



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JIM BOXOLD
SECRETARY

ESTIMATES BULLETIN 15-05 **TRAFFIC OPERATIONS BULLETIN 04-15**

DATE: July 9, 2015

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Consultant Project Management Engineers, District Construction Engineers, District Maintenance Engineers, District Roadway Design Engineers, District Traffic Operations Engineers, District Specifications Engineers, District Estimates Engineers, Program Management Engineers

FROM: Phillip "Greg" Davis, P.E., State Estimates Engineer
Mark Wilson, P.E., State Traffic Operations Engineer

Trey Tillander for Greg Davis
Mark Wilson

COPIES: Brian Blanchard, Tom Byron, Tim Lattner, Trey Tillander, David Sadler, Bruce Dana, John Krause, Robert Robertson, Michael Shepard, Bob Crim, Rudy Powell, Greg Davis, Daniel Scheer, Bob Burleson, Greg Schiess, Nicholas Finch (FHWA), Rafiq Darji, Chad Thompson (FHWA), Phillip Bello (FHWA)

SUBJECT: RETROREFLECTIVE STRIPS FOR SIGNS

This bulletin/memo supplements Roadway Design Bulletin 15-08/Traffic Operations Bulletin 03-15 with additional guidance for use of Retroreflective Strips. Specifications Section 700 has been updated to include material requirements, dimensions, measurement and payment information. This specification will be available for the January 2016 e-book.

REQUIREMENTS

1. Show pay item for Retroreflective Strips in the plans (signing pay items) and summarize on the Signing and Pavement Marking Tabulation Sheet.

NOTE: Retroreflective strips are required for use on Wrong Way Signs at Ramp Intersections, Rail Road Crossbuck sign blades, and Rail Road Crossbuck sign supports (MUTCD 5F.02 and 8B.03). See implementation plan below for other locations.

2. Pay item **700- 13- AB Retroreflective Sign Strip**, EA is effective July 1, 2015.

A= Operation

1 (Furnish & Install)

B= Height of Reflective Strip

0 (Back of Rail Road Crossbuck Sign) for back of blades

2 (2') for signs mounted at 4'

5 (5') for signs mounted at 7', per implementation plan below.

COMMENTARY

Retroreflective Strips are one type of Conspicuity Marking permitted in the MUTCD. The dimensions and material requirements included in the specification are intended to provide a consistent, statewide standard for conspicuity marking products on sign posts. Specific proprietary products are not to be identified in the plans.

While the MUTCD allows for conspicuity markings on other signs, Section 2A.15 also states that "Sign conspicuity improvements can also be achieved by removing non-essential and illegal signs from the right-of-way (see MUTCD Section 1A.08), and by relocating signs to provide better spacing." Therefore, the Engineer of Record should recognize that the overuse of conspicuity markings could diminish the effectiveness at necessary locations.

The Traffic Engineering Manual (TEM) will be updated with Guidelines for Use of Retroreflective Strips.

BACKGROUND

Refer to Roadway Design Bulletin 15-08/Traffic Operations Bulletin 03-15 for background information on wrong way signs at ramp intersections.

IMPLEMENTATION

For Projects let January 2016 and later:

The Retroreflective strips are approved for use on Wrong Way Signs at Ramp Intersections and Rail Road Crossbucks.

All other locations must be approved by the District Traffic Operations Engineer, and should only be used where additional conspicuity is needed, in accordance with the guidance in the TEM.

Include the pay item(s) in the plans and tabulation sheet, as noted above. The specification will be available in the 2016 e-Book.

For Projects let July 2015 through December 2015:

The Retroreflective strips are approved for use on Wrong Way Signs at Ramp Intersections and Rail Road Crossbucks.

All other locations MUST be approved by the State Traffic Engineering and Operations Office, and should only be used where additional conspicuity is needed.

Include the pay item(s) in the plans and tabulation sheet, as noted above. A Modified Special Provision (MSP) will be available through the District Specifications Office, and must be included with the pay item.

CONTACTS

If you have any questions, please contact:

Estimates: Melissa Hollis (850)-414-4182, Melissa.Hollis@dot.state.fl.us

Traffic Operations: Raj Ponnaluri, 850-410-5418, Raj.Ponnaluri@dot.state.fl.us

ATTACHMENTS

Modified Special Provision (MSP) for Construction Projects- Highway Signs

ATTACHMENT 1- Modified Special Provision

HIGHWAY SIGNS. (REV 5-21-15)

ARTICLE 700-2 is expanded by the following:

700-2.1.6 Retroreflective Strips for Signs: Use only on signs where the retroreflective strip is called for in the Plans. Use 0.040 aluminum panels, Type IV or Type XI retroreflective sign sheeting meeting the requirements of Section 994 for the fabrication of the sign strips and stainless steel attachment hardware for the installation. Retroreflective strips must be 2 inches in width and a height of 5 feet for all signs except for WRONG WAY signs, when mounted at 4 feet, the retroreflective strip will be 2 feet in height. For the back of Rail Road Crossbuck signs, the retroreflective strip will be 2 inches wide for the full length of the blade. Match the color of the retroreflective sheeting to the background color of the sign except for YIELD signs and DO NOT ENTER signs, where the color must be red.

SUBARTICLE 700-2.3 is deleted and the following substituted:

700-2.3 Method of Measurement: For single post and multi post sign assemblies, an assembly consists of all the signs mounted on a single structure. The Contract unit price per assembly for ground mounted signs (single post and multi-post), furnished and installed, will include furnishing the sign panels, support structure, foundation, hardware, and labor necessary for a complete and accepted installation.

The retroreflective sign strip will be paid for separately, and the Contract unit price per each will include furnishing the sign strips, hardware and labor necessary for a complete and accepted installation.

For overhead signs, sign panels will be paid separately from support structures. The Contract unit price per each for sign panel, furnished and installed, will include furnishing the sign panels, hardware, and labor necessary for a complete and accepted installation. The Contract unit price for each overhead static sign structure, furnished and installed, will include furnishing the support structure, foundation, hardware, and labor necessary for a complete and accepted installation.

Relocation of signs will consist of removing the existing sign assembly and installing the sign on a new foundation at the location shown in the Plans.

When the Plans call for existing ground-mounted signs to be relocated or removed, after removing the sign panel from the assembly, remove supports and footings. Restore the area of the sign removal or relocation to the condition of the adjacent area.

SUBARTICLE 700-2.4 is deleted and the following substituted:

700-2.4 Basis of Payment: Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

- | | |
|------------------|--|
| Item No. 700- 1- | Single Post Sign, per Assembly. |
| Item No. 700- 2- | Multi Post Sign, per Assembly. |
| Item No. 700- 3- | Sign Panel, per Each. |
| Item No. 700- 4- | Overhead Static Sign Structure , per each. |
| Item No. 700- 13 | Retroreflective Strip, per each. |