the property must be safeguarded and be handed over to the Employer's insurer for salvage.* *e. The Section: Insurance and Risk Management will inform the Employer's insurer of the incident. The Contractor/Subcontractor shall afford all reasonable access to the Site to the Employer, the Employer's Agent, the Employer's insurers and/or representatives for the purpose of assessment of any loss or damage.* *8.6.10 Reporting of catastrophic incidents* *In the event of an occurrence, which is likely to give rise to a claim, under the insurance policy effected by the Employer, with an estimated loss or damage of more than R250 000,00, the Contractor and the Employer's Agent will adhere to the following procedures:* *a. In addition to any statutory obligations and/or requirements contained in the General Conditions of Contract, the Contractor shall notify the Employer and the Employer's Agent of every occurrence within 24 (twenty-four) hours giving the circumstances, nature and an estimate of the loss or damage.* *b. The Employer's Agent must notify the Section: Insurance and Risk Management on the same day that the Contractor/Sub-contractor has notified the Employer's Agent of the incident.* *c. The Section: Insurance and Risk Management will notify the Employer's insurer of the incident. The Contractor/Sub-contractor shall afford all reasonable access to the Site to the Employer, the Employer's Agent, the Employer's insurers and/or representatives for the purpose of assessment of any loss or damage.* *d. The Employer's Agent will be responsible to complete and submit the relevant claim documentation for each incident within 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management. Should the incident be reported by the Employer's Agent more than 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management, the claim will only be considered if the claim documentation is accompanied by a letter from the relevant Strategic Executive Officer motivating the reason(s) for the late reporting of the incident. Should the relevant claim documentation not be submitted within 30 (thirty) days, the claim will be repudiated.*

		8.6.11 Reporting of crime related incidents *All crime related incidents, losses or shortages irrespective of the value, must be reported within 24 (twenty-four) hours by the person who was involved or who has discovered the incident to the nearest South African Police Services (SAPS) station. The name of the Police Station, Investigation Officer and the Case number must be obtained and stated on the Contractor Claim Form. Should the incident not be reported to the SAPS, the claim will be repudiated.* *8.6.12 Claim documentation* *The Employer's Agent must obtain all relevant information from the Contractor/Sub-contractor and complete the Contractor Claim Form, included in this report as Annexure B that is available on the Intranet. The project number must be stated on the Contractor Claim Form.* *The Employer's Agent must submit with the Contractor Claim Form a detailed cost sheet indicating the estimate of the loss or damage.* *Any misrepresentation, misdescription or non-disclosure of material facts, at the option of the insurers, can result in claims submitted being declared null and void.* *8.6.13 Authorization of claim forms* *It is imperative that a formally delegated official or his nominee of the Employer should authorize the Contractor Claim forms as proof of the appropriate authorization, verification and approval of claims submitted. The Divisional Head must provide an authorization letter to the Section: Insurance and Risk Management stating the names and the specimen signatures of the delegated official or his nominee within 30 (thirty) days from approval of this report by Council. Should the delegated official or his nominee not sign the relevant claim form, the claim will be repudiated as this may lead to inappropriate independent verification of the validity of claims, thereby increasing the risk of insurance fraud and consequent reputation damage to the Employer.* *8.6.14 Contractor to pay deductibles* *Any claim in terms of the insurance affected by the Employer shall be subject to the Contractor being responsible for the payment of the amount stated in the Annexure to the Policies as being the deductible (first amount payable or Excess) as defined in the Certificate of Insurance issued by the Employer's insurer in terms of the Policy.* *8.6.15 Settlement of claims* *All incidents reported to the Section: Insurance and Risk Management in respect of an occurrence, which is likely to give rise to a claim will be forwarded to the Employer's insurer who will take the necessary actions for the settlement of any such claims.*

		The Contractor shall negotiate for the settlement of claims with the Employer or the Employer's insurer through the Section: Insurance and Risk Management. The Employer's Chief Financial Officer will authorize all settlements of claims. *Should action for the settlement of any such claim to the satisfaction of the Employer's Agent not be taken by the Contractor/sub-contractor within 30 (thirty) days after receipt of such claim by the Contractor/sub-contractor, the Employer or the Employer's insurer may settle any such claim, after giving the Contractor notice of its intention to do so; provided that no such claim shall be settled by the Employer or the Employer's insurer without first consulting the Contractor/sub-contractor.* *The foregoing provisions of this Sub-Clause shall apply mutatis mutandis to any such claim received by the Contractor directly.*

C1.2.3 DATA PROVIDED BY THE EMPLOYER

<table>
<tr><th colspan="2">CLAUSE/OPTION</th><th colspan="2">DATA</th></tr>
<tr><td>1.1.1.13</td><td>The Defects Liability period is:</td><td colspan="2">12 (twelve) months from the date of the Certificate of Completion.</td></tr>
<tr><td>1.1.1.14</td><td>The time for achieving Practical Completion is:</td><td colspan="2">Due Completion Date is 12 months from Commencement Date</td></tr>
<tr><td>1.1.1.15</td><td>The name of the Employer is:</td><td colspan="2">City of Tshwane Metropolitan Municipality.</td></tr>
<tr><td>1.1.1.26</td><td>The Pricing Strategy is:</td><td colspan="2">Re-measurement Contract</td></tr>
<tr><td rowspan="2">1.2.1.2</td><td rowspan="2">The address of the Employer is:</td><td>Physical Address:</td><td>Capitol Towers North,
225 Madiba (former Vermeulen) Street,
Pretoria</td></tr>
<tr><td>Postal Address:</td><td>P.O. Box 1409
PRETORIA
0001</td></tr>
<tr><td>1.1.1.16</td><td>The name of the Employer’s Agent is:</td><td colspan="2">ROMH Consulting</td></tr>
<tr><td rowspan="3">1.2.1.2</td><td rowspan="3">The address of the Employer’s Agent is:</td><td>Physical Address:</td><td>50 Tegel Avenue
CENTURION
0157</td></tr>
<tr><td>Postal Address:</td><td>50 Tegel Avenue
CENTURION
0157</td></tr>
<tr><td>E-Mail Address:</td><td>info@romh.co.za</td></tr>
<tr><td>3.1.3</td><td></td><td colspan="2">• The Employer’s Agent is required to obtain approval of the Employer:
▪ for expenditure on the Contract to exceed the Contract Price;
▪ prior to the execution of any of the following duties of functions:
<table>
<tr><th>CLAUSE</th><th>DUTY/FUNCTION</th></tr>
<tr><td>3.2.1</td><td>Nomination of person as Employer’s Agent’s Representative</td></tr>
<tr><td>3.3.4</td><td>Authorization to Employer’s Agent’s Representative or any other person</td></tr>
<tr><td>4.10.1</td><td>Approval to use the Site for any other purpose such as housing</td></tr>
<tr><td>5.3.1</td><td>Delivery of the written notice to commence the execution of the works</td></tr>
<tr><td>5.6.3</td><td>Approval of programme of construction</td></tr>
<tr><td>5.7.2</td><td>Permission to carry out work by day and by night</td></tr>
<tr><td>5.8.1.1</td><td>Approval to work on special non-working days and between sunset and sunrise</td></tr>
<tr><td>5.9.7</td><td>Approval of Contractor’s designs</td></tr>
<tr><td>5.11</td><td>Suspension of progress of the Works</td></tr>
<tr><td>5.13.2</td><td>Reduction of penalty for delay</td></tr>
</table></td></tr>
</table>

CLAUSE/OPTION		DATA
		5.14.2 The issue of a Certificate of Practical Completion 5.14.4 The issue of a Certificate of Completion 5.16.1 The issue of a Final Approval Certificate 6.3.1 Variation Orders in respect of variations which are not small 6.6 Instruction to expend on Provisional and Prime Cost Sums 6.11 Adjustment of Preliminary and General allowances 7.8.1 Order to execute work of repair, etc. during the Defects Liability Period 7.8.2 Determination of value of repair work 8.2.2.2 Order to repair and make good damage arising from any excepted risk
5.3.1	The documentation required before commencement with Works execution are:	• Health and Safety Plan (Refer to Clause 4.3) • Initial programme (Refer to Clause 5.6) • Security (Refer to Clause 6.2) • Proof that all contributions required in terms of the provisions of the Workman's Compensation Act (Act no 30 of 1941) as amended in 1993, 2002 have been paid (Refer to Cause 4.3.2) • A certified copy of Unemployment Insurance Certificate, Act of 1996 (Refer to Clause 4.3.2)
5.3.2	The time to submit the documentation required from the Commencement Date is:	**14 days**
5.8.1	The non-working days are:	Sundays
	The special non-working days are:	• Annual builders holiday • Statutory public holidays
5.13.1	The penalty for failing to complete the works is:	**The penalty will be *R5000/day*.**
5.14.1	Requirements for achieving Practical Completion	• Layer works, Surfacing, Pre-marking, Road signs • All storm water systems, inlets, outlets, junction boxes and manholes must be completed.
5.16.3	The latent defect period is:	**10 (ten) Years**
6.1.3	Labour returns:	Labour returns will be submitted **monthly**.
6.2.1	Type of security for due performance:	• Fixed Performance Guarantee from approved financial institution or Cash Deposit. • The forms for the Guarantees is to contain the wording of the pro forma document included as **C1.3** or **C1.4** contained herein.
	Liability of performance guarantee/cash deposit	The liability of the guarantee shall be for **10 (ten) %** of the Contract Sum, excluding contingencies and VAT.
6.2.2	Retention money guarantee	**Not** permitted

<table>
<tr><th colspan="2">CLAUSE/OPTION</th><th>DATA</th></tr>
<tr><td>6.8.2</td><td>Adjustment in rates and/or prices</td><td>
• The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:
<table>
<tr><th>Coefficient</th><th>Description</th><th>Value</th></tr>
<tr><td>x</td><td>Portion not subject to adjustment</td><td>0.10</td></tr>
<tr><td>a</td><td>Labour</td><td>0.21</td></tr>
<tr><td>b</td><td>Civil Engineering Plant</td><td>0.27</td></tr>
<tr><td>c</td><td>Civil Engineering Materials</td><td>0.42</td></tr>
<tr><td>d</td><td>Fuel</td><td>0.10</td></tr>
</table>
(Coefficients a, b, c and d must sum to one)
• The area nearest the Site is <u>Gauteng</u>.
• The base month is <u>the month and year prior to the closing of the tender</u>.
</td></tr>
<tr><td>6.8.3</td><td>Price adjustment for variations in the cost of special materials</td><td>Allowed</td></tr>
<tr><td>6.10.1.5</td><td>The percentage on delivered materials not yet built into the Permanent Works is:</td><td>80% (Eighty percent)</td></tr>
<tr><td rowspan="2">6.10.3</td><td>Percentage retention is:</td><td>10% (ten percent) of the value of works, excluding contingencies and VAT</td></tr>
<tr><td>The limit of retention money is:</td><td>5% (five percent) of Contract Sum, excluding contingencies and VAT.</td></tr>
<tr><td rowspan="4">8.6</td><td>Insurance of the Works and Public Liability Insurance</td><td>The Employer shall arrange this insurance.

A copy of the policy and the list of excesses may be obtained from

Contractors All Risk and Liability Insurance
Ms. Morongwa Mokoena (Tel: 012 358 1126) (morongwam@tshwane.gov.za)
Mrs Ronett Marlow-Reid (Tel: 012 358 1131) (ronettm@tshwane.gov.za)
Mr Lawrence Matjila (Tel: 012 358 1374) (lawrencem@tshwane.gov.za)</td></tr>
<tr><td>The value of plant and materials supplied by the Employer to be included in the insurance sum is:</td><td>R 0 (zero)</td></tr>
<tr><td>Responsibility for payment of deductibles in respect of Insurance of Works as well as Public Liability Insurance:</td><td>Deductibles are the responsibility of the Contractor</td></tr>
<tr><td>Construction Plant:</td><td>Contractor to insure. Policy to be approved by Employer</td></tr>
<tr><td>10.5</td><td>Determination of disputes</td><td>Ad-hoc Adjudication Board</td></tr>
<tr><td>10.5.3</td><td>Number of Adjudication Board members to be appointed:</td><td>One</td></tr>
</table>

CLAUSE/OPTION		DATA
10.6	Disagreement with Adjudication Board's decision, refer matters to:	Court proceedings

C1.2.4 DATA PROVIDED BY THE CONTRACTOR

CLAUSE/OPTION		DATA		
1.1.1.9	The name of the Contractor is:			
1.2.1.2	The address of the Contract is:	• Physical Address:		
		• Postal Address:		
		• Fax to E-Mail:		
		• E-Mail Address:		
6.2.1	The security to be provided by the Contractor shall be one of the following:	Type of Security		Contractor's choice (Indicate "Yes" or "No"
		Performance guarantee (**10% (ten percent)** of the Contract Sum, excluding contingencies ad VAT)		
		Cash deposit (**10% (ten percent)** of the Contract Sum, excluding contingencies and VAT)		
6.5.1.2.3	The percentage allowance to cover profits and overhead charges for dayworks is:	_____ %. (Maximum of **15%** will be allowed) *(In the case of the Contractor not providing a percentage the percentage as per the General Conditions of Contract will prevail)*		
6.8.3	Price adjustments for variations in the cost of special materials	The variation in cost of special materials is:		
		Type of material	**Unit**	**Base Rate or Price**
		Bitumen		
		Steel		

C1.3 PERFORMANCE GUARANTEE

C1.3 PERFORMANCE GUARANTEE

WHEREAS

The City of Tshwane Metropolitan Municipality
(hereinafter referred to as the "Council"),

enters into a Contract (No _____) with

_____

(hereinafter referred to as the "Contractor")
for _____

_____

AND WHEREAS in terms of the General Conditions of the Contract the Contractor is required to furnish an acceptable independent guarantee for the due and proper fulfilment by him of all his duties and obligations in terms of the said contract.

NOW THEREFORE we the undersigned _____
_____ (full names of authorized agent(s))
and acting in my/our capacity as_____
and _____
and as such duly authorized thereto, do hereby bind the said _____
(hereinafter referred to as the "Guarantor") as surety and co-principal Debtor in solidum for the sum of
R _____ (_____)
for the due and proper fulfilment by the Contractor of all or any of his duties and obligations in terms of the said Contract. The guarantee shall not be interpreted as accessory to the contract between Council and the Contractor. The Guarantor further undertakes, in the event of the Contractor failing duly and properly to fulfil any of his duties and obligations in terms of the said Contract, or if the Contractor is placed under provisional liquidation or in the event of termination of the Contract by the Council in terms of the General Conditions of Contract, to pay to the Council the said sum of
R _____ (_____)
or such portion thereof as may be required by the Council, immediately upon receiving written demand from the Council which written demand shall be addressed to the Guarantor at (domicilium address)

The Guarantor further hereby renounces the benefits of the legal exceptions:
Exceptio non numerate pecuniae

Exception non causa debiti

Beneficium de duobus vel pluribus reis debendi

Beneficium ordinis deu excussionis

Beneficium divisionis

and all other defence which could be pleaded against the validity of this guarantee, with the meaning and effect of which it declares itself to be fully acquainted.

This undertaking shall remain in full force and effect up to and including the date of issue of the Certificate of Completion, as provided for in the General Conditions of Contract, unless the Guarantor is advised in writing by the Council of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated. Notwithstanding the aforesaid, the Council may at its' sole discretion elect to have the amount provided for under this guarantee, paid out directly to it in the case of breach of contract by the Contractor by giving the Guarantor written notice to that effect, notwithstanding the fact that the Council may decide not to institute any further legal action against the Contractor.

This document is not negotiable or transferable.

FOR AND ON BEHALF OF THE BANKER/INSURER:

BANKER/INSURER:

NAME: _____

(in BLOCK letters)

CAPACITY: _____

(of authorized agent)

SIGNATURE: _____

(of authorized agent)

SIGNED at _____on this _____day of_____

WITNESSES:

(Full name in BLOCK letters and signature)

1._____ _____

2._____ _____

C1.4 CASH DEPOSIT GUARANTEE

Contract:	Contract RTD 02-2025/26
Description of Contract:	Tender for the appointment of a Contractor for the Upgrading of Roads and Stormwater Systems in Mabopane Block U: Phase 1 for a period of 12 months
Employer:	**CITY OF TSHWANE METROPOLITAN MUNICIPALITY**
Contractor:	

I/We, the undersigned, deposit herewith [1]cash / a bank certified cheque, in the amount of

as surety for the due performance of the Contract by the abovementioned Contractor, and for all losses, damages and expenses that may be suffered or incurred by the Employer as a result of non-performance of the Contract by the Contractor.

The amount thus deposited shall at the sole discretion of the above Employer be utilised and appropriated in the manner it deems fit which shall include but not be limited to the set off of claims upon occurrence of any one or more of the following events:

(a) the Contractor being placed under provisional liquidation or committing any one or more of the acts of insolvency as provided for in the Insolvency Act, 1936 (Act 24 of 1936);
(b) failure to comply with the conditions of the contract by the contractor; or
(c) if the contract is terminated.

A letter received from the Employer stating that any one or more of the aforementioned has occurred shall be sufficient notice to effect appropriation of such deposit. A certificate under the hand of the Employer's Agent as defined under the contract described above reflecting the amount of damages shall for all purposes be deemed to be sufficient to proof to do a set off of claims

The deposit shall, subject to the above, be returned to the Contractor on the issue of the Completion Certificate in terms of the Contract, unless the Employer has utilised and / or appropriated the monies as provided for above.

[1] Delete which is not applicable

FOR AND ON BEHALF OF THE CONTRACTOR:

NAME:
(in BLOCK letters) _____

CAPACITY:
(of authorized agent) _____

SIGNATURE:
(of authorized agent) _____

SIGNED at _____ on this _____ day of _____

WITNESSES:
(Full name in BLOCK letters and signature)

1. _____ _____

2. _____ _____

C1.5 HEALTH AND SAFETY AGREEMENT

Article of Agreement in terms of Section 37(2) of the Occupational Safety Act, 1993 between

CITY OF TSHWANE
(Hereinafter referred to as the "EMPLOYER")

AND

_____

_____

_____

_____

Herein represented by _____ in his/her capacity as _____ duly authorised by

virtue of a resolution dated _____, attached hereto Annexure A, of the said

_____ (herein after referred to as the "CONTRACTOR")

WHEREAS the CONTRACTOR is the mandatory of the EMPLOYER as contemplated in an agreement in respect of

RTD 02-2025/26: Tender for the appointment of a Contractor for the Upgrading of Roads and Stormwater Systems in Mabopane BlockU: Phase 1 for a period of 12 months

AND WHEREAS section 37 of the Occupational Health and Safety act, 1993 (Act 85 of 1993), hereinafter referred to as the "ACT"), imposes certain powers and duties upon the EMPLOYER.

AND WHEREAS the parties have agreed to enter into an agreement in terms of section 37(2) of the ACT.

NOW THEREFORE the parties agree as follows:

(a) The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.

(b) The CONTRACTOR undertakes that all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations will be fully complied with. Provided that should the EMPLOYER prescribe certain arrangements and procedures, that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.

(c) The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedure, if any, imposed by the ACT and Regulations and the EMPLOYER expressly absolves the EMPLOYER from itself being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedure as the case may be.

(d) The CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with the undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to inspect

any appropriate records held by the CONTRACTOR or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.

(e) The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigations, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such an investigation, complaint or criminal charge as the case may be

FOR AND ON BEHALF OF THE CONTRACTOR:

NAME:
(in BLOCK letters) _____

CAPACITY:
(of authorized agent) _____

SIGNATURE:
(of authorized agent) _____

SIGNED at _____ on this _____ day of _____

WITNESSES:
(Full name in BLOCK letters and signature)

1. _____ _____

2. _____ _____

FOR AND ON BEHALF OF THE EMPLOYER:

NAME:
(in BLOCK letters) _____

CAPACITY:
(of authorized agent) _____

SIGNATURE:
(of authorized agent) _____

SIGNED at _____ on this _____ day of _____

WITNESSES:
(Full name in BLOCK letters and signature)

1. _____ _____

2. _____ _____

C1.6 APPLICATION FOR A PERMIT TO DEPARTMENT OF LABOUR TO DO CONSTRUCTION WORK

Annexure 1

Occupational Health and Safety Act, 1993
(Regulation 3(2) of the Construction Regulations, 2014)

APPLICATION FOR A PERMIT TO DO CONSTRUCTION WORK

This application must be submitted with the following documents:

a) Health and Safety specification
b) Health and Safety plan
c) Baseline risk assessment.

1. Name, postal address and telephone numbers of the client

_____

_____

2. Details of the agent

(a) Title, Surname and initials: _____

(b) Identity number / Passport number: _____

(c) Registration number with SACPCMP: _____

(d) Office Tel. Number and/or Mobile number: _____

(e) Postal address: _____

_____

3. Name, postal address and telephone numbers of the principal contractor

_____

_____

_____

4. Name, postal address and telephone numbers of the designer of the project

_____

_____

_____

5. Name, Postal address and telephone numbers of the following persons

(a) Construction Manager: _____

_____

(b) Construction Health and Safety Officer _____

_____

(c) Construction Health and Safety Officer _____

_____

6. Exact physical address of the construction and site office

_____

_____

7. Nature of construction work

_____

_____

8. Expected commencement date

_____

9. Expected completion date

_____

10. Estimated maximum number of persons on the construction site:

_____

11. Planned number of contractors on the construction site accountable to the principal contractor:

_____

12 Names(s) of contractors appointed

_____

_____

_____

18. Signature of Client / Client's Agent _____

19. Signature of the Principal Contractor

FOR OFFICE USE ONLY

Authorization / Unique No.	LABOUR CENTRE	OFFICE APPROVAL STAMP

13. Date of application: _____

14.

Submitted documents prescribed in Construction Regulation 5(4). (Please tick √)

CR 5(1)(a)		CR 5(1)(b)		CR 5(1); (C-S)	

15. Result of the application. (Please tick √)

Approved		**Declined**	

16. Reason for declining the application

_____

_____

_____

_____

_____

_____

_____

_____

_____

17 Signature of the Supervisor: _____

18 Signature of revoking officer / inspector: _____

C1.7 ADJUDICATOR'S AGREEMENT

This agreement is made on the _____ day of _____ between:

_____ *(name of company / organisation)*

of _____

_____ *(address)* and

_____ *(name of company / organisation)*

of _____

_____ *(address)* (the Parties) and

_____ *(name of Adjudicator)*

of _____

_____ *(address)* (the Adjudicator).

Disputes or differences may arise/have arisen[1] between the Parties under a Contract dated _____ and known as _____

and these disputes or differences shall be/have been[2] referred to adjudication in accordance with the CIDB Adjudication Procedure, (hereinafter called "the Procedure") and the Adjudicator may be or has been requested to act.

IT IS NOW AGREED as follows:

1 The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
2 The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
3 The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.
4 The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
5 The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

[1] Delete as necessary
[2] Delete as necessary

SIGNED by: _____	SIGNED by: _____	SIGNED by: _____
Name: _____	Name: _____	Name: _____
who warrants that he / she is duly authorised to sign for and on behalf of the first Party in the presence of	who warrants that he / she is duly authorised to sign for and behalf of the second Party in the presence of	the Adjudicator in the presence of
Witness _____	Witness: _____	Witness: _____
Name: _____	Name _____	Name: _____
Address:	Address:	Address:
Date: _____	Date: _____	Date: _____

Contract Data

1	The Adjudicator shall be paid at the hourly rate of R _____ in respect of all time spent upon, or in connection with, the adjudication including time spent travelling.
2	The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to: (a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs. (b) Telegrams, telex, faxes, and telephone calls. (c) Postage and similar delivery charges. (d) Travelling, hotel expenses and other similar disbursements. (e) Room charges. (f) Charges for legal or technical advice obtained in accordance with the Procedure.
3	The Adjudicator shall be paid an appointment fee of R _____ This fee shall become payable in equal amounts by each Party within 14 days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 1 and/or item 2 of the Contract Data. If the final statement is less than the appointment fee the balance shall be refunded to the Parties.
4	The Adjudicator is/is not[1] currently registered for VAT.
5	Where the Adjudicator is registered for VAT it shall be charged additionally in accordance with the rates current at the date of invoice.
6	All payments, other than the appointment fee (item 3) shall become due 7 days after receipt of invoice, thereafter interest shall be payable at 5% per annum above the Reserve Bank base rate for every day the amount remains outstanding.

[1] Delete as necessary

PART C2: PRICING DATA

TABLE OF CONTENTS

C2.1 PRICING INSTRUCTIONS 2
1. General 2
2. Pay Items 2
3. Rates 3
4. Corrections of entries made by tenderer 4
C2.2 PRICING SCHEDULE 5

C2.1 PRICING INSTRUCTIONS

1. General

1.1 This section provides the tenderer with guidelines and requirements with regard to the completion of the Price Schedule. The Schedule **shall be completed by hand in black ink** and the tenderer is referred to the Tender Specifications in regard to the correction of errors.

1.2 The Price Schedule shall be read with all the documents which form part of this Contract.

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

Unit: The unit of measurement for each item of work in terms of the Specifications and the Project Specifications.

Quantity: The number of units of work for each item.

Rate: The payment per unit of work at which the tenderer tenders to do the work.

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

Lump sum: An amount tendered for an item, the extent of which is described in the Price Schedule, the Specifications and the Project Specifications, but the quantity of work of which is not measured in any units.

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

1.5 Work reserved for Labour Intensive construction methods will be numbered with a prefix "LI" in the Price Schedule to distinguish them from the conventional construction works. Such work shall be constructed using local labour who is temporarily employed in terms of the project specification.

2. Pay Items

2.1 Descriptions in the Price Schedule are abbreviated and comply generally with those in the Standard Specifications. The measurement and payment clause of each Standard Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standard Specification, or the Scope of Work, conflict with the terms of the Price Schedule, the requirements of the Standard Specification or Scope of Work, as applicable, shall prevail.

2.2 The item numbers appearing in the Price Schedule refer to the corresponding item number in the standard specifications or as amended in the Scope of Work. In the latter case, the item number is prefixed with the letter "B". The same applies to new clauses added to the standard specifications. The prefix "LI" is simply highlighting that the item is to be done using labour intensive methods.

2.3 Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

2.4 The quantities set out in the Price Schedule are the estimated quantities of the Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

2.5 The units of measurement described in the Price Schedule are metric units. Abbreviations used in the Price Schedule are as follows:

mm	=	Millimetre	h	=	per hour
m	=	Metre	kg	=	kilogram
km	=	Kilometre	t	=	ton (metric = 1000kg)
m^2	=	square metre	no	=	number
m^2.pass	=	square metre pass	sum	=	sum
ha	=	Hectare	MN	=	mega newton
m^3	=	cubic meter	MN.m	=	mega newton metre
m^3.km	=	cubic meter kilometre	PC sum	=	prime cost sum
ℓ	=	Litre	prov sum	=	provisional sum
kℓ	=	Kilolitre	%	=	percent
MPa	=	mega pascal	kW	=	kilowatt
V	=	Volt	KVA	=	kilo volt ampere
A	=	Ampere	R/only	=	rate only
month	=	per month	pe	=	per establishment
day	=	per day	pm	=	per person per month
pd	=	per person per day	p	=	per person
ph	=	per person per hour			

3. Rates

3.1 The prices and rates to be inserted in the Price Schedule are to be full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

3.2 A price or rate is to be entered against each item in the Price Schedule, whether the quantities are stated or not.

An item against which no price is entered or where a word or phrase such as "included" or "provided elsewhere" will be accepted as a rate of nil (R0,00) having been entered against such items and covered by the other prices or rates in the Schedule.

Any work executed to which such a pay item applies, shall be measured under the appropriate items in the Price Schedule and valued at a rate of nil (R0,00). The rate of nil shall be valid irrespective of any change in the quantities during the execution of the Contract.

3.3 The Tenderer shall fill in a rate against all items where the words "rate only" appears in the amount column. The intention is that, although no work is foreseen under such item and no quantities are consequently given in the quantity column, the tendered rate shall apply should work under this item be actually required.

3.4 Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.

3.5 The tenderer shall not group together a number of items and tender one rate for such group of items.

3.6 The tenderers shall be requested to supply three (3) quotations on each provisional sums items provided as and when needed. The service provider will be required to provide a minimum of three (3) quotations every time he is allocated work depending on the available budget and scope thereof. The approved quotation will be taken as a lump sum for that specific period only and paid for according to the CTMM Standard Specifications for Civil Engineering works 2005 or as specified in terms of a "B" item.

3.7 All rates and sums of money quoted in the Price Schedule shall be in rands and whole cents. Fractions of a cent shall be discarded.

3.8 All prices and rates entered in the Price Schedule must be **excluding VAT**. VAT will be added last on the summary page of the Price Schedule.

3.9 Should excessively high unit prices be tendered, such prices may be of sufficient importance to warrant rejection of a tender by the Employer.

4. Corrections of entries made by tenderer

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

C2.2 PRICING SCHEDULE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 0	**GENERAL**				
Section 001	**General Requirements and Charges**				
001.01	**Preliminary and General Charges:**				
001.01.01	Fixed charges	Lump sum	1		
001.01.02	Time-related charges	Lump Sum	1		
001.02	**Locating existing services**	Lump Sum	1		
001.03 (LI)	**Excavate by hand to expose existing services, and backfill**	m^3	263		
B001.03	**Contract sign board**	No.	2		
001.04	**Compliance with the Occupational Health and Safety Act and applicable regulations**				
001.04.01	Provision of a Health and Safety plan	Lump Sum	1		
001.04.02	Provision of Health and Safety file	Lump Sum	1		
001.04.04	Provision of a safety officer (full time)	Lump Sum	1		
001.04.05	Health and Safety training	Lump Sum	1		
001.04.06	Provision of personal protective clothing and equipment	Lump Sum	1		
001.04.07	Provision of safety fences, signs and barricades	Lump Sum	1		
B001.05	**Community liaison officer**				
B001.05.01	Monthly Wage	Month	12	R 16 928,00	R 203 136,00
B001.05.02	Overheads, charges & profits on item B001.05.01	%	R203 136,00		
B001.06	**Compliance with Environment Management Plan**	month	12		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
B001.08	**Provisional and Lump Sums**				
B001.08.01	CCTV Inspections	Lump. Sum	1		
B001.08.02	High Pressure Pipe Cleaning	Lump. Sum	1		
B001.08.03	Alterations to and re-locating of existing services as well as point repairs	Prov. Sum	1	R 350 000,00	R 350 000,00
B001.08.04	Handling costs and profit in respect of subitem B001.08.03	%	R350 000,00		
B001.09	**Accredited Training**				
B001.09.01	Ceta accredited Training	Prov-Sum	1	R250 000,00	R 250 000,00
B001.09.02	Percentage on item B001.09.01 for charges and profit	%	R250 000,00		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 0	**GENERAL**				
Section 002	**Engineer's Accommodation**				
002.01	**Services**				
002.01.01	Services for offices	Lump sum	1		
002.01.02	Services for ablution facilities on Site for the Engineer's Site staff	Lump sum	1		
002.02	**Treatment and maintenance of areas surrounding offices**	Lump sum	1		
002.03	**Office accommodation**				
002.03.01	Provision of office accommodation, including fittings, furniture and equipment and car ports, as specified	Lump sum	1		
002.04	**Provision of survey equipment and assistants**	Lump sum	1		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 1	**ANCILLARY WORK**				
Section 101	**Site Clearing and Grubbing**				
101.01	**Clearing and grubbing**				
101.01.01	Areas	m²	2 200		
101.01.02	Strips up to 4m wide (for walkways)	m	440		
101.02	**Cutting and removing large trees with a girth -**				
101.02.01 (LI)	exceeding 1m and up to and including 2m	No.	1		
101.04	**Reclearing areas (only on the written instructions of the Engineer)**				
101.04.02	Areas not classified as strips	m²	20		
B101.05	**Removal, staking, re-using and Disposal of specific elements**				
B101.05.01	Concrete Kerbing/Kerbing combination	m	2 500		
B101.05.02	**Concrete or brick elements (reinforced or unreinforced)**				
B101.05.02.01	230mm brickwork	m²	50		
B101.05.02.02	115mm brickwork	m²	10		
B101.05.02.03	Concrete elements (unreinforced)	m³	8		
B101.05.02.04	Concrete elements (reinforced)	m³	8		
B101.05.02.05(LI)	Block Paved driveways and walkways	m²	200		
B101.06.1	Saw-cutting of asphalt, asphalt base, concrete or paving (50mm)	m	20		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 1	**ANCILLARY WORK**				
Section 102:	**Accommodation of Traffic**				
102.04	**Watering of bypasses**	kℓ	500,00		
102.14	**Temporary traffic-control facilities**				
102.14.01 (LI)	Flagmen	Lump Sum	1		
102.14.02 (LI)	Portable Stop and Go signs	No	2		
102.14.03 (LI)	Amber flashing lights	No	2		
102.14.04 (LI)	Road signs, TR-series, 900mm in diameter or 1200mm x 200mm rectangular	No	12		
102.14.05 (LI)	Road signs, TW-series, 900mm x 900mm	No	15		
102.14.06 (LI)	Road signs, TG-series	m²	5		
102.14.07 (LI)	Danger plates and delineators	No	60		
102.14.08 (LI)	Movable barricades (chevron and ROAD CLOSED types)	No	4		
102.14.09 (LI)	Traffic cones	Lump Sum	1		
102.14.10 (LI)	Plastic New Jersey barrier	No	12		
102.15	**Re-use or removal of traffic-control facilities**				
102.15.01 (LI)	Amber flicker lights	No	4		
102.15.02 (LI)	Road signs, TR and TW series	No	4		
102.15.03 (LI)	Road signs, TG-series	No	4		
102.15.04 (LI)	Danger plates and delineators	No	4		
102.15.05(LI)	Plastic New Jersey barrier	No	6		
TOTAL CARRIED TO SUMMARY					
Signature of person authorised to sign the tender:				Date	

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 1	**ANCILLARY WORK**				
Section 103	**Overhaul**				
103.01	Overhaul on material hauled outside the defined free-haul boundaries (Free-haul boundaries will be defined as 1km outside the indicated site boundaries)	m^3.km	2 500		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 1	**ANCILLARY WORK**				
Series B107	**Dayworks**				
B107.01	**Labour during normal working hours**				
B107.01.01	Unskilled labour	h	100		
B107.01.02	Semi-skilled labour	h	40		
B107.01.03	Skilled labour	h	40		
B107.02	**Extra-over item B107.02 for charges and overheads**				
B107.02.01	Unskilled labour	%			
B107.02.02	Semi-skilled labour	%			
B107.02.03	Skilled labour	%			
B107.03	**Construction Plant**				
B107.03.01	Tipper trucks				
B107.03.01.01	6m³ capacity	h	15		
B107.03.01.02	10m³ capacity	h	15		
B107.03.02	Backhoe loaders (Mass 7 - 8 ton)	h	15		
B107.03.03	Tracked Excavator (Mass 18 - 22 ton, Power 70 - 105 kW)	h	10		
B107.03.05	Grader (Mass 16 - 20 ton)	h	10		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
B107.03.09	Rollers				
B107.03.09.01	Pneumatic Roller (14 - 21 ton)	h	15		
B107.03.09.05	Single drum vibratory smooth roller (10 - 14 ton)	h	5		
B107.03.09.06	Pedestrian roller (500 - 550kg, width 390mm)	h	25		
B107.03.10	Concrete Mixer (50 litre)	h	4		
B107.03.11	Pumps				
B107.03.11.03	Diesel centrifugal (100mm)	day	8		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 2	**EARTHWORKS**				
Section 201	**General**				
201.02	**Temporary stockpiling of material**	m^3	825		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 2	**EARTHWORKS**				
Section 202	**Trenching**				
202.01	**Trench excavation**				
202.01.01	Up to 1,0m wide				
202.01.01.01	Up to 1,0m deep	m³	1 157		
202.01.01.02	Over 1,0m deep and up to 1,5m deep	m³	772		
202.01.01.03	Over 1,5m deep and up to 2,0m deep	m³	200		
202.01.01.04	Over 2,0m deep and up to 2,5m deep	m³	20		
202.01.02	Over 1,0m and up to 2,0m wide				
202.01.02.01	Up to 1,0m deep	m³	289		
202.01.02.02	Over 1,0m deep and up to 1,5m deep	m³	193		
202.01.02.03	Over 1,5m deep and up to 2,0m deep	m³	20		
202.01.02.04	Over 2,0m deep and up to 2,5m deep	m³	10		
202.02	**Extra over items 202.01, 202.03 and 202.09 for excavating in -**				
202.02.01	Intermediate material	m³	266		
202.02.02	Hard material	m³	133		
202.03	**Excavations outside the normal trench profile**	m³	133		
202.04 (LI)	**Hand excavation (extra over item 202.01)**	m³	133		
202.06 (LI)	**The backfilling of trenches (excluding backfill around the pipe barrel) with material obtained from excavations**	m³	1 543		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
202.07	**Extra over items 202.06 and 202.13 for using backfill material obtained -**				
202.07.01	From borrow areas	m^3	309		
202.07.02	From sources provided by the Contractor	m^3	77		
202.08	**Backfilling additional excavations in trench floor, using -**				
202.08.01	Class 20MPa/ 19mm concrete	m^3	6		
202.08.02	Concrete aggregate, max size 38mm	m^3	3		
202.10	**Removal of spoil material -**				
202.10.02	To dumping areas to be provided by Contractor	m^3	266		
202.11 (LI)	**Timbering and shoring left in excavation**	m^2	491		
202.12	**Extra over item 202.06 for additional compaction of backfill to 93% of modified AASHTO density in road reserves**	m^3	15		
202.13	**Backfilling trenches with soilcrete**	m^3	15		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 2	**EARTHWORKS**				
Section 203	**Mass Earthworks**				
203.01	**Excavation and borrow to fill**				
203.01.01	Compaction to 93% of modified AASHTO density	m^3	554		
203.02	**Extra over item 203.01 for excavating in -**				
203.02.01	Intermediate material	m^3	139		
203.03	**Excavate and spoil of -**				
203.03.01	Soft material	m^3	111		
203.03.02	Intermediate material	m^3	14		
203.03.03	Hard material	m^3	11		
203.03.04	Boulder material class A	m^3	270		
203.03.05	Boulder material class B	m^3	10		
203.04	**Removal of oversize material**	m^3	40		
203.08	**Preparation and compaction of construction bed material to 93% of modified AASHTO density**	m^3	197		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
203.11	**Finishing off slopes**				
203.11.01	Excavation slopes	m^2	866		
203.11.02	Fill slopes	m^2	866		
202.14	**Extra over item 203.01 for borrow material from sources to be supplied by the Contractor**	m^3	83		
202.15	**Extra over items 203.03 and 203.04 for disposing of spoil material to sites to be provided by the Contractor**	m^3	120		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 5	**DRAINAGE AND EROSION PROTECTION**				
Section 501	**Subsurface Drains and Drainage Blankets**				
501.01	**Crushed stone**				
501.01.02	Single-sized crushed stone 19mm	m^3	14		
501.02	**Procuring of filter sand**	Lump. Sum	1		
501.03 (LI)	**Placing of filter sand**	m^3	7		
501.04 (LI)	**Geotextiles (A1, U24)**	m^2	432		
501.05 (LI)	**Pipes in subsurface drains**				
501.05.01	OPVC Pipes complete with couplings				
501.05.01.01	110mm dia perforated	m	120		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 5	**DRAINAGE AND EROSION PROTECTION**				
Section 502	**Prefabricated Culverts and Stormwater Sewers**				
502.01	**Backfilling with selected excavated material compacted to -**				
502.01.01	93% of modified AASHTO density	m^3	2 408		
502.02	**Supplying and laying of concrete pipe culverts (type SC-pipes)**				
502.02.01	Class B bedding / Class 100D				
502.02.01.01	450mm Ø	m	740		
502.02.01.02	600mm Ø	m	405		
502.02.01.03	750mm Ø	m	280		
502.02.01.04	900mm Ø	m	120		
502.02.01.06	1200mm Ø	m	60		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
502.10	**Cast in situ concrete**				
502.10.01	In class A bedding, blinding layers and encasing of pipes, including any form- work required				
502.10.01.01	Class 20MPa/ 19mm concrete	m^3	20		
502.10.01.02	Class 25MPa/ 19mm concrete	m^3	12		
502.16	**Manholes, catchpits, precast inlet and outlet structures and junction boxes complete**				
502.16.02	Catchpits				
502.16.02.01	Sloped Kerb inlets complete as detailed in CoT standard detail drawings (STD003) for lengths:				
502.16.02.01.02	3m Kerb Inlet	No	17		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
502.16.02.03	Precast inlet and outlet structures				
502.16.02.03.01	Outlet structure as detailed in CoT standard detail drawings (STD005)	No	2		
502.16.02.03.02	Field inlet complete as detailed in CoT standard detail drawings (STD005)	No	3		
502.16.02.05	Junction box Type A, C and D complete as detailed in CoT standard detail drawings (STD004), dimensions determined for a pipe diameter of:				
	Type A				
502.16.02.05.01	450mm Ø	No	9		
502.16.02.05.02	600mm Ø	No	2		
502.16.02.05.03	750mm Ø	No	1		
502.16.02.05.04	900mm Ø	No	1		
	Type C				
502.16.02.05.5	750mm Ø	No	2		
502.16.02.05.06	900mm Ø	No	3		
502.16.02.05.07	1200mm Ø	No	1		
	Type D				
502.16.02.05.08	750mm Ø	No	1		
502.16.02.05.09	1200mm Ø	No	1		
502.17	**Brick work**				
502.17.01	115mm thick	m²	20		
502.17.02	230mm thick	m²	100		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
502.18	**Plaster**	m²	100		
502.19	**Benching**	m²	100		
502.20	**Accessories**				
502.20.03	Step Irons	No	2		
502.21	**Soilcrete**	m³	80		
502.22	**Extra over Items 502.01 and 502.21 for using material obtained**				
502.22.02	From sources provided by Contractor	m³	300		
B502.24	**Removing existing culvert and Manhole/KIs**	m	845		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 5	**DRAINAGE AND EROSION PROTECTION**				
Section 503	**Kerbing and Channelling**				
503.01	**Concrete kerbing (Refer to drawing STD007 1 of 2)**				
503.01.01	Precast kerbs complying to SANS 927				
503.01.01.01	Semi-vertical kerb on curved sections	m	100		
503.01.01.02	Semi-vertical kerb along straight sections	m	10		
503.01.01.03	300 sloping kerb Fig. 8c	m	3 007		
503.01.01.04	Edge beam (150 x 150mm)	m	2 100		
503.01.01.04	Laying pre-cast kerb or edge beam	m	500		
503.01.03	Extra over item 503.01.02 for variations in concrete volume due to variations in standard dimensions	m^3	10		
TOTAL CARRIED FORWARD	**TOTAL CARRIED FORWARD**				

