



REPLACEMENT OF SEWER PIPELINES, MANHOLES AND RE-CONNECTING SEWER PIPES

MAIN CENTRE

REFERENCE NO.: PEMM_DBN_SOW_045

Scope Revision: 0

Date of release: 15 September 2022

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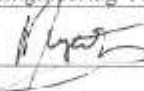

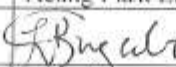
Table of Contents

Document Authorities.....	3
1. INTRODUCTION	4
2. SITE INSPECTION.....	4
3. INFORMATION REQUIRED	4
4. TECHNICAL REQUIREMENTS	4
5. SPECIFICATION REQUIREMENTS	5 – 6
6. HEALTH AND SAFETY REQUIREMENTS.....	6 - 7
7. TENDER EVALUATION CRITERIA.....	8
8. SCHEDULES OF PRICES.....	9

Signature of Bidder/s: _____

Date: _____

Document Authorities

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Department Affected	PEMM
Effective date	September 2022
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Designation	Acting Plant Engineer
Signature & Date	 16/09/2022

Signature of Bidder/s: _____

Date: _____

1. INTRODUCTION

This specification is for the:

#	TASK	REQUIRED
1	Design	✓
2	Refurbishment	✓
3	Supply	✓
4	Delivery	✓
5	Repairs	✓
6	Installation	✓

1.1 Scope of Works

Replacement of sewer pipeline, manholes and re-connecting sewer pipes

- This is a fixed value contract so the tenderer shall ensure all the costs are factored into the tendering price.

2. SITE INSPECTION

2.1 Arrangements to visit the site and confirmation of the date and time of the site inspection shall be made with Transnet Engineering Project Manager.

3. INFORMATION REQUIRED

- 3.1 Offers will not be considered unless full particulars and sufficient literature are provided at the tendering stage to enable Transnet Engineering Technical Officers the opportunity to assess each technical offer properly.
- 3.2 Prospective Contractors will complete the relevant questionnaire in full and must indicate whether their offer complies with each item of the specification
- 3.3 Should there be insufficient space for furnishing full details; contractors shall provide the additional details in their covering letter. The additional details shall be numbered in accordance with the applicable clause specified in the specification.
- 3.4 As prospective contractors are considered to be experts in their field, they are obliged to identify any shortcomings, such as omissions or sub-standard requirements, to the completeness of this specification. These must be brought to the attention of Transnet Engineering at tender stage with alternatives to address these shortcomings. However, each offer shall be quoted for separately.

4. TECHNICAL REQUIREMENTS

The following regulation and codes must be complied with:-

- The Occupational Health and Safety Act – Act 85 of 1993.

- 4.1 Except where otherwise provided for in the specification, all equipment offered will comply with the requirements of the relevant standard specifications of the SABS, if published, otherwise with the relevant standard of the British Standards Institution in force at the time of tendering.
- 4.2 Where equipment offered complies with the recognized standards of the country of manufacture and not specifically with the standards required by this specification, such equipment will be considered at the discretion of Management. In this case, tenders shall state fully all respects in which the equipment departs from the standard laid down in this specification.

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Date: _____

- 4.3 The successful tender will at the conclusion of the installation provide a document along the lines “that the installation complies with national/international requirements and that all selected /designed items are compliant with Act 85 of 1993 and SABS practices applicable to the installation. The equipment has been commissioned/ calibrated and employees as specified have been trained and found competent to operate the plant.”

5. SPECIFIC REQUIREMENTS

Any person with the intention of procuring the materials shall ensure that the information below is complied with. The requirements are binding.

5.1 Scope of works

Item no.	REQUIREMENTS	Details of Offer Comply (Yes) Does not Comply (No)
5.1.1	Read this scope of work with document number, Annexure 1 (Transnet contractor safety, health and environmental management specification guidelines TRN-IMS-GRP-GDL-014.2).	
5.1.2	The service provider is required to submit a SHE Contractor Compliance file at their own cost (Index to be provided to the successful service provider); - This file shall be submitted after the Purchase Order has been issued, not at tender stage.	
5.1.3	<ul style="list-style-type: none"> The appointed contractor shall note that this is a minimum specification for a Replacement of sewer pipeline, manholes and re-connecting sewer pipes. All site operations the relevant legislation and guidance on matters pertaining to safety must be strictly adhered to, as well as labour, transport, tools and all other items required to start and complete this project is a responsibility of a successful contractor. 	
5.1.4	All materials shall be SABS approved.	
5.1.5	The works (workmanship and materials) shall have a warranty and a provision for emergency for damaged.	
5.1.6	<p><u>INSTALLATION OF NEW SEWER PIPES</u></p> <p>The contractor shall check the existing connection manhole before commencement. The contractor shall commence the setting out at such point from manhole to manhole with wooden peg indicating the invert level.</p> <ul style="list-style-type: none"> Survey & inverts level results shall be submitted to the project manager prior to backfilling of soil 350m : Pipe PVC UG CL51 160mm Bends PVC U/G shall be fitted where required Remove and install new sewer pipes from Bay 41 leading to pump house near A35/6. (All new connections shall comply with standards act) Reconnect all sink outlet to the new line along Bay 35C with same pipe size and specification Surface beds and layer works shall be replaced with new borrowed material suitable for the sewer network and laying of sewer pipeworks and be compacted as per Engineers recommendations and all soil compaction test shall be confirmed by the Lab certificate 	

