

**STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTAL SPECIFICATION 802  
BARRIER REFLECTORS**

March 23, 1995

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**802.01 Description.** This item shall consist of furnishing and installing barrier reflectors on galvanized steel guardrail, concrete barrier, retaining wall and bridge parapets in accordance with the plans and specifications.

**802.02 Material.** The reflector body housing shall be made of acrylic or polycarbonate plastic, or corrosion resistant metal. The minimum reflective surface area of the reflector shall be 4500 mm<sup>2</sup> (7 square inches).

Barrier reflectors shall be mountable on guardrail and concrete barrier, retaining walls, and bridge parapets. In the case of guardrail mount, the unit must fit within the channel exposed to traffic and not protrude beyond the depth of the channel. In the wall or parapet mount, the barrier reflector may not extend further than 130 mm (5 inches) in a horizontal direction towards the traffic lanes.

White reflectors shall reflect the following minimum candela of light at the indicated observation angles for each 10.76 lux (1 footcandle) of incident light at the indicated entrance angles. Amber reflectors shall reflect at least 60 percent of these values.

**MINIMUM SPECIFIC INTENSITY, cd/10.76 lx**

Entrance Angle (degrees)	Observation Angle (degrees)	
	0.2	2.0
-4	62	0.25
15	52	0.18

The entrance angle is measured in the horizontal plane between the direction of incident light and normal to the face of the reflector. The observation angle is measured in the vertical plane between the observer's line of sight and the direction of light incident to the reflector face.

**802.03 Testing.** The manufacturer shall submit a sample of five reflectors to the Laboratory along with their recommended installation procedures. The Laboratory will evaluate these samples to determine conformance with this specification. Reflectors meeting this specification will be carried on a prequalified list maintained by the Laboratory. Poor field performance or a change in materials may be cause for removal from the prequalified list. Each shipment of reflectors or components shall be accompanied by a letter of certification stating that the material complies with this specification.

**802.04 Layout.** The Contractor shall lay out all locations to assure proper placement. The layout shall be approved by the Engineer prior to installation of the reflectors.

All barriers shall have a reflector at the beginning and the end of the run and at least one evenly spaced between the termini. The reflectors shall be spaced at 30 m (100 feet) on tangents and on curves of more than 350 m radius (less than 5 degrees). The reflectors shall be spaced at 15 m (50 feet) for curves of 350 m radius or less (5 degrees or greater).

The spacing on tangents and curves more than 350 m radius (less than 5 degrees) may vary from 20 m to 40 m (75 feet to 125 feet) in the final 80 m (250 feet) to achieve even spacing of the reflectors.

When a guardrail anchor assembly or a guardrail bridge terminal assembly is used, the first (or last) reflector shall be placed near the first (or last) post rather than at the end of the assembly.

When a buffer end section or similar device is provided on the end of the guardrail, the first reflector shall be placed so that it is visible to approaching traffic.

When guardrail, barriers, retaining walls, or bridge parapets are tied together in a continuous run, the total length of the run shall be used for determining the number and location of reflectors.

When a run of rail/barrier is installed that is at varying distances from the edge of pavement, a reflector shall be placed where the run first approaches closest to the pavement. If this results in spacing greater than 40 m (125 feet), or 20 m (65 feet) in cases where 15 m (50-foot) standard spacing is required, an additional reflector shall be installed.

When a non-reflectorized impact attenuator is in place, an additional reflector shall be