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD	**TOTAL BROUGHT FORWARD**				
503.03	**Transition sections (Class 20/19MPa concrete) Refer Drw STD007 2 of 2**				
503.03.01	From sloping kerb to edge beam	no	10		
503.03.02	From semi-vertical kerb to edge beam	no	11		
503.03.03	From sloping kerb to semi-vertical kerb	no	11		
503.03.04	Extra over Items 503.03.01, 503.03.02, 503.03.03 for variations in concrete volume due to variations in standard dimensions	m^3	10		
	TOTAL CARRIED TO SUMMARY				

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 5	**DRAINAGE AND EROSION PROTECTION**				
Section 505	**Erosion Protection**				
505.01	**Foundation trench excavation and backfilling**				
505.01.01	In solid rock (material which requires blasting)	m^3	1		
505.01.02	In all other classes of material	m^3	30		
505.02	**Surface preparation for the bedding of gabions**	m^2	60		
505.03	**Gabions**				
505.03.01	Gabion boxes, mesh type 80 with 2.7mm Class A galvanised wire -				
505.03.01.01	1.0m x 1.0m x 1.0m	m^3	20		
505.03.01.02	1.5m x 1.0m x 1.0m	m^3	10		
505.03.01.03	2.0m x 1.0m x 1.0m	m^3	5		
505.03.01.04	3.0m x 1.0m x 1.0m	m^3	5		
505.03.01.05	4.0m x 1.0m x 1.0m	m^3	5		
505.03.02	mattresses, mesh type 60 with 2.2mm Class A galvanised wire				
505.03.02.01	2.0m x 2.0m x 0.30m	m^3	5		
505.03.02.02	3.0m x 1.0m x 0.30m	m^3	5		
505.03.02.03	6.0m x 2.0m x 0.17m	m^3	5		
505.04	**Extra over item 505.03 for supplying gabions with PVC-coated wire**				
505.04.01	3.7mm PVC thickness	m^3	45		
505.05	**Filter fabric for gabions and riprap**				
505.05.01	Bidim A4 or similar approved	m^2	72		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
505.09.04	Precast concrete blocks (0,35mm thick, terraforce retaining block L11 or similar)	m²	571		
505.10	**Concrete in edge beams and foundation trenches**				
505.10.01	Class20/29 concrete	m³	2		
505.10.02	Class 25/19 concrete	m³	2		
505.11	**Provision and application of -**				
505.11.01	Ant poison (SANS 10124 approved)	Lump Sum	1		
505.11.03	Vegetation destroyer (SANS approved)	Lump Sum	1		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 6	**ROADS AND PARKING AREAS**				
Section 601	**Gravel Pavement Layers**				
601.02	**Gravel layers constructed from material obtained from commercial sources:**				
601.02.01.02	G5 material compacted to min 95% of MOD AASHTO (for C4 sub-base)	m^3	2 975		
601.06.02	G7 material compacted to min 93% of MOD AASHTO density (base for walkways)	m^3	1 160		
601,03	**Gravel layers constructed from material obtained from excavations:**				
601.03.01.02	Rip and recompact in-situ material (minimum G8) compacted to 93% of MOD AASHTO (subgrade)	m^3	2 975		
B601.07	Blending existing gravel G6 to produce (G5 for C4 subbase) Compacted to 95% MOD AASHTO	m^3	1 076		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 6	**ROADS AND PARKING AREAS**				
Section 602	**Crushed-stone Pavement Layers**				
602.01	**Crushed-stone base constructed with material obtained from**				
602.01.01	Commercial sources				
602.01.01.04 (a)	G2 material compacted to 88% of apparent density (base layer)	m^3	2 975		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 6	**ROADS AND PARKING AREAS**				
Section 604	**Stabilization**				
604.01	**Chemical stabilization of sub-base, extra over unstabilized compacted layers**	m^3	2 975		
604,02	**Chemical stabilizing agent**				
604.02.01	Cement (CEM I 32,5N)	t	250		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 6	**ROADS AND PARKING AREAS**				
Section 605	**Prime Coat**				
605.01	**Prime coat**				
605.01.04	Invert bitumen emulsion which complies with SANS 1260 (MSP 1) (application rate 0.95l/m²)	ℓ	15 770		
605.02	**Aggregate for blinding**	m²	100		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 6	**ROADS AND PARKING AREAS**				
606.02	**Asphalt surfacing**				
606.02.01	Continuously graded, Medium grade, 30mm thick (60/70 penetration grade bitumen)	m^2	18 260		
B606.02.02	Extra over or under item 606.02.01 for				
B606.02.02	Continuously graded (Sa-S14) for the construction of City of Tshwane spec asphalt speed hump as detailed on STD015. Contractor to include in rate all related road markings and signages	No	17		
606.10	**Saw-cutting of asphalt, asphalt base or paving (up to 40mm thick)**	m	30		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 6	**ROADS AND PARKING AREAS**				
Section 609	**Segmented Paving**				
609.01 (LI)	**Construction of segmental block paving made from -(see drawing STD008)-**				
609.01.01	60mm TypeS-A, Class 25 gray precast interlocking blocks on a 20mm sand bedding complete.	m²	5 853		
609.03 (LI)	**The construction of edge restraints with**				
609.03.01	Rectangular precast concrete barrier kerb Figure 12 or Edge beam.	m	8 964		
609.04 (LI)	**The lifting of existing segmental paving, loading and transporting it to the stockpile site specified in the Project Specifications**	m²	500		
609.05 (LI)	**Construction of segmented paving with material supplied by the Employer or from the stockpile**				
609.05.01	60mm TypeS-A, Class 25 gray precast interlocking blocks on a 20mm sand bedding complete.	m²	1 125		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 6	**ROADS AND PARKING AREAS**				
Section 612	**Traffic Signs**				
612,01	**Sign boards with painted back-ground, symbols, lettering and borders in engineering-grade retro-reflective material with sign-boards constructed from -**				
612.01.01	Aluminium sheet (2.0mm thick) with an-				
612.01.01.01	Area not exceeding 2 m²	m²	25		
612,02	**Extra over item 612.01 for -**				
612.02.01	Background of retro-reflective material of -				
612.02.01.01	Engineering grade	m²	25		
612.02.02	Lettering, symbols and borders of retro-reflective material of -				
612.02.02.01	High-intensity grade	m²	15		
612,03	**Sign supports**				
612.03.02	Steel tubing	t	1		
612.03.03	Timber - 80mm dia	m	100		
612,04	Extra over items 612.03.01 and 612.03.02 for providing				
612.04.01	Unpainted galvanized steel members	t	1		
612.04.02	painted galvanized steel members	t	1		
612,05	**Excavation and backfilling for sign supports**	m³	220		
612.06 (LI)	**Dismantling, storing and re-erecting traffic signs with a surface area of -**				
612.06.01	Area not exceeding 2 m²	No	5		
612.06.02	Area exceeding 2 m² but not 5 m²	No	5		
612.06.03	Area exceeding 5 m² but not 10 m²	No	2		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 6	**ROADS AND PARKING AREAS**				
Section 613	**Traffic Markings**				
613.01	**Road-marking paint**				
613.01.01	White lines (broken or unbroken)				
613.01.01.01	100mm	km	3,8		
613.01.01.02	150mm	km	0,4		
613.01.01.03	200mm	km	0,5		
613.01.01.04	300mm	km	0,5		
TOTAL CARRIED TO FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL CARRIED BROUGHT FORWARD					
613,04	**Variation in the rate of application**				
613.04.01	White paint	ℓ	5		
613,06	Setting out and the premarking of lines (excluding traffic-island markings, lettering and symbols)	km	5,2		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 9	**QUALITY CONTROL**				
Section 903	**Testing**				
903.06	**Other special tests requested by the Engineer**				
903.06.01	Cost of testing	PC Sum	1	R 220 000,00	R 220 000,00
903.06.02	Charge on prime cost sum	%	R220 000,00		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

SUMMARY OF PRICING SCHEDULE		
SECTION	**DESCRIPTION**	**AMOUNT**
SERIES 0	**GENERAL**	
001	General Requirements and Charges	
002	Engineers Accommodation	
SERIES 1	**ANCILLARY WORK**	
101	Site Clearing and Grubbing	
102	Accommodation of Traffic	
103	Overhaul	
107	Dayworks	
SERIES 2	**EARTHWORKS**	
201	General	
202	Trenching	
203	Mass Earthworks	
SERIES 5	**DRAINAGE AND EROSION PROTECTION**	
501	Subsurface Drains and Drainage Blankets	
502	Prefabricated Culverts and Stormwater Drainage	
503	Kerbing and Channelling	
505	Erosion Protection	
SERIES 6	**ROADS AND PARKING AREAS**	
601	Gravel Pavement Layers	
602	Crushed-stone Pavement Layers	
604	Stabilization	
605	Prime Coat	
606	Asphalt surfacing	
609	Segmented Paving	
612	Traffic Signs	
613	Traffic Markings	
SERIES 9	**QUALITY CONTROL**	
903	Testing	
TOTAL SCHEDULE OF PRICES		

Signature of person authorised to sign the tender:	
DESCRIPTION	**AMOUNT**
TOTAL OF SCHEDULED PRICES	
Add 10% for contingencies	
SUBTOTAL	
estimated 6% CPA	
SUBTOTAL	
Add 15% VAT	
CONTRACT PRICE CARRIED FORWARD TO FORM OF OFFER	

Signature of person authorised to sign the tender:	Date

PART C3: SCOPE OF WORK

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C3.1 DESCRIPTION OF THE WORKS

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C3.1.3 Extent of the works 3
C3.1.4 Location of the works 4

C3.1.1 Employers objectives

The project objective is to upgrade the roads and stormwater infrastructure in Mabopane Block U. The ultimate aim is to ensure that the standard of living for local residents is improved, safety enhanced and damage to related infrastructure (like roads for instance) is reduced.

Works earmarked for Labour Intensive construction methods will be numbered with a prefix "**LI**" in the bill of quantities to distinguish them from the conventional construction works. Such work shall be constructed using local workers who are temporarily employed in terms of the project specification.

C3.1.2 Overview of the works

The project involves the upgrading of internal roads and stormwater in Mabopane Block U. The proposed length of the streets to be upgraded is approximately 3300 m. Stormwater runoff will be managed using kerb inlets and underground pipe network to minimize potential damage to the road, surrounding property, infrastructure, and the environment. The sidewalk of approximately 3850 m will be provided and subsoil drainage pipes will also be installed where necessary. The project focuses on upgrading the existing internal roads in Mabopane Block U to improve its functionality and resilience.

The total length of roads to be constructed and surfaced is 3226m. Below is the list identified roads to be surfaces and their length:

Road	Length (m)
Kahlolo Street (Road and Stormwater)	1135
Kokoba street (Road and Stormwater)	76
Khulekani street (Road and Stormwater)	820
Sehloa street (Road and Stormwater)	435
Hlanganisa/Lenoto street (Road and Stormwater)	760
TOTAL LENGTH	**3 226**

C3.1.3 Extent of the works

C3.1.3.1 Conventional construction methods

- Grubbing
- Mass Earthworks for Roads'
- Excavation (Soft, Intermediate and Hard Rock) for Stormwater Pipes
- Roadbed Preparation
- Layer works
- Stormwater Pipe Laying and Backfilling
- Asphalt Surfacing
- Cleaning of existing stormwater systems

Labour intensive construction (LIC)

- Establishment of the Contractor's base camp or depot
- Site Clearance
- Selected trench excavations
- Pipe laying smaller than 200 diameter(service ducts)
- Erection of traffic signs and Markings
- Traffic calming measures

- Bedding
- Manholes and junction boxes
- Construction of inlet, and outlet structures
- Paving for walkways
- Edge beams and kerbing
- Expose and confirmation of existing services
- Finishing of the road reserve

C3.2.3.2 Overall extent of the work

The project scope entails the construction of a 3226m internal roads, from gravel to surfaced, 3850 m walkways and with associated approximately 1605 m stormwater system with kerb inlets and junction boxes.

C3.1.4 Location of the works

The project is located to the North of Pretoria, City of Tshwane Municipality, Gauteng Province of the Republic of South Africa. The site is known as Mabopane Block U. The approximate site centre has GPS coordinates of 25°30'14.80"S and 28° 2'22.50"E. The site is located in the corner of Xihlovo road and M21 roads, opposite the Mabopane Square. The site mainly comprises the existing formal settlement that is well-developed with formal housing structures.

C3.2 ENGINEERING

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C3.2.1 Employer's design

The employer is responsible for the design of the permanent works as reflected in the Contract Documents unless otherwise stated. It is the responsibility of the Contractor to design the temporary works and ensure their compatibility with the permanent works. The Contractor shall supply all the details necessary to assist the Engineer in compilation of the as- built drawings.

C3.2.2 Drawings

The tender drawings for the Upgrading of Roads and Stormwater Systems for Mabopane (Block U): Phase 1 are as listed below:

DRAWING NO.	DESCRIPTION OF DRAWING
PRC026-07-R0-01	GENERAL LAYOUT AND LOCALITY PLAN
PRC026-07-R1-01	LAYOUT & LONGSECTION KAHLOLO STREET
PRC026-07-R1-02	LAYOUT & LONGSECTION KAHLOLO STREET
PRC026-07-R1-03	LAYOUT & LONGSECTION KHULEKANI STREET
PRC026-07-R1-04	LAYOUT & LONGSECTION KHULEKANI, HLANGANISA AND LENOTO
PRC026-07-R1-05	LAYOUT & LONGSECTION HLANGANISA AND LENOTO ROAD
PRC026-07-R1-06	LAYOUT & LONGSECTION KOKOBA STREET
PRC026-07-R1-07	LAYOUT & LONGSECTION SEHLOA STREET
PRC026-07-R2-01	CROSS SECTIONS KAHLOLO STREET
PRC026-07-R2-02	CROSS SECTIONS KAHLOLO STREET
PRC026-07-R2-03	CROSS SECTIONS KHULEKANI STREET
PRC026-07-R2-04	CROSS SECTIONS KHULEKANI STREET
PRC026-07-R2-05	CROSS SECTIONS HLANGANISA & LENOTO STREET
PRC026-07-R2-06	CROSS SECTIONS SEHLOA STREET AND KOKOBA STREET
PRC026-07-R5-01	CATCHMENT AREA LAYOUT
PRC026-07-R5-02	MABOPANE STORMWATER BRANCH 1 LAYOUT & LONGSECTION
PRC026-07-R5-03	MABOPANE STORMWATER BRANCH 2 LAYOUT & LONGSECTION
PRC026-07-R5-04	MABOPANE STORMWATER BRANCH 3 LAYOUT & LONGSECTION
PRC026-07-R5-05	MABOPANE STORMWATER BRANCH 4 AND 5 LAYOUT & LONGSECTION
PRC026-07-R5-06	MABOPANE STORMWATER BRANCH 6 LAYOUT & LONGSECTION
PRC026-07-R5-07	MABOPANE STORMWATER LAYOUT
PRC026-07-R4-01	ROAD MARKINGS LAYOUT

DRAWING NO.	DESCRIPTION OF DRAWING
PRC026-07-R6-01	EXISTING SERVICES LAYOUT SHEET 1
PRC026-07-R6-02	EXISTING SERVICES LAYOUT SHEET 2
PRC026-07-R6-03	EXISTING SERVICES LAYOUT SHEET 3
PRC026-07-R7-01	TYPICAL ROADS CROSS SECTION
PRC026-07-R9-01	PIPE DESIGN TABLE
PRC026-07-R9-03	TYPICAL STORMWATER AND KERB LAYOUT
PRC026-07-R9-04	CATCHPIT DETAILS: ISOMETRIC VIEW AND CROSS SECTIONS
PRC026-07-R9-05	TYPE C JUNCTION BOX DETAILS
PRC026-07-R9-06	TYPE D JUNCTION BOX DETAILS
PRC026-07-R9-07	TYPICAL SPEED HUMP AND ROAD MARKING DETAILS
PRC026-07-R9-08	OUTLET CONCRETE STRUCTURE

The Principal Contractor will receive three sets of construction drawings, of which one set shall be designated for as-built records and updated by the Principal Contractor on a daily basis. The latter shall be:

- Made available to the Engineer or his/her duly authorised representative within 24 hours on request.
- Submitted to the Engineer with the completion of each project.

Take note: The information contained in the drawings, relating to the position, material, and size of the existing services, may not be 100% accurate,

C3.3 PROCUREMENT

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C3.3.1 Preferential procurement procedures

C3.3.1.1 Requirements

The City of Tshwane has a mandate and responsibility to fight poverty, build clean, healthy, safe, and sustainable communities. To achieve this, the City adopted an Integrated Poverty Reduction and Community Development Strategy which requires all departments to cooperate and contribute towards poverty reduction through employing EPWP participants on projects. Therefore, the Roads and Stormwater Division is committed to utilize participants that are registered on the City of Tshwane Central Database on all projects. The aim is to ensure commitment by each contractor on a project to utilize 100% of its personnel of the EPWP Central Database in order to enhance poverty alleviation and the uplifting of participants.

The successful contractor appointed will have to request labour from the EPWP Office that will do a random selection from the Central Database. Hundred percent of all personnel on a project must be appointed from the Central Database provided by the EPWP Office. The idea is to place beneficiaries in the correct or appropriate project roles/occupations to help them achieve income capacity and/or to equip them through skills development. The contractor must provide data about the number of beneficiaries required, qualifications, type of placement/occupation and gender before the project starts. The successful contractor appointed must accommodate students that are in need of practical training or in- service training. One student per annum must be trained on this contract. The minimum wage as per Sectoral Determination: Civil Engineering Sector published in the Government Gazette will be payable for students.

C3.3.1.1.1 Employment of unskilled and semi-skilled labour in Labour Intensive Construction works

1. Requirements for the sourcing and engagement of labour

1.1 Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be sourced from the EPWP Office.

1.2 The guideline pay rate will be as set by the CIDB/ SAFCEC Gazetted rates

1.3 Tasks by the Contractor must be such that:

(a) the average worker completes 5 tasks per week in 40 hours or less; and
(b) the weakest worker completes 5 tasks per week in 55 hours or less.

1.4 The Contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.3.

C3.3.1.1.2 Appointment Process

C3.3.1.1.2.1 Project Steering Committee (PSC)

Section 6.1.3.1 of the Expanded Public Works Programme (EPWP) Recruitment Framework requires the Office of the Speaker, in consultation with the Ward Councillor, to hold a public meeting, and elect a Project Steering Committee (PSC).

Project Steering Committee will be limited to a minimum of four (4) members and a maximum of six (6) members, to avoid a situation of too many potential interest groups preventing the PSC from functioning.

C3.3.1.1.2.2 Community Liaison Officer

After selection of the PSC, at the same meeting indicated under item C3.3.1.1.2.1, residents and stakeholders in attendance are to vote for poll of three (3) potential CLO's coming from the community concerned.

In the event that a PSC is not constituted by public meeting, or cannot proceed with its work, as contemplated by section 6.1.3.5 of the Framework, the appointed PSC will nominate potential CLOs.

It is from this pool that the contractor, after interviewing the three (3) nominees and consultation with the PSC appoints the CLO.

Administrative processes for appointment of Community Liaison Officers.

- Minutes and an attendance register must be kept as evidence of the proceedings of the election meeting.
- The office of the speaker must submit the results (minutes) and attendance registrar of the community liaison officer election meeting to the chairperson of the PSC, the contractor and the Expanded Public Works Programme (EPWP) Division.
- The elected CLO will be appointed by the contractor for the duration of the project and also be remunerated by the contractor. Where the CLO is no longer available and another is appointed, the existing CLO shall cease to receive remuneration.
- An employment agreement containing the general terms and conditions of the contract, will be issued to the CLO and must be signed by the CLO before commencement of duties.
- A CLO will be appointed from the ward in which the project is executed.
- The CLO's will be remunerated according to the entry level basic salary of an Administrator Officer position of the City of Tshwane (Task Level 5 notch 1). No benefits will be applicable.

The CLO must have the following attributes: -

- have credibility and standing in the community.
- have a strong personality.
- be able to be firm and decisive.
- be able to facilitate in disputes.
- be able to handle conflict.
- be able to keep minutes and records in a proper and orderly way.
- have a knowledge of labour laws and industrial relations (training will be provided where necessary).
- be objective and impartial.
- be fair.

C3.3.1.2 Resource standard pertaining to targeted procurement

The Contractor shall deliver the following deliverables in terms of the relevant SANS 1914 and the associated specification data:

C3.3.1.2.1 Provide business opportunities for targeted enterprises in terms of **SANS 1914-4**

1. General

Targeted enterprises shall be engaged in the performance of the contract in accordance with the requirements of SANS 1914-4 as amended in 2

2. Amendments to SANS 1914-4

2.1 Replace the existing definitions with the following:

contract participation goal (CPG)
value of supplies, services and works for which the contractor contracts targeted enterprises exclusive of any value added tax or sales tax which the law requires the employer to pay to the contractor, expressed as a percentage of the contract amount associated with the targeting strategy that is identified in the specification data

2.2 Add the following definitions:

contract amount

1) targeting strategy A
financial value of the contract at the time of the award of the contract, exclusive of all allowances and any value added tax or sales tax which the law requires the employer to pay to the contractor

2) targeting strategy B
financial value of the contract upon completion of all contractual obligations, exclusive of any value added tax or sales tax which the law requires the employer to pay to the contractor

targeting strategy A
a strategy which:

a) links the granting of a preference by the employer in the evaluation of tender offers in return for the tendering of a contract participation goal or an undertaking to attain a specified contract participation goal at the time that tenders are evaluated; or
b) requires a contractor to achieve a minimum specified goal in the performance of a contract; or
c) involves both a) and b)

targeting strategy B
a strategy which:

a) links the payment of an incentive bonus to a contractor for the attainment of a specified contract participation goal; or
b) requires the contractor to record and report on the quantum of work generated for targeted labour

2.3 Replace clauses 3.11 and 3.12 with the following:

3.1.1 The contractor shall engage targeted enterprises directly or indirectly in the performance of the contract to the extent that the total monetary value of such engagements exclusive of any value added tax or sales tax required by law, is sufficient to achieve the contract participation goal provided for in the specification data.
3.1.2 The contractor shall, in the case of targeting strategy A, submit details of his plan to achieve the contract participation goal to the employer's representative on the contract participation goal implementation plan form contained in annex C, within five working days of being instructed to do so. If no such instructions are given, these plans shall be submitted before the submission of the first claim for payment.

2.4 Replace 3.2.2 with the following:

3.2.2 Contractors shall submit completed targeted enterprise declaration affidavits and, where targeting strategy A applies, letters of undertaking to act as sub-consultants, subcontractors suppliers, manufacturers or service providers (see annex D), in respect of each and every targeted enterprise and targeted partner whose contribution shall be counted towards the contract participation goal. These documents shall, unless otherwise stated in the specification data, be submitted to the employer's representative before the submission of the first claim for payment.

2.5 Replace 4.1 with the following:

4.1 The contractor shall enter into written contractual agreements with all the targeted enterprises and targeted partners cited in the contract participation goal implementation plan and shall, as soon as is practicable, furnish the employer's representative with copies of such agreements and the written acceptances thereof. The contract to be performed by the targeted enterprises and targeted partners shall, in the case of targeting strategy A, thereafter neither be reduced in scope, nor terminated without the prior written approval of the employer's representative, which shall not be unreasonably withheld or delayed.

2.6 Replace 4.2.1 with the following:

4.2.1 Where targeting strategy A applies and in the event that, through no fault of the contractor, a contracted targeted enterprise is found to be:

a) unable to perform, or to perform on time;
b) unable to produce acceptable work;
c) unwilling to perform work required; or
d) not fit to perform the service;

the contractor shall notify the employer's representative of the apparent necessity to reduce or terminate such a targeted enterprise's contract, citing the reasons therefor.

2.7 Replace 4.3 with the following:

Where, in the case of targeting strategy A, an enterprise under contract was initially considered to be a targeted enterprise but is later discovered not to be so, or is found not to be creditable towards contract participation goals, the employer may consider a partial waiver of the contractor's obligations towards the achievement of the contract participation goal in respect of such a targeted enterprise, should the contractor satisfactorily demonstrate that he was justified in believing the enterprise to be a targeted enterprise and that eligibility standards were not violated.

2.8 Replace 6 with the following:

In the event that, and where targeting strategy A applies, the contractor fails to substantiate that any failure to achieve the contract participation goal was due to

a) quantitative underruns,
b) the elimination of items contracted to targeted enterprises, or
c) any other reason beyond the contractor's control which may be acceptable to the employer,

the sanctions provided for in the contract shall apply.

2.9 Delete "net amount" in definitions and replace "net amount" with "contract amount" wherever it appears in the text.

Clause	Specification Data

The specification data associated with SANS 1914-5 is as follows		
2.7	The employer's representative is:	ROMH Consulting
	Target area:	
	Target Area 1	The ward/wards in which the work package is to be performed
	Target Area 2	The ward/wards directly adjoining the ward/wards in which the work package is to be performed.
	Target Area 3	The region within which the ward/wards in which the work package is to be performed resides
	Target Area 4	The Tshwane Municipal area
2.17	Targeted enterprise is	Will be specified for each work package.
	The targeting strategy is	Strategy A b)
	The contract participation goal is	*The min. goal is 10% and the maximum goal is 20% (The combined goal for the contract will not exceed 30%)*
	The contract participation goal may only be achieved by subcontracting work to one or more targeted enterprises to perform commercially useful functions in the performance of the contract.	
2.9	The following weightings shall apply:	
	Target Area 1	1.2
	Target Area 2	1.0
	Target Area 3	0.8
	Target Area 4	0.6
6	**Sanctions**	In the event that the Contractor fails to substantiate that any failure to achieve the Contract Participation Goal relating to the granting of preference was due to quantitive under runs, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay the Employer a financial penalty in the following manner: $$P = 0.15 \times \frac{(D - D_o)}{100} \times N_A$$ Where D = required Contract Participation Goal percentage D_o = the Contract Participation Goal which the Employer's representative based on the

		credits passed, certifies as being achieved upon completion of the work package N_A = Net Amount P = Rand value of penalty payable

C3.3.1.2.2 Employment of unskilled and semi-skilled labour in Labour Intensive Construction works in terms of SANS 1914-5

1. General

Targeted labour shall be engaged in the performance of the contract in accordance with the requirements of SANS 1914-5 as mended in 2

2. Amendments pertaining to SANS 1914-5

2.1 Replace the existing definitions with the following:

contract participation goal (CPG)

amount equal to the sum of the wages and allowances for which the contractor contracts to engage targeted labour exclusive of any value added tax or sales tax required by law, expressed as a percentage of the contract amount associated with the targeting strategy that is defined in the specification data

targeted labour: Unemployed persons who are employed as local labour on a work package.

2.2 Add the following definitions:

contract amount

1) targeting strategy A
financial value of the contract at the time of the award of the contract, exclusive of all allowances and any value added tax or sales tax which the law requires the employer to pay to the contractor

2) targeting strategy B
financial value of the contract upon completion of all contractual obligations, exclusive of any value added tax or sales tax which the law requires the employer to pay to the contractor

targeting strategy A
a strategy which:

a) links the granting of a preference by the employer in the evaluation of tender offers in return for the tendering of a contract participation goal or an undertaking to attain a specified contract participation goal at the time that tenders are evaluated; or
b) requires a contractor to achieve a minimum specified goal in the performance of a contract; or
c) involves both a) and b)

targeting strategy B
a strategy which:

a) links the payment of an incentive bonus to a contractor for the attainment of a specified contract participation goal; or
b) requires the contractor to record and report on the quantum of work generated for targeted labour

2.3 Terms and conditions for the engagement of targeted labour

Further to the provisions of Clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

2.4 The schedule referred to in Clause 5.2 of SANS 1914-5 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of formal trainings provided to targeted labour.

2.5 Replace 6 with the following:

In the event that, and where targeting strategy A applies, the contractor fails to substantiate that any failure to achieve the contract participation goal was due to
a) quantitative underruns,
b) the elimination of items contracted to targeted enterprises, or
c) any other reason beyond the contractor's control which may be acceptable to the employer,
the sanctions provided for in the contract shall apply.

3. Training of targeted labour

3.1 The Contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
3.2 The cost of the formal training of targeted labour must be included on the total of the Prices.
3.3 The Contractor shall do nothing to dissuade targeted labour from participating in training programmes and shall take all reasonable steps to ensure that each beneficiary is provided with two days of formal training for every 22 days worked.
3.4 An allowance equal to 100 % of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of 3.3 above.
3.5 Proof of compliance with the requirements of 3.2 to 3.4 must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

Clause	**Specification Data**	
The specification data associated with SANS 1914-1 is as follows		
2.5	The employer's representative is:	*Mr. Phillip Huma*
	Target area:	
	Target Area 1	The ward/wards in which the work package is to be performed
	Target Area 2	The ward/wards directly adjoining the ward/wards in which the work package is to be performed.

	Target Area 3	The region within which the ward/wards in which the work package is to be performed resides
	Target Area 4	The Tshwane Municipal area
2.2	The contract participation goal is	*The min. goal is 10% and the maximum goal is 20% (The combined goal for the contract will not exceed 30%)*
2.8	Targeted labour means	Unemployed persons who are employed as local labour on the work package
	The targeting strategy is	Strategy A b)
2.9	The following weightings shall apply:	
	Target Area 1	1.2
	Target Area 2	1.0
	Target Area 3	0.8
	Target Area 4	0.6
6	**Sanctions**	In the event that the Contractor fails to substantiate that any failure to achieve the Contract Participation Goal relating to the granting of preference was due to quantitive under runs, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay the Employer a financial penalty in the following manner: $$P = 0.15 \times \frac{(D - D_o)}{100} \times N_A$$ Where D = required Contract Participation Goal percentage D_o = the Contract Participation Goal which the Employer's representative based on the credits passed, certifies as being achieved upon completion of the work package N_A = Net Amount P = Rand value of penalty payable

The formal training of SMMEs and targeted labour will not be undertaken under this contract. Alternatively, City of Tshwane will provide necessary training to complete the project. This training will be delivered continuously throughout the duration of the project to ensure the development of local labour and to facilitate the practical application of acquired skills.

The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

a) 60 % women;
b) 20% youth who are between the ages of 18 and 25; and
c) 2% on persons with disabilities.

The proof of compliance with the requirements must be provided by the contractor to the Employer prior to submission of the final payment certificate.

The public body City of Tshwane must set a rate of pay (task-rate) for workers to be employed on the labour-intensive tasks in accordance with the Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes (clause 10.4).

All workers must:

(a) Work in a way that does not endanger his/her health and safety or that of any other person;

(b) Obey any health and safety instruction

(c) Use any personal protective equipment or clothing issued by the employer

(d) Report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

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C3.4.1 Works specifications

C3.4.1.1 Applicable standards

The applicable Standard Specifications shall be the document **Standard Specifications for Municipal Civil Engineering Works, Third Edition 2005**, issued by the Employer.

Tenderers, Contractors and Subcontractors shall obtain their own copies of the document **Standard Specifications for Municipal Civil Engineering Works, Third Edition 2005**, for tendering purposes and for use for the duration of the Contract from the Procurement Advice Centre, Tshwane House, 320 Madiba Street, Pretoria and shall bear all expenses in this regard. Also, freely available in electronic (pdf) format at:

http://www.tshwane.gov.za/documents/tenders/CTMM_Civil_Specification_2005.zip

The **Standard Specifications for Municipal Civil Engineering Works, Third Edition 2005** have been written to cover all types of municipal civil engineering works and it may therefore cover work not applicable to this contract.

C3.4.1.2 Applicable national and international standards

Will be specified per work package

C3.4.1.3 Particular/generic specifications

C3.4.1.3.1 Generic Labour Specification

01 Scope

This specification establishes general requirements for activities which are to be executed by hand involving the following:

a) trenches having a depth of less than 1.5 metres
b) stormwater drainage
c) low-volume roads
d) sidewalks and non-motorised transport infrastructure
e) water and sanitation

02 Precedence

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

03 Hand excavate-able material

Hand excavate-able material is material:

a) granular materials:

i) whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dens, or dense; or
ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than fifteen blows of a Dynamic Cone Penetrometer (DCP) is required to penetrate 100mm;

b) cohesive materials:

i) whose consistency when profiled may in terms of Table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or

ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than eight blows of a Dynamic Cone Penetrometer (DCP) is required to penetrate 100mm;

NOTE:

1) A boulder, a cobble and gravel is material with a particle size greater than 200mm, between 60 and 200mm.
2) A Dynamic Cone Penetrometer (DCP) is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60˚ with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

GRANULAR MATERIALS		**COHESIVE MATERIALS**	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Very loose	Crumbles very easily when scraped with a geological pick	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle
Loose	Small resistance to penetration by sharp end of a geological pick	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40mm; can be moulded by fingers with some pressure
Medium dense	Considerable resistance to penetration by sharp end of a geological pick	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade
Dense	Very high resistance to penetration by the sharp end of geological pick; requires many blows for excavation	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers
Very dense	High resistance to repeated blows of a geological pick	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point

04 Trench excavation

All hand excavate-able material in trenches having a depth of less than 1.5 metres shall be excavated by hand.

05 Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand tampers.

a) to 90% Proctor density;
b) such that in excess of five blows of a Dynamic Cone Penetrometer (DCP) is required to penetrate 100mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

06 Excavation

All hand excavate-able material including topsoil classified as hand excavate-able shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand. Any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

07 Clearing and grubbing

Grass and bushes shall be cleared by hand.

08 Shaping

All shaping shall be undertaken by hand.

09 Loading

All loading shall be done by hand. Haulage equipment should be selected in a manner that allows loading by hand to the greatest extent possible.

10 Haul

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

11 Offloading

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilized for haulage.

12 Spreading

All material shall be spread by hand.

13 Compaction

Small areas may be compacted by hand provided that the specified compaction is achieved. Appropriate rollers should be used where higher (than can be achieved by hand) levels of compaction are required or for large areas.

14 Grassing

All grassing shall be undertaking by sprigging, sodding, or seeding by hand.

15 Stone pitching and rubble concrete masonry

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Grout shall be mixed and placed by hand.

16 Manufactured Elements

Elements manufactured or designed by the Contractor, such as manhole rings and cover slabs, pre-cast concrete planks and pipes, masonry unit and edge beams shall not individually, have a mass of more than 320kg. Where the mass of an element exceeds 55kg, consideration should be given to the size of the element relative to its total mass related to the number of workers who would be needed to lift such mass.

C3.4.1.3.3 Required performance characteristics on Traffic Markings

The following characteristics will be considered as indicative of the satisfactory performance of the traffic marking and should be read in conjunction with Section 613: Traffic Markings

01 Durability

Durability shall be indicated by the Traffic Wear Index determined in accordance with SABS 1248: 1995, Determination of traffic wear index.

