

Daniel S. Chamberlain, J.D.
Doehrman & Chamberlain
10333 N. Meridian Street, Suite 100
Indianapolis, Indiana 46290
Toll Free: 800.269.3443
Office: 317.844.9999
www.usLAWS.com

PREMISES LIABILITY STANDARDS

Most states have adopted the Uniform Building Code (hereinafter, *UBC*)¹ The *UBC* was first enacted in 1927 and is updated every three years. The *UBC* is “dedicated to the development of better building construction and greater safety to the public by uniformity in building laws.”² The *UBC* is an excellent resource of minimum, acceptable, safety standards and is frequently the subject of expert testimony. Violations of the *UBC* (jurisdiction permitting) may be the subject of a negligence per se jury instruction.³

1. UBC Overview

¹The *UBC* has been adopted by the State of Indiana. See, 675 IAC 13-2.1-1; 675 IAC 13-3.1-1; IC 22-13-2, 4, 9.

²*Preface, Uniform Building Code*, International Conference of Building Officials, 1988.

³“In order for violation of statute or ordinance to be held as negligence *per se*, a trier of fact must determine whether the statute is applicable. It must decide whether the statute was designed to protect the class of persons in which the plaintiff is included against the risk of the type of harm which has occurred as a result of its violation.” *Dawson by Dawson v. Long*, 546 N.E.2d 1265, 1268 (Ind.App. 4 Dist. 1989).

As a general rule, “[e]very stairway having two or more risers (steps) serving any building or portion thereof . . .” shall have a handrail on each side of the stairway.⁴ The handrail shall be placed not less than 34 inches nor more than 38 inches above the step. The handrail itself shall not be less than one and one half (1.5) inches nor more than two (2) inches as measured by cross section. Each handrail shall project no closer than one and one half (1.5) inches from the wall. There shall be no sharp corners on a handrail. Each handrail must run the entire length of the stairway. At least one handrail shall extend at least six (6) inches beyond the top and bottom risers.⁵

Hand rails serve three primary purposes:

- a. To provide the approaching pedestrian with a visual cue as to the change in elevation and the presence of stairs.
- b. To provide a support to the stair user, especially the elderly and others who may be motor-impaired.
- c. To offer the victim of slipping or tripping incidents a chance to arrest an incipient fall by grasping the railing.⁶

An inadequate handrail may be as useless as no handrail at all and in most cases is an excellent theory of liability. Few expert witnesses will deny that handrails are nothing less than excellent safety measures and are available at relatively low to modest cost. A safety professional (and medical expert) may provide an adequate causal connection

⁴Section 3306 {a}{j}, *UBC, International Conference of Building officials, 1988.*

⁵*UBC, Section 3306 {j}.*

⁶*English.*

between the type of injury sustained and the improper system design.

2. Stairway Requirements - An Overview

Most building codes provide uniform, minimum standards for the construction (and subsequent remodeling) of stairways.⁷ The purpose of the uniform standards are to provide a “common experience” for consumers traveling from stairway to stairway.⁸ It is believed that most persons “normally ascend or descend stairs without much conscious thought. This process depends on uniformity of step geometry, however. Recent research has shown that it is common for subjects’ feet to clear step nosings⁹ by less than [a quarter of an inch] 1/4" so that variations in riser height or tread depth predictably lead to missteps.”¹⁰

Stairs with less than three steps shall be avoided.¹¹ If a short flight of stairs (less than three steps) or a single step transition exists, appropriate warning cues are required. Such warning cues include, “[h]andrills, delineated nosing edges, tactile cues, warning signs, contrast in surface colors and accent lighting”¹² The visual cues are necessary to warn pedestrians of an unusual step down or stairway. Even

⁷See, Marion county, Indiana, *Housing and environmental Standards Ordinance*, “[e]very . . . inside and outside stair . . . shall be safe to use and shall be kept in sound condition and good repair.” Sec. 10-701.

