

DESCRIPTION

This work shall consist of furnishing and installing preformed polymer concrete barrier panels for use in the resurfacing & remediation of deteriorated concrete traffic barrier to be done in accordance with the contract documents and as directed by the Engineer.

The Contractor is advised that certain elements and/or processes contained in the plans and this specification for Preformed Polymer Concrete Barrier Panel may be patented or subject to patents pending by Transpo Industries, New Rochelle, NY. Ph. (914)-636-1000. Transpo Industries product Visi-Barrier or an approved equal shall be allowed as determined by the Director, Materials Bureau.

MATERIALS

The Contractor shall provide a Preformed Polymer Concrete Barrier Panel that meets the following requirements:

- Conform to the shape and dimension of the existing barrier or as depicted on the contract plans.
- Be of uniform cross section that allows for secure attachment to an existing barrier structure, while maintaining original shape.
- Serve as an in-place form until the annular space between the existing barrier structure and panel is filled.
- Panels shall have a smooth surface texture, free of cracks or other defects and be uniform in color and appearance.
- Consist of a Polymer Concrete mixture meeting the following Physical Requirements:

Property	Requirement	Test Method
Compressive Strength, Min. 28 days	55 MPa Minimum	ASTM C1439 & C109
Freeze-thaw Loss (25 Cycles, 10% NaCl solution)	Less than 1.0% Loss	NYSDOT 501-3P
Flexural Strength	15 MPa Minimum	ASTM C1439 & C348

In addition, the following installation material requirements shall apply:

- The annular space between the panel and existing barrier shall be filled with Class DP Concrete in accordance with Section 501 of the Standard Specifications or Concrete Grout in accordance with the Material Requirements of Section 701-06.
- Grout bedding material shall conform to the requirements of Section 701-05, and as depicted on the contract plans.
- Joint Sealer shall be used in accordance with Section 705 of the Standard Specifications and as depicted on the contract plans.

CONSTRUCTION DETAILS

Prior to panel installation, the existing concrete barrier shall require surface preparation in accordance with Section 582-3.03 and 582-3.04. All areas of unsound concrete shall be removed to the depth as indicated on the contract plans or as determined by the engineer. This work shall be included in the bid price for panel installation.

The Contractor shall furnish and install preformed polymer concrete traffic barrier panel in accordance with the plans and specifications. The Contractor shall propose the method of panel attachment to the substrate barrier material as per the manufacturer's recommendations or as depicted on the contract plans. The Contractor shall submit panel installation and detail drawings to the Engineer at least 30 days prior to installation, which shall clearly depict the following:

- Panel fabrication details, dimensions, and appearance.
- Method of panel handling & placement.
- Panel attachment details & required installation materials.
- Proposed construction sequence.

Panels shall be installed on a bed of grout meeting the requirements of 701-05, as depicted on the contract plans. Panels shall be installed such that adjacent panel edges are flush within a tolerance of +/- 4 mm. All panel joints shall be sealed as per the manufacturer's recommendation prior to filling the annular space.

The material used to fill the annular space between the panel and the existing barrier shall consist of Class DP concrete or Grout with an aggregate size less than 25 mm. Upon completion, the backfill material shall serve to make the panel integral with the existing barrier. If an annular fill material other than the above is used, a mix design and placement method shall be submitted to the Director of the Materials Bureau for approval prior to the installation of the panels.

METHOD OF MEASUREMENT

This work will be measured as the number of linear meters of Preformed Polymer Concrete Traffic Barrier Panel satisfactorily furnished and installed.

BASIS OF PAYMENT

The unit price bid per linear meter of Preformed Polymer Concrete Panel shall include the cost of all panel materials, furnishing all labor, existing barrier surface preparation, anchorage materials, annular space fill material, and equipment necessary to satisfactorily complete the work.