02 Night-time visibility

Night-time retro-reflection shall be measured during daytime with a portable retro-reflectometer in accordance with SANS 6261:2008. No separate payment shall be made for the retro-reflectometer as well as the tests.

Permanent road markings shall comply with the relevant levels of performance during the functional performance as indicated in table 1(a) which is adjusted from the SADC RTSM Vol 1 Chapter 7.

Table 1(a) – Road Marking Performance Specifications

FACTOR	NEW MATERIALS			USED MATERIALS		
	WHITE	YELLOW	RED	WHITE	YELLOW	RED
Colour X(1)	0,305 0,335 0,325 0,295	0,494 0,470 0,493 0,522	0,660 0,610 0,638 0,690	0,305 0,350 0,340 0,295	0,481 0,444 0,494 0,054	0,655 0,579 0,606 0,690
Colour Y(1)	0,315 0,345 0,355 0,325	0,505 0,480 0,457 0,477	0,340 0,340 0,312 0,310	0,315 0,360 0,370 0,325	0,518 0,476 0,426 0,454	0,345 0,341 0,314 0,310
Luminance Factor	0,6	0,4	+0,08	0,45	0,3	+0,06
Coefficient of Retro-reflective (minicandelas/m^2/lx)	250	135	30	100	70	20
Skid Resistance BPN(2)	50	50		50		

Note: All new surfaces shall be painted with 1.2mm thermoplastic paint
The co-ordinates given refer to the Chromaticity Chart in Figure 1.11 Volume 1 of the SADC RTSM. The co-ordinates measured for the colour should fall within the area defined by the co-ordinates given.
"BPN" stands for a value determined by the British Portable Pendulum Number measurement method applicable to all colours of markings.
Initial retro-reflectivity tests shall be performed within 14 days of road marking application to qualify for acceptance. (The Contractor shall notify the Employer in writing of any abnormal building or construction activities or circumstances on the roads prior to testing which may have a negative result in the night-time retro-reflectivity test). The contractor shall provide an approved retro-reflectometer for the measuring of retro-reflectivity free of charge to the employer for the duration of the contract period. Should there be any dispute regarding the type of retro-reflectometer used, a Delta LTL-X retro-reflectometer shall be used to provide the final measurements.
Retro-reflectivity tests shall also be performed six months after road marking application on the "cleaner type road surface" as agreed with the Engineer and shall meet the minimum requirements as follows:

White road markings ≥ 150 mcd/m^2/lx
Yellow road markings ≥ 90 mcd/m^2/lx

Should the road markings not meet this requirement after six months then the road must be repainted at the expense of the contractor. Proper surface preparation must be done to the satisfaction of the Engineer e.g. if the road markings are too thick or if the road markings are breaking off then sand blasting or water blasting may be required before the road marking application. The cost of this preparation work shall be for the account of the contractor and will not be paid for by the Employer.
No new work orders will be issued to the contractor before the road markings are repainted and approved according to the requirements in Table 1(a) above.
N.B. A "cleaner type of road surface" is a road where sand does not get onto the road which adversely affects the road markings.

03 Protection

After the paint has been applied, the traffic markings shall be protected against damage by traffic or other causes. The Contractor shall be responsible for the erection, placing and removal of warning boards, flags, cones and barricades as recommended in Vol2, Chapter 13 of the SADC RTSM. The Contractor shall be responsible for the placing of extra cones to prevent vehicles from crossing over wet paint. Should the wet paint be carried over the road surface or paint spillage takes place during the traffic marking operation such redundant paint shall be sandblasted. Black paint shall never be applied as a corrective measure to redundant traffic markings unless approved by the Engineer as a temporary measure. These traffic markings shall then be sandblasted as a final corrective measure.

04 Quality Control

The Contractor shall execute quality control of the traffic markings in accordance with a quality control plan approved by the employer. The quality control plan shall be based on a minimum level of assessment on at least 10 sets of 5 readings per 1km section of a road as indicated by the Engineer to determine the night-time visibility of each type of marking. The contractor shall provide the Engineer with the results of the Contractor's process quality control during the traffic marking process. The cost of such process quality control shall be borne by the Contractor.
Should it be clear that the traffic markings would not meet the required level of performance at any of the inspection dates; the Contractor may use his discretion to apply appropriate remedial actions to rectify the shortcomings after getting approval from the Engineer.

C3.4.1.3.4 Required performance characteristics on Traffic signs

1. Poles

1.1 For standard regulatory and warning signs, poles used shall be of a"D" section obtained by rolling flat mild steel plate of 2mm wall thickness to the desired form, and seam-welding it along the entire
Length (the d-section extrude from standard pipe section is not acceptable).

1.2 The d section must have a flat base of approximately 63mm measured externally and the circular part an external diameter of 76mm. Each pole is to be blanked-off at the top by means of at least 2mm mild steel plate welded to the top, with the same form as the d section.

1.3 The welding joint must be watertight and smoothed off after Welding.

1.4 The base plate for D section poles and 76mm diameter. Round poles to be 150mm square and 2mm thick, and welded to the base of each pole by means of 4 evenly spaced welds, each not less than 20mm long. The base plate for 100mm diameter round poles to be 200mm square

1.5 The poles shall be hot dipped zinc coated (galvanised).

1.6 All poles >3.6m length to be 100mm diameter round poles with 3mm wall thickness.

1.7 Poles used for signs >15 square meter to be designed in line with SARTSM volume 2 chapter 15.

1.8 All poles used for street name signs shall be 3.6m round sections and 76mm diameter

1.9 Signs must be installed onto break away footings on paved concrete Islands.

1.10 Holes to be drilled as directed by the engineer.

1.11 Sign date needs to be applicate to the front of the pole 50mm high Vinyl.

1.12 No jointing of poles allowed.

2. Signs

2.1 All signs to be manufactured with class i engineering grade
Prismatic material having a 7 year warranty period, while all hazard markers to be manufactured with class 3 high intensity prismatic material having a 10 year warranty period.
All panel signs to be class 3 reflective ground mounted and class 4 reflective for overhead signs.
All temporary signs to be class 3 reflective material.

2.2 No unistruts on signs are allowed for 600mm r series and up to 900mm W series signs, while signs > 1200mm require unistruts.

2.3 All sign corners to be round r=25mm (excluding r1).

2.4 All signs to be fixed flat against the poles.

2.5 All vinyl to be cast vinyl with 10 year warranty for road signs.

2.6 All ink used for silk screening must be from the same supplier as the reflective material.

2.7 Symbols for w416/7 to be silk screened.

2.8 Street name font to be din “a” as per SARTSM vol. 4

2.9 Type 2 & 3 street names >1500mm require 2 poles and brackets.

2.10 Reflective sheet only to be applied onto the vertical section of the street name plate.

2.11 No jointing of reflective material allowed on sign face.

2.12 All bolts to have washers.

C3.4.2 Plant and materials

C3.4.2.1 Plant and materials supplied by the employer

The Employer will **not** supply any plant and / or materials.

C3.4.2.2 Materials, samples and shop drawings

C3.4.2.2.1 Road Construction Materials

No borrow pits are provided. Where material cannot be obtained from cut on the works, the Contractor will be responsible to obtain the material required for the fill, sub-grade and pavement layers from commercial sources.

C3.4.2.2.2 Aggregate for Concrete

The crushed stone and aggregate to be used in the base, surfacing and concrete must be approved by the Engineer before it may be used.

C3.4.2.2.3 Water for Concrete and Construction Purposes

No natural water from rivers, streams, boreholes, pans, dams or irrigation canals shall be used for concrete, stabilised layers or compaction purposes. Only suitably purified (drinking quality) water shall be used.

The contractor must make adequate provision in his tender for all negotiations and procurement of water for construction activities and all related costs will be deemed to be included in his tendered rates.

C3.4.2.2.4 Spoil Material

The contractor shall make his own arrangements for the provision of a suitable place off the site for the disposal of material obtained from excavations, demolition, clearing and grubbing the demolition of boundary walls, brick work, foundation excavations, etc. The rates in the schedule of quantities shall include all costs or fees payable to cover the disposal at the dumping site. The rates must allow for haul as no haul will be payable.

C3.4.2.2.5 Cement for concrete

The cement used for the construction of culverts, foundations and bridge structures as well as for stabilisation must be approved by the engineer prior to construction.

C3.4.3 Construction equipment

C3.4.3.1 Requirements for equipment

The construction methods adopted, and plant and equipment used shall be at the discretion of the Contractor, provided always that the construction methods adopted and Plant used by the Contractor are appropriate in respect to the nature of the Works to be executed and the standards to be achieved in the Contract.

C3.4.3.2 Equipment provided by the Employer

The Employer will **not** provide any equipment.

C3.4.4 Existing services

C3.4.4.1 Location of services

The Employer's Agent will be responsible to obtain the necessary permissions and way leave approvals from the relevant Service Owners The Contractor shall locate and establish the actual position of any services on Site as indicated on the wayleaves before starting the construction.

Payment will not be made for any inconvenience caused to the Contractor in regard to any services crossing the Site or any authority working on any such service, nor will any delays caused by such works be accepted as a basis for claiming an extension of time for completing the works. All communications with owners of services and their work teams must take place in conjunction with the engineer or his representative.

C3.4.4.2 Treatment of existing services

Engineer's Instructions will be issued to the contractor when existing services need attention to consult service owners.

C3.4.4.3 Use of detection equipment for the location of underground services

Equipment to be used at the direction of the Engineer

C3.4.4.4 Damage to services

All services damaged by the Contractor shall be reported directly to relevant institution and will be rectified with immediate effect. No separate payment will be made to the Contractor for services damaged and repaired by him/her.

C3.4.4.5 Reinstatement of services and structures damaged during construction

The Engineer will determine the requirements and reinstatement procedures for the notification and repair of damage to services, penalties applicable to the damage of services.

C3.4.5 Site establishment

C3.4.5.1 Services and facilities provided by the employer.

The employer will not provide any services and / or facilities

C3.4.5.2 Facilities provided by the contractor

C3.4.5.2.1 Contractor's Camp site

The contractor shall be provided with a suitable site for his camp and for accommodating the work force. The choice of the site for the establishment of the camp, offices and the layout thereof, shall be approved.

The camp site shall be cleared and grubbed and properly fenced with a security fence around the perimeter. The Contractor is to provide his own security at the camp or on the site if required, at his own expense.

After completion of the contract, the Contractor shall remove all his temporary buildings, plant and equipment. The site shall be made good and be left in a neat and tidy condition before a certificate of completion shall be issued.

C3.4.5.2.2 Water Supply

The Contractor shall make his own arrangement for potable and construction water. No natural water from rivers, streams, boreholes, pans, dams or irrigation canals shall be used for concrete or stabilised layers. Only drinking quality purified water shall be used. The Contractor must make adequate provision in his tender for all negotiations and procurement of water for construction activities and all related costs will be deemed to be included in his tendered rates.

C3.4.5.2.3 Power Supply

The Contractor shall make his own arrangements.

C3.4.5.2.4 Ablution Facilities

The Contractor shall, at each construction area, provide sufficient portable chemical latrine units. The latrine units shall be serviced daily and kept in a hygienic and orderly state to the approval of the engineer. No separate payment shall be made for this requirement, and the costs thereof shall be deemed to be included in the rates billed for the contractor's time-related obligations.

C3.4.5.2.5 Cellular Telephone

It is a requirement of the contract that the contractor shall equip his site agent(s) with a cellular telephone to allow for effective communication between the contractor's supervisory personnel and the engineer's supervisory staff. All costs associated with the provision of cellular telephones for the contractor's personnel shall be deemed to be included in rates billed for time-related charges.

C3.4.5.2.6 Site Facilities required by the Engineer

One site office and boardroom of approximately 50m² complete with sufficient lighting and power points. Two desks, ten chairs, one conference table and two steel filing cabinets. Three carports for his exclusive use, a net shade cover will suffice. An ablution unit for his exclusive use.

The engineer does not require laboratory facilities.

C3.4.5.3 Storage and laboratory facilities

The Engineer will order the Contractor to provide as needed.

C3.4.5.4 Other facilities and services

None.

C3.4.5.5 Vehicles and equipment

The Engineer will order the Contractor to provide as needed.

C3.4.5.6 Advertising rights

Not applicable.

C3.4.5.7 Notice boards

Two notice boards will be supplied by the Contractor which will be erected at the construction site as per instruction of the Engineer.

C3.4.6 Site usage

Not applicable.

C3.4.7 Permits and way leaves

The Engineer will be responsible for the initial application of permits and wayleaves after which the contractor will be responsible for maintaining and renewing of permits and wayleaves.

C3.4.8 Alterations, additions, extensions and modifications to existing works

To be carried out with the instruction from the Engineer.

C3.4.9 Inspection of adjoining properties

Adjacent buildings and properties will be inspected before commencing with the works that have the potential to damage surrounding buildings and property on the instruction of the Engineer and according to his requirements.

C3.4.10 Water for construction purposes

No natural water from rivers, streams, boreholes, pans, dams or irrigation canals shall be used for concrete or stabilised layers. Only drinking quality purified water shall be used. The Contractor must make adequate provision in his tender for all negotiations and procurement of water for construction activities and the City of Tshwane will provide water on this contract.

C3.4.11 Survey control and setting out of the works

Survey controls requirements and the setting out of the works will be determent by the Engineer and will be site specific.

C3.5 MANAGEMENT

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C3.5.1 Management of the works

C3.5.1.1 Applicable Standards

CTMM Standard specifications (third edition) 2005

C3.5.1.2 Particular / generic specifications

C3.5.1.2.1 Corrections and amendments to the Standard Specifications

CLAUSE / ITEM		**CORRECTION**
Series 6: Roads and Parking Areas		
Section 602: Crushed-stone Pavement Layers		
08 MEASUREMENT AND PAYMENT		
Item		
601.06	**Extra over Item 601.02 for borrow material from sources to be supplied by the Contractor**	Replace item numbers with:
~~614.02.01~~	(Layer and type material indicated)	*601.06.01*
~~614.02.02~~	Etc. for other layers and type of material	*601.06.02*
602.02	**Crushed-stone subbase constructed with material from**	
602.02.01	Commercial sources	Replace item description with:
602.02.01.02	~~G2 material compacted to 100% of apparent density~~	*G2 material compacted to 100% of modified AASHTO density*

C3.5.1.2.2 Variations and Additions to the Standard Specifications

The following references from, and variations and additions to the Standard Specifications will be valid for this Contract.

The clauses and pay items in this portion of the Particular Specifications are numbered "**B**" followed by a number corresponding to the number of the relevant clause or pay item in the Standard Specifications. New clauses and pay items not covered by clauses or pay items in the Standard Specifications, if included here, are also designated "**B**" followed by a number. These numbers follow on the last clause or pay item number used in the relevant section of the Standard Specifications.

SERIES 1: ANCILLARY WORK

SECTION 001: GENERAL REQUIREMENTS AND CHARGES

31 MEASUREMENT AND PAYMENT

Item B001.03: Contract Name Board

Add pay item B001.03 Contract board

Item		Unit
B001.03:	**Contract Name Board**	**No**

The sums tendered shall include full compensation for the procurement and erection of the contract name boards as specified on drawings and at locations specified by the engineer on site.

Payment shall be made upon completion of erecting contract sign boards on site.

Item B001.05: Community liaison officer

Replace pay item B*001.05 Community liaison officer* with the following:

Item		Unit
B001.05	**Community Liaison Officer**	
B001.05.01	Monthly wage	Month (m)
B001.05.02	Percentage on item B001.05.01 for charges and profit	percentage (%)

The sums tendered shall include full compensation for the appointment of a community liaison officer as outlined on Part C3 section C3.3.1.1.2.2 of this document.

Payment shall be made in monthly instalments, upon proof of payment to the Community Liaison Officer.

Item B001.06: Compliance with Environment Management Plan

Add pay item B001.06 Compliance with Environment Management Plan

Item		Unit
B001.06	**Compliance with Environment Management Plan**	**Month (m)**

The sums tendered shall include full compensation of compliance with Environmental requirements as outlined on Part C3 Annexture 3.5.A of this document.

Payment shall be made in monthly instalments to appointment Environmental officer throughout the project period.

Item B001.08: Provisional and Lump Sums

Add pay item B001.08 Provisional and Lump Sums

Item		Unit
B001.08	**Provisional Lump Sums**	**Prov. Sum**

B001.08.01	CCTV Inspections	Lump. Sum
B001.08.02	High Pressure Pipe Cleaning	Lump. Sum
B001.08.03	Alterations to and re-locating of existing services as well as point repair	Prov. Sum
B001.08.04	Handling costs and profit in respect of subitem B001.08.03	Percentage (%)

B001.08.01 CCTV Inspections shall be undertaken by specialised personnel. The service provider will be required to provide the equipment to allow the Engineer to inspect the existing stormwater system (roughly 1 km).

Payment shall be made after the completion of inspecting the existing stormwater pipe.

B001.08.02 High-Pressure pipe cleaning. The service provider shall be required to provide or outsource the services of companies with equipment to clean the existing stormwater pipe, to the satisfaction of the Engineer and the client

Payment shall be made after the stormwater pipes has been cleaned (1 km pipe) and water flowing towards the outlet.

B001.08.03 Alterations to and re-locating of existing services, the contractor shall inform the engineer about the services that require alteration or re-location. This item should include protection of services that intersect or adjoin pipe trenches.

The contractor and the engineer shall work together in consultation with the service provider, develop specification of the work to be carried out.
The contractor shall subsequently submit a quotation detailing all associated costs for the required work and no relocation shall be undertaken without prior consultation and approval from the respective service owner.
B001.08.04 shall compensate for handling costs and profit in respect of subitem B001.08.03.

Payments shall be made upon submission of proof of completed work and proof of payment for all services listed from B001.08.01 to B001.08.03.

Item		**Unit**
B001.09	**Accredited training**	
B001.09.01	Accredited training for Labourers	Prov. Sum
B001.09.02	Percentage on item B001.09.01 for charges and profit	percentage (%)

The contractor must submit a proposal for the training to the client for approval. The training type must be related to the scope of work.
The contractor must obtain and submit three (3) quotations from accredited service providers. In collaboration with the CLO, they will select one service provider. The chosen service provider will be required to deliver accredited training to at least 30 local labourers.

Payment will be made upon completion of the training and once the certificates have been distributed to the recipients.

SERIES 1: ANCILLARY WORK

SECTION 101: SITE CLEARING AND GRUBBING

MEASUREMENT AND PAYMENT

Item B101.05: Removal, staking, re-using and Disposal of specific elements

Replace pay item 1*01.05* Removal, staking, re-using and Disposal of specific elements

Item		Unit
B101.05	**Removal, staking, re-using and Disposal of specific elements**	
B101.05.01	Concrete Kerbing/Kerbing combination	Meter(m)
B101.05.02	**Concrete or brick elements (reinforced or unreinforced)**	
B101.05.02.01/02	230/115mm brickwork	Square Meter(m^2)
B101.05.02.03	Concrete elements (reinforced /unreinforced)	Cubic Meter(m^3)
B101.05.02.05	Block Paved driveways and walkways	Square Meter(m^2)

The sums tendered shall include full compensation of Removal, staking, re-using and/or Disposal of specified elements.

Payment shall be made per actual work done, measured in relevant unit of measure as indicated above.

Add the following section

SECTION B107: DAYWORKS

01 SCOPE
02 GENERAL
03 MEASUREMENT AND PAYMENT

01 SCOPE

This section covers the listing of Dayworks items in accordance with Conditions of Contract Clause 6.5, for the use in determining payment for work which cannot be quantified in specific units in the schedule of quantities, or work ordered by the Engineer during construction period which was not foreseen at bid stage and for which applicable rate exist in the schedule of quantities.

02 GENERAL

No Dayworks shall be undertaken unless written authorization has been obtained from the Engineer.

03 MEASUREMENT AND PAYMENT

Item	Unit

B107.01	**Labour during normal working hours**	
B107.01.01	Unskilled labour	hour (h)
B107.01.02	Semi-skilled labour	hour (h)
B107.01.03	Skilled labour	hour (h)
B107.02	**Extra-over item B107.01 for charges and overheads**	
B107.02.01	Unskilled labour	percentage (%)
B107.02.02	Semi-skilled labour	percentage (%)
B107.02.03	Skilled labour	percentage (%)
B107.03	**Construction Plant**	
B107.03.01	Tipper trucks	
B107.03.01.01	6m³ capacity	hour (h)
B107.03.01.02	10m³ capacity	hour (h)
B107.03.02	Backhoe loaders (Mass 7 - 8 ton)	hour (h)
B107.03.03	Tracked Excavator (Mass 18 - 22-ton, Power 70 - 105 kW)	hour (h)
B107.03.05	Grader (Mass 16 - 20 ton)	hour (h)
B107.03.09	Rollers	
B107.03.09.01	Pneumatic Roller (14 - 21 ton)	hour (h)
B107.03.09.02	Single drum vibratory padfoot roller (7 - 10 ton)	hour (h)
B107.03.09.06	Pedestrian roller (500 - 550kg, width 390mm)	hour (h)
B107.03.10	Concrete Mixer (50 litre)	hour (h)
B107.03.11	Pumps	
B107.03.11.03	Diesel centrifugal (100mm)	hour (h)

The Contractor is also referred to Clause 6.5 of the Conditions of Contract regarding Dayworks.

Personnel during normal working hours

The unit rate for item B107.01 shall be the hour for the labourer. The labour charges to be reimbursed under the Dayworks item B107.01 in the Schedule of Quantities shall be the actual amount of wages

paid to labourers, (but no foreman), employed on Dayworks with the authorisation of the Engineer. The labour charges will be paid only for the time that the workmen are actually employed on Dayworks.

Leave pay, bonuses, subsistence, allowances, employer's contribution to medical schemes and provident funds and the like shall not be included in the above-mentioned labour charges but will be deemed to be covered by the percentage rate tendered by the Contractor against item B107.02 scheduled for this purpose under Dayworks in the Schedule of Quantities.

The unit rate for item B107.02 shall be the percentage extra over for the labourer. This percentage rate shall also be deemed to allow for the use of small tools, supervision, insurances, overhead expenses, transport of workmen, housing and feeding (if the liability of the contractor), profit and any other expenses in connection with workmen employed on Dayworks and shall also include for everything else covered under the allowance as stated in Clause 6.5 of the Conditions of Contract.

Construction Plant

The unit rate for item B107.03 shall be the hour for the item of plant. The rates tendered for the hire of plant shall be applicable only to plant that the Contractor has on the site and shall be total all-inclusive unit prices which shall include, inter alia for all fuel and lubricants; for the wages of operators, equipment and everything else necessary; for all depreciation, maintenance and repair costs; for overhead expenses, profit and for everything in accordance with Clause 6.5 of the General Conditions of Contract.
The rates shall be paid only for the time that the plant is actually working on the Dayworks as authorised by the Engineer.

Transport of Construction Plant

The unit rate for item B107.04 shall be for the kilometre distance that the vehicle travelled for transporting plant. The billed rate for item B107.04 shall include full compensation for the cost of the vehicle including fuel, maintenance, depreciation and running costs and all costs related to the loading and unloading of the plant onto and off the vehicle.

SERIES 5: DRAINAGE AND EROSION PROTECTION

SECTION 502: PREFABRICATED CULVERTS AND STORMWATER SEWERS

MEASUREMENT AND PAYMENT

Item B502.24: Prefabricated Culverts and Stormwater Sewers

Add pay item B502.*24 Removal* existing culvert and Manholes/Kerb inlets

Item		Unit
B502.24	***Removal* existing culvert and Manholes/Kerb inlets**	Meter(m)

SERIES 6: ROADS AND PARKING AREAS

SECTION: 601 GRAVEL PAVEMENT LAYERS

MEASUREMENT AND PAYMENT

Item B601.07: Blending existing gravel (G6) to produce (G5 for C4) compacted to 95% MOD AASHTO

Add pay item B601.07 *Blending existing gravel (G6) to produce (G5 for C4)*

Item		Unit
B601.07	***Blending existing gravel (G6) to produce (G5 for C4) compacted to 95% MOD AASHTO***	Cubic Meter(m^3)

The tendered rate shall include full compensation for ripping the existing layer, breaking it down, removal of unwanted materials, adding fine material, and blending it to form the required G5 material, and compaction to the required strength.

Payment shall be made per actual work done, measured in cubic meters of the blended layer.

Item		Unit
B606.02.02	Extra over or under item 606.02.01 for Continuously graded (Sa-S14) for the construction of City of Tshwane spec asphalt speed hump as detailed on STD015. Contractor to include in rate all related road markings and signages.	No

The unit of measurement shall include full compensation for supplying of Asphalt, construction of speedhump, marking, and installation of its associated signs.

Payment will be made upon the approval of the completed speedhump by the Engineer,

C3.5.1.3 Planning and Programming

The Contractor shall submit within the period stated in the Contract Data a suitable and realistic construction programme for the consideration of the Engineer. This shall be done individually for each of the work packages identified within the limits of this tender.

The programme shall be in the form of a Gantt chart and shall include the following details:

- A work breakdown structure, identifying the major activity groups.
- For each activity group further details shall be provided with regard to the scheduled start and end dates of individual activities.
- The linkages between activities shall be clearly indicated and the logical network upon which the programme is based shall be separately submitted to the engineer if requested. Any constraints shall be classified as being time-related or resource-related.
- The critical path(s) shall be clearly indicated and floats on non-critical activities shall be shown.
- The Contractor shall indicate the working hours per day, night, week and month allowed for in the programme.
- Where relevant the Contractor shall state the production rates for key activities, e.g. earthworks, etc.
- The dates when, in order to construct the Works in accordance with his programme, the Contractor will need materials and other things to be provided by the Employer.
- For each activity, a statement of how the Contractor plans to do the work identifying the principal equipment and other resources which he plans to use.
- The execution of the work must be programmed in such a manner as to limit disruption to passing traffic and residents to a minimum.

Together with the programme as detailed above the Contractor shall submit to the Engineer a cash flow projection, indicating projected monthly invoice amounts. This have to be done for each of the work packages identified within the limits of the tender. The cash flow projection shall be updated at monthly intervals to reflect actual payments to date and anticipated further payments.

The programme will be reviewed at the monthly site meetings at which the Contractor shall provide sufficient detail that will allow the comparison of completed work per activity that has fallen behind. The updated programme shall be submitted to the Engineer at least two days prior to the monthly meetings.

If the programme has to be revised by reason of the Contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the Works within the time for completion as defined in Clause 5.6 of the General Conditions of Contract or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by providing more labour and plant on site, or by using the available labour and plant on site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit the programme or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided in Clause 5.6 of the General Conditions of Contract.

The approval by the Engineer of any programme shall have no contractual significance other than that the Engineer will be satisfied that the work is carried out according to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Engineer to instruct the Contractor to vary the programme if required by circumstances. The Contractor is also referred to Clause 5.6 of the General Conditions of Contract when drawing up his programme.

C3.5.1.4 Sequence of the works

The sequence of the works will be work package specific and will be evaluated by the Engineer as such.

C3.5.1.5 Software application for programming

Any software used for planning and programming must be generated using the latest version of Microsoft Project or fully supported by Windows 11 Pro or latest.

C3.5.1.6 Methods and procedures

The methods and procedures of the works will be work package specific and will be provide by the Contractor and reviewed by the Engineer as such.

C3.5.1.7 Quality plans and control

The quality plan and control of the works will be work package specific and will be provide by the Contractor and reviewed by the Engineer as such.

C3.5.1.12 Recording of weather

The Contractor shall erect an effective rainfall gauge on the site of the works and record the daily rainfall figures in the site diary. The site diary shall be handed to the Employer’s representative for his signature no later than 10 days after rain that is considered to justify an extension of time occurs.

Extension of time due to abnormal rainfall shall be determined by means of Method 1, where rainfall records and/or values derived from rainfall records are supplied in the Scope of Work, otherwise Method 2 shall apply. Method 1 and 2 are defined and described in the Contract Data.

In the case where Method 2 applies the following is applicable:

- Extension of time resulting from abnormal rainfall or other forms of inclement weather for items on the critical path of the programme shall be calculated according to the requirements of Method 2 (Critical-path method). The value of "n" working days per calendar month as specified in this clause shall be two (2) working days. If no abnormal rainfall or other inclement weather periods occur during a specific calendar month (or months), the n-values as specified shall not be taken as accumulating over the contract period. If the n-days allowed for in the programme of work are not taken up by standing time due to abnormal rainfall or inclement weather conditions, they will fall away and will not be considered in extension of time claims which may arise later during the contract period.

- A working day, or portion thereof, shall be considered as lost when the engineer agrees that no work could have been undertaken on any item falling within the critical path. The contract extension of time arising from inclement weather shall be agreed upon between the engineer's and the contractor's representatives. The days upon shall be recorded in the minutes of the monthly site meetings.

Extension of time due to abnormal rainfall for the purposes of this contract shall be determined by means of Method 1. The rainfall records at Rainfall Station, Soshanguve (Tswaing) ARS 05501158 for the period 2009 to 2024 reproduced in the accompanying table and the monthly averages, Rn and Nn, for this period, shall for the purpose of this Contract be taken as normal rainfall.

South African Weather Service

LEGEND

'AVE' represents the average rainfall for the month

'ST DEV' represents the standard deviation from the normal

s = SQRT (SUM(X*X)/n - (AVE(x) * AVE(x)))

'N DAY RAIN' represents the average number of rain days per month

'NUM MON' represents the number of months used in the calculation

'r1 r2' represents the average number of raindays in range r1 to r2 inclusive

'MAX R DAY' represents the maximum rainfall that occurred over a 24-hour period. (08:00-08:00)

'MAX RAIN DATE' represents the date on which the maximum 24 hour rainfall occurred

DATA FOR THE AVERAGE CALCULATION ARE NOT USED IF :

1. There are more than 5 consecutive days of accumulation

2. The data for certain days in the month unavailable

3. The accumulation period occurred at the end of a month

DATA FOR THE FREQUENCY CALCULATION ARE NOT USED IF :

1. Accumulation occurred in the month

2. The data for certain days in the month are unavailable

2009 2024 (Extracted 2024/08/20 08:25)

0550115 8 SOSHANGUVE (TSWAING) ARS Lat:-25.5280 Lon:28.1130 Height:1328 m

MON	AVE	ST	N DAY	NUM	1	5.1	10.1	20.1	50.1	100.1	MAX R	MAX RAIN
MON		DEV	RAIN	MON	5	10	20	50	100	900	DAY	DATE
JAN	136.8	65.9	16.7	7	4	3	2.4	1.6	0.3	0	87.4	2011/01/03
FEB	105.7	60.2	14.7	6	4.2	2.7	1.2	1.2	0.3	0	87.6	2022/02/04
MAR	71.2	58.4	10.9	9	2.6	1.3	1.1	0.9	0	0.1	109	2018/03/22
APR	90	44	11.2	5	2.2	1.2	1.2	1.6	0.2	0	59	2024/04/06
MAY	30.4	35.7	4.6	7	0.7	0.7	0.7	0.4	0	0	31.2	2023/05/07
JUN	3.7	5.7	1	8	0.4	0.1	0.1	0	0	0	14.4	2016/06/12
JUL	1.6	4	0.9	9	0.1	0.1	0	0	0	0	8.2	2018/07/10
AUG	0.5	1	0.2	5	0.2	0	0	0	0	0	2.4	2011/08/15
SEP	10.7	15.7	2.1	10	0.8	0.3	0.3	0.1	0	0	26.4	2009/09/28
OCT	39.2	27.1	6.8	4	2.3	1	0.8	0.5	0	0	33.4	2021/10/07
NOV	78.1	42.9	11.9	7	3.1	1.3	1.1	1.1	0.1	0	54.2	2022/11/07
DEC	87.1	26.3	19.8	4	5.5	3.8	2	0.5	0	0	53.4	2012/12/10
YR	654.9		100.6		26	15.5	10.9	7.9	1	0.1		

Records of rain days will be recorded in the minutes of the monthly site meeting

C3.5.1.13 Format of communications

The Engineer will set standards specific to the work package for communications.

C3.5.1.14 Key personnel

A schedule of key personnel / schedule of contact particulars of key personnel will be requested by the Engineer with the commencement of a specific work package.

C3.5.1.15 Management meetings

C3.5.1.15.1 Community participation

Community participation consists of engagement of Project Steering Committees (PSC). A PSC will be established for the town by the Ward Councillor. The functions of the PSC will be to:

- Assist in monitoring the work package.

- Ensure that the community provide assistance to the contractor to ensure that he can execute the contract in accordance with the specifications and within time.
- Encourage the community to participate in the Labour-Intensive construction.
- Identify skills, skilled personnel and suppliers in the towns.

The PSC will not have the power to:

- Give any instructions to the contractor, except through the engineer.
- Become involved in the daily operations of the contractor or interfere with the contract works.

A monthly meeting will be held with the PSC to discuss relevant matters. The site agent and resident engineer will attend the meetings. The contractor will have to report on progress, deviations from the programme, financial matters community related aspects, general problems and co-operation at the meeting. The PSC members will not receive any remuneration for attending, and they must provide their own transport.

C3.5.1.16 Forms of contract administration

Contract administration pro-formas will be as provided by the Engineer

C3.5.1.17 Electronic payments

Will be as per City of Tshwane's standards.

C3.5.1.18 Daily records

The requirements for daily records of resources (people and equipment employed) / site diaries in respect of work performed on the site and where such documents are to be held will be provided by the Engineer.

C3.5.1.19 Bonds and guarantees

Will be as specified in the Contract Data

C3.5.1.20 Payment certificates

Will be carried out as per General Conditions of Contract for Construction Works, Third Edition (2015).

C3.5.1.21 Permits

Employers shall assess the work being done and determine whether it falls under activities that require a work permit. The appointed Occupational Health and safety and Environmental specialists will assist.

C3.5.1.22 Proof of compliance with law

Not applicable.

C3.5.1.23 Insurance provided by the employer

A copy of the policy and the list of excesses may be obtained from

Contractors All Risk and Liability Insurance:
Mrs Morongwa Mokoena

Tel: 012 358 1126
E-Mail: morongwam@tshwane.gov.za

Room 205
2nd floor, Red Brick Building
175 E'skia Mphahlele drive
Pretoria

C3.5.2 Environment

See Annexure 3.5.A: Environmental Specification

C3.5.3 Health and safety

See Annexure 3.5.B: Health and Safety Specification

C3.5.4 ANNEXURES:

ANNEXURE C.3.5.A Environmental Specification 43
ANNEXURE C.3.5.B Health and Safety Specification 92

ANNEXURE C.3.5.A Environmental Specification

REPORT DETAILS

Project name:	RTD 02-2025/26: Tender for the appointment of a contractor for the upgrading of roads and stormwater systems in Mabopane block U: Phase 1 for a duration of 12 months
Environmental firm:	BOWA Marang Environmental Management & Consulting [BOWA Marang EMC]
Proponent:	City of Tshwane: Roads and Transport department
Consulting Engineer:	ROMH Consulting
Contractor:	To be appointed
Project team:	**Senna Lesego** holds a BSc (Hons) Environmental Science, BSc. Natural Sciences degree, and Environmental Law certificate (NWU) and Geographic Information Systems GIS) from (UFS) **Waarts Boipelo** holds a Bachelor's degree in Geography and Environmental Management (UKZN), Safety, Health & Environment certificate (University of York), Environmental Law certificate (UNW), Environmental Impact Assessment Enforcement and Compliance (UP) **Nthabiseng Ngubeni** holds a BSc (Hons) Geography and GIS and a BSc in Geography and Environmental Management (UFS)

ABBREVIATIONS

DEA Department of Environmental Affairs

DEDET Department of Economic Development, Environment and Tourism

DPWRT Department of Public Works, Roads and Transport

DWA Department of Water Affairs

DEO Designated Environmental Officer

ECO Environmental Control Officer

EIA Environmental Impact Assessment

EMP Environmental Management Plan

HIA Heritage Impact Assessment

MPRDA Minerals and Petroleum Resources Development Act

NEMA National Environmental Management Act

NHRA National Heritage Resources Act

SAHRA South African Heritage Resources Agency

1. INTRODUCTION

BOWA Marang Environmental Management & Consulting (Pty) Ltd. (referred to as BOWA Marang EMC) has been appointed by ROMH Consulting on behalf of The City of Tshwane : Roads and Transport Department to compile an Environmental Management Programme/Plan (EMPr) for the Professional Engineering services for detailed design review, contract documentation and site supervision for Mabopane (block U) roads and stormwater. This EMPr has been compiled to provide recommendations and guidelines according to which compliance monitoring can be done during the construction and operation of supervision for Mabopane (block U) road(s) upgrade and stormwater.

This EMPr informs all relevant parties, which are in this case, the Engineers , the Contractor's team, the Environmental Monitoring Team and all other staff employed by ROMH Consulting at the site as to their duties in the fulfilment of the legal requirements for the construction and operation of the project in question with particular reference to the prevention and mitigation of anticipated potential environmental impacts.

The provisions of this EMPr are legally binding in terms of the National Environmental Management Act (Act No. 107 of 1998) as amended

The EMPr identifies the following:

- Construction activities that will impact on the environment

- Specifications with which the contractor shall comply in order to protect the environment from identified impacts
- Actions that shall be taken in the event of non-compliance

1.1. Objectives of the EMPr

- The Environmental Management Programme will guide the pre-construction, construction and operation phases of the proposed project
- Ensure that the activity is undertaken in compliance with environmental legislation and policy
- Identify a range of mitigation measures which could reduce and mitigate the potential impacts to minimal or insignificant levels;
- Detail specific actions deemed necessary to assist in mitigating the environmental impact of the project;
- Establish a method of monitoring and auditing environmental management practices during all phases of the activity;
- Ensure that safety recommendations are complied with
- Verify environmental performance through information on impacts as they occur
- Respond to unforeseen environmental events
- Create management structures that address the concerns and complaints of I&APs with regards to the development
- Ensure that there is sufficient allocation of resources on the project budget so that the scale of EMPr- related activities is consistent with the significance of project impacts
- Ensure compliance with regulatory authority stipulations and guidelines which may be local, provincial, national and/or international
- Provide feedback for continual improvement in environmental performance
- Show the methodology for implementation of environmental restoration/rehabilitation

1.2. Structure and Function of the EMPr

An EMPr is focused on sound environmental management practices, which will be undertaken to minimise adverse impacts on the environment through the lifetime of a development. In addition, an EMPr identifies what measures will be in place or will be actioned to manage any incidents and emergencies that may occur during operation of the project.

As a result, the EMPr provides specifications that must be adhered to in order to minimise adverse environmental impacts associated with the construction and operation of the road and stormwater upgrade.

1.3. Environmental Legislative Context

Construction must be according to the best industry practices, as identified in the project documents. This EMPr, informs the Contractor as to his/her duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with the project.

