

TNPA PORT OF EAST LONDON

SUPPLY AND DELIVERY OF PRECAST LEVEL CROSSING CONCRETE BLOCKS

1. LOCATION OF DELIVERY SITE

The material to be delivered at Transnet National Port Authority, Port of East London, Corner Dr Zahn, and Pontoon Road. The area is access controlled and all security and safety protocols must be always adhered to.

2. SCOPE OF WORK

This specification covers the supply of reinforced concrete crossing blocks for road surface at level crossings.

3. BACKGROUND

TNPA plans to purchase new precast-level crossing concrete blocks. This will assist when there are worn-out blocks that need to be changed and areas where there are none. By acquiring new precast-level crossing concrete blocks, TNPA is taking proactive measures to ensure that we have the necessary tools to maintain and improve our infrastructure. This will enable us to continue to provide a safe and efficient environment.

4. INTERPRETATIONS

4.1. Requirements and Specification

This specification shall be read in conjunction with the transport services specification S420 for concrete work and specification SABS-1200-GE for precast concrete (structural).

5. MATERIALS

The blocks shall be cast in 40 MPa/19 mm concrete

6. CONSTRUCTION

6.1.1. The blocks shall be manufactured in accordance with the tender drawings.

6.1.2. The contractors shall submit with his tender details of the curing process he intends to use

6.1.3. The top surface of each block shall be lightly brushed while the concrete is still plastic to obtain a non-slip surface.

6.1.4. Blocks which are cracked or deformed will not be accepted.

7. MARKINGS

All blocks shall be suitably marked.

The following marking shall be used:

7.1.1. Year and month of manufacture

7.1.2. Manufactures identification mark.

All markings shall be indented.

8. PACKING AND DELIVERY

The blocks shall be loaded in layers.

Each layer including the bottom layer shall rest on 2 strips of timber. Each timber strip shall have a cross-section not less than 40mm x 20mm. Suitable packing material shall be placed vertically between blocks to prevent breakage during transit.

9. TOLERANCES

The dimensional tolerances of each block shall be $\pm 3\text{mm}$.

10. TESTING

10.1. Concrete

10.1.1. Two sets of three 150mm cubes shall be cast at reasonable intervals for each day's production, irrespective of the number of blocks cast during the day and shall be tested in accordance with SABS 1200 GE.

10.1.2. If the specified strength is not obtained, 2 additional crossing blocks over and above the requirement of 10.2.1, selected at random from blocks casted that day, shall be tested in accordance with 10.2.2.

10.2. Deflection

10.2.1. One block selected at random from every batch/ portion thereof produced each day shall be tested.

10.2.2. The test block shall carry a load of 80kN over an area of 100mm x 300mm, chosen by

10.2.3. Transport services, for a period of 15 minutes without the deflection exceeding

10.2.4. 1/40 of the clear span. Should any block fail to comply with the requirement of 7.2.2, the same test shall be applied to 2 other blocks from the same batch. If either of these fails, the entire batch will be rejected.

11. GUARANTEE

The service provider is responsible for ensuring that the supplied blocks are free from any defects caused by faulty materials or workmanship for a period of 12 months. In case any defects are noticed within the guarantee period, the affected blocks will be replaced at no cost.

12. METHOD OF MEASUREMENT AND PAYMENT

12.1. Payment will be made for the supply and delivery of all precast level crossing concrete blocks accepted by Transnet.

12.2. The service provider's material quality shall be to the highest possible standard and entirely to the satisfaction of the Project manager/requestor before any claims are approved.

13. PRICE SCHEDULE

SUPPLY AND DELIVERY OF PRECAST CONCRETE LEVEL CROSSING BLOCKS	UNIT	QTY	PRICE
1. Outer Precast Level Crossing Blocks (700 x 495)	Ea.	50	
2. Inner Precast Level Crossing Blocks (650 x 495)	Ea.	50	
TOTAL		100	

14. DRAWINGS

See Attached Annexures A & B.