
Standard Practice for Collecting Images of Pavement Surfaces for Distress Detection

AASHTO Designation: R 86-18 (2022)¹

Technically Revised: 2018

Reviewed but Not Updated: 2022

Technical Subcommittee: 5a, Pavement Measurement



**American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
Washington, DC 20004**

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1. SCOPE

- 1.1. This practice outlines the procedures for collecting images of pavement surfaces utilizing automated methods for the purpose of distress detection for both network- and project-level analysis. Detailed specifications are not included for equipment or instruments used to collect the images. According to this standard, any equipment that can be adequately validated to meet the functionality stipulated herein is considered acceptable. The goal is to achieve a significant level of standardization that will contribute to the production of consistent pavement condition estimates while not unduly limiting innovation.
- 1.2. The images are to be collected utilizing a platform traveling at or near the prevailing highway speed.
- 1.3. The data collected should cover the entire driven lane in the travel direction.
- 1.4. *This practice does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations related to and prior to its use.*

2. TERMINOLOGY

- 2.1. *Definitions:*
 - 2.1.1. *crack*—a fissure of the pavement material at the surface with minimum dimensions of 1 mm (0.04 in.) width and 25 mm (1 in.) length.
 - 2.1.2. *crack width*—the average gap in millimeters (inches) between the two edges of a crack measured at points along the gap with a minimum spacing between the measurement points of 3 mm (0.12 in.).
 - 2.1.3. *pavement distress*—external indications of pavement defects or deterioration.
 - 2.1.4. *pavement image*—a representation of the pavement that describes a characteristic (gray scale, color, temperature, elevation, etc.) of a matrix of points (pixels) on the pavement surface.