⁸*English.*

⁹ASTM, F1637-95, 6.1.2 - Step nosings shall be readily discernible, slip resistant, and adequately demarcated. Random, pictorial, floral, or geometric designs are examples that can camouflage a step nosing.

¹⁰*English.*

¹¹ASTM, F1637-95, 6.2.1, 2 - Where a short flight of stairs cannot be avoided, “obvious visual cues shall be provided to facilitate step identification.”

though visual cues may be used, such “cues or warnings do not necessarily negate the need for safe design construction.”¹³

¹²ASTM, F1637-95, 6.2.2.

¹³ASTM, F1637-95, 10.1.

The *UBC* prescribes the minimum physical dimensions of a stairway. The width of a stairway shall not be less than 44 inches or 36 inches for an occupant load less than 49 persons.¹⁴ The rise (height) of the step shall not be less than four (4) inches or greater than seven (7) inches.¹⁵ The run of the step (flat portion of the step) shall not be less than 11 inches as measured horizontally.¹⁶ The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch..¹⁷ No door shall open over a stairway.¹⁸ Further, a stairway with a distracting view shall be avoided.¹⁹

In general, uniform stairway dimensions are crucial for safe pedestrian movement. A safety professional may take into account the physical dimensions of the stairway, human locomotion and behavioral studies and render a scientifically verifiable opinion on whether the stairway was designed, constructed and maintained in a safe fashion.

2. ASTM Overview

¹⁴*UBC, Section 3306 {b}.*

¹⁵*UBC, Section 3306 {c}.*

¹⁶*UBC, Section 3306{c}.*

¹⁷*UBC, Section 3306 {c}; See, Marion County, Indiana, Housing and Environmental Standards Ordinance, “[e]very inside and outside stair or step shall have uniform risers and uniform treads.” Id.*

¹⁸ASTM, F1637-95, 6.1.3.

¹⁹ASTM. F1637-95, 6.1.1 - Stairways with “distracting” forward or side views shall be avoided. A “distracting” view is one which can attract the stair user’s attention (i.e. advertisements, store displays), thus distracting the stair user.

The American Society for Testing and Materials (ASTM) was founded in 1898. Since that time, ASTM has developed into one of the largest voluntary standards development systems in the world. ASTM is a not-for-profit organization²⁰ which provides a forum for “producers, users, ultimate consumers, and those having a general interest to meet on common ground and write standards for materials, products, systems, and services.”²¹ Presently, there are 130 standards-writing committees that produce more than 10,700 standards each year. The standards are published in 73 volumes and divided among 16 sections.²²

ASTM standards are reviewed, discussed, implemented and followed throughout the world. Although voluntary, the standards are an important step in establishing a basic level or minimum standard of care to be followed by individuals, businesses and manufacturers. Compliance with an ASTM standard does not necessarily equate compliance with a reasonable standard of care under individual circumstances.

A. Definitions, as prescribed by the ASTM -

²⁰ Individuals may apply for membership in ASTM at the rate of \$65.00 per year. A membership application or additional information (including standards) may be obtained by contacting ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428; Telephone: 610-832-9693; or, online at <http://www.astm.org>.

²¹ ASTM, Foreword, p., iii. Note: Most members of ASTM Committees are comprised of members of industry and corporate America.

²² ASTM Sections are identified as follows: Section 1-Iron and Steel Products; Section 2-Nonferrous Metal Products; Section 3-Metals Test Methods and Analytical Procedures; Section 4-Construction; Section 5-Petroleum Products, Lubricants and Fossil Fuels; Section 6-Paints, Related Coatings and Aromatics; Section 7-Textiles; Section 8-Plastics; Section 9-Rubber; Section 10-Electrical Insulation and Electronics; Section 11-Water and Environmental Technology; Section 12-Nuclear, Solar, and Geothermal Energy; Section 13-Medical Devices and Services; Section 14-General Methods and Instrumentation; Section 15-General Products, Chemical Specialties, and End Use Products; Section 00-Index.