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	<ul style="list-style-type: none"> No pipe shall be installed in the trench until excavation has been properly constructed per the Engineer's instruction All sewers must be laid accurately to line and grade, with tongue or spigot end downstream The inverts of the sewer lines entering the manhole at or near the flow line elevation of the manhole shall be shaped and routed across the floor of the manhole using mortar to obtain the proper contour. Test and inspect joints for leaks prior to backfill 	
5.1.7	<p><u>MANHOLE</u></p> <ul style="list-style-type: none"> Manholes shall be constructed at locations shown on site and to the depth required thereon. Breakdown and remove the existing manhole behind Bay 16.. Construct new manhole behind Bay 35C. Manholes may be constructed of concrete, brickworks or precast concrete sections and in all types shall be constructed to the dimensions shown on the plans. Where concrete or precast concrete sections are used, the interior wall shall be thoroughly coated with coal tar epoxy. Joints between precast concrete sections shall be made by uniformly placing "Ram-Nek" flexible plastic gaskets or approved equal on all faces of the lower part of the joint and lowering the upper ring evenly into place to produce uniform bearing and compression on the sealer. The construction of manholes shall be done as soon as practical after sewer lines into or through the manhole are completed. All sewers shall be cut neatly at the inside face of the walls of the manhole and pointed up with mortar on the existing and new manhole. After the masonry work has been completed to the proper elevation, the cast iron manhole cover frame shall be set in a full mortar bed and adjusted to the elevation established on the drawings. 	
5.1.8	<p><u>FRAMES, GRATES, RINGS AND COVERS</u></p> <ul style="list-style-type: none"> Casting shall conform to the type shown on the plans and shall be clean castings, free from sand or blow holes or other defects. Materials shall be not less than Class 30B gray iron conforming to ASTM A-48. Surfaces of the castings shall be free from burnt-on sand and shall be reasonably smooth. Bearing surfaces between manhole rings and covers and frames shall be cast or machined with such precision that uniform bearing shall be provided throughout the perimeter area of contact. 	
5.1.9	<p><u>REPAIR WORKS (SEWER & STORM WATER)</u></p> <p>The work shall take place at the following Bays:</p> <ul style="list-style-type: none"> - Bay 58 (Pipe broken at entrance drain). - Bay 59-61 (4 off's Manhole seized cannot open). - Bay 64-65 (Floor drain pipe broken at entrance). - Bay 49-50 (Pipe collapsed inside bay and floor sank). - Bay 3 (Pipe blocked outside workshop). - Bay 4 (Pipe broken inside workshop). - Bay 43-45 (Pipebroken, hose pipe stuck). 	

Signature of Bidder/s: _____ Date: _____

	<p>- Repair to overhead water line near canteen (40m)..</p> <p>The scope shall include:</p> <ul style="list-style-type: none"> ▪ Remove all the precast slabs that are cracked and damaged and cart away ▪ Remove all broken stormwater pipework that is underneath the ground and cart away and install new ▪ Clean the silt on the existing stormwater manholes. ▪ Construct new stormwater manholes, with heavy duty cover and frame, as per the detail given by an Engineer. ▪ Lay new stormwater pipes DN200 mPVC pipes to replace all the damaged stormwater and sewer pipes. ▪ Backfill the newly laid pipes using selected granular material. ▪ Connect the new pipes to the stormwater system that is outside Bay 42. ▪ Remove all the loose sandy material, to a minimum depth of 600mm that was washed away during the heavy storm. ▪ Re-instate layerworks at 150mm per layer, using G6 quality material from commercial sources, to the level below the precast slab. ▪ Replace all the broken precast slabs with the new precast slabs, concrete strength to be 30MPa. ▪ Replace the manhole cover at Bay 52 entrance with a sewer steel closed cover. 	
5.1.10	24 months warranty and maintenance shall be included.	
5.1.11	After replacement of sewer pipeline the contractor shall clean the area and remove all rubble away from site.	

5.2 Installation

The success of any Replacement of sewer pipeline, manholes and re-connecting sewer pipes and modification requires satisfactory of the Civil Engineer.

