



Designation: F2966 – 19

Standard Guide for Snow and Ice Control for Walkway Surfaces¹

This standard is issued under the fixed designation F2966; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This guide covers snow and ice control procedures. It is intended to recommend known methods to bring about reasonably safe walkways where snow and ice may impact the safety of pedestrians.

1.2 Conformance with this guide will not alleviate all snow and ice hazards; however, conformance represents a reasonable effort to reduce pedestrian risks associated with snow and ice.

1.3 *This standard 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *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

F1637 Practice for Safe Walking Surfaces

F1646 Terminology Relating to Walkway Safety and Footwear

3. Terminology

3.1 See Terminology **F1646** for the following terms: fall, friction, pedestrian, ramp, sidewalk, slip, slip resistant, and walkway.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *anti-icing materials, n*—dry or liquid snow and ice control materials applied before a snow and ice event intended

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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.

to prevent precipitation from bonding (that is, freezing) with the pavement, or weaken bonds formed for easier removal.³

3.2.2 *de-icing materials, n*—snow and ice melting products applied on top of a layer of snow or ice, or both, that is bonded to the pavement.

3.2.2.1 *Discussion*—Can also be applied proactively, during, or after plowing or snow and ice removal.³

4. Significance and Use

4.1 This guide outlines key elements of snow and ice control on walkway surfaces.

5. Snow/Ice Control

5.1 *General:*

5.1.1 Planning for snow and ice removal is integral for implementing a snow and ice management program. Control techniques for exterior walkway surfaces include anti-icing, plowing, snow blowing, shoveling, de-icing, or applying sand or other abrasives, or a combination thereof.

5.1.2 A combination of pre-snow season site evaluation and remediation planning, snow and ice removal processes, weather and site monitoring, and continuing maintenance should be provided to maintain safe walking conditions following winter storms.

5.1.3 Snow and ice control procedures should be prioritized based on pedestrian usage. Where feasible, parking lots, primary outdoor walkways, stair systems, and ramps should be remediated and treated with de-icing materials before use in all circumstances where de-icing materials are the appropriate remediation measure.

5.1.4 Walkway surfaces should be monitored and the potential for refreezing addressed.

5.1.4.1 Measures should be taken to minimize the effects of refreezing. Removed snow and ice should be placed/stored in a manner that does not create a slip hazard upon melting or refreezing. For example, plowing snow accumulations to lower elevations of the property or onto grassy areas may prevent potentially hazardous effects of refreezing of melt water.

³ *National Cooperative Highway Research Program (NCHRP) Report 577: Guidelines for the Selection of Snow and Ice Control Materials to Mitigate Environmental Impacts*, Transportation Research Board of the National Academies, 2007.