Item 512
Portable Traffic Barrier

1. DESCRIPTION

Furnish, install, move, and remove portable traffic barrier.

2. MATERIALS

2.1. Furnished by the Contractor.

2.1.1. Concrete. Furnish barrier of the class of concrete shown and using materials that meet the pertinent requirements of the following Items:

- Item 420, “Concrete Substructures”
- Item 421, “Hydraulic Cement Concrete”
- Item 424, “Precast Concrete Structural Members (Fabrication)”
- Item 440, “Reinforcement for Concrete”
- Item 442, “Metal for Structures”

2.1.2. Steel. Barrier sections will be furnished when shown on the plans. Barrier sections must meet the crash testing requirements of NCHRP 350 or MASH TL-3 or TL-4 specifications as per test matrix for Longitudinal Barriers.

2.1.3. Concrete and Steel. When barrier is to be furnished and retained by the Contractor, products from nonapproved sources or previously used products may be provided if the Contractor submits written certification that the barrier sections and materials substantially conform to the requirements of this Item. The Engineer may approve the use of the product if:

- the barrier sections substantially meet typical cross-section dimension requirements,
- there is no evidence of structural damage such as major spalls or cracks,
- the general condition of both the barrier sections and their connectors is acceptable,
- the barrier is new, and
- the barrier is being reused.

2.2. Furnished by the Department. Department-furnished barrier sections will be at a stockpile location or an existing traffic barrier installation shown on the plans.

3. CONSTRUCTION

Notify the Engineer of the location of the casting site and the date on which the work will begin. Multi-project fabrication plants as defined in Item 424, “Precast Concrete Structural Members (Fabrication),” that produce concrete traffic barrier, except temporary barrier furnished and retained by the Contractor, must be qualified in accordance with DMS-7350, “Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Traffic Barrier.” See the Department’s MPL for approved fabricators. Construct barrier in accordance with Item 420, “Concrete Substructures,” to the dimensions and cross-sections shown on the plans. Provide forms and cure concrete in accordance with Item 424, “Precast Concrete Structural Members (Fabrication).”

Provide a rough texture to the bottom surface of Single Slope or F-Shape barriers and to the top of Low Profile barriers similar to a wood float finish.
Remove formwork after the concrete has reached sufficient strength to prevent physical damage to the member. Move barrier sections to a storage area and place them on blocking to prevent damage when they have attained sufficient strength to permit handling without causing visible damage.

Produce precast barrier to the tolerances given in Table 1 unless otherwise shown on the plans.

### Table 1

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Tolerance</th>
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</thead>
<tbody>
<tr>
<td>Length</td>
<td>±1 in.</td>
</tr>
<tr>
<td>Insert Placement</td>
<td>±1/2 in.</td>
</tr>
<tr>
<td>Horizontal Alignment</td>
<td>±1/8 in. per 10 feet of length</td>
</tr>
<tr>
<td>Deviation of Ends:</td>
<td></td>
</tr>
<tr>
<td>Horizontal Skew</td>
<td>±1/4 in.</td>
</tr>
<tr>
<td>Vertical Batter</td>
<td>±1/8 in. per foot of depth</td>
</tr>
</tbody>
</table>

Install the barrier sections in accordance with the details shown on the plans or as directed.

After use, stockpile barrier sections and connection hardware that are to be retained by the Department at the location shown on the plans or as otherwise directed. Obtain assembly and installation information for the portable steel traffic barrier from the manufacturer, and provide the Engineer with an installation and repair manual specific to the portable steel traffic barrier.

Repair or replace all traffic barrier or connecting hardware damaged by the Contractor's operations at the Contractor's expense.

Repair or replace any pavement damaged in the process of installing, moving, or removing barrier sections at the Contractor's expense.

4. **MEASUREMENT**

This Item will be measured by the foot based on the nominal lengths of the barrier sections.

5. **PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price as follows:

- For concrete barrier only, bid for “Portable Traffic Barrier” of the work category (Furnish and Install, Designated Source, Move, Stockpile, or Remove), shape (e.g., Single Slope, F-Shape, or Low Profile) and Type (1, 2, 3, etc.) of barrier sections specified. This price includes equipment, labor, tools, and incidentals.

- For concrete and steel barrier, bid for “Portable Traffic Barrier” of the work category (Furnish and Install, Designated Source, Move, Stockpile, or Remove), shape (e.g., Single Slope, F-Shape, or Low Profile) and Type (1, 2, 3, etc.) of barrier sections specified or “Steel”. This price includes equipment, labor, tools, and incidentals.

5.1. **Furnish and Install.** This price is full compensation for furnishing and installing barrier sections and connection hardware.

5.2. **Designated Source.** This price is full compensation for delivering and installing Department-furnished barrier sections and connection hardware from a designated source.

5.3. **Move.** This price is full compensation for moving barrier section installations on the project from one location to another (including disassembly and reassembly costs), moving barrier sections from an installation on the project to a temporary storage area (including disassembly costs), and moving barrier sections from a temporary storage area to an installation site on the project (including assembly costs).
5.4. **Stockpile.** This price is full compensation for removing barrier sections and connection hardware from the project and delivering to the Department stockpile area shown on the plans or as directed.

5.5. **Remove.** This price is full compensation for removing barrier and connection hardware from the project and retained by the Contractor.