1. Standard (noun) - a document that has been developed and established within the consensus principles of the Society and that meets the approval requirements of ASTM procedures and regulations.

2. Standard (adjective) - indicates consensus approval in accordance with ASTM procedures and regulations.

3. Provisional Standard - a document published for a limited period of time by the Society to meet a demand for rapid issuance of specific documents, such as an emergency situation, regulatory requirements, or other special circumstances.

4. Discussion - committee members review and comment on a provisional standard. A provisional standard is accepted upon subcommittee consensus.²³

5. Classification - a systematic arrangement or division of materials, products, systems, or services into groups based on similar characteristics such as origin, composition, properties, or use.

6. Guide - compendium of information or series of options that do not recommend a specific course of action.

7. Practice - a definitive set of instructions for performing one or more specific operations or functions that does not produce a test result.

8. Specification - an explicit set of requirements to be satisfied by a material, product, system, or service.

9. Terminology - a document comprising definition of terms; description of terms; explanation of symbols, etc.

²³ Regulations Governing ASTM Technical Committees, Section 14.

10. Test Method - a definitive procedure that produces a test result.

B. Initial Considerations - Does the Standard Apply?

The standards are published in booklet format each designated as a “Book of Standards”. Each volume is published annually and approximately 30% of each volume contains revisions of standards previously adopted or entirely new standards. The following procedure should be used to initially evaluate whether a standard may apply in a premises liability claim:

1. Has the Standard been adopted? If the standard is provisional (meaning that the standard has not yet been approved and adopted by an ASTM Committee), its applicability is questioned until unconditional approval has been made.

2. When was the Standard adopted? It is presumed that ASTM standards do not have retroactive application to factual situations that arose at prior to formal approval or adoption of the same.

3. Has the Standard been subject to revision? It is important to obtain the subject standards for the year prior to, during and after desired application to determine whether any fundamental changes have occurred, and if so, why were the revisions made.²⁴

4. Has the Standard been the subject of proposed revision or other discussion? If so, the ASTM Committee representative assigned to the subject standard will maintain all comments, discussions, voting patterns, etc. This information may be

²⁴ Each Standard contains the following information: Designation Number (Internal code to easily access a Standard within a particular volume); the ASTM Committee and Subcommittee directly responsible for the standard; Year Standard was adopted, reapproved or revised.

invaluable as Committee members (typically representatives of manufacturers or other industry peers) will submit their concerns in writing. These writings are maintained as a permanent Committee record.

There are several types of common hazards that cause pedestrian falls and are subject to expert testimony.²⁵

1. Speed Bumps

Parking lots should be designed without speed bumps.²⁶ If a speed bump is located in a foreseeable pedestrian walkway or path, the protrusion shall be “transitioned by means of a ramp.”²⁷ The speed bump shall be ‘clearly marked with safety color coding to contrast with surrounding’²⁸ A painted speed bump must be slip resistant. “Caution” signs are recommended to warn pedestrians of the existence of the speed bump.”²⁹

2. Wheel Stops

²⁵See, *EXHIBIT C: Slip and Fall Text and Other References.*

²⁶ASTM, F1637-95, 7.1.

²⁷ASTM, F1637-95, 7.2, 7.3, 4.2.4.

²⁸ASTM, F1637-95, 7.3; ANSI Z535.1.

²⁹ASTM, F1637-95, 7.3.

Parking lots should be designed so that wheel stops are not necessary.³⁰ If wheel stops are used, the wheel stops should not be located in an area that can reasonably be foreseen as a pedestrian walkway.³¹ Wheel stops should be made of concrete, not such material as landscape timbers.³² All wheel stops should be in painted or identified in “contrast” from their surrounding.³³ Wheel stops shall be no longer than six (6) feet long and six and one-half (6½) inches in height above the parking surface.³⁴ The minimum width of pedestrian passage between wheel stops is three (3) feet.³⁵ There shall be adequate illumination of the parking lot so that pedestrians will be able to visually discern the presence of wheel stops.³⁶

3. Carpet

Carpet shall be maintained so as to not create a pedestrian hazard.³⁷ Carpet shall be firmly secured and seams tightly maintained. *Id.* At no time shall there exist “loose or frayed edges, unsecured seams, worn areas, holes, wrinkles or other hazards that may cause trip occurrence.” *Id.* All carpet shall be routinely inspected.³⁸ At no

³⁰ASTM, F1637-95, 8.1.

