



RFP Number: PTH/55108

Description: For the supply, deliver and off load of pre-stressed hollow core slabs to Transnet freight rail, Port Elizabeth (Gqeberha)

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## **Annexure "G" - Specification**

### **1 BACKGROUND**

Pre-stressed hollow core slabs is required to erect a security fence that will serve as a boundary between Transnet rail reserve and low cost dwellings. The boundary wall will stretch from Marshalling yard at New Brighton up to Swartkops station in Port Elizabeth. Access to the site is respectively of Grahamstown Road and Swartkops Road.

Low cost housing is adjoining the New Brighton Marshalling yard and Transnet's property serves as a thoroughfare for the local residence that's promoting theft, vandalism, injuries and fatalities of the "passing public" and Transnet employees.

### **2 CURRENT SITUATION**

The existing fence or sections thereof does not articulate a definitive barrier between the local residence and Transnet's property. The boundary is depictive of open sections, vandalised -, stolen -, residential fibre concrete sections and planted rail sleepers with a steel cable.

The New Brighton Area and Swartkops area's is high risk area that's characterised by robberies of Transnet's employees, theft and vandalism of its assets. Local residence also crosses the property to reach their destinations on the opposing side of the property. Local children and are found hitching "short rides" on moving trains therefore risking injuries and fatalities.

### **3 PURPOSE / OBJECTIVE**

The fence would enable a barrier between the Local Township and Transnet and would make the area more secure for Transnet's employees and assets.

### **4 CONFIDENTIALITY**

A fundamental requirement of the procurement process is that tender information is kept confidential at all times. No team members or stakeholders are to communicate these technical specifications to anyone outside of the process.

### **5 TECHNICAL SPECIFICATION**

Detail the technical specification required to fill the demand, in the necessary format. A suggested outline format is detailed below;

#### **5.1 INTRODUCTION**

Pre-stressed hollow sections consist of 120mm wall thickness that is 6 meter in length and 2 x 1.2 metre in height and 1 x 0.9. The panels are a component of the fence that would be horizontally installed between vertically planted 152 x 152 H steel sections, serving as posts. Total length of fence is +/- 5.5km and we require 1900 of 1.2m panels.

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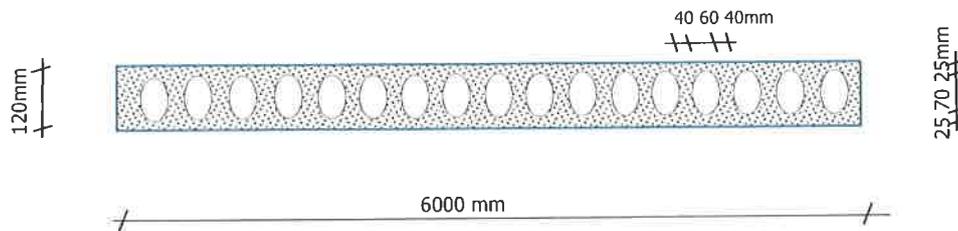
**5.2 REQUIREMENTS**

The appointed tenderer to supply and deliver precast hollow core slab wall as per Transnet requirements/spec stated below.

- Slip formed, precast, pre-stressed hollow core wall slabs not exceeding 222 kg/m<sup>2</sup> in weight at 120 mm thick.
- Slabs to have off-steel-shutter finish externally.
- Wall slabs compressive strength to be in excess of 50 MPa. Certification of quality management inclusive of slab strength to be provided by supplier PRIOR to delivery.

**5.3 TYPICAL DETAIL**

Cross Sectional Detail



**5.4 SECTIONAL INFORMATION:**

Total breadth of webs:	468 mm
Conc. 28 day strength:	50 MPa
Conc. strength at transfer:	35 MPa
Mod. of elasticity of concrete:	34 kN/mm <sup>2</sup>
Stressing of strand / wire:	70%
Cover to steel:	30 mm

**5.5 STANDARD WIRING PATTERNS**

A = 8 X 5 mm wires	B = 12 X 5 mm wires	C = 9 X 5 mm wires + 3 X 9,53 mm strand	D – 7 X 5 mm wires + 5 X 9.53 mm strand
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## **5.6 THE REQUIREMENTS**

Supplier is to manufacture the goods to technical requirements as highlighted above and offload in such manner as to not compromise that structural integrity of the panels. Off-loading and transporting is to the account of the supplier.