6. Health and safety requirements

- 6.1 All equipment and installation whether detailed in this specification or not shall comply with the requirements of the Occupational Health and Safety Act 85 of 1993 as amended and all other applicable legislation including specific set of regulations and local authority bylaws where applicable.
- 6.2 The contractor shall hold monthly safety meetings with staff and records of minutes shall be kept on file on site.
- 6.3 The contractor shall be available for daily/weekly meetings with Transnet Management. A schedule for these meetings may be agreed upon.

7. SHE specification

- Prior to commencement of contract, the contractor shall be issued with a SHE specification in order to compile a SHE file in line with TE requirements.

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Date: _____

- Prior to establishing on site, it is an explicit requirement of this contract that all of the Contractor's personnel directly involved with this contract, including those of sub-contractors, attend a Safety induction course. Transnet will provide the course free of charge and attendance is compulsory for all personnel under the control of the Contractor who, during the duration of the contract, will be present on site whether on a full time or adhoc basis.
- The contractor must allow for all additional charges because of these requirements as no claims for extras will be accepted in connection with the foregoing.

8. As part of the legislative and TE SHE requirements.

- The successful contractor is required to conduct a Risk assessment to ascertain all potential risks associated with this project. The completed risk assessment is to potential risks associated with this project. The completed risk assessment is to be formally submitted to the Risk department via the project manager at least two weeks prior to the commencement of the actual project.
- A safety file and associated documents will be required from a successful tenderer and such will be communicated by the Risk department.

9. Requirements for prevention of Covid-19

- a) 1 COVID-19 Safety Plan.
- b) Daily Screening questionnaire.
- c) Return to work induction register- Induction Presentation/TE will also conduct the COVID-19 induction.
- d) COVID-19 Employee questionnaire checklist.
- e) Fitness Certificates.
- f) Risk Assessments register.
- g) COVID-19 PPE issue register/sanitizer.

10. Construction Industry Development Board (Cidb) Registration

The Tenderers to be appointed under this Project must be registered with the **CIDB Grading of minimum 3CE** registration, TRANSNET ENGINEERING Durban does not award Projects to any company without proof of this registration.

Signature of Bidder/s: _____

Date: _____

11. TENDER EVALUATION CRITERIA

The following criteria will be used to award the tender. Should there be a criteria over and above the listed below, that will be used, such criteria will be specifically stated.

Technical

No.	Pre-Qualification Criteria TECHNICAL DESCRIPTION (The technical evaluation will be used as a threshold. All bidders who do not meet the minimum threshold of 90% will not proceed to the final stage of evaluation.)	Weightings
11.1	Reporting Structure (Organogram) to be used for this contract Staff credentials (CV's) of staff to be used for this contract. 1. Organogram and staff credentials submitted - 10 points. (Safety Manager = 5 points & Civil Engineer = 5 points) 2. No organogram and staff credentials submitted - 0 (Note: if 1 of the 2 is submitted, then the bidder will score 0).	10 points
11.2	Project Plan and Final Lead time 1 Project Plan final Lead time equals/less than 0 to 2 weeks – 15 points 2 Project Plan final Lead time more than 2 weeks – 5 points 3 No Project Plan final Lead time submitted – 0 (Note: Project Plan must be submitted in either excel or MS project format only)	15 points
11.3	Compliance to scope of work and specifications 1 Comply to scope of work – 15 points 2 Non-compliance to scope of work (including not completed) – 0	15 points
11.4	Specific knowledge relating to projects of this nature Previous experience <u>only</u> construction of sewer networks and stormwater pipes (only completed projects & similar) in the past 5 years, with contactable references. 3 or more submitted – 20 points 2 submitted – 10 points 1 submitted – 5 points 0 submitted – 0	20 points
11.5	Methodology and Approach 1. Approach paper which responds to the scope of works & outlines proposed approach and methodology, besides meeting the good rating, the important issues are approached in an innovative & efficient way, indicating that the tenderer has outstanding knowledge of state-of-the-art approaches. The approach paper details ways to improve the project outcomes & the quality of the outputs = 30 Points 2. The technical approach and/ or methodology is poor/ is unlikely to satisfy project objectives or requirements. The tenderer has misunderstood certain aspects of the scope of works and does not deal with the critical aspects of the project = 1 Point 3. No response/ no documents submitted = 0	30 points
11.6	Safety, Health and Environmental Management Plans 1. Health & Safety Submission of the policies and procedures/plan. = 5 Points 2. Environmental Submission of the policies and procedures/plan=5 Points 3. No response/ no documents submitted = 0	10 points

Total Weighting:

100 points

Minimum qualifying score required:

90 points

Signature of Bidder/s: _____

Date: _____

12. ACTIVITY SCHEDULES AND PRICES

All prices **exclude Vat** and additional items listed (with prices) shall be clearly labelled as optional or essential.

Item	Qty	Price per item	Price
Total (Excl. VAT) to tender form			R

Tenderer: _____

Date: _____

Witness 1: _____

Date: _____

Witness 2: _____

Date: _____

Signature of Bidder/s: _____

Date: _____