The Contractor must identify and comply with all South African national and provincial environmental legislation, including associated regulations and all local by-laws relevant to the project. Key legislation currently applicable to the construction and operation phases of the project must be complied with. The list of applicable legislation provided below is intended to serve as a guideline only and is not exhaustive

Acts	Objectives, important aspects and considerations
The Constitution (No. 108 of 1996)	Chapter 2 – Bill of Rights Chapter 24 – Environmental Rights Everyone has the right a)to an environment that is not harmful to their health or well-being and b) to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures i. Prevent pollution and ecological degradation ii. Promote conservation and iii. Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development
National Environmental Management Act 1998 (Act No. 107 of 1998 as amended)	*Objectives* To provide for co-operative governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote o-operative governance procedures for co-ordinating environmental functions exercised by organs of state Application to proposed project Environmental Management must be integrated , acknowledging that all elements of the environment are linked and interrelated; the social, economic and environmental impacts of activities including disadvantages and benefits must be considered ,

	assessed and evaluated and decisions must be appropriate in the light of such considerations 'Polluter Pays' principle Development must be socially, environmentally and economically sustainable
National Water Act (Act No. 36 of 1998 as amended)	*Objectives* The National Water Act (NWA) is a legal framework for the effective and sustainable management of water resources in South Africa central to the NWA is recognition that water is a scarce resource in the country which belongs to all people of South Africa and needs to be managed in a sustainable manner``6 to benefit all members of society. The NWA places a strong emphasis on the protection of water resources in South Africa, especially the exploitation, and the insurance that there is water for social and economic development in the country for present and future generations Application to the proposed project Sustainable use, protection , development and conservation of water resources Defines 11 water uses and provides licensing procedures.
National Environmental Management: Waste Act	Section 17 – Every attempt must be made to reduce, recycle or re-use all waste before it is disposed Section 25 – All waste (general and hazardous) generated during the construction may only be disposed of at an appropriately licensed waste disposal site

National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Provides for the protection of species and ecosystems that warrant national protection and the sustainable use indigenous biological resources
National Environmental Management Air Quality Act (Act No. 39 of 2004)	Section 32 – Control of Dust Section 34 – Control of noise Section 35 – Control of offensive odours
Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983	*Objectives* To provide for control over the utilization of the natural agricultural resources in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants and for matters connected therewith
National Heritage Resources Act, 1999 (Act 25 of 1999)	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development , the Act makes provision for potential destruction to existing sites, pending the archaeologists recommendations through permitting procedures . Any artefacts found in and around the construction footprint will not be tampered with and shall be reported immediately to the relevant authorities.
Occupational Health and Safety Act (Act No. 85 of 1993)	Section 8 – General duties of employers to their employees Section 9 – General duties of employers and self-employed persons to persons other than their employees
Construction Regulations (2014)	Contractors must comply with the Construction Regulations which lay out the framework for construction related activities

Acts/Policies/ Environmental Management Instruments	
City of Tshwane By-laws	
City of Tshwane Integrated Development Plan	

1.4. Environmental Authorisation

In accordance with the requirements of the National Environmental Management Act (Act No. 107 of 1998) (NEMA), and relevant EIA regulations made in terms of this Act and listed activities under (Government Notice R 544, 545, 546), a working agreement was negotiated between the National Department of Environmental Affairs and Tourism (DEAT) and the City of Tshwane Metropolitan Municipality. The agreement stipulates the work package types the City of Tshwane Metropolitan Municipality need to submit to DEAT for approval and those work package types the City of Tshwane Metropolitan Municipality do not need to submit for approval. The following work package types are set to fall in this non-approval category are periodic maintenance, special maintenance, rehabilitation and specific upgrades.

The Environmental Management Programme (EMPr) prescribes project-specific mitigation measures and specifications to be achieved in accordance to legislation and environmental best practices. In addition this EMPr is based on the principles of Integrated Environmental Management (IEM).

2. PROPOSED ACTIVITY

2.1. Description of the proposed activity

The City of Tshwane: Roads and Transport department has appointed ROMH Consulting for professional Engineering services for detailed design review, contract documentation and site supervision for Mabopane (block u) roads and stormwater. ROMH Consulting has appointed BOWA Marang EMC to undertake and conduct holistic environmental management services for the proposed project. According to the employer the objectives of the project are to deliver public infrastructure using labour intensive methods. The works in the contract are to be executed by using both conventional construction and labour-intensive construction methods in accordance with the Expanded Public Works Programme (EPWP). The works will comprise the construction of stormwater systems and appurtenant

works within the Tshwane municipal boundary. Conventional and labour-intensive construction methods (LIC) will be employed to complete the work, with the Employer's Agent ruling on the method to be used.

The description of the works further includes;

- The geometric design review of the proposed road network of 3.241km.
- Reviewing the design of the proposed streets, layout, profiles, and cross-section drawings complete with detailed construction drawings for implementation
- Review the capacity of the new hydraulic structures in terms of hydrology and hydraulics.
- Propose drainage upgrades i.e. kerb inlets, pipes, catchpits, junction boxes, etc where needed
- A visual assessment of the project area
- Material investigation including Dynamic Cone Penetrometer (DCP) testing
- Design review of previous consultant
- Determining the strategy for the new pavement for a 20-year design life

2.1.1. Site Location

The proposed project is in The City of Tshwane Municipality in Mabopane (Block U) in the Gauteng Province. The project site is located opposite Mabopane square, approximately 9.2 km west of the Tshwane University of Technology

Extracted from ROMH Consulting\PRC026 CoT Upgrade SW Mabopane\08 Reports and Presentations\081 Reports\1. Stage 3_Review Report\1.1 Design Review Report

3. SCOPE OF THE EMPR

In order to ensure an integrated approach to the management of environmental impacts during the construction and operation of the proposed road rehabilitation, this EMPr sets out the methods by which proper environmental controls are to be implemented by the Contractor and all other parties involved. The EMPr is a dynamic document subject to influences and changes to the provisions of the project specification.

3.1. Layout of the EMPr

The EMPr is divided into three phases of development. Each phase has specific issues unique to that period of the construction and operation. The impacts are identified and given a brief description. The phases of the development are identified as below:

3.1.1 Construction Phase

This section of the EMPr provides management principles for the construction phase of the project. Environmental actions, procedures and responsibilities as required during the construction phase are specified in this EMPr. These specifications will form part of the contract management and therefore the Contractor will be required to comply with these specifications to the satisfaction of the Project Engineer and ECO.

3.1.2 Operational phase

This section of the EMPr provides management principles for the operation phase of the project. Environmental actions, procedures and responsibilities as required from authorities during the operation and maintenance phase

3.1.3. Closure and decommissioning phase

This section of the EMPr includes principles for the decommissioning and closure phase of the project. This section will be required to be re-visited and updated at the time of decommissioning

A hard copy of the EMPr will be kept on site during construction and will be made available to any member of the public and authorities for review. This EMPr will also be kept on site during the operational phase of the project, either as hard copy or electronic. All copies of the EMPr will contain the latest version of the document together with all amendments. The Environmental Management Plan is a dynamic document that will be updated when necessary. Regular audits will be carried out to ensure that the mitigation and management measures are being implemented as recommended or as required by the legislation.

4. ROLES AND RESPONSIBILITIES

4.1. City of Tshwane: Roads and Transport department

The CoT: Roads and Transport department is the employer and shall therefore be the entity monitoring the implementation of the EMPr and compliance with the authorisation. However CoT appointed Consulting Engineers to implement the project and therefore implement the proposed mitigation measures documented in this EMPr on their behalf, the environmental responsibilities of the project team is outlined below;

4.2. The Project Engineer

The Project Engineer is responsible for overall management of the project and the implementation of the EMPr. The following tasks fall within his/her responsibilities:

- Be familiar with the recommendations and mitigation measures of this EMPr, and implement these measures;
- Monitor site activities on a daily basis for compliance;
- Conduct internal audits of the construction site against the EMPr;
- Confine the construction site to the demarcated areas; and
- Rectify transgressions through the implementation of corrective action

4.3. The Contractor

- To provide all supervision during the execution of the project.
- To appoint a competent Environmental Site Officer (ESO)
- To implement the projects as per the approved project plan.
- To fulfil all requirements (including environmental obligations) as per the appointment contract.
- To ensure that his project team is environmentally trained/inducted about the risks and management of those risks associated with the different construction activities.
- Report all environmental incidents.
- Ensures compliance with conditions of the EMPr and other environmental legislations.
- Be responsible for the finalisation of the EMPr in terms of the methodologies which are required to be implemented to achieve the environmental specifications contained herein and the relevant requirements contained in the environmental authorisation

- Maintain an environmental register which keeps a record of all environmental incidents that occur on the site during construction and rehabilitation. These incidents may include:
  - Incidents involving Hazardous materials stored on site
  - Public Involvement/complaints
  - Health and safety incidents
  - Non-compliance incidents
- Be responsible for the overall implementation of the EMPr in accordance with environmental legislation and the authorisation

4.4. The Environmental Site Officer (ESO)

- The ESO will be site-based and shall be the responsible person for implementing the environmental provisions of the construction contract

The ESO's duties will include, inter alia, the following

- Ensure that all the environmental authorisations and permits required in terms of the applicable legislation have been obtained prior to construction works
- Reviewing construction method statements with input from the ECO and Engineer
- Assisting the Contractor in finding environmentally responsible solutions to problems
- Keeping accurate and detailed records of all activities on site
- Keeping a register of complaints on site and recording community comments and issues and the actions taken in response to these complaints
- Ensuring that the required actions are undertaken to mitigate the impacts resulting from non-compliance
- Reporting all incidences of non-compliance to the ECO and Contractor
- The ESO must be fully conversant with the Environmental Management Plan of the project and all relevant environmental legislation

4.5. The Environmental Compliance/Control Officer (ECO)

- The ECO will be responsible for the monitoring, reviewing and verifying of compliance with the EMPr by the Contractor
- Confirming that all the environmental authorisations and permits required in terms of the applicable legislation have been obtained prior to construction

- Monitoring and verifying that the EMPr specifications are adhered to at all times and taking actions if specifications are not followed
- Monitoring and verifying that environmental impacts are kept to a minimum or prevented where possible
- Reviewing and approving construction method statements with input from the ESO and Engineer
- Induct/ train the contractor and site staff with the contents of the EMPr and records of training/induction dates, details of attendees and discussion points shall be kept by the ECO.
- Inspecting the site and surrounding areas on a regular basis regarding compliance with the EMPr
- Monitoring the undertaking by the Contractor of environmental awareness training for all new personnel on site
- Ensuring that activities on site comply with all relevant environmental legislation
- Checking the register of complaints kept on site and maintained by the ESO and ensuring that the correct actions are/were taken in response to these complaints
- Checking that the required actions are/were undertaken to mitigate the impacts resulting from non-compliance
- Keeping photographic record of progress on site from an environmental perspective. This can be conducted in conjunction with the ESO as the ESO will be the person that will be onsite at all times and can therefore take photographic records weekly
- Recommending additional environmental protection measures, should this be necessary
- The ECO will be responsible for issuing instructions to the contractor where environmental considerations call for action to be taken
- The ECO must be contactable by the public regarding matters of environmental concern as they relate to the operation of the works

The ECO must be fully conversant with NEMA, Environmental Management Plan/Programme and all relevant environmental legislation.

5. ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES

A variety of potential impacts are associated with the construction activities for this project. Theses impacts can be categorized as general construction related impacts as well as construction impacts specifically related to this site. General best practice rules to construction should be followed at all times.
These guidelines will form the basis for environmental management on site. The Environmental Control Officer will ensure that any modifications are communicated, explained to and discussed with all affected parties (i.e. the authorities, contractor and any directly affected party)

5.1. Planning and Design Phase

General

Policy Compliance

- Development must comply with relevant legislation and/or policy e.g. NEMA, SEMA's IDP, Municipal By-laws, etc.

Waste Management

- Ensure that a proper waste management plan is in place and implemented

Stormwater Management

- A stormwater management plan must be drawn up and approved

5.2. Construction Phase

Noise Pollution

- Construction activities must be limited to the hours 08:00 – 17:00
- Sufficient warning must be provided to the surrounding residents on the times of activity.
- Safety warning signs must be provided around the construction and activity sites.

Air Pollution

- Stored and exposed material should be covered to reduce dusty conditions during construction.
- Roads used by construction vehicles must be regularly dampened to reduce dust.

Soil erosion

- After construction, all slopes must be stabilised to reduce the risk of erosion.
- Where possible, stockpiled topsoil must be used in rehabilitation.

Waste Management

- All rubble and refuse must be collected and disposed of at a licensed landfill site.
- An environmental management programme incorporating waste management issues during the construction phase of the project has been developed and must be implemented.

Social

- If any culturally or historically significant artefacts are observed during construction, SAHRA must be notified immediately.

Socio-economic

- As far as possible, people in the surrounding communities should be the preferred choice for filling contract construction opportunities.

5.2.1. PRE-CONSTRUCTION PHASE

Activity	**Compliance specification**
Appointment of Environmental Control Officer (ECO)	The ECO will fulfil the responsibility of assuring that environmental performance is achieved by all stakeholders during all phases of the project
Legal and policy compliance	All legal matters pertaining to permitting must be completed prior to any construction activity
Scheduling of Construction	Where possible, construction activities should be undertaken during the driest part of the year to minimize downstream sedimentation due to excavations. Wherein the above is not possible, suitable stream diversion structures must be used
Site Establishment	- The Contractor shall establish his construction camps, offices, workshops and testing facilities on the site in a manner that does not adversely affect the environment. - The site offices should not be sited in close proximity to steep areas, as this will increase soil erosion, preferred locations would be flat areas. - The construction camp must have the necessary ablution facilities at commencement of construction activities

	- Ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles must not be closer than 100m from any natural water bodies or boreholes. - The contractor should arrange for regular emptying of toilets and will be entirely responsible for their enforcement - Safe drinking water for human consumption must be available at the site offices and at other convenient locations on site. - No fires are allowed outside of the construction camp. Fire fighting equipment must be supplied by the Contractor at suitable locations. - The contractor must supply waste collection bins where such is not available, and all solid waste collected must be disposed of at a municipal registered landfill. - Under no circumstances may solid waste be burnt on site
Erosion	A Rehabilitation, Alien Vegetation and Erosion Management Plan must be compiled by the contractor and be updated regularly during the construction phase
Invasion of Alien species	A Rehabilitation, Alien Vegetation and Erosion Management Plan must be designed to reduce the establishment and spread of undesirable alien plant species
Storm Water management	- Ensure that rainwater containing pollutants does not run into natural areas and thus result in a pollution threat - Increased run-off due to vegetation clearance and and/or soil compaction must be managed - Storm water management plan must be implemented
Construction vehicles impacting on the traffic flow	A Traffic Management Plan must be compiled prior to the construction phase
Environmental complaints register	A complaints register is to be established and kept on site to address complaints in a timely manner , which will be reported to the project manager

Record-Keeping	The following documents should be maintained by the designated representative or the site agent; - Training records - Inspection records - Records of non-conformance and corrective action - Environmental Management Plan - All incident reports

5.2.2. CONSTRUCTION PHASE

Activity	**Compliance specification**
Environmental Induction and training	Ensure that all site personnel have a basic level of environmental awareness training. Topics covered should include; - What is meant by the "environment" - Why the environment needs to be protected and conserved - How construction activities can impact on the environment - What can be done to mitigate against such impacts - Awareness of emergency and spills response provisions - Social Responsibility during construction of the road - Records of attendance as well as the content material of training to be kept on file
Erosion	- The contractor must protect areas susceptible to erosion, wind screening and stormwater control must be undertaken to prevent soil loss from the site - The contractor will provide for the stripping and stockpiling of topsoil from the site for later reuse. - All topsoil stockpiles and windrows shall be maintained throughout the contract period in a weed-free condition. - Weeds appearing on the stockpiled topsoil shall be removed by hand - Stockpiles shall not exceed a height of 2m.

	- The contractor shall ensure that no topsoil is lost due to erosion either by wind or water. - Soil shall be replaced in the excavation in the original order it was removed for rehabilitation purposes. - Topsoil stockpiles must not be contaminated with oil, diesel, petrol, waste or any other foreign material. - All erosion control mechanisms to be maintained. - Re-vegetation of disturbed surfaces must occur immediately after the construction activities are completed.
Air Quality	<u>Dust Control</u> - Damping-down of unsurfaced and unvegetated area during dusty periods is required. - Water used for this purpose must be used in quantities that will not result in the generation of excessive run-off - Retention of vegetation where possible will reduce dust travel. - Excavations and any other clearing activities must only be done during agreed working times and permitting weather conditions. - A speed limit of 40km/h must not be exceeded on dirt roads. - All vehicles exhaust systems should be in working order to limit air pollution. - Any complaints or claims emanating from the lack of dust control must be attended to immediately by the contractor. <u>Emissions Control</u> - Regular servicing of vehicles in order to limit gaseous emissions - Regular servicing of on—site toilets to avoid potential odours.
Water quality	<u>Sanitation</u> - Adequate sanitary and ablution facilities must be provided for construction workers, sanitary arrangements should be to the satisfaction of project management, the local authorities and legal requirements. - Ablution facilities shall be easily accessible and shall be positioned as such.

	- Use of the veld by employees is prohibited. - Outside toilets hall be provided with locks and doors and shall be secured to prevent them from blowing over. - The toilets to be placed outside areas susceptible to flooding. - The contractor shall arrange for regular emptying of toilets and shall enforce their use - Contractor is to keep the toilets in a clean, orderly and sanitary condition. <u>Hazardous materials</u> - Use and /or storage of materials, fuels and chemicals which could potentially leak into the ground must be controlled in a manner that prevents such occurrences. - All storage tanks containing hazardous materials must be placed in bunded containment areas with sealed surfaces. - The bund wall must be high enough to contain 110% of the total volume of the stored hazardous material with an additional allocation for potential high runoff stormwater events. - Any hazardous substances must be stored at least 100m from any of the water bodies on site. - Contaminated wastewater must be managed by the Contractor to ensure existing water resources on the site are not contaminated. - All wastewater from general activities in the camp shall be collected and removed from the site for appropriate disposal at a licensed waste site - Vehicles and machinery leaking pollutants must be removed from site and taken to an appropriate location for repairs - Repairs to vehicles/machinery should not take place outside the designated areas allocated except in emergencies - All stationery vehicles must be equipped with a drip tray to retain any potential oil leaks

	- Hazardous substance must be stored at least 100m away from any water bodies on site to avoid pollution <u>Water resources</u> - Site staff shall not be permitted to use any other open water body or natural water source adjacent to or within the designated site for the purposes of bathing, washing of clothing or for any construction related activities. - Site design and operation must ensure that surface/storm water is diverted away from excavation trenches. - Backfilling of trenches must be done in such a way that water ponding and erosion of the backfilled trench are avoided. <u>Stormwater</u> - A quality, quantity and flow direction of any surface water runoff shall be established prior to disturbing any area for construction purposes. - No water sources shall be polluted in any way due to construction works - Streams, rivers, pans, wetlands, dams and their catchments shall be protected from erosion and from direct or indirect spillages of pollutants such as refuse, oils, aggregate, tailings, and wash water. Organic material and bituminous or tar products - Stormwater containing pollutants must not run-off into natural areas - Stormwater shall be diverted from the construction works - A stormwater management plan to be drawn and implemented - Effort shall be made to ensure that storm water leaving the construction site is not contaminated or polluted.
Noise	Noisy activities must take place during allocated construction hours only as per section 25 of the Noise Control Regulations of the Environmental Conservation Act, 1989 (Act No. 73 of 1989)

	- Construction site yards, workshops and other noisy fixed facilities must be located well away from noise sensitive areas. - The contractor must take measures to discourage labourers from loitering in the area and causing noise disturbance. - All construction vehicles, plant and equipment are to be kept in good conditions. - Noisy operations should be combined so that they occur where possible at the same time
Waste Management	<u>Construction rubble/Solid waste</u> - Construction rubble shall be disposed of in demarcated spoil dumps - Sufficient waste bins must be provided at the construction site for different types of waste disposal and for possible recycling purposes. - Clearly labelled refuse bins must be provided; waste must be separated and dumped according to type. - Refuse bins must be placed at strategic positions to ensure that litter does not accumulate within the construction site. - Littering by the employees of the Contractor shall not be allowed under any circumstances. The ECO shall monitor the neatness of the work sites as well as the Contractor campsite. - All waste must be removed from the site and transported to a registered landfill site and records kept on file. - Waste bins must be emptied regularly such that they do not overspill. - No waste may be disposed or buried on site. - The Contractor will maintain 'good housekeeping; practices and ensure that all work sites and construction camp are kept tidy and litter free <u>Hazardous waste</u> - All hazardous waste materials must be carefully stored so as to ensure protection of ground and underground water.

	- Hazardous waste must be collected in hazardous bins and disposed of at a registered hazardous waste landfill, proof of safe disposal to be kept in file on site - Exercise extreme care with the handling of diesel and other toxic solvents to ensure that spillage is minimised. - Special care shall also be taken to avoid spillages of tar or bitumen products such as binders or pre-coating fluid to avoid water-soluble phenols from entering the ground or contaminating water - Under no circumstances shall spoiling of tar or bituminous products on the site, in borrow pits or any burying, is prohibited <u>Remedial actions</u> - Hazardous Chemical substance Regulations promulgated in terms of the Occupational Health and Safety Act 85 of 1993 and the SABS Code of practice to be adhered to. - Employees handling hazardous materials must be trained to carry out and handle these substances and/or waste. - Contaminated soil must be excavated and removed from site and rehabilitation methods upheld. - If a spill occurs on impermeable surface such as cement or concrete, the surface spill must be contained using oil absorbent materials. - Contamination remediation materials must be carefully removed from the area of the spill so as to prevent further release of petrochemicals to the environment and stored in suitable containers until appropriate safe disposal. - The immediate response must be to contain the spill. - Drip trays must be placed under stationery vehicles - A spill kit must be available on site at all times. - Any accidental spills must be corrected immediately and recorded in the incidents register.

	- Unused or rejected tar or bituminous products shall be returned to the supplier's production plant. - Any spillages of tar or bituminous products shall be attended to immediately and affected areas shall be rehabilitated according to standard.
Vegetation	- Demarcate the construction footprint and ensure that all activities remain within the defined footprint area. - Only vegetation directly affected by the development may be cleared. - No endemic flora and fauna species will be deliberately destroyed or permanently alienated from their natural habitat during construction. - Only vegetation falling directly in demarcated operational area should be removed where necessary. - No exotic/invasive plants are to be planted on common ground of the site. No vegetation will be removed without prior permission from ECO. - Trees that are not to be cleared should be marked beforehand with danger tape. The ECO must be given a chance to mark vegetation that is to be conserved before the contractor begins clearing the site. - No open fires are permitted within naturally vegetated areas. - Retain vegetation and soil in position for as long as possible, removing it immediately ahead of construction /earthworks in that area. - Care must be taken that unnecessary clearance of vegetation does not take place. Where possible, natural vegetation must be retained or pruned. - Establishment of extensive alien species will be monitored. - Cleared indigenous vegetation can be stockpiled for possible reuse in later rehabilitation or landscaping. - Stockpiles of vegetation are only to be located in areas approved by the ECO, and may not exceed 2m in height.

	- Methods of stacking must take cognisance of the possible creation of a fire hazard. - Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas. - Alien vegetation re-growth must be controlled throughout the entire site during the construction period. - Construction time must be kept to a minimum followed by speedy rehabilitation to restore habitat and biodiversity integrity where required. - No uncontrolled collection of firewood may be allowed on the property and surroundings. - No open fires are allowed outside designated cooking areas. - Adequate fire fighting equipment must be available onsite at all times and at least one person present on the site must be trained in the use thereof. - The cleared vegetation should not be burned, but taken to the nearest available municipal disposal site or made available for use in a controlled manner. - Exposed areas should be rehabilitated with a grass mix that blends in with the surrounding vegetation. The grass mix should consist of indigenous grass species adapted to the local environmental conditions. - Any proclaimed weed or alien species that propagates during the contract period shall be cleared by hand before seeding - The Contractor shall be responsible for the re-establishment of vegetation within all areas disturbed during construction
Fauna and Avifauna	- No hunting, harming or capturing of any of the animals on the site must be allowed. This must be enforced during construction as well as the operational phase. - Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads.

	- No littering by construction workers is permitted as this may affect fauna on and around site. - Adequate fire fighting equipment must be available onsite at all times and at least one person present on the site must be trained in the use thereof. - No poison should be used to control any animals without the input of an ecologist/zoologist. - Under no circumstances shall any animals (Stock or game) be handled, killed or be interfered with by the Contractor, his employees, his subcontractors or his subcontractors' employees. - No domesticated animals will be allowed on site. - Any open excavations must be inspected early morning prior to the daily construction activities. - Any amphibians and small mammals or any other fauna species found should be removed and released in suitable habitats away from construction activities. The open excavations should be back-filled as soon as possible. - Records of any injured or deaths of fauna within the construction site must be kept by the ECO. - Open fires are prohibited on site.
Agriculture	- The development must be contained within the site, either by a wall or fence structure. All existing agricultural fences must not be removed and or demolished - Dust generation must be minimized as it reduces the quality of grazing grasses - Spillages of fuels, oils and other potentially harmful chemicals must be cleaned up immediately and contaminants properly drained and disposed of using correct solid/ hazardous waste facilities (not to be disposed of within the natural environment). - Any contaminated soil must be removed and the affected area rehabilitated immediately.

	- The implementation of an alien invasive control plan must form part of the construction and operational EMPr for the development.
Material handling and Storage	- Appropriate PPE shall be provided to all staff and special PPE shall be provided for those handling hazardous substances. The contractor must comply with the OHS Act and Construction Regulations - All hazardous materials will be stored in a secured, designated area with restricted entry. - Storage of hazardous products shall only be in suitable containers. - Hazard signs indicating the nature of the stored materials shall be displayed on the storage facility or containment structure as well as Material Safety Data Sheets (MSDS). - Fuel must be stored in appropriate storage tanks or in bowsers. - The tanks/ bowsers shall be situated on a smooth impermeable surface (concrete) with a bund wall. The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 110% of the total capacity of all the storage tanks/ bowsers - Sufficient fire fighting equipment in event of an accident must be readily available on site as well as at the site office. - No smoking will be allowed where fuel is stored and used
Movement of construction vehicles and personnel	Construction routes must be clearly defined. Access of all construction and material delivery vehicles should be strictly controlled, especially during wet weather to avoid compaction and damage to topsoil structure. Vehicles and equipment shall be serviced regularly to avoid the contamination of soil from oil and hydraulic fluid leaks etc. - The access route shown on the site plan must be used at all times - No illegal use of private roads during construction. - Servicing must be done off-site or at a designated area - Oil changes must take place on a concrete platform or on a drip tray

	- Upon completion of the project all roads shall be repaired to their original state. - No roads shall be cut through sensitive areas. - Soil stabilisation measures should be implemented - Rehabilitation of disturbed areas immediately following road construction should be done. - All construction personnel and equipment remain within the demarcated construction sites at all times. - Access to the site must be restricted to authorised personnel only. - No machinery, personnel, material, or equipment is allowed on sensitive or 'No-Go' areas during the course of the project. - The main routes to the site must be clearly signposted
Traffic	- Proper traffic calming/ speed control should be implemented in attempt to manage the influx of vehicles and prevent accidents from occurring. - The placing of flagman to assist in directing vehicular traffic in a suitable manner - Regular maintenance of the access road should be implemented to ensure road stays in good condition.
Visual	- Demarcate sensitive areas and no-go areas with danger tape to prevent disturbance during construction. - Plan construction times in such a manner to have the least impact on the environment - Keep disturbed areas to a minimum. - No clearing of land to take place outside the demarcated footprints. - Minimise waste generation on the construction site and recycle waste where possible. - Reduce and control dust through the use of approved dust suspension techniques as and when required.

	- Rehabilitate all disturbed areas in accordance with the Method Statement - Maintain access roads to prevent scouring and erosion, especially after rains. - Soil excavated must not be stockpiled above 2m. - All temporary structures erected on site for the purposes of the project's construction phase will be removed from site upon completion of the project. - Lighting will be sufficient to ensure security but will not constitute 'light pollution' to the surrounding areas. - The site must be clean and tidy at all times
Fire	- Contractor must make sure that there is supervision for all fires that are used in the construction camp. - Smoking should be prohibited in the vicinity of flammable substances. - Fire-fighting equipment must be available on site, in particular where flammable substances are stored. - Fire-fighting equipment and emergency plans must be in place prior to the construction phase. - The contractor will plan and implement a fire prevention programs and develop a contingency plan in the event of any fire (Fire Management Plan - No refuse or waste may be burnt on site. The contractor will be responsible for all damages caused by the outbreak of a fire originating from a site where work is undertake - The contractor is to provide cooking areas where fire risks will be minimized and controllable. - The contractor to provide a safety evacuation plan including emergency assembly points along the construction route including at the site camp
Concrete mixing	- Pre-mix concrete shall be the preferred option where possible.

	- The batching / mixing area must be properly designated and indicated on the site plan and it will be kept neat and clean at all times. - No batching / mixing activities will occur on a permeable surface. - Where concrete has been mixed, especially in the natural environment, all residues must be removed and disposed of in an environmentally responsible manner approved by the ECO. - Unused cement should not be left to dry on the ground. If proper housekeeping rules are complied with, most impacts should not affect the environment.
Safety and Security	- The provisions of the OHS Act should be implemented at all times - Security must be appointed during the construction phase of the development to help prevent crime/theft from the proposed construction site and surrounding properties. - Signs should be erected on all entrance gates indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime. - The contractor is to ensure traffic safety at all times, and shall implement road safety precautions - Necessary personal protective equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). - All vehicles and equipment used on site must be operated by appropriately trained and / or licensed. The appointed operators should have their documentation and credentials included on fie to be reviewed by the Health and Safety Agent - An environmental awareness training programme for all staff members shall be put in place by the contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMPr and relevant occupational health and safety issues.

	- Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimized. - Adequate emergency facilities must be provided for the treatment of any emergency on the site. - Emergency contact numbers are to be displayed conspicuously at prominent locations around the construction site and the construction crew camps at all times. - The contractor must have a basic spill control kit available at the construction site and offices. - Excavations must not be left open for longer than 14 days where at all possible. - Excavations must be barricaded/ fenced of at all times.
Heritage	Cultural and Heritage Artefacts as well as the South African Heritage Resources Agency (SAHRA) must be informed if any artefacts are uncovered in the affected areas and mitigation measures recommended by SAHRA must be followed. - The Contractor must ensure that his workforce is aware of the necessity and importance of reporting any possible historical or archaeological finds to allow for proper action to be taken - Any discovered artefacts may not be removed under any circumstances. - Any destruction of the site may only be allowed once a permit is obtained and the site has been mapped and noted. - Permits must be obtained from SAHRA
Workshop Control and Housekeeping	The Contractor's management and maintenance of his plant and machinery will be strictly monitored (i.e. at the place of construction activity or at a formalised workshop) - All the necessary handling and safety equipment required for the safe use of petrochemicals and oils shall be provided by the contractor and used or worn by employees whose duty is to

	manage and maintain the contractor's and sub-contractor's supplier's plant, machinery and equipment. - Petrochemicals, oils and identified hazardous substances shall only be stored under controlled conditions. - All hazardous materials e.g tar or bitumen shall be stored in a secured, designated area that has restricted entry. - Storage of tar or bituminous products shall take place using suitable containers - Hazard signs indicating the nature of the stored materials shall be displayed in the storage facility or containment structures. - The preferred method shall be a concrete floor that is bunded. - The MSD sheet or method statements shall indicate the emergency procedures in the event of misuse or spillage that will negatively affect the environment or an individual The Contractor shall undertake "good housekeeping" practices during the construction. This will help avoid disputes on responsibility and allow for the smooth running of the contract as a whole. Good housekeeping extends to beyond the wise practice of construction methods that leaves production in a safe state subject to weather to include care for and preservation of the environment within which the site is situated.
Fuel and Oil storage	- Fuel shall be stored in a secure area in a steel tank. - An adequate bund wall , 110% of volume, shall be provided for fuel and diesel areas to accommodate any leakage spillage or overflow of these substances - The area inside the bund wall shall be lined with an impervious lining to prevent infiltration of the fuel into the soil. - Any leakage, spillage or overflow of fuel shall be attended to without delay - LPG or gas cylinders shall be stored in a secure, well-ventilated area.

Oil and lubricant	- Used oil, lubricants and cleaning materials from the maintenance of vehicles and machinery shall be disposed of appropriately at a registered hazardous accepting landfill site. - Water and oil shall be separated in an oil trap. - Oils collected in this manner, shall be retained in a safe holding tank and removed from site by a specialist oil recycling company for disposal at an approved waste disposal site for hazardous materials. - All used filter materials shall be stored in a secure bin for disposal off site. - Soils contaminated by oils and lubricants shall be collected and disposed of at a registered facility. - Safe disposal certificates to be provided when dumping hazardous waste.
Earthworks and layer works	This section includes all construction activities that involve the mining of all materials and their subsequent placement, stockpile, soil, treatment or batching to use in permanent works or temporary works - It is the responsibility of the Contractor to ensure that a mining permit has been granted and approved along with the EMPr. - The conditions set out in the permit is therefore legally binding - The Contractor shall provide the engineer with detailed plans of his intended construction processes prior to starting any cut or fill or layer, the plans shall detail personnel, plants and equipment to be used and the measures by which the impacts of the pollution (noise, dust, litter, fuel, oil and sewage) erosion, vegetation destruction and landscape deformation will be prevented, contained and rehabilitated. - The Contractor shall demonstrate his 'good housekeeping' particularly with respect to closure at the end of everyday so as to leave the site in a safe condition from rainfall overnight or over periods when there is no construction activity

	- The Contractor shall be responsible for the safe siting, operation, maintenance and closure of any spoil site he uses during the contract period - No spoil shall be located within 500m of any watercourse - Slopes shall not exceed a vertical: horizontal ratio of 1:3 - Appropriate grassing measures to minimise soil erosion shall be undertaken by the contractor - No construction related activities including stockpiling and spoil areas, temporary storage areas, temporary and permanent access routes and temporary working areas are to take place within the areas beyond the demarcated site boundaries.
Site Closure and Rehabilitation	- A site rehabilitation plan must be developed and kept on site during construction. - All temporary structures and equipment used for construction activities must be removed upon completion of the project. - All disturbed areas must be fully rehabilitated and protected from erosion. - All waste and excess material shall be removed from the site upon completion of the work. Such material shall be disposed of at a registered waste facility. - No waste or any materials shall be buried on the site. - Re-seeding shall be done on disturbed areas in consultation with the ECO. - Clearing of alien plants from the site must be implemented upon completion of works.

6. OPERATIONAL PHASE

6.1. Storm water management

- It is recommended that a proper storm water drainage system must be ensured on the site during operational phase. The storm water drainage system will assist in to preventing soil erosion on site.

- The contractors will be responsible to ensure that the storm water drainage system is maintained.
- Storm water should not be allowed to discharge onto bare soil but must be diverted to the surrounding grasslands or to the landscaped gardens during the operational phase.

6.2. Waste generation and disposal

- The solid waste generated during the operational phase will be removed in a continuous and efficient manner to the satisfaction of the local municipality.
- No solid waste should be dumped on the site.
- In the event of leakage or incident occurring that leads to hazardous waste being discarded on the site, a professional company to be appointed to remove and clean up the waste as quickly as possible.

6.3. Visual impacts

To reduce visual impacts it is recommended that natural indigenous vegetation be used against the access roadsides and ground fillings to assist with stabilizing the roadsides and to limit soil erosion. Plants and adequate landscaping will also limit the visual impact of the development.

6.4. Environmental complaint register

- The environmental complaint register must be maintained during the operational phase.

6.5. Traffic and Road Maintenance

- Access roads to be maintained with an acceptable surface, free of erosion and without surface water ponding.
- Proper traffic calming/ speed control should be implemented in attempt to manage the influx of vehicles and prevent accidents from occurring.
- Regular maintenance of the access road should be implemented to ensure road stays in good condition.

7. ENVIRONMENTAL MONITORING

A monitoring programme must be implemented for the duration of the construction and operation of the road rehabilitation. Monthly audits will be conducted by an independent ECO for the construction phase to ensure compliance with the conditions stipulated in this EMPr and where necessary make recommendations for corrective action. These audits will ensure that the relevant authorities are kept informed about progress with the project and that they are given assurance that the project is implemented as prescribed by them. Audits will also ensure that any environmental contraventions/non-compliances are reported to the provincial Department of Environmental Affairs and corrected by the responsible parties. The audits can be conducted randomly and do not require prior arrangement with the Contractor. Monthly monitoring reports will be compiled and submitted to the Engineer and Contractor respectively. The ECO will be responsible for the undertaking of these audits.

8. ENVIRONMENTAL AWARENESS

The Contractor must ensure that documents are periodically reviewed and revised, where necessary, and that current versions are available at all locations where operations essential to the functioning of the EMPr are performed. All documents must be made available to the ECO and other independent external auditors.
The Contractors must ensure that their employees and any third party, who carries out all or part of the Contractors' obligations, are adequately trained with regard to the implementation of the EMPr and the general environmental legal requirements and obligations.

Environmental health awareness training programmes should be targeted at three distinct levels of employment, i.e. the executive, middle management and labour. Environmental awareness training programmes should contain the following information:

- The names, positions and responsibilities of personnel to be trained.
- The framework for appropriate training plans.
- The summarised content of each training course.
- A schedule for the presentation of the training courses.

The ECO must ensure that records of all training interventions are kept in accordance with the record keeping and documentation control requirements as set out in this EMPr.
The Contractor must ensure that adequate environmental training takes place. All employees must be given an induction presentation on environmental awareness and the content of the EMPr. The presentation needs to be conducted in the language of the employees to ensure it is understood. The environmental training must, as a minimum, include the following:

- The importance of conformance with all environmental policies.
- The environmental impacts, actual or potential, of their work activities.
- The environmental benefits of improved personal performance.

- Their roles and responsibilities in achieving conformance with the environmental policy and procedures and with the requirement of the Agency's environmental management systems, including emergency preparedness and response requirements.
- The potential consequences of departure from specified operating procedures;
- The mitigation measures required to be implemented when carrying out their work activities.
- Environmental legal requirements and obligations.
- Details regarding floral/faunal species of special concern and protected species, and the procedures to be followed should these be encountered during the construction of approach roads or construction camps
- The importance of not littering.
- The importance of using supplied ablution facilities
- The need to use water sparingly.
- Details of and encouragement to minimise the production of waste and re-use, recover and recycle waste where possible.
- Details regarding archaeological and/or historical sites which may be unearthed during construction and the procedures to be followed should these be encountered

The Contractor must monitor the performance of construction workers to ensure that the points relayed during their induction have been properly understood and are being followed. If necessary, the ECO and / or a translator should be called to the site to further explain aspects of environmental or social behaviour that are unclear.

