

ALDOT-422-06
METHOD FOR RETROREFLECTIVITY MEASUREMENT OF TRAFFIC
MARKING MATERIALS

1. Scope

1.1 This method covers measurement of the retroreflectivity of traffic marking materials: thermoplastic, hot spray thermoplastic, preformed thermoplastic, preformed traffic tape, and traffic paint (waterborne and solvent based).

2. Applicable Documents

2.1 Alabama Department of Transportation Standard Specifications

2.2 ASTM E 1710, "Standard Specifications for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer"

2.3 ASTM D 6359, "Standard Specifications for Minimum Retroreflectivity of Newly Applied Pavement Marking Using Portable Hand-Operated Instruments"

2.4 Form BMT-186, "Retroreflectivity, Color and Luminance Factor Report"

3. Apparatus

3.1 Use an approved 30 meter geometry retroreflectometer meeting ASTM E 1710.

4. Sampling

4.1 Evaluate all striping materials in an "as is" condition per ASTM D 6359.

4.2 Location of measurements:

4.2.1 Lot - The entire length of any one type and color of stripe.

4.2.2 Sublot - The project's length divided by 5. If project is less than 5 miles in length, a subplot is equal to 1 mile.

- 4.2.3** Test Section – A randomly selected one hundred foot section within each subplot.
- 4.3** The sample size shall be 3 measurements approximately fifty feet apart within each test section.
- 4.3.1** The average of all three measurements taken within the test section of each subplot shall be used in determining the acceptance and payment of each subplot of traffic stripe.
- 4.3.2** Centerlines shall be measured in the direction for retroreflectivity values. Three measurements shall be taken within each test section. The average of all three measurements within the test section of each subplot shall be used in determining the acceptance and payment of each subplot of centerline traffic stripe.
- 4.4** Pass / fail criteria are based on the Department’s specification for each type of traffic marking.

5. Procedure

- 5.1** Retroreflectivity: Measure the retroreflectivity with an approved measuring device meeting the requirements of 3.1 per the written instructions of the manufacturer. Calibrate the instrument at the beginning of each day of use. Perform additional calibrations if the instrument is turned off, recharged, or if testing conditions change, e.g. substantial change in ambient temperature. Mark the location of measurements to allow subsequent measurements in the same location.

6. Reporting

- 6.1** Record all data on form BMT-186 titled “Retroreflectivity, Color and Luminance Factor Report” to document the retroreflectivity of traffic marking materials.