Retroreflectivity - The Latest

NACE has been a member of the AASHTO Task Force on Retroreflectivity for a number of years. It has worked to expand options for retroreflectivity achievement including not publishing values for markings and signage in the MUTCD. The AASHTO Board of Directors recently recommended a change in Section 406 of the present law regarding establishment of minimum retroreflectivity values for signs and pavement markings.

The AASHTO recommendation would remove the requirement of FHWA having to establish retroreflectivity values for both signs and markings. It does, however, recommend in its place that agencies establish a management program to review these devices with an official process to maintain good sign and pavement marking for the driving public. AASHTO says it believes this is a much better process and could avoid the Tort Liability issues of having to maintain a certain level of retroreflectivity for both signs and markings. The specifics are as follows:

"Proposed Legislative Modification
Road Management - Retroreflectivity Requirements for Roadway Signs and Pavement Markings

Public Law 102-388, Oct. 6, 1992 (Department of Transportation and Related Agencies Appropriations Act, 1993)

CURRENT
Section 406 - The Secretary of Transportation shall revise the Manual of Uniform Traffic Control Devices to include -

a) a standard for a minimum level of retroreflectivity that must be maintained for pavement markings and signs, which shall apply to all roads open to public travel; and
b) a standard to define the roads that must have a centerline or edge lines or both, provided that in setting such standard the Secretary shall consider the functional classification of roads, traffic volumes, and the number and width of lanes.

PROPOSED
Section 406 - The Secretary of Transportation shall revise the Manual of Uniform Traffic Control Devices to include -

a) the establishment of a management process to provide for reasonably maintained nighttime visibility of traffic control devices, including traffic signs and pavement markings; and
b) a standard to define the roads that must have a centerline or edge lines or both, provided that in setting such standard the Secretary shall consider the functional classification of roads, traffic volumes, and the number and width of lanes.

BACKGROUND
Retroreflective traffic control devices are widely used for nighttime visibility and safety. In 1991 Congress directed the U.S. Department of Transportation to establish "a standard for a minimum level of retroreflectivity that must be maintained for pavement markings and signs which apply to all roads open to the public travel." Since then there has been considerable research conducted in an attempt to establish these standards.

The retroreflectivity research results indicated the levels of retroreflectivity needed for visibility of signs and markings are not an exact science. Instead, the values are subject to many factors, such as weather, driver age, eye-height of the driver, vehicle type, and type of headlamps on the vehicle. With the US population aging, and vehicle and headlamps changing, it is even more difficult to establish standard values for maintained retroreflectivity of signs and markings.

AASHTO concurs that it is desirable to maintain an adequate level of retroreflectivity for both traffic signs and pavement markings to enhance safety for motorists during hours of darkness and during adverse weather conditions. However, there is concern about additional liability for transportation agencies if the proposed minimum levels of retroreflectivity values are established in the Manual on Uniform Traffic Control Devices

The efforts to ensure adequate night visibility should not impose undue burdens on highway agencies. To that end, AASHTO recommends that Congress reconsider the requirement of putting such information in the MUTCD.

Instead, the law should be changed to allow agencies to establish a management process to provide reasonably maintained nighttime visibility of traffic control devices. This process could use one or more of the following methods:

- Nighttime inspections
- Sign and markings management system
- Sign Life Analysis
- Other methods as appropriate.

Recommendations for Legislation

Revise section 406(a) of the 1993 Department of Transportation Appropriations Act that required the Secretary of Transportation to revise the Manual on Uniform Traffic Control Devices to include a standard for minimum level of retroreflectivity that must be maintained for traffic signs and pavement markings. These retroreflectivity levels should not be published as part of the Manual on Uniform Traffic Control Devices. Instead, agencies should establish a process to provide reasonably maintained nighttime visibility of traffic signs and pavement markings. Signs and pavement markings that do not provide reasonably maintained nighttime visibility should be replaced within a reasonable time.

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