9. COMPLIANCE WITH EMPr

A copy of the EMPr must be kept on site at all times during the construction period. The EMPr will be binding on all contractors operating on the site and must be included within the Contractual Clauses.

It should be noted that in terms of Section 28 of the National Environmental Management Act (No. 107 of 1998): those responsible for environmental damage must pay the repair costs both to the environment, human health and the preventative measures to reduce or prevent further pollution and/or environmental damage (The 'polluter pays' principle).

9.1. Non-compliance

The contractors must act immediately when notice of non-compliance is received and take corrective action. Complaints received regarding activities on the construction site pertaining to the environment must be recorded in a dedicated register and the response(s) noted with the date and action taken. The ECO should be made aware of any complaints.

Any non-compliance with the agreed procedures of the EMPr is a transgression of the various statutes and laws that define the manner by which the environment is managed. Failure to remedy the cause must be reported to the competent authority for them to deal with the transgression, as it deems fit.

The Contractor is deemed not to have complied with the EMPr if, inter alia:

- There is evidence of contravention of the EMPr specifications within the boundaries of the construction site and site extensions
- There is contravention of the EMPr specifications which relate to activities outside the boundaries of the construction site
- Environmental damage occur due to negligence
- Construction activities take place outside the construction footprint
- The Contractor fails to comply with corrective or other instructions issued within a specific time period.

It is recommended that the Contractors institute penalties for the following 'less serious' violations and any others determined during the course of work, as detailed below:

- Littering on site.
- Lighting of illegal fires on site.
- Persistent or unrepaired fuel and oil leaks.
- Any persons, vehicles or equipment related to the Contractor's operations found within the designated "no-go" areas.
- Excess dust or excess noise emanating from site.
- Possession or use of intoxicating substances on site.
- Any vehicles being driven in excess of designated speed limits.
- Removal and/or damage to fauna, flora, cultural or heritage objects on site.
- Urination and defecation anywhere except at designated facilities.

9.2. Emergency preparedness

The Contractor must compile and maintain environmental emergency procedures to ensure that there will be appropriate responses to unexpected or accidental actions or incidents that will cause environmental impacts, throughout the construction period. Such activities may include;

- Accidental waste water discharges to water and land.

- Accidental fires.
- Accidental spillage of hazardous substances.
- Specific environmental and ecosystem effects from accidental releases or incidents.

These plans should include:

- Emergency organisation (manpower) and responsibilities, accountability and liability.
- A list of key personnel and contact details.
- Details of emergency services available (e.g. the fire department, spill clean-up services, etc.).
- Internal and external communication plans, including prescribed reporting procedures where required by legislation
- Actions to be taken in the event of different types of emergencies.
- Incident recording, progress reporting and remediation measures required to be implemented.
- Information on hazardous materials, including the potential impact associated with each, and measures to be taken in the event of accidental release.
- Training plans, testing exercises and schedules for effectiveness.

The Contractor must comply with the emergency preparedness and incident- and accident-reporting requirements, as required by the Occupational Health and Safety Act (No. 85 of 1993), the NEMA (No. 107 of 1998) and the National Water Act (No. 36 of 1998) as amended and/or any other relevant legislation.

9.3. Incident reporting and remedy

If a leakage or spillage of hazardous substances occurs on site, the local emergency services must be immediately notified of the incident. The following information must be provided:

- the location
- the nature of the load
- the extent of the impact
- The status at the site of the accident itself (i.e. whether further leakage is still taking place, whether the vehicle or the load is on fire).

Written records must be kept on the corrective and remedial measures decided upon and the progress achieved therewith over time. Such progress reporting is important for monitoring and auditing purposes. The written reports may be used for training purposes in an effort to prevent similar future occurrences.

9.4. Penalties

Where environmental damage is caused or a pollution incident, and/or failure to comply with any of the environmental specifications contained in the EMPr, the Contractor will be liable.

The following violations, and any others determined during the course of work, should be penalised:

- Hazardous chemical/oil spill and/or dumping in non-approved sites.
- Damage to sensitive environments.
- Damage to cultural and historical sites.
- Unauthorised removal/damage to indigenous trees and other vegetation, particularly in identified sensitive areas.
- Uncontrolled/unmanaged erosion.
- Unauthorised blasting activities (if applicable).
- Pollution of water sources.
- Unnecessary removal or damage to trees.

Non-compliance must be reported to DEA in the monthly audit reports, however the ECO will also report on corrective actions proposed and implemented

10. REPORTING

10.1. Administration

Before the construction activities commence, the Contractor must provide the ECO with a written method statement setting out the following:

- Details of the construction activities.
- Location where the activity will take place.
- Identification of impacts that might result from the activity.
- Identification of activities that may cause impacts.
- Methodology and/or specifications for impact prevention for each activity or aspect
- Methodology and/or specifications for impact containment for each activity or aspect.
- Emergency/disaster incident and reaction procedures.
- Treatment and continued maintenance of the impacted environment.

The Contractor should provide such information in advance of any or all construction activities provided that new submissions are given to the ECO whenever there is a change or variation to the original.

10.2. Good housekeeping

The Contractor must undertake "good housekeeping" practices during construction. This will help avoid disputes on responsibility and allow for the smooth running of the contract as a whole. Good housekeeping extends beyond the wise practice of construction methods to include the care for and preservation of the environment within which the construction is situated.

10.3. Record keeping

The ECO must continuously monitor the Contractor's adherence to the approved impact prevention procedures and the ECO must issue the Contractor with a notice of non-compliance whenever transgressions are observed. The ECO should document the nature and magnitude of the non-compliance in a designated register, the action taken to discontinue the non-compliance, the action taken to mitigate its effects and the results of the actions. The non-compliance should be documented and reported in the monthly reports. These reports must be made available to DEA when requested.

10.4. Document control

The Contractor is responsible for establishing a procedure for electronic document control. The document control procedure should comply with the following requirements:

- Documents must be identifiable by organisation, division, function, activity and contact person
- All documents should be dated, provided with a revision number and reference number, filed systematically, and retained for a five year period.
- A copy of the EMPr will be made available on site at all times. The EMPr will be used for referral as the project progresses and will be provided to any member of the public or authority should the need arise

The Contractor must ensure that documents are periodically reviewed and revised, where necessary, and that current versions are available at all locations where operations essential to the functioning of the EMPr are performed. All documents must be made available to the ECO and other independent external auditors.

11. CLOSURE PLANNING

Final site cleaning - the contractor must clear and clean the site and ensure that all equipment and residual materials not forming part of the permanent works is removed from site before issuing the completion certificate or as otherwise agreed.

Rehabilitation - the contractor must be responsible for rehabilitating and re-vegetation of all areas disturbed/areas earmarked for conservation during construction to the satisfaction of the engineer and ECO.

11.1. Post-construction audit

A post-construction audit must be carried out and submitted. Objectives should be to audit compliances with the key components of the EMPr, to identify main areas requiring attention and recommend priority actions. The audit should be undertaken annually and should cover a cross section of issues, including implementation of environmental controls, environmental management and environmental monitoring.

Results of the audits should inform changes required to the specifications of the EMPr or additional specifications to deal with any environmental issues which arise on site and have not been dealt with in the current document.

11.2. General review of EMPr

The EMPr will be reviewed by the ECO on an on-going basis. Based on observations during site inspections and issues raised at site meetings, the ECO will determine whether any procedures require modification to improve the efficiency and applicability of the EMPr on site.

Any such changes or updates will be registered in the ECO's record, as well as being included as an annexure to this document. Annexures of this nature must be distributed to all relevant parties

12. CONCLUSION

All foreseeable actions and potential mitigations and/or management actions are contained in this document; the EMPr should be seen as a day-to-day management document. The EMPr thus sets out the

environmental and social standards, which would be required to minimise the negative impacts and maximise the positive benefits of the construction activities. The EMPr could thus change daily, and if managed correctly lead to a successful construction and operation phase.

13. ENVIRONMENTAL TRAINING

WHAT IS THE ENVIRONMENT?

- Soil
- Water
- Plants
- People
- Animals
- Air we breathe
- Buildings, cars and houses

ANIMALS

- Do not injure or kill any animals on the site
- Ask your supervisor or Contract's Manager to remove animals found on site

TREES AND FLOWERS

- Do not damage or cut

SMOKING AND FIRE

- Put cigarette butts in a rubbish bin
- Do not smoke near gas, paints or petrol
- Do not light any fires without permission
- Know the positions of fire fighting equipment
- Report all fires
- Do not burn rubbish or vegetation without permission

PETROL, OIL AND DIESEL

DUST

Try to avoid producing dust –
Use water to make ground & soil wet

NOISE

TOILETS

- Use the toilets provided
- Report full or leaking toilets

EATING

- Only eat in demarcated

RUBBISH

- Do not litter – put all rubbish (especially cement bags) into the bins provided
- Report full bins to your supervisor
- The responsible person should empty bins regularly

TRUCKS AND DRIVING

EMERGENCY PHONE NUMBERS

Know all the emergency phone numbers:

- Ambulance:
- Fire:
- Police:

City of Tshwane Municipality

FINES AND PENALTIES

WHY MUST WE LOOK AFTER THE ENVIRONMENT?

- It affects us all as well as future generations
- We have a right to a healthy environment
- A contract has been signed
- Disciplinary action (e.g. construction could stop or fines issued)

WORKING AREAS

Workers & equipment must stay inside the site boundaries at all times

RIVERS & STREAMS

- Do not swim in or drink from streams

PROBLEMS - WHAT TO DO!

- Report any breaks, floods, fires, leaks and injuries to your supervisor
- Ask questions!

STAFF CONDUCT CONTROL AND INFORMATION SHEET

1.	ALL STAFF MUST OBEY THE FOLLOWING RULES: DO NOT leave the construction site untidy and strewn with rubbish that will attract animal pests.
2.	DO NOT bring your pets to the construction site
3.	DO NOT trespass on private properties not linked to the project
4.	DO NOT carry a weapon on the construction site or in the vehicle transporting workers to and from the construction site.
5.	DO NOT set fires unnecessarily.
6.	DO NOT cause any unnecessary disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
7.	DO NOT drive a construction-related vehicle under the influence of alcohol
8.	DO NOT exceed the national speed limits on public roads or exceed the recommended speed limits in this management where applicable, while driving a construction vehicle
9.	DO NOT drive a vehicle that is generating excessive noise (noisy vehicles must be reported and repaired as soon as possible) more so when works are near schools
10.	DO NOT litter along the roadsides, including both public and private roads
11.	DO NOT remove or destroy vegetation at the construction camp/construction site without the prior consent of the Engineer and the Environmental Control Officer
12.	DO NOT tamper with, destroy or remove vegetation from any areas that have been fenced off or marked.

ANNEXURE C.3.5.B Health and Safety Specification

PROJECT NAME . : TENDER FOR THE APPOINTMENT OF A CONTRACTOR FOR THE UPGRADING OF MABOPANE BLOCK U

CLIENT : CITY OF TSHWANE METROPOLITAN MUNICIPALITY

TENDER NO. : RTD02-2025/26

ANNEXURE A: HEALTH AND SAFETY SPECIFICATION

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1. INTRODUCTION, PROBLEM STATEMENT AND OBJECTIVES OF THE PROJECT

The project objective is to complete the upgrading of the roads and stormwater infrastructure in Mabopane Block U. The Contract is the second phase to be implemented to ensure that all of the gravel roads are surfaced, and adequate stormwater measures are in place. The ultimate aim is to ensure that the standard of living for local residents is improved, safety enhanced and damage to related infrastructure is prevented.

2. DESCRIPTION OF THE SITE

The project site is located opposite Mabopane square, approximately 9.2 km west of the Tshwane University of Technology.

3. PROJECT SCOPE OVERVIEW AND PURPOSE OF THE SHE SPEC

3.1. Project Scope overview

The project involves the upgrading of gravel roads to surfaced roads and construction of associated stormwater collection system. The proposed length of the streets to be upgraded is approximately 6.5km. Stormwater runoff will be managed using a piped system, in conjunction with kerbing, kerb inlets, catchpits, junction boxes, and manholes to minimize potential water damage to the road, surrounding infrastructure, and the environment. The project focuses on upgrading the existing roads to improve its functionality and resilience. In summary the project tasks entail (but not limited) to the following:

- Protection and relocation of underground services and associated infrastructure.
- Construction of mass earthworks.
- Construction of 150mm stabilised subbase layer in selected roads.
- Construction of 125mm gravel (G2) base layer.
- Construction of 25mm continuously graded asphalt surfacing (AC).
- Repair and upgrade of existing surfaced arterial road.
- Construction of precast pipe culverts, catchpits, kerb inlets, junction boxes, and manholes.
- Extension and repairs to inlet and outlet structures of existing drainage culverts, where required.
- Construction/protection of water and sewer reticulation connections, where required.
- Installation of kerbing and channelling.
- Construction of segmental block paving to the sidewalks including removal and disposal where required.
- Road markings and supply and erection of road signs.
- Testing of materials.
- Procurement of road building materials from commercial sources.
- Installation of sleeves for future street lighting and traffic signals.

3.2. Purpose of the Site Specific Health and Safety Specification

This health and safety specification aims to inculcate a positive safety culture in the project and outlines the working behaviours and safe work practices that must be implemented and complied with by, the Principal Contractor, Contractors, Consultants, Visitors and Suppliers, that will be undertaking activities associated with the THE UPGRADING OF ROADS AND STORMWATER SYSTEM IN MABOPANE BLOCK U project. The Site Specific Health and Safety Specification has been developed in accordance with the requirements of Occupational Health and Safety Act 85 of 1993 and related Regulations, the Construction Regulation of 2014, and as partial fulfilment of the Construction Regulation 5(1)(b) as well as any other applicable legislation.

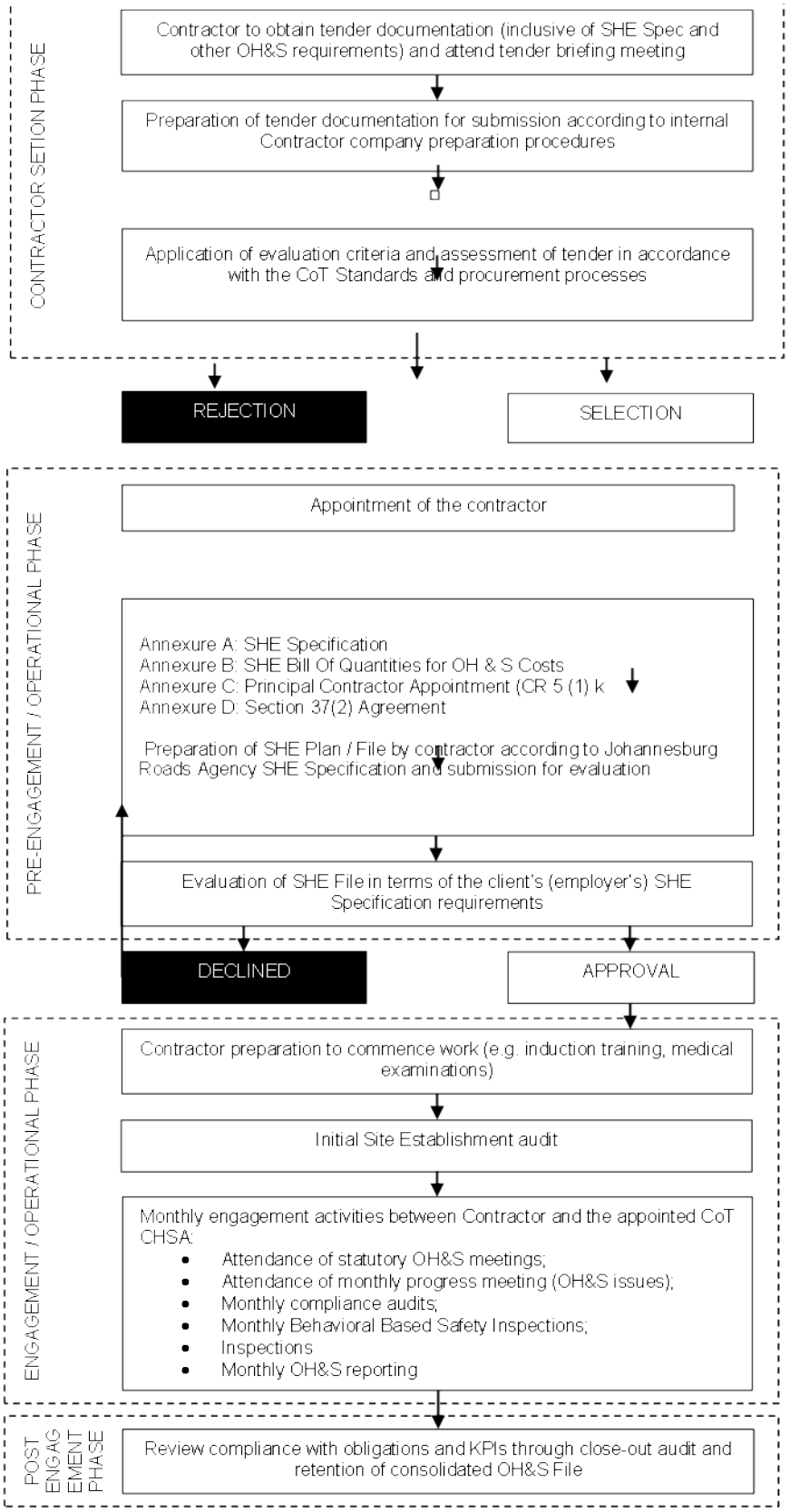
The appointed Principal Contractor and other contractors must identify all requirements applicable to their scope of works and address these accordingly in their Contractor ‘s Site Specific Health and Safety Management Plan. It is the Principal Contractor ‘s responsibility to ensure that all other sub-contractors comply fully with all legal requirements as well as the requirements of this Specification.

This Site Specific Health and Safety Specification will be reviewed and updated periodically as and when necessary to address and / or include:

- Changes in legislation;
- As per Client requirements;
- Change in scope of work
- Construction Design review must consequently be followed by review of the Baseline Risk Assessment for the project and the SSHSS;
- Lessons learnt from incidents.

4. CONTRACTOR SELECTION, ENGAGEMENT AND MANAGEMENT PROCESS OVERVIEW

Figure 1: Contractor's selection, engagement and management process overview



5. DEFINITIONS

The Act

Means, unless the context indicates otherwise, the Occupational Health and Safety Act, 85 of 1993 and Construction Regulations 2014 promulgated there under, (OHSA).

Acceptable Risk

A risk that has been reduced to a level that can be tolerated having regard for the applicable legal requirements and the Health and Safety Policy adopted for the project.

Agent

Means in terms of Construction Regulations, 2014, 'a competent person who acts as a representative for a client'.

ALARP (As Low as Reasonably Practicable)

The concept of weighing a risk against the sacrifice needed to implement the measures necessary to avoid the risk. With respect to health and safety, it is assumed that the measures should be implemented unless it can be shown that the sacrifice is grossly disproportionate to the benefit.

Applicant (Permit to Work)

A person requesting permission to perform work for which a Permit to Work is required. Applicants must be authorised (in writing) to receive (or accept) Permits to Work and must be competent to do so by virtue of their training, experience and knowledge of the area or plant in which the work is to be performed.

Authorised Person (Permit to Work)

A person (typically a Project employee or an employee of the client) who has been authorised (in writing) by the nominated project management representative to issue Permits to Work within the scope of his designation. A person may only be appointed to issue Permits to Work if he has undergone training and has been assessed and found competent in systems, plant and equipment operation within the scope of his designation.

Barricade

A temporary structure that is erected as a physical barrier to prevent persons from inadvertently coming into contact with an identified hazard.

Battering

Sloping the sides of an excavation to a predetermined angle (usually less than the natural angle of repose) to ensure stability.

Benching

The creation of a series of steps in the sides of an excavation to prevent collapse.

Client

Means any person for whom construction work is being performed.

Consequence

The outcome of an event expressed qualitatively or quantitatively.

Contractor

An employer performing construction work, or providing related or supporting services, on a project site.

Competent Person

A person who has in respect of the work or task to be performed the required knowledge, training, experience and as per OHS Act, 1993 (Act 85 of 1993) and CR 2014.

Construction Manager

Means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site.

Construction Supervisor

A competent person responsible for supervising construction activities on a construction site.

Excavation

Any man-made cut, cavity, pit, trench, or depression in the earth's surface formed by removing rock, sand, soil or other material using tools, machinery, and / or explosives. Tunnels, caissons and cofferdams are specifically excluded and are not addressed in this standard.

First-Aid Injury (FA)

A first-aid injury is any one-time treatment and any follow up visit for observation of minor scratches, cuts, burns, splinters and the like which do not normally require medical care. Such treatment is considered to be first aid even if administered or supervised by a medical practitioner.

Hazard

A source of potential harm in terms of human injury or ill health, or a combination of these.

Hierarchy of Controls

- A sequence of control measures, arranged in order of decreasing effectiveness, used to eliminate or minimise exposure to workplace health and safety hazards:
- Elimination – Completely removing a hazard or risk scenario from the workplace.
- Substitution – Replacing an activity, process or substance with a less hazardous alternative.
- Isolation (Engineering) Controls – Isolating a hazard from persons through the provision of mechanical aids, barriers, machine guarding, interlocks, extraction, ventilation or insulation.
- Administrative Controls – Establishing appropriate policies, procedures and work practices to reduce the exposure of persons to a hazard. This may include the provision of specific training and supervision.
- Personal Protective Equipment – Providing suitable and properly maintained PPE to cover and protect persons from a hazard (i.e. Prevent contact with the hazard).

Health and safety by Design- this is the process of managing health and safety risks throughout the lifecycle of structures, plant, substance or other products.

Incident

An event (or a continuous or repetitive series of events) that results or has the potential to result in a negative impact on people (employees, contractors and visitors), the environment, operational integrity, assets, community, process, product, legal liability and / or reputation.

Likelihood

A description of probability or frequency, in relation to the chance that an event will occur.

Lost Time Injury (LTI)

Any occurrence that resulted in a permanent disability or time lost from work of one day/shift or more. If an employee is injured and cannot return to work in the next shift (will ordinarily miss one whole shift), and the department brings the employee in to only receive treatment by the Supervisor/ Return to Work Coordinator in that shift, this is still considered an LTI.

Lost Time Injury Frequency Rate (LTIFR) - Number of LTI‘s multiplied by 1 million or 200,000 and divided by labour hours worked.

Light Vehicle

A vehicle that:

- Can be licensed and registered for use on a public road;
- Has four or more wheels, and seats a maximum of 12 adults (including the driver);
- Requires the driver to hold only a standard civil driving licence; and
- Does not exceed 4.5 tonnes gross vehicle mass (GVM), which is the maximum loaded mass of the motor vehicle as specified by:
  - The vehicle‘s manufacturer; or
  - An approved and accredited automotive engineer, if the vehicle has been modified to the extent that the manufacturer‘s specification is no longer appropriate.

Examples of light vehicles include passenger cars, four-wheel drive vehicles, sports utility vehicles (suvs),

pick-ups, minibuses, and light trucks.

Any vehicle falling outside of this definition must be considered mobile equipment.

Mobile Equipment

A vehicle (wheeled or tracked) that generally requires:

- The driver to hold a specific state or civil license; or
- The operator to hold a nationally recognized certificate of competency.

Examples of mobile equipment include, but are not limited to, dump trucks, water trucks, graders, dozers, loaders, excavators, forklifts, tractors, back-actors, bobcats, mobile cranes, tele- handlers, drill rigs, buses and road-going trucks.

Near-Miss

An incident that has occurred that did not result in any injuries, illnesses, environmental or property damage but had the potential to cause an injury, illness, environmental or property damage.

Personal Lock

A single lock with one unique key controlled by the owner. Used for personal protection.

Regulation

In the context of this guideline, _Regulation(s) 'refers to the Construction Regulations, 2014 required by Section 43 of the Occupational Health and Safety Act 85 of 1993, published under Government Notice R 84 in Government Gazette 37305 of February 2014.

Risk

A combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of injury or ill health that can be caused by the event or exposure.

Risk Assessment

A process of evaluating the risk arising from a hazard, taking into account the adequacy of any existing control measures, and deciding on whether or not the risk is acceptable.

Risk Management

The systematic application of management policies, processes and procedures to identifying hazards, analysing and evaluating the associated risks, determining whether the risks are acceptable, and controlling and monitoring the risks on an ongoing basis.

Abbreviations

CR – Construction Regulations

CHSA- Construction Health and Safety Agent

CIDB- Construction Industry Development Board

CHSO- Construction Health and Safety Officer

DSTI - Daily Safety Task Instruction

DoL- Department of Employment and Labour

LTI- Lost Time Injury

HIRA - Hazard Identification and Risk Assessment

IMS - Integrated Management System

MS - Management System

OHS Act - Occupational Health and Safety Act

SSHSS- Site Specific Health and Safety Specification

SHE- Safety, Health and Environment

PTO – Planned Task Observation

PM- Project Manager

VFL - Visible Felt Leadership

OHS - Occupational Health and Safety

VCT - Voluntary Counselling and Testing

SACPCMP - The South African Council for Project and Construction Management Professions, here in refer to as the registrar of Health and Safety Professionals

6. LEGAL REQUIREMENTS

Execution of project tasks must be in line with relevant applicable legislation throughout the project lifecycle, applicable standards and specifications and code of practice must be adhered to by the Principal Contractor and other contractors on the project. The Principal Contractor must compile a legal register that must also include applicable standards and specifications, code of practice including applicable municipal by-laws. The Principal Contractor must demonstrate SHE legal compliance throughout the project lifecycle.

6.1. GENERAL ADMINISTRATIVE REGULATIONS (GAR) REQUIREMENTS

i. Copy of the Act (OHS Act)
ii. Health and Safety Representative
iii. Health and Safety Committee
iv. Reporting of Incidents and Occupational Diseases
v. Recording and Investigation of incidents
vi. Registration in terms of the COID Act
vii. Health and Safety File

6.1.1. Copy of the Act (Reg. No. 4 of GAR)

The contractor shall retain the copy of the OHS Act and the relevant regulations on site all the times, where there are more than five people on site.

Basic Conditions of Employment Act, Employment Equity Act and the General Machinery Regulations must also be available on site. The Principal Contractor must ensure that these are communicated to the construction personnel and an attendance register must be completed to certify this.

6.1.2. Designation of Health and Safety Representatives (Reg. No. 6 of GAR)

The team of employees on site must have a health and safety representative deployed on the project site(s). A Health and Safety Representative must be elected and appointed. Taking into consideration the number of employees deployed, the geographical area in which the work is taking place, the different work disciplines, and the shift pattern (if applicable), the contractor must ensure that an adequate number of Health and Safety Representatives (at a minimum ratio of one Health and Safety Representative per 50 employees) are elected and appointed to effectively represent all site personnel as required by the OHS Act 85 of 1993, section 17 - 18.

Each Health and Safety Representative must attend an accredited training course for health and safety representatives. The cost of this training shall be for the contractor‘s account.

The contractor must make the necessary allowances for the Health and Safety Representatives to carry out their duties as specified in the applicable legislation.

The contractor must ensure that the nominated and appointed SHE Rep is easily identifiable; this can be achieved through ensuring that the SHE Rep has a badge or sticker on his / her helmet (written) SHE Rep.

Without derogating from the aforementioned, the principal contractor / contractor shall ensure that the provisions of OHSACT 17-20 and General Administrative Regulations, 2003 (hereinafter GAR) 5 to 7 are implemented and adhered to.

6.1.3. Health and Safety Committee (Reg. No. 5 of GAR)

The Principal Contractor/Contractor shall convene a health and safety committee meeting monthly. All members required to be in attendance shall be notified of such meeting by means of a formal agenda which must be made available to the Safety Agent / Project Manager upon request. Items on the agenda include but not limited to the following:

- Opening and welcome
- Members present, apologies and absent
- Minutes of previous meeting
- Matters arising from the previous meeting
- SHE rep deviation reports
- Outcomes of previous audit and behavioural based safety inspections
- Incident and / or accident reports and investigations
- Incident, accident and / or injury statistics
- Health and safety plan (revisions and new requirements)
- Training (awareness, competence and off-the-job)
- Emergency Preparedness Plan
- Non-conformances and notices
- Toolbox talks Program
- Close and next meeting

6.1.4. Reporting of Incidents and Occupational Diseases (Reg. No. 8 of GAR)

(1) The contractor shall,

(a) Give notice to the Provincial director in the form of WCL 1 or WCL 2 within seven days of any incident referred to in section 24(1)(*a*) of the Act,
(b) Report to the provincial director by telephone, facsimile or similar communication where a person, in consequence of such an incident, dies, becomes unconscious, suffers the loss of a limb or part of a limb, or is otherwise injured or becomes ill to such a degree that he or she is likely either to die or to suffer a permanent physical defect, such incident, including any other incident contemplated in section 24(1)(*b*) and (*c*) of the Act.

(2) The principal contractor shall furnish the provincial director with the following information whenever an incident arises to persons other than employees,

(a) name of the injured person;
(b) address of the injured person;
(c) name of the user, employer or self-employed person;
(d) address of the user, employer or self-employed person;
(e) telephone number of the user, employer or self-employed person;
(f) name of contact person;
(g) details of incident:

(i) what happened;
(ii) where it happened (place);
(iii) when it happened (date and time);
(iv) how it happened;
(v) why it happened; and

(h) names of witnesses.

(3) The principal contractor shall make use of a registered medical practitioner for the examination or treatment of a person for a disease contemplated in section 25 of the Act, give notice thereof to the chief inspector and the employer in the form of WCL 22.

(4) Any other person not contemplated in this regulation may in writing give notice of any disease contemplated in section 25 of the Act, to the employer and chief inspector.

6.1.5. Recording and Investigation of Incidents ((Reg. No. 9 of GAR)

The Principal Contractor shall report all incidents and accidents including near miss incidents, first aid, medical treatment, lost time incidents (disabling injuries & fatalities); OH&S Act Section 24 and 25 incidents; electrical contact; falls from height: major equipment damage; chemical spillage and other Environmental Incidents to the appointed Project Manager or Engineer within 24 hours of them occurring or, before the end of the work shift.

For any incident (near miss, first aid, medical) that has contravened any of the Statutory Requirements, the Contractor's Representative (Construction Health and Safety Officer) (including the Subcontractor's Representative, if applicable) may be required to present to the client, the incident and the mitigation measures that would be implemented to prevent a recurrence and the implementation of a deadline for all corrective actions to be implemented.

The Principal Contractor and all the other contractors shall ensure that immediate post incident drug and alcohol samples are taken for all parties who are involved in the accident. This may include machine operators, riggers, general labourers and supervisors as well as any witness and the injured. Testing may take place even if there is no property damage or injury, as in the event of a near miss.

If it is found that the Principal Contractor or their Subcontractors are not reporting incidents, actions (which may include disciplinary action) shall be taken against the contractor's or subcontractor's representatives.

A detailed investigation report, including supporting documents, proof of actions taken and proof of communication to other affected employees, shall be completed within 14 days of the incident and submitted to the Project Manager or Engineer formally for comment and review. Should the contractor require a greater period of time to conduct the investigation then permission should be sought from the client's representatives (Engineer or appointed Project Manager). Medical reports received by the contractor after the investigation submission should be forwarded immediately to the client's representative.

An Incident flash report shall be submitted by the Principal Contractor and all the Contractors upon knowledge of an incident; health and safety and occupational injury as soon as reasonably practicable.

Near misses shall be reported and investigated based on the severity of the near miss. The Principal Contractor and Contractors shall submit the completed investigation within seven days.

The Principal Contractor and all the other contractors shall ensure that all accidents / incidents are investigated by a competent person and are discussed at the relevant SHE meetings. The client reserves the right to participate in any accident / incident investigation if the accident / incident is directly linked to any activity related to the project. The Construction Health and Safety Agent (CHSA) must be part of the incident investigation team for all project related incidents.

The Principal Contractor shall keep at his Project Site Office a record of all accidents and incidents reported in the form of the OH&S Act Annexure 1 investigation form as referenced in the OH&S Act. (Incident Investigation Report).

The client or the client's appointed CHSA reserves the right to conduct an independent investigation of any accident and / or incident reported by the Principal Contractor or Subcontractors over and above their own investigations. The Principal Contractor and Subcontractors shall co-operate fully with the investigation and implement any additional improvement measures.

Investigations shall begin as soon as practicable after the incident / accident has occurred. Where applicable and with appropriate authorisation (when required), photographs shall be taken of the scene of the incident as well as any equipment involved. Interviews with witnesses shall be conducted as soon as possible after the incident occurred whilst it is still fresh in their memory and if necessary followed up later to determine if further information was recalled.

The Principal Contractor shall investigate all incidents immediately and supply to the Engineer a written report within five days, unless otherwise specified by Engineer, which shall include but not limited to:

- Date, time and place of incident;
- Description of incident;
- Root causes of incident/accident;
- Type of injury and/or (if any);
- Medical treatment provided (if any);
- Persons involved;
- Loss or damage sustained (if any);
- Names and contact details of witness/s;
- Description of corrective action to prevent a recurrence (with clear deadlines and persons identified for taking remedial action).
- All corrective actions shall be closed out within 14 days of the date of the incident, unless otherwise agreed by the Engineer.

6.1.6. Registration in terms of the COID Act

The Principal Contractor and all the other Contractors on site must be in good standing with the Compensation Commission for Occupational Injuries and Diseases or similar (Federated Employer's Mutual Assurance- FEMA) by registering in terms of the COID Act. A copy of a *valid letter of good standing* as issued by the Compensation Commission for Occupational Injuries and Diseases (Department of Employment and Labour) or similar (Federated Employer's Mutual Assurance- FEMA) must be retained in the safety file all the times.

6.1.7. Contents of the Health and Safety File (CR 7 (1) b

The Principal Contractor shall open and retain on site a SHE file with the following minimum requirements:

- Construction Work Permit or Notification of construction work to the Department of Employment and Labour
  - Letter of good standing
  - Safety, Health and Environmental (SHE) plan
  - SHEQ policy, procedures and guidelines
  - Site Specific Organogram
  - Definitions
  - Substance abuse, alcohol and Drug Policy
  - Legal Appointments relevant to the project scope of work
  - Risk Assessment relevant to the project scope of work
  - Method statements relevant to the project scope of work
  - Safe work procedures relevant to the high risk tasks and machinery
  - Safety Induction derived from the risk assessment and aligned to the project scope of work.
  - First aid arrangements
  - Lifting and tackle equipment
  - Excavation work
  - Key Performance Indicators
  - Working at heights (Fall Protection Plan)
  - Access ladders
  - Vehicle Safety policy for Construction vehicles and mobile plant
  - Use and temporary storage of flammable liquids
  - Incident Management
  - Personal Protective Equipment
  - Housekeeping
  - Stacking and storage
  - Fire precautions on site
  - Emergency Evacuation plan
  - Medical examination
  - Toolbox talks
  - Safety Audit
  - Monthly SHE stats reporting and recording
  - Traffic management plan
  - SHE Communication
  - Employee wellness program TB & HIV
  - Waste Management
  - Asset Register

- Inspection registers not limited to the following:
  - ✓ Accident and/or incident register;
  - ✓ Occupational health and safety representatives' inspection register;
  - ✓ Construction vehicles and mobile plan inspections;
  - ✓ Daily inspections of construction vehicles, plant and other equipment by the operator, driver and/or user;
  - ✓ Daily inspections of excavations by competent person;
  - ✓ Record of training;
  - ✓ Record of toolbox talks;
  - ✓ Designer's inspections record;
  - ✓ Inspection and maintenance of explosive powered tools;
  - ✓ Inspection of electrical installations (including inspection of portable electrical tools, electrical equipment and other electrical appliances);
  - ✓ Fall protection inspections;
  - ✓ First-aid box content;
  - ✓ Record of first-aid treatment;
  - ✓ Fire equipment inspection and maintenance;
  - ✓ Record of hazardous chemical substances kept and used on site;
  - ✓ Ladder inspection;
  - ✓ Machine safety inspections (including machine guards, lock-outs etcetera);
  - ✓ Inspection registers and logbooks for lifting machines and –tackle (including daily inspections by drivers/operators);
  - ✓ Inspection of excavation
  - ✓ Inspection of stacking and storage;
  - ✓ Inspection of use and temporary storage of flammable liquids on construction sites
  - ✓ Inspection of housekeeping and general safeguarding on construction site
  - ✓ Inspection of construction employees' facilities
  - ✓ Traffic accommodation signage inspection
  - ✓ Inspection of material hoists
  - ✓ Inspection of bulk mixing plant
  - ✓ Inspection of cranes
  - ✓ Inspection of construction vehicles and mobile plant
  - ✓ Inspections of vessels under pressure;
  - ✓ Inspection of electrical installations and machinery on construction sites; and
  - ✓ Records of issuing of Personal Protective Equipment;

The Principal Contractor must note that the contents mentioned herein must be used as a guideline, It is the responsibility of the Principal Contractor to ensure that the SHE file is comprehensive and entails all the procedures meant to mitigate the project's identified risk and endeavour to meet health and safety legal requirements. The Principal Contractor must ensure that all the Contractors (subcontractors) on site develop and submit a SHE file to the approval of the CHSO, contents thereof must be discussed between the Principal Contractor's CHSO and the Contractors SHE personnel.

6.2. General safety regulations (gsr) requirements

6.2.1. Personal Protective Equipment (Safety PPE and Clothing)

All applicable legislation concerning Personal Protective Equipment (PPE) must be complied with at all times. As a minimum, the following PPE must be worn by all persons (including visitors) at all times whilst on the project site:

- Safety footwear with steel toe protection;
- Face mask;
- Safety glasses (individuals who wear prescription spectacles must be provided with either over-spec safety glasses or prescription safety glasses);
- Safety helmet (hard hat); and
- High visibility protective clothing with reflective taping (long trousers and long-sleeved shirts with collars and cuffs).
- Additional PPE requirements must be informed by hazard identification and risk assessment i.e must be risk based. This hazard-specific PPE (such as hand protection, welding suit, hearing protection and respiratory protection) must be worn as required (e.g. when in a certain area, when performing a certain task, or when working with a certain substance);
- The correct PPE must always be worn:
- In accordance with site requirements (as indicated at the entrances to a project site and at the entrances to buildings and / or designated areas on the premises);
- In zoned areas (e.g. noise zones and respirator zones); or
- As required by a Safe Work Procedure, a risk assessment, safety information boards or a Material Safety Data Sheet (MSDS).

