

EVALUATION OF RETROREFLECTIVITY ON PERMANENT PAVEMENT MARKINGS USING MOBILE 30 METER GEOMETRY INSTRUMENTS

1. SCOPE:

- 1.1. This method covers the evaluation of retroreflectivity on permanent pavement markings using mobile 30-meter geometry instruments.
- 1.2. It is intended to provide standards of horizontal pavement markings to assure that adequate retroreflectivity for the driver is provided by newly applied markings.
- 1.3. Waterborne and durable waterborne pavement markings will be evaluated in a period of not less than 30 to no more than 60 days after the date the materials are applied.
- 1.4. Durable pavement markings such as Thermoplastic, Permanent Pavement Tapes, and Epoxies will be evaluated in a period of time not less than 150 days to no more than 210 days after the date the materials are applied.

2. TERMINOLOGY:

- 2.1. Section: a portion of striping completed for a single color per line width by one striping crew in one shift.
- 2.2. Segment: a portion equal to one-tenth of a mile of a section.
- 2.3. Retroreflectivity: a standard of measure for pavement markings. The units for these readings are millicandelas per square meter per lux ($\text{mcd}/\text{m}^2/\text{lx}$).
- 2.4. Crew: a group of two or more people identified by the striper and the driver of the striper applying pavement markings.
- 2.5. Shift: a period of time whereby a single crew works continuously stopping only for legally required breaks.

3. SUMMARY OF SPECIFICATION:

- 3.1. For the purpose of evaluating retroreflectivity, data obtained through evaluation according to KM 64-203 will be collected and evaluated separately for each section.
- 3.2. Calibrate the mobile instrument. Record calibration measurements at the beginning of the day's work. Recalibrate the instrument as necessary when taking readings. Provide the

calibration measurements in the retroreflectivity report, each time these operations are performed.

- 3.3. The Department will provide the Contractor operating the mobile retroreflectometer with routes for evaluation. The routes evaluated will represent at least 50% of the segments completed in a section of striping. Data shall be collected in the direction the striper applied the traffic markings.

4. PERFORMANCE REQUIREMENTS:

- 4.1. Retroreflectivity: The pavement marking will be evaluated for acceptance within the time periods detailed in sections 1.3. and 1.4.
- 4.2. If 80% or more of the segments evaluated in a section meet or exceed the required minimum retroreflectivity values established for the materials that are being measured, the section will be accepted.
- 4.3. If less than 80% of the segments evaluated in a section meet the required minimum retroreflectivity values established for the materials that are being measured, the section will not be accepted.

5. REPORTING:

- 5.1. Include the following in the inspection report:
 - 5.1.1. Calibration information for the mobile retroreflectometer.
 - 5.1.2. Average of the readings taken for each segment evaluated by the mobile retroreflectometer (which should show date of test, total number of segments, passing segments, % passing segments, failing segments and % failing segments).
 - 5.1.3. Date of application of the pavement marking.
 - 5.1.4. Location (District, county, route, starting milepoint, ending milepoint, line type, direction of travel, color of line, and any special information).
- 5.2. Readings shall be recorded in millicandelas per square meter per lux (mcd/m²/lx).
- 5.3. Measurement shall be reported for each section of striping per color per line width per shift.

APPROVED _____

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DIRECTOR
DIVISION OF MATERIALS

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