## **5.7 DELIVER AREAS**

The material will be delivered at New Brighton Depot and Swartkops Depot respectively. Specific areas to be identified on site.

## **5.8 DURATION OF CONTRACT**

Lead time of 20 working days is requested for "part delivery" (i.e. 25% at a time) from the date of the Purchase Order and 20 days following each stage of delivery or as stated by successful bidder. However sooner lead-times would be acceptable.

## **5.9 PENALTIES**

A penalty to the amount of R 1000 per working day for late delivery applies.

## **5.10 PROCUREMENT TIMELINE**

Approximately 10 weeks

## **5.11 FUNCTIONAL REQUIREMENTS**

- The supplier will required to deliver the material within normal working hours i.e. between 7:00 and 16:30.
- The supplier shall make provisions for transportation and offloading of materials on site.

## **5.12 PERFORMANCE REQUIREMENTS**

- The Contractor develops and maintains a comprehensive register of documents that will be generated throughout the contract including all quality related documents as part of its Quality Plan.
- The Contractor shall submit his Quality Assurance proposal(s) for the contract. This proposal shall detail the Contractor's quality management system as it applies to all aspects of supply or service provision including design, procurement and manufacturing.
- The Project Quality Plan (PQP) is generally in narrative form detailing the Project Specific QA and QC systems and controls required for the Contractor to complete the specific works.
- The requirements for a PQP shall include but not be limited to the following:
  - i. Include all quality activities relevant to the Scope of Work, identifying all procedures, reviews, audits, controls and records used to control and verify compliance with the specified contractual requirements.

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- ii. Include a listing of all special processes (e.g. cube testing etc) envisaged for use, including confirmation of personnel certification as required.
- iii. Include a list of all proposed method statements (for site based work activities).
- iv. Include a description of the Contractor's project organisation, with key positions and responsibilities identified and individuals named. The organisation structure shall also indicate the resources committed to the management / coordination of QA / QC activities.
- v. Include a listing of all Quality Control Plans (QCP's), and associated Field Inspection Checklists (FIC's), as applicable.
- vi. Identify in the Project Quality Plan any Subcontractor work. Subcontractor plans shall be approved by the Contractor, and a copy forwarded to the Project Manager.
- vii. Include a schedule of proposed quality records.

### 5.13 OTHER REQUIREMENTS

- TFR will provide storage and security of the material.
- Supplier to provide trained employees for the good handling and packing of the material.
- **The supplier shall make sure that the delivery note is signed upon delivery of materials for payment purposes.**
- Invoices shall be processed as and when delivery take place.

### 5.14 CONSTRAINTS

The supplier to present first delivery schedule to be accepted by RNC.

### 5.15 IMPLEMENTATION REQUIREMENTS

This will be according to the specification of loading and offloading to make sure the material is received in acceptable condition.

### 5.16 ENVIRONMENTAL IMPACT ASSESSMENT

While offloading, supplier to make sure that there's no waste water or air pollution.

### 5.17 HEALTH AND SAFETY

All tenderers are to note that their price must include supply and delivery of pre-stressed hollow core panels and will be required to submit complete safety file as per Transnet's safety specification for approval prior to any delivery.

- The supplier shall provide a Safety File.
- The supplier ensures that its Subcontractors comply with the Transnet's requirements.

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- No alcohol is permitted on Site and Transnet property. The Employer has a zero tolerance policy in this regard and all personnel entering the Site will be required to undergo breathalyser tests.
- Long pants are a requirement – no shorts are allowed to be worn on site.
- The supplier shall provide all personnel with the required PPE as detailed in the Health and Safety Plan and Standard.

The following PPE is the minimum requirement:

- Hard hat
- Safety boots with steel toe cap
- High visibility reflective vests
- Safety glasses
- Safety gloves
- Any other job specific PPE required.

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**BASELINE RISK ASSESSMENT FOR OFFLOADING PRE-STRESSED HOLLOW CORE PANELS OF 6M X 1.2M**

RA NO: BASELINE 001

DATE: 12 October 2020

CONTRACTOR: \_\_\_\_\_

LOCATION: NEW BRIGHTON

PROJECT DESCRIPTION: OFFLOADING HOLLOW CORE PANELS OF 6M X 1.2M

START DATE: \_\_\_\_\_

END DATE: \_\_\_\_\_

Initials and Surname	Position	Signature
Phoebus Quantoi	Engineering Manager	
Martin Scott	Supervisor	