The Principal Contractor and all the Contractors must provide each of his employees with all required PPE (at no cost to the employee). Only in isolated circumstances such as proven act of negligence by the employee should a cost be attached to the replacement of the PPE. The specific PPE that is provided to a particular employee must be based on the nature of that employee‘s work and the location in which the work is performed (i.e. must be based on the hazards and risks which the employee is exposed to). PPE requirements for a particular job or for a particular area must be determined through a risk assessment for that task or area.

Any employee who does not have all of the PPE that is required for him to perform his duties safely will not be permitted to work. Each employee must care for his PPE, maintain it in good condition, and inspect it on a daily basis. If an item of PPE has worn out, has become damaged, or is found to be defective in any way, it must be replaced by the contractor.

PPE must be stored in accordance with the manufacturer‘s requirements and / or recommendations. All PPE issued must be SABS (or equivalent) approved.

Each employee must receive training in the use, maintenance and limitations of the PPE that is provided to him, and must be made aware of why the PPE is necessary as well as the consequences of not wearing it as instructed (i.e. the potential for injury and / or disciplinary action). Training records must be retained.

The Principal Contractor and all the Contractors must conduct a PPE survey so as to define the relevant PPE per project task this must be aligned to the risk profile of the task in question.

Any person who refuses to wear PPE as required must follow the necessary Principal Contractor's disciplinary procedures and must not be allowed to conduct any site tasks. Symbolic signs indicating mandatory PPE requirements must be prominently displayed at the entrances to a project site and at the entrances to buildings and / or designated areas on the premises where additional PPE is required. These signs must comply with the applicable national standard (if one exists).

The Principal Contractor and any other Contractor must appoint an employee to:

- Control the issuing and replacement of PPE;
- Keep an up-to-date register as proof that items of PPE have been issued to individuals (an employee must sign for the items that he receives);
- Ensure that there is an adequate supply of all required PPE (i.e. maintain PPE stock levels on site); and
- Carry out regular inspections to ensure that PPE is being used correctly, is being maintained in a good, serviceable and hygienic state, and is not being shared between employees

6.2.2. Access Control/Admittance of Persons

All persons shall report to the Security Officer at the main site office before proceeding to site. Visitors shall sign a visitors' log book and read through the induction notes as detailed on the induction book. All visitors to be accompanied by an authorized person for inspections and other site related assignments.

6.2.3. Display of Notices, Symbolic SHE signs, Hazard Notices and danger areas

All symbolic safety signage that the Principal Contractor is to use/display shall conform to the requirements of SANS 1186.

The display of the following signs is mandatory:

- For Site Establishment: The Principal Contractor's Company Name Sign must be posted at their site offices to reflect the name and contact details of the: Construction Manager; CHSO; First Aider(s); Health and Safety Representative and Evacuation arrangements.
- The Principal Contractor must ensure that the name board is aligned to the employer's requirements in terms of contents thereof.
- "Radio-Active Material" symbolic signs for radioactive material storage areas.
- The location of every First Aid Box; Fire Extinguisher and Emergency Exit is to be clearly indicated by means of appropriate signage.
- When in use, an explosive Power Tool shall have signage warning of its operation.
- Other specific signage for high risk activities shall be displayed e.g. deep excavations and traffic accommodation signage.
- Contractor(s) shall post Company Name Sign on all fuel storage containers.
- Symbolic SHE signs must be displayed as per the risk profile of the task in the different project areas.

The Contractor shall provide the signage where work is carried out, where unauthorised entry is prohibited and/or where alerting and cautioning passers-by to be aware of potential dangers. Risk based signage shall be installed as the project progresses.

6.2.4. First Aid, Emergency Equipment & Procedures

The Principal Contractor must develop, implement, test and maintain an Emergency Preparedness Plan (incorporating emergency evacuation procedures with all the necessary emergency evacuation routes) that focuses specifically on the Principal Contractor 's team and work activities and sequence. The plan must be risk-based and must detail the procedures that must be followed when responding to all potential emergency scenarios such as a medical emergency (including first aid response), a fire, an explosion, a hazardous substance spill, flooding, rescue from height, rescue from a confined space, mob violence, hostage situation etc.

Consideration must be given also to potential off-site emergency scenarios must be included (e.g. emergency scenarios related to the transport of personnel, strikes, the transport of hazardous materials, and personnel performing work in remote locations and lone working).

The Emergency Preparedness Plan must satisfy and comply with all applicable legal requirements. The plan must be adequately resourced to ensure effective implementation. These resources must include appropriate personnel, external emergency response service providers, emergency response equipment, and warning devices. All equipment and warning devices must be identified, maintained and tested to ensure availability at all times.

Accountability for the Emergency Preparedness Plan must be clearly defined. An Emergency Response Team (ERT) responsible for the implementation, management and execution of the Emergency Preparedness Plan must be established. The roles and responsibilities of each team member must be clearly defined in the plan. Each team member must receive appropriate training to ensure that each role is performed competently.

The process for managing incident communication, notification, and reporting must be incorporated into the Emergency Preparedness Plan. The responsible person(s) must be clearly identified, and the protocols for communicating with internal and external stakeholders must be defined.

Emergency evacuation procedures must be developed and included in the Emergency Preparedness Plan. A copy of the plan must be submitted to the CHSA or the Resident Engineer or his representative for approval prior to site establishment. The Emergency Preparedness Plan must be formally reviewed (and amended if necessary) when project needs require, and following any emergency situation, to ensure that it remains appropriate and effective.

At each project work site, as a minimum:

- A suitable evacuation alarm (whistle or siren) must be provided. All persons working in an area where an evacuation alarm is sounded must respond to it immediately.
- Suitable fire-fighting equipment must be provided and maintained, and personnel must be trained in fire-

fighting procedures and the use of fire-fighting equipment.

- Suitable first aid equipment and supplies must be provided and maintained, and an adequate number of appropriately trained First Aiders must be in place.
- Emergency assembly points positioned in safe locations away from buildings, plant and equipment must be designated (and conspicuously signposted). In the event of an evacuation, all persons (i.e. personnel and visitors) must assemble and be accounted for at these emergency assembly points.
- All personnel must receive awareness training on the applicable Emergency response procedures, and all visitors entering the site must be properly instructed in these procedures.
- The Emergency response procedures must be displayed on each notice board.
- A diagram (site plan) indicating evacuation routes, emergency assembly point locations, and the positioning of emergency equipment (fire extinguishers, first aid boxes, etc.) must be prominently displayed in all buildings and plants, in all offices, on all notice boards, and in other locations on the site as may be required.
- An up-to-date list of emergency telephone numbers must be compiled and maintained. A copy of this list must be posted at each site entrance, in each office, near each telephone, and on every notice board.
- Emergency response drills must be conducted to test the effectiveness of the emergency procedures and equipment, as well as the knowledge and proficiency of the response personnel consisting mainly site personnel. Where appropriate, drills must include liaison with and the involvement of external emergency response service providers. A range of emergency scenarios must be tested including, but not limited to, medical emergencies, fires, rescues, and hazardous substance spills. A drill must be carried out one month after site establishment and then again six months thereafter.

Each drill must be monitored and the outcomes (highlights and shortcomings) must be documented. Corrective actions must be identified and implemented to address the shortcomings, and the Emergency Preparedness Plan and associated procedures must be amended as required.

6.2.4.1. Fire Fighting

The contractor must ensure that Fire Fighting requirements are complied with. An appointed competent Fire Fighter must be appointed to ensure compliance to firefighting requirements. Applicable standards and codes of practice apply.

6.2.4.2. First Aid and First Aid Kits

The Principal Contractor must ensure that First Aiders are trained and appointed as described in the Site Specific Health and Safety Specification and in accordance with relevant legislative requirements.

A suitable first aid kit (i.e. appropriate to the level of training) must be readily available to each First Aider. All kits must be provided and maintained by the contractor.

Taking into account the type of injuries that are likely to occur in the workplace, each first aid kit must contain suitable equipment and supplies. First aid equipment and supplies required by applicable legislation must be provided as a minimum.

The contents of each first aid kit must be kept clean and dry. Each kit must be contained in either a portable weather-proof case / bag or a steel box mounted to a fixed structure. Access to first aid equipment / supplies must be limited to train First Aiders only. Access to portable kit bags must be controlled and steel first aid boxes mounted in the workplace must be kept locked. Approved signage must be in place to indicate the locations of the first aid boxes / bags. A record of each treatment administered must be kept in a suitable register.

No tablets or medication to be stored in the first aid box. No tablets or medication to be administered by first aiders or other personnel to employees who are not feeling well or have been injured.

The first aid kits must, as a minimum, contain the following equipment and supplies:

Table 1:Minimum Requirements to be included when equipping first aid boxes

Item 1:	Wound cleaner/ antiseptic – 100ml;
Item 2:	Swabs for cleaning wounds;
Item 3:	Cotton wool for padding – 100g;
Item 4:	Sterile gauze – minimum quantity 10;
Item 5:	1 x Pair of forceps – for splinters;
Item 6:	1 x Pair of scissors – minimum size 100mm
Item 7:	1 x Set of safety pins;
Item 8:	4 x Triangular bandages;
Item 9:	4 x Roller bandages – 75mm x 5m;
Item 10:	4 x Roller bandages – 100mm x 5m;
Item 11:	1 x Roll of elastic adhesive – 25mm x 3m;
Item 12:	1 x Non-allergenic adhesive strip – 25mm x 3m;
Item 13:	1 x Packet of adhesive dressing strips – minimum quantity 10 assorted sizes;
Item 14:	4 x First aid dressings – 75mm x 100mm;
Item 15:	4 x First aid dressings – 150mm x 200mm;
Item 16:	2 x Straight splints;
Item 17:	2 x Pairs large and 2 x pairs medium disposable latex gloves;
Item 18:	2 x CPR mouth pieces or similar devices.

Additional items / supplies may need to be provided depending on the nature of the workplace (specific hazards) and the level of training of the first aider in position of the kit.

6.2.5. Work in Elevated Positions

There is no scope for working in elevated positions for this project. Where a contractor is appointed to install street lights and light fittings the requirements of Construction Regulations 10 shall be adhered to.

6.2.6. Use and storage of flammable liquids

Refer to Operational Control Section of the SSHSS

6.2.7. Stacking of articles

The Principal Contractor and all the other contractors must, in addition to compliance with the provisions for the stacking of articles in the General Safety Regulations, 2003, ensure that:

- A competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- Adequate storage areas are provided;
- There are demarcated storage areas; and
- Storage areas are kept neat and under control.

6.2.8. Ladders

Access step ladders shall be used for deep excavations, the following requirements shall be complied with regarding ladders and ladder work:

- The term "ladders" refers to both fixed and portable ladders.
- Ladders shall be clearly numbered, and inspected on the register provided.
- A competent person shall be identified and appointed as the ladder inspector.
- Where aluminium ladders cannot be used, then wooden ladders shall be straight grained, unpainted to allow for proper inspection of the grain for cracking.
- Ladders shall be secured at the top and chocked at the base to prevent slipping.
- Where chocking of the base is not possible, then the user shall ensure that the ladder is held in position by another employee when ascending the ladder.
- Ladders shall be inspected a minimum once per month by the person appointed as the ladder inspector.
- Proper storage shall be provided for all ladders when not in use.

6.3. APPLICATION OF CONSTRUCTION REGULATIONS (CR) (2014 REQUIREMENTS

The intended construction work falls within the scope of “construction work” as defined in the Construction Regulations, 2014 made under the Occupational Health and Safety Act 1993 (OHS Act), as amended (“the Act”).

6.3.1. Construction Design Management (CR 6- Duties of Designer)

The Designers must ensure that all the designs for the project are in line with the requirements of Construction Regulation 6 and the requirements for construction material and substances as spelt out in the OHS Act Sect 10: General duties of manufacturers and others regarding articles and substances for use at work are met.

The Designers must demonstrate proof that health and safety by design prevails throughout all the construction stages of the project. As a minimum requirement a Design Health and Safety Report should be compiled at Design Stage and must consequently form part of the contract documentation to be accessible to contractors for construction documentation and management stage.

The minimum requirements of the Design Health and Safety Report should consist but not limited to the following:

- The purpose of the project as outlined by the client / client representative in the project brief.
- All the relevant parties consulted in undertaking the design.
- Design risk register.
- Product Technical statements and relevant material safety data sheets for construction.
- Relevant test results as outlined in the contract documents and relevant code of practice.
- The hazards and risks identified during the design process, and control measures incorporated into the design, specifically in relation to:
    - Any hazardous materials specified in the design.
    - Any unusual or atypical features requiring attention during construction stage.
    - Evidence of consideration of design ergonomics while undertaking the design.
    - Any features of the design which present specific risks.
    - The recommended control measures for any foreseeable activities (for instance operation, maintenance, repair and any disposal requirements).
- Manuals and procedures for safe operations and maintenance post project completion.

The Designers must provide evidence and supporting documentation throughout the Design Development such as:

- Design Development Planning
- Design and development inputs
- Design development controls and related reviews
- Design Development desired outputs and hold points to support design reviews conducted.
- Design and development changes.
- Final Design approval and provision for ongoing design reviews to manage health and safety risks.

6.3.2. Contractor Health and Safety Management System (HSMS)

6.3.2.1. Health and Safety Philosophy

Health and safety is a shared responsibility and team work effort. The client shall endeavour to provide a working environment that is free from health, safety and environmental hazards. To this end, the Principal Contractor and all the other Subcontractors in the project must execute their tasks in the safest possible manner. The Principal Contractor must ensure that a health and safety management system is developed, implemented, monitored and continually reviewed on site to ensure that the risk of harm to employees from construction hazards is reduced to as a low as reasonably practicable. The Health and Safety Management System must clearly outline the following steps 'Plan, Do, Check, Act' and the risk based approach to site tasks, this approach shall be explained in detail to the Principal Contractor upon contractor and subcontractor induction to be conducted by the Construction Health and Safety Agent.

6.3.2.2. Occupational Health and Safety (OHS) Structure and Responsibilities

(i) APPOINTMENTS

All appointment letters must be signed by the appointer and acknowledged by the appointee. Appointment letters must be retained in the SHE file and must be up-to-date with the duration of the appointment. The following legal appointments are relevant to this project:

Chief Executive Officer	[OHSAct Section 16.1]
Project Manager	[OHSAct Section 16.2]
Construction Manager	[Construction Regulation 8.1]
Construction Health and Safety Officer	[Construction Regulation 8(5)]
Construction Supervisor	[Construction Regulation 8(7)]
Construction Supervisor Assistant	[Construction Regulation 8(8)]
Temporary Electrical Installations Insp & Controller	[Construction Regulation 24 e]
Electrical Machinery Inspector	[Construction Regulation 24 d]
Drivers/Operators of Construction Vehicles/Plant	[Construction Regulation 23]
Crane Operator	[Construction Regulation 22 a]
Emergency/Security/Fire Coordinator	[Construction Regulation 29]
Excavation Supervisor	[Construction Regulation 13(1) a]
Excavation Inspector	[Construction Regulation 13 (2) h]
First Aider	[General Safety Regulation 3]
Fire Fighting Equipment Inspector	[Construction Regulation 29]
Hazardous Chemical Substances Supervisor	[HCS Regulations 10]
Incident Investigator	[General Admin Regulation 9]

OH&S Committee	[OHSAct Section 19]
OH&S Officer	[Construction Regulation 8(5)]
OH&S Representatives	[OHSAct Section 17]
Person Responsible for Machinery	[General Machinery Regulation 2]
Risk Assessor	[Construction Regulation 9(1)]
Stacking and Storage Supervisor	[Construction Regulation 28]
Construction Vehicles/Mobile Plant/Machinery Operator	[Construction Regulation 23 (1) d]
Construction Vehicles/Mobile Plant Inspector	[Construction Regulation 23]
Ladder Inspector	[General Safety Regulation 13 A]
Lifting Machine Inspector	[Driven Machinery Regulation 18 (5)]
Lifting Machinery Operator	[Driven Machinery Regulation 18 (11)]
Lifting Tackle Inspector	[Driven Machinery Regulation 18 (10) e]
Goods Hoist Inspector	[Driven Machinery Regulation 17 (2)]
Handtools Inspector	[OHS Act Sect 8]

Based on the HIGH degree of risk attached to the project, a Full-Time Construction Health and Safety Officer (CR 8.5) registered with SACPCMP as a Construction Health and Safety Officer must be appointed to oversee construction health and safety aspects of the project.

The above legal appointments are not exhaustive the Principal Contractor and all the other subcontractors must ensure that the Legal appointments register is updated in line with the changing scope of work and consequent risk register. ***Change of Project Personnel must be done with the approval of the client's representative.***

(ii) ADDITIONAL DUTIES OF PRINCIPAL CONTRACTOR

a) It is the responsibility of the principal contractor to notify the Department of Employment and Labour regarding the intended construction work. Notification of construction work with the Department of Employment and Labour is applicable to this project.
b) Coordination, supervision and monitoring of other contractors on site remains the responsibility of the Principal Contractor.

It is the responsibility of the principal contractor to carry out duties as outlined in the Construction Regulations 7. All subcontractors are required to submit a complete health and safety file to Safety Agent. The later shall evaluate and approve the safety file. A minimum score of 95% must be achieved by any contractor before commencement with any tasks on site.

c) The Principal contractor must provide proof of registration with the Compensation commission or any other registered insurer. The letter of good standing must be valid and available on site all the times.
d) The Principal Contractor must engage with the CHSA with respect to subcontractor challenges when it comes to development and implementation of the safety management system on site which must be aligned to the SSHSS and also the baseline risk assessment for the project.

(iii) MANDATARIES

The Principal Contractor shall be appointed by the client to undertake construction work on site in terms of Construction Regulations 5 (1) k. An Agent (The Project Manager, Project Engineer) is appointed in writing to represent the client. The Construction Regulations places the responsibility on the client to oversee health and safety matters (who in turn appoints a Construction Health and Safety Agent to oversee health and safety aspects of the project. The Project Manager or Project Engineer must be competent to perform project management functions of the project.

(iv) SCHEDULE OF ALL CONTRACTORS

A comprehensive subcontractor list, including key contact persons, shall be maintained on-site. All subcontractors must be evaluated for competence and compliance with health, safety, environmental, and all other applicable legislation.

Each subcontractor shall be legally appointed and required to sign the Construction Regulation 7(1)(c)(v) appointment and the Occupational Health and Safety Act Section 37(1) & (2) Mandatory Agreement.

It is imperative that all subcontractors appointed for this project demonstrate their competence to perform tasks safely, are registered, and maintain good standing with COID.

(v) OCCUPATIONAL HEALTH AND SAFETY ACT SECTION 37(2) AGREEMENTS

The principal contractor shall sign the 37 (1) (2) agreement with the client. All other subcontractors on site shall also sign the Sect 37 (1) (2) upon appointment by the principal contractor.

6.3.3. General OHS provisions

6.3.3.1. Risk Assessment and Method Statement

(**Project specific assessment requirements / Potential Sources of risks, RA Plan and Contractor Health and Safety Plan)**

Detailed hazard identification and risk assessment processes must be followed for all work to be performed as well as for all associated equipment and facilities as required by the Construction Regulation of 2014, Regulation 9(1) – (7).

The Client through the appointed Construction Health and Safety Agent shall provide a baseline risk assessment (BRA) informing the Principal Contractor on the hazards and risks relevant to the project. The Principal Contractor must also conduct a detailed suitable and sufficient risk assessment for the project. The Principal Contractor must ensure that effective procedures and risk assessment systems are in place to control hazards and to mitigate risks to levels that are as low as is reasonably practicable.

The risk assessment processes must be applied to:

- The full life cycle of the project, including any design changes within the project scope of work;
- Routine and non-routine activities;
- Planned or unplanned changes;
- All employees, sub-contractors, suppliers and visitors; and
- All infrastructure, equipment and materials.

The risk assessment processes and methodologies must be in context with the nature and scale of the risks, and must be compiled and implemented by competent persons. To this end, a competent risk assessor must be appointed in writing.

The process of analysing and managing risk must include the following:

- Establishing the context of the risk assessment;
- Identifying hazards and determining possible risk scenarios (unwanted events);
- Evaluating risks and assigning ratings (classification);
- Recording the risk analysis in a risk register;
- Managing risks according to their classification (prioritising for action);
- Identifying and implementing control measures (through the application of the Hierarchy of Controls) to ensure that risks are managed to levels that are as low as is reasonably practicable (ALARP);
- Developing action plans for reducing risk levels (where possible);
- Verifying the completion of actions;
- Re-evaluating the risks and classifications as appropriate; and
- Reviewing and updating the risk register.

6.3.3.2. Baseline Risk Assessments

Prior to site establishment, (the Client or appointed client representative, the CHSA in this instance) will conduct a detailed Baseline Risk Assessment identifying foreseeable hazards and risk scenarios associated with the contractor‘s scope of work on the project site(s) as required by Construction Regulations of 2014, regulation 5(1)(a). Details concerning proposed control measures shall be included. The Principal Contractor shall conduct a task based risk assessment for all the project tasks, ideally th project programme of works should be used to align the task based risk assessment and ensure that all high risk project tasks are adequately assessed. The risk assessment process must be facilitated by a competent person who has been appointed in writing and must involve the participation of the contractor‘s site management representatives, supervisory personnel and technical experts. An attendance register must be completed and retained for reference purpose. The Baseline Risk Assessment must be reviewed and approved by the Project CHSO and Project Construction Manager.

When carrying out a Baseline Risk Assessment or a Task-Based Risk Assessment, Hazard (Energy) Types must be specified. Risk scenarios must be described indicating the manner in which a person may come into contact with, or be exposed to, a specific hazard.

An initial risk rating must be assigned to each risk scenario without taking any control measures into consideration. Control measures for managing the risks to levels that are as low as is reasonably practicable must then be identified for implementation on the project, and a residual risk rating must be assigned to each risk scenario taking the identified control measures into consideration.

A Risk Register comprising of all significant risks (i.e. Risks rated as major or catastrophic) identified for the project will be compiled using the information contained in the project Baseline Risk Assessment as well as the contractor‘s Baseline Risk Assessment. Key control measures for managing each of these risks will be specified in the register.

For the significant risks in particular, action plans will be developed for reducing the risk levels (where possible).

The project Risk Register will be reviewed and, if necessary, updated:

- On a quarterly basis during construction;
- When changes are made to a design and / or the construction scope, schedule, methods, etc. That result in a change to the risk profile; and
- Following an incident.
- Project risk monitoring and review plan must be retained by the contractor and any subcontractor on site.

The Principal Contractor must ensure that the hazards, risk scenarios and control measures identified in the contractor‘s Baseline and Task-Based Risk Assessments are taken into consideration when developing, implementing and maintaining the various elements of the contractor‘s health and safety management system for the project (e.g. Competence, training and awareness requirements).

All persons potentially affected must be made aware of the hazards, risk scenarios and control measures identified in the contractor‘s risk assessments. This must be done through training, Toolbox

Talks, and Daily Safe Task Instructions.

Task-Based Risk Assessments

The Principal Contractor must carry out detailed project-specific Task-Based Risk Assessments which must be reviewed and approved by the Client's appointed CHSA and internally by the Principal Contractor's Project Construction Manager prior to the commencement of any work.

The risk assessment process must be facilitated by a competent person who has been appointed in writing in terms CR 9 sub regulation (1). The contractor's site management representatives, supervisory personnel, technical experts (as required) and workforce personnel directly involved with the task being examined must participate in the risk assessment process. An attendance register must be completed and retained.

Please Note: Under no circumstances may a Contractor's Health and Safety Officer perform a risk assessment in on his/ her own. The active participation of all persons referred to above is mandatory, a risk assessment team must conduct the risk assessment.

A Task-Based Risk Assessment must at least:

- Be accompanied by a Work Method Statement (describing in sufficient detail how the specific job or task is to be performed in a logical and sequential manner);
- Provide a breakdown of the job or task into specific steps;
- Identify the hazards and potential risk scenarios associated with each step;
- Include consideration of possible exposure to noise, heat, dust, fumes, vapours, gases, chemicals, radiation, vibration, ergonomic stressors, or any other occupational health hazard or stressor;
- Describe the control measures that will be implemented to ensure that the risks are managed to levels that are as low as is reasonably practicable; and
- Assign an initial risk rating (without taking any control measures into consideration) and a residual risk rating (taking the identified control measures into consideration) to each risk scenario.

A Task-Based Risk Assessment must be reviewed and, if necessary, updated:

- On an annual basis (as a minimum);
- When changes are made to the associated Work Method Statement; and
- Where there are changes to the project scope.
- Where there are design changes.
- Introduction of new equipment.
- Introduction of new personnel.
- Introduction of new material.
- Following an incident.
- Whenever the need arise based on the progress of the project.

The Principal Contractor and all the other contractors are advised to align the Task Based Risk assessment to the tasks as outlined in the Project Programme of works for their specific project scope of work. The following is a guide in terms of tasks and equipment that require risk assessment:

a) Site establishment
b) Setting out of works
c) Accommodation of traffic
d) Excavation of trenches
e) Construction of bedding
f) Installation of stormwater sewers including construction of inlet, outlet structures and junction boxes
g) Backfilling
h) Structures and appurtenant to stormwater systems (inlets, junction boxes and manholes)
i) Quality control
j) Maintenance of the work during the construction and subsequent liability periods
k) *Any other specific tasks as part of the project works.*

It remains the responsibility of the Principal Contractor and all the other contractors in the project to ensure that the risk assessment is aligned and relevant to their scope of work.

Pre-Task Hazard Assessments (Daily Safety Task Instruction- DSTI)

A pre-task hazard assessment (Daily Safety Task Instruction- DSTI) must be completed before conducting any task on site and whenever a change is identified while carrying out an activity. Any deviation from what was discussed during the Daily Safety Task Instruction (prior to the activity commencing), or anything that was not discussed, constitutes a change.

Before carrying out the particular task that involves the identified change, a few minutes must be spent identifying the hazards and risks associated with that task as well as suitable control measures.

6.3.4. Contractor Health And Safety Plans

The Principal Contractor must prepare, implement and maintain a project-specific Health and Safety Management Plan. The plan must adhere to the requirements of the SHE specification, aligned to the project risk assessment and comply with relevant/applicable legislation. It must cover all activities that will be undertaken as part of the Project from project inception, site mobilisation, project implementation right upto decommissioning.

The plan must demonstrate the Principal Contractor ‘s commitment to health and safety and must, as a minimum, include the following:

- A copy of the contractor‘s **Health and Safety Policy**; in terms of the OHS Act section 7
- Procedures concerning **Hazard Identification and Risk Assessment**, including both Baseline and Task-Based Risk Assessments;
- Arrangements concerning the identification of applicable Legal and Other Requirements, measures to ensure compliance with these requirements, and measures to ensure that this information is accessible to relevant personnel;

- Details concerning Health and Safety Objectives – a process must be in place for setting objectives (and developing associated action plans) to drive continual improvement;
- Details concerning Resources, Accountabilities and Responsibilities – this includes the assignment of specific health and safety responsibilities to individuals in accordance with legal or project requirements, including the appointment of a Project Manager, Health and Safety Officers, Supervisors, Health and Safety Representatives, and First Aiders;
- Details concerning Competence, Training and Awareness – a system must be in place to ensure that each employee is suitably trained and competent, and procedures must be in place for identifying training needs and providing the necessary training;
- Communication, Participation and Consultation arrangements concerning health and safety, including Safety Observations and Coaching, Toolbox Talks, Daily Safe Task Instructions, project health and safety meetings, and notice boards;
- Documentation and Document Control – project-specific documentation required for the effective management of health and safety on the project must be developed and maintained, and processes must be in place for the control of these documents;
- Processes and procedures for maintaining Operational Control, including rules and requirements (typically contained in Safe Work Procedures) for effectively managing health and safety risks, particularly critical risks associated with working at heights, confined spaces, mobile equipment and light vehicles, lifting operations, hazardous chemical substances, etc.;
- Emergency Preparedness and Response procedures;
- Fall protection planning
- Management of Change – a process must be in place to ensure that health and safety risks are considered before changes are implemented;
- Sub-contractor Alignment procedures – a process must be in place for the assessment of sub-contractors and suppliers with regard to health and safety requirements and performance (before any contract or purchase order is awarded);
- Measuring and Monitoring plans, including a plan for the measuring and monitoring of employee exposure to hazardous substances or agents (e.g. Noise, dust, etc.) In order to determine the effectiveness of control measures;
- Incident Reporting and Investigation procedures describing the protocols to be followed with regard to incident reporting, recording, investigation and analysis;

- Non-conformance and Action Management procedures concerning the management of corrective actions;
- Performance Assessment and Auditing procedures concerning health and safety performance reporting, monthly internal audits to assess compliance with the project health and safety requirements, and daily site health and safety inspections; and
- Details concerning the Management Review process followed to assess the effectiveness of health and safety management efforts.

Once the plan has been reviewed, the Principal Contractor must action and resolve any outstanding issues within 7 days from the start of work.

If the issues requiring corrective action are not resolved within this 7-day period, the Principal Contractor shall submit an action plan with relevant commitment dates.

Any proposed amendments or revisions to the Principal Contractor ‘s Health and Safety Management Plan must be submitted and approved by the client’s appointed CHSA.

Should it be identified that the contractor has overlooked a high risk activity, and as a result has omitted the activity and associated control measures from the Health and Safety Management Plan, the plan will not be approved. The Principal Contractor shall be advised to review the Health and Safety Management Plan incorporating the omissions as identified before approval by the CHSA.

6.3.5. H & S Policy

The Principal Contractor must develop, display, communicate and implement a Health and Safety Policy that clearly states the Principal Contractor ‘s values and objectives for the effective management of health and safety as required by OHS Act of 1993, 7(3). These values and objectives must be endorsed by the contractor ‘s management representative (ideally the Chief Executive Officer) and must be consistent with those adopted for the project.

The policy must be signed and dated, and must be reviewed annually. The policy must commit to:

- Compliance with all applicable legal requirements;
- The effective management of health and safety risks;
- Risk based approach to project tasks
- The establishment of measurable objectives for improving performance, and the provision of the necessary resources to meet these objectives;
- The prevention of incidents; and
- Achieving continual improvement with regard to health and safety performance.

All employees of the Principal Contractor as well as the employees of any sub-contractors that may be appointed by the Principal Contractor must be made aware of the policy. This must be done through Health and Safety Induction Training and Toolbox Talks. A copy of the policy must be displayed in each meeting room and on each notice board. The copy of the health and safety (environmental policy) must be available for interested and affected parties.

6.3.6. Legislative Requirements And Site Specific Requirements

The Principal Contractor must comply with the requirements of all applicable health, safety and environmental legislation as well as any other project-specific standards, relevant codes of practice and procedures as issued by the client.

The Principal Contractor must compile and maintain a register of all legal and other (standards, specifications, codes of practice and municipal by laws) requirements relevant to the project. This register must be updated regularly to ensure relevance.

Applicable laws and standards must be appropriately communicated to all employees of the contractor (as well as the employees of any sub-contractors that may be appointed by the contractor) through training, Toolbox Talks, and Daily Safety Task Instructions.

6.3.7. OHS Goals And Objectives & Arrangements For Monitoring And Review Of OHS Performance

The Principal Contractor and all the other contractors are required to maintain zero mandays lost. The contractor will report mandays lost to the client on a monthly basis.

$$\text{LTIR} = \frac{\text{(Number of Lost Time Injuries) x 200 000}}{\text{Total Number of Man-hours Worked Over Period for the Construction Project}}$$

Lost-Time Injury (LTI): *A work related injury or illness resulting in unfitness or absence from normal work activities and the employee's absence is calculated from the time of the incident / accident. Lost-Time Injuries include injuries / accidents where an employee is placed on light-duty or any other duty for which he/she is not normally employed as a result of an accident / injury.*

The Principal Contractor shall establish health and safety objectives and targets and come up with ways of measuring performance with regards to achieving the set objectives. Progress towards the set objectives must be discussed during toolbox talks, safety meetings and ad hoc meetings. A system to report on SHE performance must be put in place by the Principal Contractor.

6.3.8. Training, Competence And Information

(i) General Induction Training

All Principal Contractor and sub-contractor employees shall receive induction training based on the entire safety management system for the project. All project employees inducted, must be in possession of proof of induction. No employee must commence with any site activities without receiving induction training and proof thereof. All subcontractor employees must be inducted before proceeding to site. A programme to induct visitors must also be put in place. No visitor shall proceed to site without being inducted.

(ii) Site/Job Specific Induction Training.

The Principal Contractor must compile a risk based induction programme, this must be based on the hazards and risks identified on site. Site personnel must receive this induction as it is in context with project tasks. The principal contractor's employees and any other subcontractor employees must be in possession of proof of task specific induction training.

(iii) Other Training

The Principal Contractor must conduct training as stipulated by the Construction Regulations and other relevant regulations. Other training to be offered must be based on the Contractor's safety plan and as identified as a control in risk assessment. Other training shall include but not limited to the following:

a) General induction training (Section 8 of the OHSACT- duty to inform).
b) Site / task specific induction for employees and visitors (Section 8 & 9 OHSACT).
c) OHS Representative Training (OHSACT Sect 18 (3).
d) Legal appointees training.
e) Plant Operators, Light Driven Motor Vehicle drivers, Heavy Driven Vehicles drivers (Construction Regulation 23).
f) Basic Fire Fighting (Environmental Regulations 9)
g) Storekeeping methods and stacking storage (Construction Regulation 28).
h) Emergency Coordination (Construction Regulation 29)
i) Hazard identification and risk assessment (Construction Regulation 9).
j) Use of power tools training
k) Flagmen training

Any other training that is meant to mitigate an identified risk as an administrative control.

(iv) Proof of Training

Employees that are required to be trained according to the OHS Act, Construction Regulation and any other relevant legislation shall retain valid proof of training all the times.

(v) Awareness & Promotion

The Principal Contractor is required to create safety, health and environmental awareness for the duration of the project. This can be achieved through but not limited to the following:

a) Use of SHE posters
b) Use of SHE videos
c) Toolbox talks
d) SHE suggestion systems such as suggestion boxes
e) Participating platforms such as SHE meetings.

(vi) Competence

The Principal Contractor shall ensure that all legally appointed personnel including subcontractor employees are competent to execute tasks assigned to them. Proof of competence shall be in the form of formal training and also on the job experience. Verification of proof of competence shall be through planned task observations and recommendations thereof.

Refresher training shall be conducted as and when required. Change in the risk profile of the tasks at hand may also necessitate refresher training for project personnel. Use of power tools such as the whacker, jack-hammer, grinding machines shall require formal training by a registered institution.

All training records shall be retained in the safety file for inspection.

6.3.9. Consultation, Communication And Liaison

The Principal Contractor shall maintain documented information detailing how to communicate, participate and consult with employees and external interested parties on issues of safety, health and environment.

Effective internal communication, participation and consultation is essential for the operation of the safety, health and environmental programme and the achievement of OH&S, Environment objectives. Methods of communication, participation and consultation with employees must be incorporated into all the Procedures and Work Instructions to promote interaction between all relevant levels. Individual and group responsibilities must be defined for recording, reporting and sharing of data and information. Monthly and Quarterly, Health & Safety and Environment Meetings must be held to maintain safety management system in place so as to reduce risk to health, safety and environment.

Effective communication and consultation with external interested parties is a vital component of maintaining a positive working relationship with legal regulators, customers, contractors, OH&S and Environmental interest groups.

A pro-active approach must be taken by communicating and consulting with staff in setting objectives and targets for SHE performance improvement.

The Principal Contractor must ensure that, SHE Procedures and method statements must describe the information and data to be recorded and communicated for effective operation of the SHE management System.

All personnel in the project or through a representative (Supervisor) must be:

- Involved (take part) with the development and review of Safe Work Procedures related to the hazards of their activities/area.
- Consulted with regard to changes that affect their health and safety, and the environment.
- Represented on OH&S matters by their Safety Representative.
- Informed who their Safety Representative and OH&S and or any other safety appointee are by means of notices on the notice boards.

The Principal Contractor must ensure that Procedures that have a specific role in the formal communication system include:

- **Responsibility, Authority and Resources** informing all personnel of the structure, responsibility and resources for OH&S, Environmental. This assists with the understanding of the sources of OH&S, Environmental information and who should be advised of OH&S and Environmental.
- **Document Control** ensuring the communication of correct instructions to all personnel by defining and controlling the distribution of documentation of the OHS and Environmental System.
- **Procurement** communicating OH&S and Environmental expectations to individuals and organizations that provide products and services. Suppliers and contractors are expected to comply with OH&S and

Environmental rules relating to the contractor's and subcontractor's policy and procedures when on site. The contractor must ensure that major suppliers carry out suitable OH&S and Environmental controls depending on the actual or potential OH&S and Environmental impacts of their products and services. This control also applies to any subcontractor on site.

- **Corrective Action** The contractor must identify problems arising from non-conformance incidents, accidents, emergencies and internal audits and communicating the causes, responsibilities and remedial action.
- **Internal Audits** The contractor must monitor the effective implementation of the SHE policies and procedures and communicating the results to all salient stakeholders in the project.

The Principal Contractor and any other subcontractor in the project must ensure that other specific communication methods that are used to capture and share information on OH&S and Environmental issues including:

- **Team Briefings** must be conducted to advise project personnel on current issues and to seek ideas and opinions. All relevant topics must be discussed. Frequency of team briefings shall be determined by the contractor and all the other subcontractors in the project.
- **Notice Boards** must be conspicuously displayed on site to advice personnel of the SHEQ Policies, performance and initiatives for OH&S and Environmental improvement.
- **Safety & Wellness program and 5-minute Safety Talks** shall include general OH&S and Environmental information and must aim to maintain a constant awareness of OH&S and Environment by all employees. It must include OH&S and Environment incidents and monthly OH&S and Environmental statistics.
- **External Communication of Significant Aspects** The contractor shall evaluate the identified significant aspects; determine which of these will have an influence outside of company boundaries. Such aspects must be communicated to the relevant interested and affected parties, both internally and externally.

External communication on significant aspects shall only take place provided the communication is related to a legal requirement.

- **After-Hours communications:**

The contractor shall ensure that after-hours communications are limited to emergencies and contact details for emergencies must be available on the notice board on the site's entrance gate.

- **A letter of notification** must be used to notify interested parties e.g.

– Neighbouring companies
– Department of Employment and Labour - Chief Inspector
– Provincial Director
– Emergency Services
– Local Town Council.
– The local community any other interested and affected parties

6.3.10. Checking And Reporting And Corrective Action

Monthly Audit by Client (CR 5(1) o).

The client through the appointed CHSA shall monitor and ensure that contractor is implementing the safety plan in place by conducting monthly audits as per Construction Regulation 5 (1) o. The client reserves the right to appoint a competent person to conduct these audits, the CHSA in this case.

Other Audits and Inspections by Client

The client technical personnel including the appointed SHE personnel reserve the right to conduct scheduled site inspection. The Principal Contractor and any other subcontractor must ensure that a competent representative accompanies the team on any inspection conducted.

