



Designation: E1778 – 98a (Reapproved 2019)

Standard Terminology Relating to Pavement Distress¹

This standard is issued under the fixed designation E1778; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This terminology provides definitions for pavement distress for airfields, highways, roads, streets, and parking lots of all functional classifications.

1.2 This terminology covers surfaces paved with either bituminous or portland cement concrete. It does not include other paved or unpaved surfaces.

1.3 This terminology includes most of the significant types of pavement surface distresses, but it is not all inclusive.

1.4 Not all distresses noted are applicable to all pavement categories listed in 1.1.

1.5 Severity levels are not addressed in this terminology but are addressed in other ASTM test methods and practices (for example, Test Method D5340). However, a knowledge of severity levels is required for evaluating many of the distresses defined in this terminology.

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D5340 Test Method for Airport Pavement Condition Index Surveys

3. Terminology

GENERAL

bituminous pavement, *n*—a pavement comprising an upper layer or layers of aggregate mixed with a bituminous binder,

¹ This terminology is under the jurisdiction of ASTM Committee E17 on Vehicle - Pavement Systems and is the direct responsibility of Subcommittee E17.42 on Pavement Management and Data Needs.

Current edition approved Dec. 1, 2019. Published December 2019. Originally approved in 1996. Last previous edition approved in 2015 as E1778 – 98a (2015). DOI: 10.1520/E1778-98AR19.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

such as asphalt, coal tars, and natural tars for purposes of this terminology; surface treatments such as chip seals, slurry seals, sand seals, and cape seals are also included.

continuously reinforced concrete pavement (CRCP), *n*—portland cement concrete pavement with sufficient longitudinal steel reinforcement to control transverse crack spacings and openings in lieu of transverse contraction joints for accommodating concrete volume changes and load transfer.

crack, *n*—fissure or discontinuity of the pavement surface not necessarily extending through the entire thickness of the pavement.

depression, *n*—localized pavement surface areas at a lower elevation than the adjacent paved areas.

free edge, *n*—an unrestrained pavement boundary.

joint, *n*—a discontinuity made necessary by design or by interruption of a paving operation.

joint seal deterioration, *n*—any condition which enables incompressible materials or water to infiltrate into a previously sealed joint from the surface.

DISCUSSION—Ability to prevent water infiltration is an attribute that cannot always be readily determined visually.

jointed concrete pavement (JCP), *n*—portland cement concrete pavement that has transverse joints placed at planned intervals.

lane-to-shoulder dropoff, *n*—(*highways, roads and streets only*) difference in elevation between the traveled surface and the shoulder surface.

longitudinal cracking, *n*—cracks in the pavement predominantly parallel to the direction of traffic.

pavement distress, *n*—external indications of pavement defects or deterioration.

portland cement concrete pavement, *n*—a pavement having a surface of aggregate mixed with portland cement paste binder or a mixture of portland cement and other pozzolans.

pumping, *n*—ejection of liquid or solid material or both from beneath the pavement through a crack or joint.