No	LIST TASK WITH ALL TASK STEPS (WHO WILL DO WHAT, WHERE AND WHEN)	POTENTIAL AND EXISTING HAZARDS • INJURY • HEALTH • PROCESS • MATERIAL • ENVIRONMENT	PREVENTATIVE MEASURES AND CONTROLS • ELIMINATE RISK • CONTROL AT SOURCE • PUT/FOLLOW PROCEDURE • PROVIDE PPE	PERSON RESPONSIBLE TO ENSURE PREVENTATIVE MEASURES AND CONTROLS ARE IN PLACE
1	Appoint team that will be responsible for task	<ul style="list-style-type: none"> <li>• Not adhering to the Occupational Health &amp; Safety Act could have serious consequences</li> <li>• Incompetent personnel could cause serious incidents /accidents</li> </ul>	<ul style="list-style-type: none"> <li>• Submit safety file to prove that all risks have been considered.</li> <li>• Ensure personnel is medically fit and have prove of all licences &amp; competency certificates.</li> </ul>	Supplier
2	Pre- Shift daily inspections by operators	<ul style="list-style-type: none"> <li>• Encountering hazards on the plant during pre-shift inspection.</li> <li>• Damage to plant and equipment</li> <li>• Negative impact on operations activities</li> <li>• Driver /Operators under the influence can cause serious damage/ injuries</li> </ul>	<ul style="list-style-type: none"> <li>• All hazards identified must be reported to the supervisor and mechanics a s a p</li> <li>• Plant record and pre-inspection register to be in place before any plant can operate.</li> <li>• Operator may not operate the plant until the mechanics has resolved the hazard and signed off as corrected and safe to use</li> <li>• All personnel involved in task must be sober (screened &amp; keep register)</li> </ul>	Supplier
3	Loading of 6m X 1 22m Pre-Stressed Hollow core panels	<ul style="list-style-type: none"> <li>• Attach suitable lifting tackle, spreader bars and belts / soft endless slings / chains</li> <li>• Damage / injuries due to un-secure or sliding load.</li> <li>• Damage / injuries due to moving load.</li> </ul>	<ul style="list-style-type: none"> <li>• Operator to ensure the correct lifting tackle is used Load test certificates and inspection records to be available.</li> <li>• Operator to ensure load is secure and raised evenly</li> <li>• Operator to ensure no persons have entered the lifting area</li> </ul>	Supplier
4	Travelling to off-loading site	<ul style="list-style-type: none"> <li>• Not adhering to traffic laws can cause accidents</li> <li>• Loose load can cause serious damage if sliding off low-bed</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor to ensure traffic laws are followed.</li> <li>• Load to be inspected at regular intervals during trip</li> </ul>	Supplier



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5	Vehicle establishment at off-loading area	<ul style="list-style-type: none"> <li>• High crime area – theft &amp; robbery</li> <li>• Working near Railway OHTE can cause serious electrical shock.</li> <li>• Contamination of area due to oil or diesel spills</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor to ensure that security is present at all times.</li> <li>• Personal items such as cell phone &amp; wallet should be kept in a safe place</li> <li>• Supervisor to check that crane reach is not within 6m of any OHTE lines</li> <li>• Use drip trays for any breakdowns &amp; no site refuelling is allowed</li> </ul>	Supplier
6	Off- Loading of 6m X 1 22m Pre-Stressed Hollow core panels	<ul style="list-style-type: none"> <li>• Attach suitable lifting tackle, spreader bars and belts / soft endless slings / chains</li> <li>• Damage / injuries due to un-secure or sliding load</li> <li>• Damage / injuries due to moving load.</li> <li>• Injuries to people due to overhead loads.</li> </ul>	<ul style="list-style-type: none"> <li>• Operator to ensure the correct lifting tackle is used. Load test certificates and inspection records to be available</li> <li>• Operator to ensure load is secure and raised evenly</li> <li>• Operator to ensure no persons have entered the lifting area</li> </ul>	Supplier
7	Stacking 7 Housekeeping	<ul style="list-style-type: none"> <li>• Unstable ground can cause stacked material to fall/ slide and cause serious injuries</li> <li>• Stacking height and incorrect stacking method can cause product damage and injuries</li> <li>• Loose items and debris is a trip hazard and ca cause injuries</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor to check firmness of soil / stacking area prior to placement.</li> <li>• Stack material only in accordance with Manufacturer's specification</li> <li>• Supervisor to ensure site is kept clean at all times</li> </ul>	Supplier