Conducting an Audit

The Principal Contractor must ensure that he has an appointed representative to accompany the auditor, it is the responsibility of the Principal Contractor or any subcontractor to ensure that findings raised are closed within a reasonably practicable timeframe. The turnaround time for closing the findings shall be agreed between the CHSA and the Principal Contractor, this shall be based on the degree of risk with regards to the finding raised.

An action plan with commitment dates and resources required to close SHE legal compliance audit finding must be sent to the CHSA within 3 days after notification of the finding. The Principal Contractor must commit to adhere to commitment dates as outlined in the action plan.

All the OHS legal compliance audit findings must be addressed through a Request For Improvement (RFI) system that aims to identify and conclusively address the root cause so as to mitigate the probability of recurrence. The RFI form, shall form part of the annexures to the SHE specification. The CHSA shall conduct formal month SHE legal audits without any prior arrangement or formal notice to the Principal Contractor or contractors on site. Ad hoc inspections shall be conducted ongoing as measure for health and safety monitoring and control.

Construction Regulations 5 (1) q Site works stoppages

The CHSA has the authority as vested upon him by the client in line with CR 5 (1) q…'stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site'

The CHSA shall conduct ad hoc OHS inspections and the outcomes shall also be incorporated to the monthly OHS legal compliance audit. The CHSA reserves the right to conduct OHS inspections and OHS legal compliance without any prior notification to the Principal Contractor. This is based on the premise that the project MUST be compliant all the times.

OHS legal compliance audit rating

0 to 50% Fail	**51 to 79% Not acceptable**	**80 to 89% Acceptable-improvements required**	**90 to 100% Desired**

For any given period under review the Principal Contractor or any other contractor appointed on the project must aim to achieve the DESIRED OHS legal compliance audit score that is between the 90- 100% range. Where the PC achieves an audit score in the ranges of 0-50% & 51- 79% this shall give strong motivation for suspension of site works pending rectification of the OHS deviations raised.

In any month where there were temporary work stoppages based on OHS deficiencies by the Principal Contractor or any other appointed contractor, the OHS audit score for the month shall be categorised as unacceptable by default.

Principal Contractor's Audits and Inspections

The Principal Contractor shall conduct SHE monthly audits to measure performance of the SHE management system in place. Records of such audits and inspections must be retained in the safety file for record keeping and inspection. The appointed CHSO must engage Supervisor(s), the Construction Manager and other relevant personnel in terms of addressing the findings raised during the internal audit.

Inspections by OH&S Representative's and other Appointees

The appointed SHE Rep shall conduct daily and weekly inspections to identify any situations that are a risk to health and safety within the project. Any deviations noted must be immediately reported to the Supervisor or the personnel responsible for the area.

Recording and Review of Inspection Results

Records of formal inspections and audits must be filed and reviewed during SHE committee meetings, SHE meetings and during progress and technical meetings as held be the client.

Reporting of Inspection Results

The principal contractor is required to formally present a monthly audit report to the client at the end of each respective month.

6.3.11. Operational Control

6.3.11.1. Construction Work Permit (CR 3) or Notification of Construction Work (CR 4).

In the vent that that client meets the requirements of Construction Regulation 3, the Client shall apply for a Construction Work Permit at least 30 days prior commencing of any construction work. However, if the requirements of permit application are not met that means the contract meets the requirements of Construction Regulation 4, the contractor shall notify the Department of Labour 7 days before any construction works begins. The notification to the Department of Employment and Labour must valid for the duration of the contract and retained in the safety file. The notification must be in the form of Annexure 2 of the Construction Regulations 4. The project triggers Notification of Construction Work with the Department of Employment and Labour.

6.3.11.2. Emergency Preparedness (EP), Contingency Plan and Response

(See 5.2.4 of the specification).

6.3.11.3. First Aid (See 5.2.4 of the Specifications)

6.3.11.4. Security

All persons shall report to the Security Officer at the main site office before proceeding to site. Visitors shall sign a visitors' log book and read through the induction notes as detailed on the induction book. All visitors to be accompanied by an authorized person for inspections and other site related assignments.

All Security Personnel to be in good standing in terms of PSIRA. A habitable guardhouse should be provided for all security personnel.

6.3.11.5. Provision for substance abuse on site

The contractor must ensure that all personnel under his authority do not at any time enter the site or perform any work whilst under the influence of alcohol, a drug, or any other intoxicating substance. To this end, the Principal Contractor shall put in place an adequate substance abuse, alcohol and drug policy in place.

Selling or possessing drugs, alcoholic beverages or any other intoxicating substance on the site is strictly prohibited. This constitutes a dismissable offence and the SAPS shall be engaged whenever such behaviour is discovered on site.

A drugs and alcohol testing program will be implemented. Persons entering the site shall be daily/ randomly tested. Any person who tests positive for alcohol or drug consumption will be subject to disciplinary action and shall be permanently removed from the site.

Any person has the opportunity to rather report that he/she is under the influence before accessing the project site – in these case the employee may only be sent home for the day by the responsible Project Manager representative but will then be tested for the following five days (each day) on his return to the project site. If it is found that the same person is frequently reporting that he/she is under the influence before even accessing the project site, It shall be the responsibility of the nominated project management representative to take disciplinary action and remove such a person‘s from the project site.

Should the actions and / or demeanour of an employee suggest possible drunkenness, the employee must be removed from the site. This may be done without testing.

Note: All personnel involved in an incident / accident must immediately be subjected to an alcohol test and a drug test as part of the investigation.

6.3.11.6. Excavation Work (CR 13)

Prior to commencing work on any trench or excavation, the Contractor shall first submit a completed Excavation Method Statement and risk assessment to the Engineer or any appointed client’s representative for approval. After reviewing the method statement, the Engineer or appointed client’s representative shall sign and approve retain a copy and issue the signed original to the contractor. For all trenches or excavations over 7 meters deep, the contractor or any appointed subcontractor must have the sloping, shoring, or shielding method reviewed by a Licensed Professional Engineer (Excavation Technologist) of discipline. The design must be submitted to the Engineer as an attachment to the Excavation method statement.

The Principal Contractor shall ensure that a full sketch is provided as part of the method statement detailing the excavation and the location of underground services.

The Principal Contractor shall ensure that the requirements of the Employer’s trenching and excavation procedure is complied with during activities. This will include the marking of the excavation boundaries, the location of all known services, performing a scan with a cable locator or Cable Avoidance Tool (CAT) by a trained individual, and also performing a physical evidence survey (ground trothing).

The Principal Contractor shall appoint a competent person to fill out the permit and monitor all trench and excavation work where required. Daily excavation inspections are also required to be performed and documented, an excavation Supervisor must be appointed to perform this function.

Adequate precautions shall be taken to prevent the collapse of excavations, as well as to prevent rocks and loose material falling onto workers. Sloping, shoring or shielding shall be provided for all excavations over 1.5 meters in depth. Angle of repose for project site shall not exceed 1:1 unless otherwise approved by a Licensed Professional Engineer of discipline and approved by the Engineer.

All excavations shall be clearly demarcated and securely barricaded to prevent unauthorised access. Only solid barricading will be used at areas where a fall hazard is present. Solid barricading such as fencing shall be provided by the Contractor around all holes or openings to prevent any person being injured as a result of a fall. Safety nets may only be used as a pre-warning to make the solid barricading more visible and to prevent persons from coming too close to the danger area.

If an excavation or trench endangers the stability of buildings or walls, shoring, bracing, or underpinning will be provided by the Contractor with prior approval from the Engineer. Excavations and trenches that are adjacent to backfilled excavations or trenches, or which are subject to vibrations from railroad traffic, road traffic, blasting or the operation of machinery (e.g., shovels, cranes, trucks), must be secured by a support system, shield system or other protective systems (i.e., sheet pile shoring, bracing).

No backfill material shall be allowed to be within 1 meter of the excavation edges. All excavations shall be on a register and inspected daily (documented) before work commences and after inclement weather (e.g. rainfall) by an appointed competent person. When declared safe work can recommence and the findings recorded in the register. If the excavation is not safe to use, remedial action shall be taken before the work site is re-opened.

Deep excavations (6 meters) shall have an escape ladder for access/egress and use in emergencies.

The contractor shall ensure that all precautionary measures as stipulated for confined spaces are determined. No work shall commence in an excavation unless the excavation has been declared safe by the competent person.

The Contractor shall conduct a cable scan using a device that can detect cables and other services. The Contractor shall ensure that the operator of the scanner is adequately trained and competent to use the device to its full capabilities with and without the use of a signal generator.

6.3.11.7. Protection of Overhead & Underground Services

The Principal Contractor shall be responsible for ensuring full compliance with all requirements related to work near existing overhead and underground services, including the following:

1. Overhead Services:
    - A minimum three-meter buffer zone shall be maintained when working in proximity to live overhead cables, unless otherwise specified by the relevant service owner.
    - In cases where work must be undertaken closer than the prescribed distance, the Principal Contractor must ensure that the relevant authority is notified and all compliance conditions are met before commencement of such work.
    - Enhanced safety buffer zones shall be implemented where circumstances warrant additional precautions.
2. Underground Services:
    - A cable detector shall be utilised to locate and identify all underground services prior to any excavation activities.
    - This detection process shall be carried out in conjunction with the relevant wayleaves issued by the Client.
    - All areas identified as containing underground services shall be clearly marked.

- Excavation in such identified areas shall only be carried out under the supervision of a competent and formally appointed Excavation Supervisor.

3. Wayleave Management:
   - The Principal Contractor shall ensure that all wayleaves issued by local authorities are valid and up to date throughout the project duration.
   - A comprehensive wayleave register must be maintained, recording all wayleaves and their corresponding expiry dates.
   - The Contractor shall proactively renew any wayleaves prior to their expiry, ensuring there is no lapse in authorisation.
   - The Principal Contractor remains responsible for identifying and verifying the presence of any additional existing services within the project boundaries, beyond those identified in the wayleaves provided.
4. Permit Requirements:
   - Where specific works require special permissions or permits (e.g., excavation on public roads), the Construction Health and Safety Officer (CHSO) must ensure that all relevant approvals are obtained in advance from the appropriate local authorities.
   - All conditions attached to such permits and wayleaves must be adhered to at all times.

The Principal Contractor shall remain fully accountable for the implementation of these requirements, ensuring that all service-related risks are managed effectively and in compliance with applicable regulations and service provider conditions.

6.3.11.8. Cranes and Lifting Equipment

Lifting equipment must be designed and constructed in accordance with the manufactures/designers specifications as well as generally accepted technical standards and operated, used, inspected and maintained in accordance with the manufactures requirements as well as that of the of Driven Machinery Regulations promulgated in terms of the Occupational Health and Safety Act (Act no 85 of 1993):

The Driven Machinery Regulations requires that:

- Lifting equipment be clearly and conspicuously marked with the maximum mass load (MML) that it is designed to carry safely. When the MML varies with the conditions of use a table showing the maximum mass load with respect to every variable condition shall be posted up by the user in a conspicuous, place easily visible to the operator and the table shall be used by the driver/operator;
- Each winch on a lifting machine must al all time have, at least, three full turns of rope on the drum when the winch has been run to its lowest limit;
- Lifting equipment shall be fitted with a brake or other device capable of holding the MML. This brake or device shall automatically prevent the downward movement of the load when the lifting power is interrupted;
- Lifting equipment shall be fitted with a load limiting device that automatically arrest the lift when the load reaches its highest safe position or when the mass of the load is greater than the MML;
- Every chain or rope on a lifting machine that forms an integral part of the machine must have a factor of safety as prescribed by the manufacturer of the machine. Where no standard is available the factor of safety must be:
  - chains – 4 (four)
  - steel wire ropes - 5 (five)
  - fibre ropes- 10 (ten)
- Every hook or load attaching device must be designed to prevent the load from slipping off or disconnecting;

- Every lifting machine must be inspected and load tested by a competent person every time it has been dismantled and re-erected and every 12 months after that. The load test must be in accordance with the manufacturer's requirements or to 110% of the MML. In addition, all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices forming an integral part of a lifting machine must be inspected every 3 months (quarterly) by a competent person;
- All maintenance, repairs, alterations and inspection results must be recorded in a log book and each lifting machine must have its own log book; and
- No person may be lifted by a lifting machine not designed for lifting persons unless in a cradle approved by the inspector of the Department of Labour.

General requirements for cranes and lifting equipment

All documentation must be provided to the client's appointed CHSA or appointed Project Engineer prior to mobilisation. Failure to do so and the resulting cost of any delays and/or remedial activities will be for the Contractor's account.

All crane operators must be authorised by the relevant Engineer before they may operate a crane or lifting machine. The Load charts must be displayed in the cab of the crane.

Daily pre-use inspections of the cranes must be done and be kept on the file. The inspections must be logged in a logbook. The area in which a lift is performed must always be barricaded to prevent employees from entering.

A crane or lifting machine must not be left unattended and the keys may never be left in the ignition when the operator is not present. Properly constructed out rigger pads must be used when soil is uneven or unstable. (Only sleepers or appropriately designed steel plate pads may be used for this purpose).

Only a competent rigger may direct a lift of any kind unless the following requirements are met. Rigger assistants used for performing lifting operations shall be limited to lifts with all of the following requirements:

- Lifts lower than 5 tons
- Easy lifts that does not require the load to be lifted over structures, equipment or machinery
- Equipment that is not critical
- Rigging configuration that requires the attachment of several parts of lifting equipment such as chain blocks to adjust the angle of loads.

All safety devices on a crane or lifting machine must be functional.

All personnel responsible for lifting operations shall be appropriately identifiable.

Cranes and Lifting Machines

A contractor must in addition to compliance with the Driven Machinery regulation, 1988 ensure that tower cranes are used-

- They are designed and erected under supervision of a competent person;
- A relevant risk assessment and method statement are developed and applied

- The effects of wind forces on the crane are taken into consideration and that a wind speed device is fitted that provides the operator with an audible warning when the wind speed exceeds the design engineer's specification;
- the bases for the tower cranes and tracks for rail-mounted tower cranes are firm, level and secured;
- the tower cranes operators are competent to carry out the work safely and;
- the tower crane operators a have a medical certificate of fitness to work in such an environment, issued by an Occupational Health Practitioner in the form of Annexure 3

Crane Test Certificate

The Contractor's CHSO and the Responsible Engineer must inspect all cranes and lifting machines before they are brought onto the construction site.

Certification will be required for record purpose, and shall cover the following:

- A Brake or other device capable of holding the maximum mass should the power fail, or which is such that it shall automatically prevent the uncontrolled downward movement of the load when the raising effort is interrupted; and
- A limiting device which shall automatically arrest the driving effort when:
- the Hook or Load attachment point of the Power Driven lifting machine reaches its highest safe position; and
- in the case of a Winch Operated lifting machine with a lifting capacity of 5000kg or more; the load is greater than the rated mass load of such machine.

No user shall use or permit any person to use a Jib-Crane with a lifting capacity of 5000kg or more at a minimum Jib radius, unless it is provided with:

A load indicator that shall indicate to the operator of the Jib-Crane the mass of the load being lifted, provided that such a device shall not require manual adjustment from the application of the load, to the Jib-Crane, until the release of the load.

A Limiting Device which shall automatically arrest the driving effort whenever the load being lifted is greater than the rated mass load of the Jib-Crane.

The user shall ensure that every lifting machine is operated by an Operator specifically trained for a particular type of lifting machine; the user shall not require or permit a person to operate such lifting machine unless the operator is in possession of a certificate of training, issued by an accredited person or organisation.

Acceptance of Cranes on Site

No Crane shall be used at arrival on site before copies of all documentation have been handed over to the Contractor's CHSO, or the CHSA or the appointed Resident Engineer and the Crane have been checked by a person dually authorised and signed off as acceptable. Copies of all documentation must be kept in the SHE File at all times.

No Crane shall be used without a pre-use check and findings entered on an approved checklist.

Before any cranes are established on site the following must be inspected and approved:

- Operator's licences
- Training certificates
- Medical fitness certificate.
- The cranes load test certificate.
- Rope test certificates including Mill / Destructive test.
- The lifting gear load test certificates.
- The load limiting device calibration certificate.
- Proof that the hooks have been measured for spreading.
- The service inspection history.
- monthly comprehensive inspection certificate
- Operation and maintenance Manuals and crane condition.

Mobile Crane near Power Lines

No mobile cranes are to be used near overhead power lines until the client's Representative has been notified and provided safe access conditions and a valid permit to work is obtained. Mobile cranes shall be effectively earthed when working in the vicinity of electrical wires. Assume that all electrical equipment and wires are live and avoid them.

Skyjacks

- No Skyjack shall be used before the Jack has been inspected and passed by the Resident Engineer.
- The Test Certificate, no older than three (3) months shall be produced.
- The Safe Working Load shall be clearly displayed.
- The Operators shall make use of Safety belts / Harnesses at all times.
- Only trained, competent and appointed persons shall operate Skyjacks.
- Proof of Training and Training program shall be submitted.
- No person shall stand of the Handrails of a Skyjack.
- When a Skyjack is not operational, it shall be stopped, no lower than three (3) meters above ground level.
- The Operator shall make use of a ladder to get in and out of the Skyjack. The ladder shall be removed to safekeeping when stopped and not in use.
- The Power supply shall be disconnected when not in use thus preventing unauthorised

Lifting tackle

The following requirements will apply to lifting tackle:

- Manufactured of sound material, well-constructed and free from patent defects;
- Clearly and conspicuously marked with an identity number;
- MML factor of safety:
  - Natural fibre ropes - 10(ten)
  - Man-made fibre ropes and woven webbing - 06(six)
  - Steel wire ropes – single rope - 06(six)
  - Steel wire ropes – combination slings - 08(eight)
  - Mild Steel chains - 05(five)
  - High tensile/alloy steel chains - 04(four)
- Steel wire ropes must be examined by a competent person every three months and the results recorded in a designated log book. The ropes must be discarded (not used any further for lifting purposes) when wear and corrosion is evident.

Machine operators

The following requirements will apply to machine operators:

- Every lifting machine operator must be trained specifically for the type of lifting machine that he is operating.
- Operators of Jib cranes with a MML of 500 kg or more must be in possession of a certificate of training issued by a training provider accredited by The Department of Employment and Labour.

Material hoists

A contractor must ensure that every material hoist and its tower have been constructed in accordance with the generally accepted technical standards and are strong enough and free from defects. (2) A contractor must ensure that the tower of every material hoist is -:

(a) Erected on firm foundations and secured to the structure or braced by steel wire guy ropes, and extends to a distance above the highest landing to allow a clear and unobstructed space of at least 900 millimetres for over travel;

(b) Enclosed on all sides at the bottom, and at all floors where persons are at risk of being struck by moving parts of the hoist, except on the side or sides giving access to the material hoist, with walls or other effective means to a height of at least 2100 millimetres from the ground or floor level; and provided with a door or gate at least 2100 millimetres in height at each landing, and that door or gate must be kept closed except when the platform is at rest at such a landing.

A contractor must cause –

(a) the platform of every material hoist to be designed in a manner that it safely contains the loads being conveyed and that the combined mass of the platform and the load does not exceed the designed lifting capacity of the hoist;

(b) the hoisting rope of every material hoist which has a remote winch to be effectively protected from damage by any external cause to the portion of the hoisting rope between the winch and the tower of the hoist; and

(c) every material hoist to be provided with an efficient brake capable of holding the platform with its maximum load in any position when power is not being supplied to the hoisting machinery.

No contractor may require or permit trucks, barrows or material to be conveyed on the platform of a material hoist and no person may so convey trucks, barrows or material unless those articles are secured or contained in a manner that displacement thereof cannot take place during movement.

A contractor must cause a notice, indicating the maximum mass load which may be carried at any one time and the prohibition of persons from riding on the platform of the material hoist, to be affixed around the base of the tower and at each landing.

A contractor of a material hoist may not require or permit any person to operate a hoist, unless the

person is competent in the operation of that hoist.

No contractor may require or permit any person to ride on a material hoist

A contractor must ensure that every material hoist –

(a) Inspected on daily basis by a competent person appointed in writing by the contractor and such competent person must have the experience pertaining to the erection and maintenance of material hoists or similar machinery;

(b) Inspection contemplated in paragraph (a), includes the determination of the serviceability of the entire material hoist, including guides, ropes and their connections, drums, sheaves or pulleys and all safety devices; (c) Inspection results are entered and signed in a record book by a competent person, which book must be kept on the premises for that purpose;

(d) Properly maintained and the maintenance records in this regard are kept on site.

6.3.11.9. Construction Vehicles and Mobile Plant

All vehicles brought to site must meet safety requirements. Each vehicle to be used on site must be inspected and approved by the client's representative before a site access permit will be issued for the vehicle / equipment. No vehicle shall be permitted to enter the site unless it is duly authorised. Access permits are vehicle-specific and may not be transferred between vehicles.

The contractor must allow any vehicle that is brought onto site (including privately owned vehicles) to be searched at any time while on the premises, or when entering or leaving the premises.

The Principal Contractor is solely responsible for the safety and security of all vehicles (including private vehicles) that is brought onto the site. All road-going vehicles used by the contractor on the site must be roadworthy and registered with the relevant traffic authority.

A vehicle will not be permitted to enter the site in an un-roadworthy condition. Access will be denied if, for example, but not limited to:

- The vehicle has a defective exhaust system;
- A serious oil or fuel leak is evident;
- The vehicle has unsafe bodywork or is carrying an unsafe load;
- The vehicle is fitted with extraneous or non-standard equipment;
- Passengers are not seated properly;
- The vehicle is not fitted with a seat belt for each occupant; or
- The vehicle has any obvious mechanical defect;
- Pre-inspection requirements are not met.

Overloaded vehicles will not be permitted to enter the site. The driver / operator of any vehicle / mobile equipment must carry a copy of his appointment with him at all times. Each driver / operator must:

- Comply with all site rules and regulations pertaining to traffic and the safe operation of vehicles / mobile equipment;
- Obey all road signs;
- Obey all instructions given by security or emergency services personnel;
- Remain within the boundaries of the site; and
- Ensure that the vehicle that he is operating is never overloaded, and that loads are always properly secured.

In the interest of safety, only the minimum number of vehicles required by the contractor to complete the work under the contract will be permitted to enter the site. When not in operation, the contractor‘s vehicles / mobile equipment must be parked within the boundaries of his lay- down area or yard.

Parking is only permitted in designated parking areas. All cars are parked on site at the owner‘s risk. In the event of a vehicle accident on site, the driver(s) must report the incident immediately and must remain at the scene until a nominated project management representative arrives, or until a nominated project management representative authorizes him to leave (unless, of course, the driver requires medical attention).

Construction Plant

- All plant must comply with the OHSA and Regulations requirements in relation to operation and maintenance thereof.
- Records of service and maintenance of the vehicles must be of a high standard at all times.
- All plant shall subject to design be fitted with back-up alarms and audible indicating devices.
- The Principal Contractor/Contractor shall ensure that all construction plant's moving parts are adequately protected.
- Pre-start inspections shall be conducted on all motorised equipment daily, deviations of such inspections shall be recorded.
- Construction plant identified for use shall be operated by a trained and authorised operator only.
- All construction plant shall be operated under the direct supervision of a person competent to identify potential hazards in the work he is conducting.
- Work involving the use of construction plant shall be conducted in accordance with an approved Risk Assessment.
- The Principal Contractor/Contractor shall ensure all operators are equipped with the necessary PPE namely; safety shoes, overall, safety glasses, and gloves.
- All Plant shall be fitted with an extinguisher where practicable.
- Washing shall be conducted in the designated washing areas.

The Principal Contractor/Contractor shall ensure the all equipment moving to and from site is adequately secured, and that all Principal Contractor/Contractor abide by this requirement.

The Principal Contractor/Contractor must provide proof of medical and psychological fitness including training of all operators engaged in the construction activity.

Transport of Personnel

- Should it be necessary for the Principal Contractor/subcontractor to transport their personnel to site, only safe vehicular transport must be provided. This shall include proper seating, side restraints and cover. Seats shall be firmly secured and adequate for the number of employees to be carried.
- No personnel shall be permitted to travel on any plant or equipment on the site works.

Road safety principles shall be adhered to on and off site, this includes adherence to the Road Traffic Management Act.

6.3.11.10. Electrical Installations (CR 24)

The installation of temporary electrical installations shall comply with Construction Regulation 24 and the Electrical Installations Regulations.

The Principal contractor must ensure that the following are in place for all electrical installations:

a) Existing services are located and marked before construction works commences, markings must be clearly visible also during the construction work.
b) Suitable protective work must be provided to employees working with equipment such as jackhammers. Suitable personal protective equipment includes but not limited to the following: rubber mats, insulated handles, non-electricity conductor wear.
c) Electrical equipment must be suitable for intended site works.
d) Temporary electrical installations must be inspected at least once a week by an appointed Temporary Electrical Installations Inspector (competent). Records of such inspections must be retained in the safety file.
e) All electrical equipment in use on site must be inspected before use by a competent (operator), such inspection records must be retained in the safety file.
f) A Certificate of Conformance (CoC) must be issued by a competent person for all temporary electrical installations.

6.3.11.11. Electrical and Mechanical Lockout

The Principal Contractor is mandated to develop a mechanical and electrical lock out procedure, which shall be submitted to the client for approval before any construction work commences. The Principal Contractor and any appointed subcontractor must adhere to the lock-out procedure in place.

6.3.11.12. Use and Storage of Flammables

Storage of fuel and other hazardous chemical substances on site shall be done upon prior approval in writing by the client or his nominated representative.

If the on-site storage of a fuel or a flammable liquid is approved, the contractor must ensure the following:

- The quantity of fuel / flammable liquid to be stored on site must be kept to the minimum that is required;
- Applicable by laws in terms of fuel storage on site are adhered to i.e notification of relevant local authorities;
- The storage area must be located in a well-ventilated area at least 10 metres away from any building, drain, boundary or any combustible material;
- If more than 200 litres of fuel / flammable liquid is to be stored, the tank must be installed / the containers must be positioned within a bund;
- If the fuel / flammable liquid is to be stored in bulk tanks / vessels, then the minimum capacity of the bund must be 110% of the volume of the largest tank / vessel. If many small containers (e.g. 210 litre drums) are to be stored, the bund must be able to contain 25% of the total volume of the stored products;
- The bund must be impermeable. It must have a solid concrete floor and the walls must be constructed out of brick and must be plastered on the inside;
- The bund must be fitted with a lockable drain valve (for draining away rainwater), which must remain locked in the closed position. The valve may only be opened under supervision and in accordance with a written procedure;
- The fuel / flammable liquid storage area may not be used for the storage of any other materials / equipment, and must be kept completely free of all combustible materials (including rubbish, brush and long grass) at all times;
- Access to the storage area must be controlled (wire mesh fencing and gate);
- The contractor must ensure that appropriate warning signage (i.e. —Flammable Liquid, —No Smoking and —No Naked Flames) must be prominently displayed at the storage area. The contents and volume of each tank must be indicated;
- In order to contain spillages, the offloading / refuelling bay at the fuel / flammable liquid storage area must have a solid concrete base surrounded by bund walls, ramps or humps and / or spill trenches (covered with steel grating) that lead into a sump;
- Fuel dispensing pumps must be protected against impact damage;
- All fuel / flammable liquid storage tanks and dispensing equipment must be electrically bonded and properly earthed;
- All electrical installations and fittings must be of an approved intrinsically safe type;
- Two 9kg dry chemical powder fire extinguishers must be mounted in an easily accessible position near the entrance gate to the fuel / flammable liquid storage area. Depending on the size of the storage area, additional fire extinguishers may be required to ensure that an extinguisher is no further than 10 metres away from any point on the perimeter of the storage area;
- A fire extinguisher must be at hand wherever refuelling is carried out;
- Smoking or open flames within 5 metres of a fuel / flammable liquid storage / refuelling area is strictly prohibited;
- No petrol or diesel powered vehicle or equipment may be refuelled while the engine / motor is running;
- Cellular phones must be switched off in fuel / flammable liquid storage / refuelling areas;

- Spill clean-up kits (containing a suitable absorbent fibre product) must be provided;
- Any spillages must be cleaned up immediately and all contaminated cleaning materials must be disposed of in accordance with the applicable legislation;
- If a flammable liquid is spilt or is leaking from a container / vessel, the area must be cordoned off and appropriate warning signage must be displayed to keep unauthorized personnel away from the affected area. Every effort must be made to contain the spillage. All hot work in the vicinity must be stopped immediately. If the spilt product is volatile and the possibility exists that a vapour cloud may form, or if the leak or spillage cannot be contained or stopped, then appropriate emergency response procedures must be activated, including the evacuation of all persons in the vicinity. Suitable firefighting equipment must be positioned ready for use should the spilt product ignite;
- The manual decanting of fuel or a flammable liquid from a large container should only be done using a stirrup pump (or similar) or a purpose-made frame which allows the container

/ drum to tilt for decanting and then return to the upright position;

- Drip trays must be used wherever required;
- All tanks, drums, cans, etc. containing flammable liquids must be tightly closed and properly sealed except for when a container is being filled or when a product is being decanted;
- The transport or storage of corrosive or flammable liquids in open containers is strictly prohibited;
- Daily-use quantities of fuel (up to a maximum of 20 litres) must be handled in an approved safety can with a flash arresting screen, spring closing lid and spout cover that will safely relieve internal pressure if the can is exposed to fire;
- Where safety cans may be impracticable, only approved metal containers with screw caps may be used. Each container must be clearly labelled to indicate its contents;
- Only small quantities of flammable liquids (paints, solvents, etc.) may be stored within a building. Each product must be kept either in its original container or in an approved container which must be properly sealed. Each container must be clearly labelled to indicate its contents. When not in use, all such containers must be stored in a well- ventilated steel cabinet which must be kept locked to prevent unauthorized access;
- Not even small quantities of flammable liquids may be stored or dispensed in buildings or places of public assembly, in general warehouses, or in buildings containing sources of ignition such as space heaters, cooking devices, open electric motors, motor vehicles, or where welding, cutting, or grinding activities are being carried out;
- Safe Work Procedures must be compiled for the transportation (including delivery), offloading, storage, handling and use of any fuel / flammable liquid on site;
- All personnel that will be required to work with or may come into contact with a flammable liquid must be made aware of the hazards associated with the product and must be thoroughly trained in the safe transportation, use, handling and storage thereof.

6.3.11.13. Housekeeping (CR27)

The Principal Contractor must maintain a high degree of tiredness in all work areas free of debris and any other unwanted rubbish. Unless directed otherwise, the contractor must dispose of all debris, rubbish, spoil and hazardous waste off site in a designated and authorized area or facility. The contractor must familiarize himself with the waste management plan for the site including collection and disposal

arrangements, and must align his waste management activities accordingly. Proof of waste disposal must be retained by the contractor.

In cases where an inadequate standard of housekeeping has developed and compromised safety and cleanliness, a nominated project management representative may instruct the contractor to stop work until the area has been tidied up and made safe. Neither additional costs nor contract deadline extensions will be allowed as a result of such a stoppage. Failure to comply will result in a clean-up being arranged through another service provider at the cost of the non- complying contractor.

The Principal Contractor must carry out housekeeping inspections on a weekly basis to ensure maintenance of satisfactory standards. The contractor must document the results of each inspection. These records must be retained in the safety file.

The contractor must implement a housekeeping plan for the duration of the contract ensuring that the site housekeeping is maintained. Furthermore, at the end of every shift, the contractor must ensure that all work areas are cleaned, all tools and equipment are properly stored, and construction rubble is removed.

Where the contractor fails to maintain housekeeping standards, the client representative may instruct the contractor to appoint a dedicated housekeeping team for the duration of the project at the contractor ‘s expense. Littering is prohibited.

6.3.11.14. Stacking and Storage (CR 28)

The Principal Contractor and any other subcontractor must ensure that all stacking is supervised by a competent person appointed in writing. Clearly defined and allocated storage areas are to be provided and identified. All materials being stored within these areas are to be stacked in accordance with the sound stacking principles of sort-by-sort. Storage areas are to be level and access through them is to be maintained. The height to which material is stacked shall not exceed three times the base width.

The PC and other contractor must avoid stacking of materials such as kerbs and other on the actual construction site where these introduce a secondary risk of injury to the public. Where materials are stored on site e.g stormwater pipes adequate protection measures must be in place such as use of a physical barricade or fence to protect stacked material and stormwater pipes. Relevant signage and reflecting netting must be used to compliment the physical barricade. Public protection remains key in relation to the stacking and storage of material on site.

6.3.11.15. Storage of Hazardous Chemicals (including flammables)

(See 5.3.1.3.13 above)

6.3.11.16. Fire Prevention and Protection (CR 29)

The Principal Contractor must compile a Fire Protection and Prevention Plan for the work that will be carried out on site where a fire hazard has been identified.

The Principal Contractor must assess his area of responsibility and identify locations where the risk of fire is high. It is noteworthy that certain locations may need to be designated as high risk due to the presence of large quantities of flammable or combustible materials / substances. For all high risk areas, the contractor must ensure that additional precautions are taken to prevent fires and strict control is exercised over any hot work (i.e. welding, cutting, grinding, etc.) that is carried out.

The contractor must supply and maintain all required fire-fighting equipment. The type, capacity, positioning, and number of fire-fighting appliances must be to the satisfaction of the appointed client's representative and must meet the requirements of the applicable legislation. Fire mains, hydrants and hose reels will rarely be available on site, so use must primarily be made of portable fire extinguishers.

Fire-fighting equipment, fixed and portable, must be strategically located such that they are easy to use to bring potentially dangerous and destructive fires under control without causing significant damage.

All fire extinguishers (and any other fire-fighting equipment) placed on site must be:

- Conspicuously numbered;
- Recorded in a register;
- Visually inspected by a competent person on a monthly basis (the results of each inspection must be recorded in the register and the competent person must sign off on the entries made);
- Inspected and serviced by an accredited service provider every year (the appointed client representative may require that this frequency be increased depending on the environmental conditions (e.g. high dust levels, water, heat, etc.) to which the fire extinguishers are exposed).

Any fire extinguisher that has a broken seal, has depressurised, or shows any sign of damage must be sent to an accredited service provider for repair and / or recharging. Details must be recorded in the register. Fire-fighting equipment may not be used for any purpose other than fighting fires.

Access to fire-fighting equipment, fixed or portable, must be kept unobstructed at all times. Approved signage must be in place to clearly indicate the location of each permanently mounted fire extinguisher, fire hose reel, etc.

The contractor must ensure that all persons working in / entering his area of responsibility are made aware of where all fire-fighting appliances and alarm points are located. The contractor must ensure that his employees (and those of any appointed sub-contractors) are trained in fire- fighting procedures and the use of fire-fighting equipment.

The contractor must compile an emergency response procedure detailing the actions that must be taken in the event of a fire or a fire / evacuation alarm. All personnel working within the contractor‘s area of responsibility must be trained, and all visitors must be instructed, on this procedure. Copies of the procedure must be prominently displayed in the workplace in all languages commonly used on the site.

Used fire extinguishers must be replaced by the contractor without delay.

No hot work (i.e. welding, cutting, grinding, etc.) or any other activity that could give rise to a fire may be performed outside of a designated area without a Permit to Work having been issued.

At the end of every working period (i.e. before each tea / lunch break and at the end of every shift / day), the workplace must be thoroughly inspected to ensure that no material is left smouldering and no condition / situation exists that could give rise to a fire.

The Principal Contractor must ensure that all Supervisors and all employees carrying out or assisting with any hot work or any other activity that could give rise to a fire have been trained in fire-fighting procedures and the use of fire-fighting equipment. The training must be conducted by an accredited training provider.

When using electrical equipment, all cables must be in good condition and the nearest convenient socket must be used. No power socket may be loaded beyond its rated capacity through the use of adaptors, etc. Makeshift electrical connections are not permitted under any circumstances. Water-based fire-fighting equipment must not be used on electrical equipment or burning liquids.

Each vehicle used on site for work purposes and each item of mobile equipment with a diesel or petrol engine must be fitted with a permanently mounted fire extinguisher. Smoking is only permitted in designated smoking areas. Cigarette ends / butts must be properly stubbed out in the ashtrays provided and never thrown into waste bins.

The contractor must ensure that good housekeeping practices are enforced, as this is crucial to the prevention of fires.

All combustible waste materials must be removed from the workplace on a daily basis (at the end of each shift) and placed in waste receptacles located at least 5 metres away from any structure. The accumulation of waste materials in out-of-the-way places is prohibited. Offices, desks, cabinets, etc. must always be kept tidy and uncluttered. Waste paper bins must be emptied regularly.

The storage of combustible materials under stairways or in attics is prohibited. The storage of any materials against the exterior of a building or any other structure is prohibited. All walkways, passages and stairways must be kept clear (i.e. must be unobstructed) at all times, as they may need to be used as a means of escape.

The areas around and the routes to all exits, fire escape doors, fire hydrants, fire hose reels and fire extinguishers must be kept clear (i.e. must be unobstructed) at all times. "No Smoking" signs must be conspicuously displayed in and around all storage areas / rooms. Waste may not be burned under any circumstances.

No flammable liquid (such as petrol, acetone, alcohol, benzene, etc.) may be used for starting fires or as a solvent for cleaning clothes, tools, equipment, etc. Only solvents approved by the nominated project management representative may be used for cleaning purposes.

Whenever any work is carried out involving the use of a flammable substance / material, the area must be cordoned off and appropriate warning signage (i.e. —No Unauthorized Entry, —No Smoking and —No Naked Flames) must be displayed.

6.3.11.17. Eating, Changing, Washing and Toilet Facilities (CR 30)

As a minimum requirement the following will apply:

a) Toilets

The National Building Regulations and Construction Regulations 30 stipulates that a contractor must provide toilets to his staff. The contractor must provide chemical toilets to a ratio of 1:30 on site.

The contractor must commit with the toilet supplier a service schedule that must adhered to all the times between the toilet supplier and the contractor. Records of service must be retained in the SHE file for inspection.

b) Showers

If permissible, cold showers must be provided to employees at a ratio of 1 shower per 15 workers.

c) Change rooms

Changing rooms must be provided for personnel in the project. Male and female changing rooms must be provided and must be kept tidy at all times.

d) Eating Facility

A decent eating facility must be provided. Excessive heat, wind, cold and any inclement weather must be considered when establishing an eating facility for employees. The facility must be located away from workplace activities that might introduce risk to health.

e) Living accommodation

There is no living or accommodation on site.

6.3.11.18. PPE (See 5.2.1 of the specifications)

6.3.11.19. Portable Electrical Tools and Equipment

Machinery, Tools and Equipment

The Principal Contractor shall ensure that all machinery, tools and equipment are identified, safe to be used and maintained in a safe condition. All tools and equipment must be allocated a unique identifier.

Power tools like the compactor will be selected with the ergonomics of the operator taken into account. The machine will be fitted with an automatic stop device should the operator lose control.

All machines driven by means of belts, gear wheels, chains and couplings shall be adequately guarded. A machine is guarded when persons cannot gain access to the moving parts. The Contractor shall maintain an inventory list for all machinery, tools and equipment on site.

All machinery, tools and equipment shall be regularly inspected at least monthly or as required by legislation and risk assessments. A registers of tools shall be kept on the health and safety file.

All machinery, tools and equipment must have the necessary approved test or calibration documentation where applicable prior to being brought onto the premises.

The client's representative (CHSA) reserves the right to inspect equipment and plant brought to the project site (and at other places, if any, as may be specified under the contract as forming part of the Site) by the Contractor for use on the project. Should any item be found to be inadequate, faulty, unsafe or in any other way unsuitable for the safe or satisfactory execution of the work for which it is intended, the contractor or subcontractor shall be advised in writing and shall remove the item from the site and replace it with a safe and adequate substitute. In such cases, the contractor or subcontractor shall not be entitled to extra payments or extensions of time in respect of delay caused by these instructions.

All Principal Contractor's and subcontractor personnel must receive formal training and be declared competent for use of power tools and potable electrical equipment. No employee shall use portable electrical equipment and power tools in the absence of formal training by an accredited institution.

Portable Lights

a) Must be fitted with a robust non-hygroscopic non electricity conducting handle.
b) Live metal parts which may become live must be protected against contact.
c) The lamp must be protected by a strong guard.
d) The cable lead in must withstand rough handling.
e) A register for each light must be retained and inspection thereof.

f) When used in wet/damp/metal container conditions, it must be protected the same manner as portable electrical tools as stated above.

6.3.11.20. Public Health and Safety

It is the duty of the Principal Contractor and all the other contractors to ensure that non employees are equally protected from the project hazards and concomitant risks. This includes non-employees that are located further away from the project site, this is said considering the trans-boundary nature of other occupational stressors such as construction dust. Typical vulnerable population group include the following:

- Non- employees entering the site for whatever reason;
- The surrounding community.
- School children within the project footprint.
- Businesses that are within the project footprint.
- Residents that are within the project footprint.
- Passers-by the site.
- Any other persons that maybe affected by the project works.

Appropriate signage must be posted to this effect and all employees on site must be instructed to ensure that non-employees are protected at all times. All non-employees entering the site must receive induction into the hazards and risks of the project and the control measures to be observed. The Principal Contractor should make efforts to identify the project site boundaries areas such as borrow pits and ensure that adequate measures are in place to protect the public especially in the absence of the Principal Contractor after working hours.

Access to residents' houses should be considered during excavation works, temporary access ramps should be put in place to ensure safe access. A suitable and sufficient risk assessment should accompany the installation of temporary access ramps such as load bearing aspects are considered.

Spectator value should be factored where heavy plant and equipment are at work. Children and some adults are fascinated by the various construction works and other equipment such as crane works, Excavator, the Grader, tipper trucks and many. It is a common occurrence that people watch such heavy plant and machinery executing project tasks. The PC must ensure that there is a safe buffer zone for anyone watching such construction works. The objective is to use a physical barricade with dust proof netting to protect t the project works especially where there are deep excavations. A designated person must be appointed to ensure that any persons watching construction works is further away from the construction activities such that the risk of harm as a result of the execution of project tasks is reduced to as low as reasonably practicable. All Plant Operators shall be given induction such that there are aware of the movement of public within the construction footprint. Appropriate NO TRESSPASSING signage shall also be used to restrict the public from trespassing into the project high risk areas.

Designated personnel must be appointed to ensure public health and safety in relation to the various construction works.

Airborne dust is a significant occupational stressor that is transboundary and may easily affect the adjacent community resulting in short-term and chronic respiratory illness. The PC must put in place dust control programme (wet method) such that it is consistently implemented for the duration of the project. Excavation works, movement of plant, backfilling and compaction works are bound to generate clouds of airborne dust. The dust suppression programme should be spearheaded by an appointed person. The PC should ensure that water used for dust suppression does not introduce secondary health risk to the community.

The laying of stormwater pipes is characterised by deep excavations to various depths. The PC must develop and submit an excavation and laying of stormwater pipes method statement to the approval of the client's representative. Ideally the method statement should consider the length and duration of open excavations. The PC must ensure that excavations are done where pipes are set to be lain and backfilling must ensue such that the area is 'closed' at the end of the work shift. The PC should avoid instances whereby lengthy trenches are opened without laying the pipes and consequent backfilling. The method statement should consider the following: open, lay backfill material, lay the pipes after the necessary tests and backfill. Only small areas of trenches should be left open, where these are left open a physical barricade (speed fence or equivalent) including reflective barricade netting should be used.

The PC shall ensure that safe pedestrian walkways are in place for use by the public. The construction works are likely to temper or affect the original pedestrian walkways within the construction footprint. Pedestrian walkways should be clutter free and consider motor vehicle movement. The risk of harm in relation to the use of the designated pedestrian walkways should be reduced to as low as reasonably practicable

Awareness creation in relation to project works

The PC shall put measures in place meant to create awareness within the community in respect of the project construction works and the inherent construction hazards and risks and mitigation thereof. The PC must consider using public platforms such as community forums held from time to time to formally introduce the project and the anticipated inconveniences as a result of project works. Flyers should also be used to disseminate information with regards to the project mainly focusing on business and residents where project disturbances are expected to be significant. The CLO is strategically positioned to formally introduce the project to the community also detailing the basic health and safety aspects that the community should be cognisance of. The appointed CHSO and the CLO should target schools such that information regarding the common project risks and mitigation measures is communicated to school children.

6.3.11.21. Protecting the Environment

It is a legal and moral obligation to ensure that the environment is protected from degradation as a result of project activities. The project must be executed within the realms of environmental sustainability and the project's ecological footprint must be reduced at all costs. It is the responsibility of the contractor to create environmental awareness through various initiatives such as environmental monthly workshops, environmental toolbox talks, and other environmental campaigns.

The project has various workplace hazards that includes but not limited to the following:

a) Chemical (dust and vapours)
b) Physical (heat, light, noise and radiation)
c) Posture and motion (vibration and ergonomics)
d) Biological (bacteria and viruses etc)
e) Psychosocial (stress, bullying, and violence)

Effective management of workplace health risks will assist the Employer to:

a) Maximize the productivity per employee as a result of improved well-being.
b) Avoid illness as result of workplace exposures.
c) Employee retention and consequently improved productivity.
d) Good and positive company image, increased prospects of getting more work.
e) Improved turnover and no income lost as result of standing time while investigating incidents.
f) Improved personal relations amongst employees.
g) Avoid prosecution and penalties.

6.3.11.22. Transportation of employees

Employees must not be transported with tools and equipment. Any bakkie or motor vehicle to be used on site for employee transport must be fitted with adequate seating facilities and restraint covers and must be approved by the client representative prior to be used on site. No persons shall be transported on construction plant and equipment. The contractor must develop a vehicle policy that must also incorporate the transporting of employees on site, to and from work.

6.3.11.23. Sub-Contractors

A detailed subcontractor list shall be retained on site by the principal contractor. Each subcontractor to be appointed formally and legally appointed using the CR 7 1 c v contractor and appointment and the Mandatary OHSACT Sect 37 (1) (2) agreement.

Each subcontractor shall be given that SHE specification and in turn must compile a safety plan that shall be approved by the Principal contractor. Each subcontractor to submit a detailed safety plan with all the necessary SHE procedures as identified by the respective risk assessment. The principal contractor to formally approve the Safety file.

All subcontractor employees to undergo induction before commencing with any site works. Each subcontractor must conduct his own induction (based on his scope of work) records of such to be retained in the safety file. It remains the responsibility of the Principal contractor to prescribe as to whether a full time safety officer must be appointed by the subcontractor. This shall be based on the risk profile of the task at hand.

The Principal Contractor Safety Officer must audit the subcontractor on a monthly basis to ensure that the contractor is adhering to the safety management system in place.

6.3.11.24. Traffic Management

Traffic Management Plan should be developed and approved by the client's representative Resident Engineer. No open manhole in streets, lanes or any place where the public or other persons have access shall be left unguarded. The necessary road signs and speed limitation boards must also be in place. Any construction area must have all barricading requirements and a person assigned as flagman in every entrance to the site.

Appointed trained flagpersons should be available all the times. The placement of traffic accommodation equipment shall be in line with the traffic accommodation drawings as issued by the client's representative where applicable. It remains the prerogative of the Resident Engineer to request for a competent Traffic Safety Officer for the traffic accommodation aspects of the project.

6.3.11.25. Handtools

The contractor must inspect all hand tools before it is brought onto the site.

- As far as possible all hand tools must be numbered and placed on register to be inspected monthly by a person designated to do so.
- Any tools found to be in an unsafe condition must immediately be removed from service and either discarded or rectified.
- No chisels with “mushroomed” heads must be used.
- No hammer shall be used with a cracked or damaged handle.
- All files must be fitted with handles.
- All trolleys, pushcarts, etc. used on site must be identifiable, placed on register and inspected at least once every month.
- Non-sparking tools must be used in areas where the risk of fire or explosion is present.
- No home-made hand tools are allowed on the project.

6.3.11.26. Barricading

The Principal Contractor shall submit barricading method statements for approval by the Client’s appointed CHSA or Project Manager before any major site operations commence.

General Barricading Requirements

- Hazardous areas must be fully enclosed with appropriate barricading to prevent unauthorized access. Examples include areas with "Man at Work," "Narrow Passage," or "Directional Arrow" signage.
- If there is a risk of injury, the area must be secured using solid barricades, positioned at least 1.5 meters away from the identified hazard.

Structural Requirements for Barricading

- Barricades designed to restrict access to areas with potential injury risks shall include:
  - Hand-rail and knee-rail construction.
  - Proper support structures to prevent collapse or unintended access.
- All physical barricades must be covered with netting to ensure high visibility for personnel and machinery operators.

Signage and Marking Requirements

- Hazard-specific signage must be affixed to the barricade, indicating:
  - The nature of the hazard (e.g., "Deep Excavation," "Lifting Operations").
  - The responsible Supervisor’s name and contact details.
- All barricades must display “No Entry” signs:
  - On all sides and at each change of direction.
  - At 20-meter intervals for extended barricades.
  - Minimum sign size: 290 mm x 290 mm.
- Danger tape shall not be used as a primary barricade for preventing entry.
- In non-hazardous areas, such as stacking and storage zones, wire fencing may be used for demarcation.

Access and Removal of Barricades

- Where personnel access is required, a designated entrance shall be provided.
- Signage at the entrance must indicate which Contractor has the right of entry.
- It is the Contractor's responsibility to remove all redundant barricades immediately after use.
- The Contractor's CHSO must maintain an updated site plan showing the locations of all barricades.

Protection Against Exposed Rebar and Poles

- Contractors must install rebar caps on all exposed reinforcement bars and poles where there is a risk of injury to employees.

This barricading standard is mandatory for all Contractors on-site to ensure safe and controlled work environments.

6.3.11.27. Critical (Safe) Operating Control Procedures (SWPS

Procedures (but not limited) to the following activities shall be developed and implemented.

a) Site clearance;
b) Pipe trenches
c) Stormwater drainage and excavation
d) Earthworks (Roads and subgrade)
e) Subbase
f) Asphalt base and surfacing
g) Segmented paving
h) Kerbing and channelling
i) Ancillary roadworks
j) Street furniture
k) Metal works
l) Minor concrete works
m) Plumbing and drainage
n) Mino Electrical works
o) And other related civil works
p) Existing underground water, electricity and other Services
q) Use of ladders
r) Dust
s) Any other specific items or tasks relating to the construction work to be undertaken

Document Description	Baseline Risk Assessment	Signature
Project:	The Upgrading of Roads and Stormwater System in Mabopane Block U	
Risk Assessor Name	Tinashe Kamupira	
Risk Assessor Professional Registration Number:	CHSM/1062/2022	
Risk assessment Date	30 March 2025	
Risk Assessment Reviewed by	N Mabunda CHSA	
Risk Assessment Reviewed	30 March 2025	
Revision No.	00	

Probability		Impact	
5	Common	5	Fatality or permanent disability
4	Has happened	4	Major injury
3	Could happen	3	Average lost time injury
2	Not Likely	2	Minor injury
1	Practically impossible	1	Medical treat only or less

Severity Index

		Probability				
		1	2	3	4	5
Impact	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

12 - 25	HIGH
4 - 11	MEDIUM
1 - 3	LOW

Risk #	Task or Activity	Hazards / Risk (Potential danger) (Energy)	Possible Consequence Likely to happen	Initial Risk Score			Proposed Control Measures	Responsibility
				Likelihood	Consequence	Risk Rating		
1	**SITE ESTABLISHMENT**							
	Securing Site	Access by unauthorized personnel	Unexpected injuries due to ignorance of safety practices	4	3	12	Only authorised personnel should be allowed access to site.	Principal Contractor
1.1	**Clearing and Grubbing/ Removal of Vegetation**	Unknown underground services,	Electrocution injuries from unseen ground electricity wires and even fatalities. Property damage Asphyxiation/ Respiratory irritation due to accidental gas leaks	4	5	20	Properly trained personnel should only carry out clearing activities Wearing of adequate PPE	Principal Contractor Principal Contractor
1.2		Unsecured deep excavations	Fall into flooded or deep excavations causing injuries or drowning	4	3	12	Barricade all deep excavations.	Principal Contractor
1.3		Noise and dust	Hearing loss or difficulties and respiratory irritation and even tuberculosis	3	3	9	Ensure that safety ear plugs/muffs are worn all the times. Contractor to ensure that dust is suppressed by dampening the soil	Principal Contractor
1.4	**Surveying and Underground Service Detection/ Exposing**	Unknown underground services,	Electrocution injuries from unseen ground electricity wires and even fatalities. Property damage Asphyxiation/ Respiratory irritation due to accidental toxic gas leaks	4	5	20	Properly trained personnel should only carry out clearing activities Wearing of adequate PPE	Principal Contractor Principal Contractor

1.5		Unsecured deep excavations	Fall into flooded or deep excavations causing injuries or drowning	4	3	12	Barricade all deep excavations.	Principal Contractor
1.6	**Material Transportation**	Suspended loads falling from height	Crush injuries and loss of limb	4	5	20	Proper load stacking practices. Training operators on loading and stacking	Principal Contractor Principal Contractor
1.7		Incompetent drivers and operators, unroadworthy vehicles	Accident injuries and even fatalities	4	3	12	Properly trained operators Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats Regular and consistent servicing of vehicles	Principal Contractor Principal Contractor Principal Contractor
1.8		Wandering or unauthorised pedestrian	Run over injuries	4	5	20	Establish pedestrian & vehicle routes Check for bystanders or pedestrians before moving Operator to use a signaller to warn operator of persons, obstacles or other hazards	Principal Contractor Principal Contractor Principal Contractor
1.9	**Welfare Facilities**	Inadequate ablution/eating, /showering facilities	Biological hazards (infections to the body)	3	3	9	Regular and proper maintenance of facilities	Principal Contractor
1.10	**Delivery/ Loading and Offloading of Materials**	Movement of Material Handling Equipment (Forklifts and Cranes) and trucks	Injuries or fatalities due to moving equipment	3	5	15	Properly trained operators Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats.	Principal Contractor Principal Contractor
1.11		Sharp cutting edges of materials	Hand cuts or injuries	4	3	12	Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats.	Principal Contractor
1.12		Suspended and falling loads	Crush injuries and loss of limb	4	5	20	Proper load stacking practices. Training operators on loading and stacking	Principal Contractor Principal Contractor
1.13		Incompetent drivers and operators,	Accident injuries and even fatalities	4	3	12	Properly trained operators	Principal Contractor

		unroadworthy vehicles					Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats Regular and consistent servicing of vehicles	Principal Contractor Principal Contractor
1.14	**Manual Excavation**	Unknown underground services,	Electrocution injuries from unseen ground electricity wires and even fatalities. Property damage Asphyxiation/ Respiratory irritation due to accidental toxic gas leaks	4	5	20	Perform service identification through 3D underground scanning. Pilot pits to be dug so that UG services can be identified. Properly trained personnel should only carry out excavation activities Wearing of adequate PPE	Principal Contractor Principal Contractor
1.15	**Electrical Installations and Services Connection**	Incorrect usage of voltage, Unprocedural or incorrect usage of equipment	Electrocution injuries	4	3	12	· Properly trained personnel should only carry out electrical installation activities	Principal Contractor Principal Contractor
1.16	**Barricading of the Work Area**	Manual handling, substandard hand tools,	Pinched hands and crushed limbs	4	3	12	2 or more individuals carrying goods onto designated storage bays Proper use of PPE. (gloves)	Principal Contractor Principal Contractor
1.17	**Transportation &Stacking**	Cargo falling from heights	Property damage/Injuries to individuals	4	3	12	Proper stacking practices. Training operators on stacking	Principal Contractor Principal Contractor
1.18		Manual handling	Ergonomic injuries (e.g back aches)	3	3	9	Use of MHE to handle cargo Training of operators on ergonomics	Principal Contractor Principal Contractor
1.19		Poor housekeeping	Trip and fall	4	3	12	Good house keeping Proper use of storage and stacking bays	Principal Contractor Principal Contractor
1.20		Movement of MHE and trucks by unlicensed operators	Injuries and equipment damage	3	5	15	Ensure only licensed operators are authorised to access MHE and trucks	Principal Contractor

2	**EARTHWORKS**							
2.1	**Trenching**	Moving machinery,	· Injuries and equipment damage	3	5	15	· Ensure only licensed operators are authorised to access and operate the machinery and trucks	Principal Contractor
2.2		Noise, vibration, dust,	· Hearing impairment · Whole body Vibration disease · Respiratory complications	3	3	9	· Wearing of appropriate PPE, earplugs, vibration belts, dust masks ·	Principal Contractor Principal Contractor Principal Contractor
2.3		unstable side walls,	· Injuries due to collapse of walls.	4	3	12	· Ensure that there is edge protection around the edge of the excavation if it is over 1 metre deep · ensure that the excavation is adequately shored or the sides are battered to a suitable angle to prevent collapse. · Inspect the excavation on a daily basis for defects and fallen material. · No person is allowed to enter an excavation unless the sides are adequately supported or battered.	Principal Contractor Principal Contractor Principal Contractor Principal Contractor
2.4		defective equipment and machinery,	· Struck by faulty moving parts · Body injuries	4	3	12	· Properly trained operators · Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats	Principal Contractor Principal Contractor

							· Regular and consistent servicing of vehicles	Principal Contractor
2.5		Services not identified/unknown underground services,	· Electrocution injuries from unseen ground electricity wires and even fatalities. Property damage · Respiratory irritation due to accidental gas leaks .	4	5	20	· Properly trained personnel should only carry out clearing activities · Wearing of adequate PPE	Principal Contractor Principal Contractor Principal Contractor
2.6		Unsecured/flooded deep excavations	· Fall into flooded or deep excavations causing injuries or drowning	4	3	12	· Barricade all deep excavations.	Principal Contractor
2.8		Incorrect use of ladder,	· Fall from height and body injuries or bruises	3	3	9	· Provide adequate working at heights training · Ladder use training · Wear appropriate PPE. Hard hat	Principal Contractor Principal Contractor Principal Contractor
		incorrect stacking of paving	· Crushed toes or limbs	4	3	12	· Proper load stacking practices. · Training operators on loading and stacking	Principal Contractor Principal Contractor
2.8	**Backfilling and Material Testing**	Moving machinery,	· Injuries and equipment damage	3	5	15	Ensure only licensed operators are authorised to access and operate the machinery and trucks	Principal Contractor
2.10		noise, vibration, dust,	· Hearing impairment · Whole body Vibration disease · Respiratory complications	3	3	9	· Wearing of appropriate PPE, earplugs, vibration belts, dust masks	Principal Contractor Principal Contractor Principal Contractor

2.11		unstable side walls,	· Injuries due to collapse of walls.	4	3	12	· Ensure that there is edge protection around the edge of the excavation if it is over 1 metre deep · ensure that the excavation is adequately shored or the sides are battered to a suitable angle to prevent collapse. · Inspect the excavation on a daily basis for defects and fallen material. No person is allowed to enter an excavation unless the sides are adequately supported or battered.	Principal Contractor Principal Contractor Principal Contractor Principal Contractor
2.12		defective equipment and machinery,	· Struck by faulty moving parts · Body injuries	4	3	12	· Properly trained operators · Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats Regular and consistent servicing of vehicles	Principal Contractor Principal Contractor Principal Contractor
2.13		Services not identified/unknown underground services,	· Electrocution injuries from unseen ground electricity wires and even fatalities. Property damage · Respiratory irritation due to accidental gas leaks	4	5	20	· Properly trained personnel should only carry out clearing activities Wearing of adequate PPE	Principal Contractor Principal Contractor
2.14		Unsecured/flooded deep excavations	· Fall into flooded or deep excavations causing injuries or drowning	4	3	12	Barricade all deep excavations.	Principal Contractor
2.15		Incorrect use of ladder,		3	3	9	Provide adequate working at heights training	Principal Contractor

			Fall from height and body injuries or bruises				Ladder use training Wear appropriate PPE. Hard hat	Principal Contractor Principal Contractor
2.16		incorrect stacking of paving	Crushed toes or limbs	4	3	12	Proper load stacking practices. Training operators on loading and stacking	Principal Contractor Principal Contractor
2.17		Moving machinery,	Injuries and equipment damage	3	5	15	Ensure only licensed operators are authorised to access and operate the machinery and trucks	Principal Contractor
2.18		Underground water in trenches	Fall into flooded or deep excavations causing injuries or drowning .	4	3	12	Barricade all deep excavations. Provision of floating equipment or emergency lifesaving in case of flooding	Principal Contractor Principal Contractor
3	**PIPING & STRUCTURES**							
3.1	**Laying of Stormwater & Water Pipes, Culverts, etc.**		Struck by falling parts				Properly trained operators	Principal Contractor
3.2		Misuse of cranes and defective lifting tackle,	. Body injuries	4	5	20	Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats	Principal Contractor
3.3							Regular and consistent servicing of the equipment	Principal Contractor
3.4		unstable ground & side walls,	Tipping of machinery resulting	4	5	20	Ensure that the ground is stable and even before using machinery	Principal Contractor

			in body crashing injuries				Ensure that out riggers are extended fully. Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats Regular and consistent servicing of the equipment	Principal Contractor
3.5		walking on the pipe, and excessive weights,	body injuries from falls on the pipes and broken piping	3	3	9	Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats	Principal Contractor
3.6		drowning/ flooding	Fall into flooded or deep excavations causing injuries or drowning .	4	3	12	Barricade all deep excavations. Provision of floating equipment or emergency lifesaving in case of flooding	Principal Contractor Principal Contractor
3.7 3.8	**Working with Mobile / Construction Plant**	Inclement weather	Accident injuries from slippery roads due to rain etc	3	5	15	Wear appropriate PPE Ensure that weather conditions are anticipated and made ready for that	Principal Contractor Principal Contractor
3.9		unstable ground & side walls,	Tipping of machinery resulting in body crashing injuries	4	5	20	Ensure that the ground is stable and even before using machinery Ensure that out riggers are extended fully. Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats Regular and consistent servicing of the equipment	Principal Contractor Principal Contractor
3.10		excessive weights,	body injuries from falls on the pipes and broken piping .	3	3	9	Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats .	Principal Contractor
3.11		unauthorized mobile plant on site,	· Struck by faulty moving parts	4	3	12	Properly trained operators	Principal Contractor

			· Body injuries from crashes and accidents				Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats Regular and consistent servicing of vehicles	Principal Contractor Principal Contractor
3.12		medically unfit personnel or with fatigue,	Accident injuries due to fatigue and being unfit	3	3	9	Periodical medicals surveillance for workers · Provide adequate shift periods to allow for rest and rotation or exchange on the job	Principal Contractor Principal Contractor
4	**CONCRETE AND CEMENT WORKS**							
4.1	**Casting and Mixing of Concrete**	Misuse of concrete pump truck,	· Struck by falling parts · Body injuries	4	5	20	· Properly trained operators · Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats · Regular and consistent servicing of the equipment	Principal Contractor Principal Contractor Principal Contractor
4.2		Concrete vibrator, noise	· Hearing impairment · Whole body Vibration disease	3	3	9	· Wearing of appropriate PPE, earplugs, vibration belts. ·	Principal Contractor Principal Contractor Principal Contractor
4.3		Wet cement	· Skin irritation	4	3	12	· Wearing of appropriate PPE,gloves, safety glasses etc	Principal Contractor
4.6	**Hazardous Chemical Substances**	Inhalation, ingestion, congestion, spillages ot corrosive hazards and other HCS	· Corrosive and chemical burns	3	3	9	· Wearing of appropriate PPE (Gloves)	Principal Contractor
4.7	**Construction of Manholes**	Working at heights use of ladders and scaffolding	· Fall from height resulting in body injuries or bruises	4	3	12	· Provide adequate working at heights training · Ladder use training · Wear appropriate PPE. Hard hat	Principal Contractor Principal Contractor Principal Contractor

4.8		Work in confined spaces,	· Suffocate or suffer ill health due to: Exhaust fumes & fuel vapours,	4	5	20	· Always work in aerated spaces · Use of gas detection equipment · Wear appropriate PPE	Principal Contractor Principal Contractor Principal Contractor
4.9		Inhalation, ingestion ot HCS	· Corrosive and chemical burns · Respiratory failure	4	3	12	· Wearing of appropriate PPE (Face masks, breathing apparatus, Gloves)	Principal Contractor Principal Contractor
4.10	**Use of Pneumatic Jack Hammers**	vibrations, noise, dust	· Hearing impairment · Whole body Vibration or associated disease · Respiratory complications	3	3	9	· Wearing of appropriate PPE, earplugs, vibration belts, dust masks ·	Principal Contractor Principal Contractor Principal Contractor
4.11	**Drilling**	Services not identified/unknown underground services,	· Electrocution injuries from unseen ground electricity wires and even fatalities. Property damage · Respiratory irritation due to accidental gas leaks	4	5	20	· Properly trained personnel should only carry out clearing activities Wearing of adequate PPE	Principal Contractor Principal Contractor
4.12		Noise and dust	· Hearing loss or difficulties and respiratory irritation and even tuberculosis	3	3	9	· Ensure that safety ear plugs/muffs are worn all the time.	Principal Contractor
7	**USE OF POWERED EQUIPMENT AND MACHINERY**							
		Lifting equipment tipping over	Injuries/fatalities and plant damage	4	5	20	Ensure appropriate and certified equipment and machinery for lifting is done right on first time.	Principal Contractor
		Load hitting any plant facility	Injuries and equipment damage	4	3	12	Ensure all personnel operating lifting equipment onsite are properly trained.	Principal Contractor

		Falling of loads from height	Injuries/fatalities and plant damage	4	5	20	Ensure all personnel operating lifting equipment onsite are properly trained.	Principal Contractor
8.1	**Using a Hydraulic Power Equipment**	vibrations, noise, dust	· Hearing impairment · Whole body Vibration or associated disease · Respiratory complications	3	3	9	· Wearing of appropriate PPE, earplugs, vibration belts, dust masks ·	Principal Contractor Principal Contractor Principal Contractor
8.2		Moving machinery,	· Injuries and equipment damage	3	5	15	Ensure only licensed operators are authorised to access and operate the machinery and trucks	Principal Contractor
9	**CONSTRUCTION WORKS**							
9.1	**Asphalt Surfacing**	Toxic fumes, gas bottle explosion, fire.	· Respiratory complications · Body burns and injuries · fatalities	4	5	20	· Wearing of appropriate PPE, gloves, fire retardant material · Fire fighting equipment to be available.	Principal Contractor Principal Contractor Principal Contractor
9.3		Wandering or unauthorised pedestrian	· Run over injuries/Fataility	4	5	20	· Establish pedestrian & vehicle routes · Check for bystanders or pedestrians before moving · Operator to use an signaller to warn operator of persons, obstacles or other hazards ·	Principal Contractor Principal Contractor Principal Contractor Principal Contractor Principal Contractor
9.4	**Paving and Kerbing**	incorrect handling of paving	· Crushed toes or limbs	4	3	12	· Proper handling practices. · Training operators on handling and installation of paving	Principal Contractor Principal Contractor

9.5		Defective or Incorrect use of ladder during Fencing	· Fall from height and body injuries or bruises	3	3	9	· Provide adequate working at heights training · Ladder use training · Wear appropriate PPE. Hard hat	Principal Contractor Principal Contractor Principal Contractor
9.6		faulty tools, sharp edges during fencing	· pinching and hand injuries · cuts from sharp edges	4	1	4	· correct use of PPE. Gloves safety glasses where necessary	Principal Contractor Principal Contractor
9.7	**Storing Flammable and Hazardous Substances**	fire, spillage, fumes	· burns from fire · slips and falls · respiratory diseases from fumes	4	3	12	· conduct periodical fire drills · firefighting equipment to be in place	Principal Contractor Principal Contractor Principal Contractor
10	**WORKS EXECUTION**							
10.1	**Traffic Accommodation**	Obstruction of roads, fast moving vehicles, public interference, high volume of traffic, lack of signage, narrow lanes No safe roadway for pedestrians to move on.	· Crush or accident injuries/fatalities	4	5	20	Ensure a safe passageway for traffic to move freely through traffic control Speed limits to be put in place Flag bearers should be present to help traffic movement	Principal Contractor Principal Contractor Principal Contractor
10.2		Faulty equipment & machinery,	· Struck by faulty moving parts · Body injuries from crashes and accidents	4	3	12	Properly trained operators Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats Regular and consistent servicing of vehicles	Principal Contractor Principal Contractor Principal Contractor

10.3		Manual handling, substandard hand tools,	· Pinched hands and crushed limbs	4	3	12	· 2 or more individuals carrying goods onto designated storage bays · Proper use of PPE. (gloves)	Principal Contractor Principal Contractor
10.4		Defective and incorrect use of ladder,	· Fall from height and body injuries or bruises	3	3	9	· Provide adequate working at heights training · Ladder use training · Wear appropriate PPE. Hard hat	Principal Contractor Principal Contractor Principal Contractor
10.5		hazardous chemicals and pesticides	· Respiratory complications · Corrosive and chemical burns	3	3	9	· Wearing of appropriate PPE Face masks, gloves.	Principal Contractor Principal Contractor
10.6	**Overitme/ Emergency Work**	Long working hours/ working at night, Inadequate emergency coordination, Insufficient/ excessive lighting	· Fatigue resulting in occupational accidents and injuries	3	3	9	· Regular rest breaks and job rotation · Regular medical checks for employees · Wear appropriate PPE during all working periods	Principal Contractor Principal Contractor Principal Contractor
10.7	**Driving on Site**	Unauthorised use or driving of the vehicle Speeding, uneven roads, adverse weather conditions	· Injuries and fatalities · Damage to property	4	5	20	· Disciplinary code · Only trained and licensed personnel to test the vehicles	Principal Contractor Principal Contractor
10.8		faulty vehicles	· Injuries and fatalities · Damage to property	3	5	15	· Only trained and licensed personnel to test the vehicles	Principal Contractor Principal Contractor
10.9		Long driving hours	· Fatigue resulting in occupational accidents and injuries	3	3	9	· Regular rest breaks and job rotation · Regular medical checks for employees	Principal Contractor Principal Contractor

							· Wear appropriate PPE during all working periods	Principal Contractor
10.11	**Emergency Preparedness/Response**	Inadequate emergency procedure and failure to communicate such to employees, inadequate signage, poor coordination, emergency threats, inadequate warning systems,	· Fire injuries · Injuries from inappropriate site exits	3	3	9	· Put in place emergency preparedness procedure · Carry out emergency drills periodically	Principal Contractor Principal Contractor
10.12	**Security and Protection of Personnel, Assets and Equipment**	Community Unrest, Riots/Strikes	· Injuries to employees/ third parties, damage to property	3	3	9	· Ensure adequate security measures ·	Principal Contractor Principal Contractor
10.13		Robberies,	· Body injuries · Property damage	3	3	9	· Ensure adequate security measures	Principal Contractor Principal Contractor
10.14	**Transport to and from the Site**	Employees transported in open trucks	· Body injuries from falling out of open truck vehicle	3	5	15	· Ensure employees sit inside open truck cabin · Wear appropriate PPE.	Principal Contractor Principal Contractor
10.15	**Waste management**	Hazardous and non-hazardous waste, oil spillages	· Biological hazards (infections to the body)	4	3	12	· Wear appropriate PPE. Gloves, face mask	Principal Contractor
10.16	**Use of Compressor**	Use of compressed air	· struck by moving objects such as the work piece being ejected, or by the unexpected or uncontrolled movement of the plant or work piece?	4	3	12	· Wear appropriate PPE. Gloves, face mask · Competent and trained personnel handling compressor	Principal Contractor Principal Contractor
10.17	**Using Vibrating Equipment**	vibrator, noise	· Hearing impairment · Whole body Vibration disease	3	3	9	Wearing of appropriate PPE, earplugs, vibration belts. Job rotation Supervision	Principal Contractor Principal Contractor

			· Discomfort due to repetitive motions/vibration					
10.18	**Use of Hand Tools and Manual labour**	Manual handling, substandard hand tools,	Pinched hands and crushed limbs · Blisters and other finger and hand bruises, laceration of hands and fingers, puncture wounds on hands	4	3	12	2 or more individuals carrying goods onto designated storage bays Proper use of PPE. (gloves)	Principal Contractor Principal Contractor
11	**SITE CLOSURE**							
11.1	**Decommissioning of Site**	Site clearing noise and dust	· Hearing loss or difficulties and respiratory irritation and even tuberculosis .	3	3	9	Ensure that safety ear plugs/muffs are worn all the times.	Principal Contractor Principal Contractor
11.2		removal of site camp, containers, fencing and temporary road signs	· Crush injuries from load falling · Pinched hands and crushed limbs .	4	3	12	Properly trained operators Provide adequate PPE, safety shoes, overalls, gloves goggles, hard hats Regular and consistent servicing of vehicles	Principal Contractor Principal Contractor Principal Contractor

PART C4: SITE INFORMATION

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C4.1 DESCRIPTION OF THE SITE AND SURROUNDINGS

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C4.1.1 Locality

below is the locality map of the site:

The project is located in Mabopane Block U in the north-western side of Pretoria, approximately 50km from Pretoria CBD. Mabopane Block U can be accessed via Bushveld Road and Peter Mogano Rd within the boundaries of M21. Project area is located at Lat 25°30'6.51"S ; Long 28° 2'32.64"E.

Locality Map

C4.1.2 General Description of the Site

The site is located to the North of Pretoria, City of Tshwane Municipality, Gauteng Province of the Republic of South Africa. The site mainly comprises the existing formal settlement that is well-developed with formal housing structures. Some of the roads have been developed with black top surfaces.

Drainage is in the form of sheet flow and a combination of stormwater drainage pipes which drains and discharges in two key points, one along the site's south-western boundary and the other along the site's north-eastern boundary. There is a water course that runs approximately 160m from the northern boundary of the site.

C4.1.3 Site Conditions

C4.1.3.1 Topography

The Topography of the Site is fairly flat with clay soil profiles encountered.

C4.1.3.2 Site Geology

The Geotechnical investigation suggests that the in-situ conditions are favourable for the upgrading of roads in Mabopane Block U. The bulk of the in-situ material will be used for the subgrade (rip and recompact). Where there are shortages, material will be imported from the borrow pits.

The DCP tests conducted along the existing roads suggests good in-situ founding conditions with favourable CBR's in most of the DCP's conducted. The Investigation report is summarised below:

TEST PIT NO	LAYER	DESCRIITION	DEPTH (mm)	P0.075	GRADING MODULUS	PLASTICITY INDEX	LINEAR SHRINKAGE (%)	RELATIVE DENSITY (% of MDD)	RELATIVE MC (% OF OMC)	CALIFORNIA BEARING RATIO			CHEMICAL REACTION		CLASSIFICATION	
										90%	93%	95%	HCL	PEHOLPHTHALEIN	TRH14	COTO
1 (Lenoto and Hlanganisa Streets)	1	Silty sandy gravel	0 - 340	6	2.5	NP	0	103%	31%	17	29	41	X	X	G6	G6
	2	Loose; silty sand	650 - 340	12	2.1	SP	0.3	109%	24%	25	36	46	X	X	G5	G5B
	3	Medium dense; silty sandy gravel	780 - 650	8	2.5	SP	0.3	88%	77%	22	35	47	X	X	G5	G5B
2 (Kahlolo Street)	1	LOOSE; silty sandy GRAVEL	0 - 150	5	2.6	NP	0	99%	26%	55	89	123	✓	X	G6	G5B
	2	very DENSE; silty SAND	150 - 450	6	2.4	NP	0	97%	59%	43	57	70	✓	X	G5	G5B
	3	DENSE; clayey SAND	450 - 1000	19	1.9	8	3.9	99%	51%	25	28	30	X	X	G6	G6
3 (Khulekani Street)	1	LOOSE; silty clayey GRAVEL	0 - 600	10	2.5	7	3.7	93%	67%	3	6	9	X	X	G10	N/A
	2	LOOSE; clayey SAND	600 - 1000	12	2.4	10	5.1	92%	55%	19	23	26	X	X	G6	G6
4 (Sehloa Street)	1	DENSE; silty clayey SAND	0 - 160	14	2.1	4	2.1	81%	160%	11	15	18	✓	X	G7	G7
	2	medium DENSE; silty clayey SAND	160 - -440	14	2.2	4	2.2	96%	44%	17	19	21	X	X	G7	G7
	3	LOOSE; clayey SAND	440 - 800	16	2.1	11	5.7	101%	79%	37	53	68	X	X	G7	G7
	4	medium DENSE; clayey SAND	800 - 1000	11	2.4	9	4.4	80%	108%	38	45	60	X	X	G5	G5A
5 (Xihlovo Street)	1	DRY; Asphalt surfacing	0 - 100										X	X		
		medium DENSE; silty SAND	100 - 300	18	1.8	3	1.3	0%	0%	30	34	37	X	X	G6	G6
	2	LOOSE; silty clayey SAND	300 - 700	18	1.9	5	2.4	0%	0%	25	42	58	X	X	G5	G5A
	3	medium DENSE; silty clayey SAND	700 - 1000	17	2	4	1.8	0%	0%	30	32	34	X	X	G6	G6

C4.1.3.3 Ground water

There was no ground water seepage encountered during the Geotechnical Investigation. All trial pits remained dry until they were eventually closed.

C4.1.3.4 Hydrology

The site is not be affected by any flood lines. The 1:50 and 1:100 flood lines traverse the site along its northern boundary and only affect an area that will not be developed.