³¹ASTM, F1637-95, 8.2, 8.3.

³²*English.*

³³ASTM F1637-95, 8.3.

³⁴ASTM F1637-95, 8.4, 8.5.

³⁵ASTM F1637-95, 8.4.

³⁶ASTM F1637-95, 8.6.

³⁷ASTM F1637-95, 4.3.1.

³⁸ASTM F1637-95, 4.3.2.

time shall shag-type carpet be used on a stairway.³⁹

4. Floor Mats and Runners

³⁹ASTM F1637-95, 4.3.4.

Building entrances shall be provided with mats or runners, or other means to help remove foreign particles and other contaminants from the bottom of pedestrian footwear.⁴⁰ Mats and runners shall be used, as needed, in inclement weather to keep building entrances and interior walkways dry.⁴¹ Replacement of the mats or runners when saturated is mandatory.⁴² Mats and runners shall be of sufficient design and area to control the tracking of contaminants onto the floor surfaces “reducing the likelihood of the floors becoming slipper.”⁴³

5. Exterior and Interior Illumination

Interior and exterior pedestrian walkways shall be adequately illuminated.⁴⁴ The illumination must be free of glare and shall be designed to eliminate the presence shadows.

6. Changes in Walkway Level

Adjoining walkway surfaces shall be made flush.⁴⁵ Unlike most codes, the ASTM requires that new construction as well as existing facilities comply with this requirement.⁴⁶ Where adjoining walkway surfaces meet, the following standards shall apply:

⁴⁰ASTM F1637-95, 4.4.2.

⁴¹ASTM F1637-95, 4.4.1.

⁴²ASTM F1637-95, 4.4.2, 4.4.2.

⁴³ASTM F1637-95, 4.4.3, 4.4.4.

⁴⁴ASTM F1637-95, 4.5.1, *et al.*

⁴⁵ASTM F1637-95, 4.2.1.

⁴⁶ASTM F1637-95, 4.2.1.

- a. changes in levels greater than one-half of an inch ($\frac{1}{2}$) require a ramp or stairway to make the transition;
- b. Changes in levels between one-quarter of an inch ($\frac{1}{4}$) and one-half of an inch ($\frac{1}{2}$) shall be beveled between surfaces; and,
- c. Changes in levels less than one-quarter of an inch may be made without any treatment.⁴⁷

Most experts agree that pedestrian walkways should be designed to “facilitate foot traffic without introducing unnecessary impediments. It is better to find out how and where people tend to walk and design to that pattern than to try and conform everyone’s behavior. . . .”⁴⁸ A safety professional should be utilized to present scientifically verifiable concepts for the design, construction and maintenance of parking lots and pedestrian walkways.

THE OPPONENT EXPERT - “THE BATTLE OF THE EXPERTS”

An Expert can play a pivotal role in a particular case and may often be instrumental in achieving a favorable outcome. In a premise liability case, an engineer or safety professional, in combination with a bio-mechanical engineer and human factors expert, may overcome the burden that the plaintiff was not injured, either wholly or in part, as a result of a self-initiated act. In addition, a credible expert may offer critical advice in handling pre-litigation matters and in conducting discovery after the

⁴⁷ASTM F1637-95, 4.2.2, 4.2.3, 4.2.4.

⁴⁸ASTM F1637-95, 4.2.2, 4.2.3, 4.2.4.

filing of a lawsuit.

An expert witness may offer an opinion on the ultimate question, based neither on fact or reasonable conclusion, but on whether the client's interests are protected. Such an opinion may be grounded in nothing more than mere conjecture, speculation and at worst, intellectual and scientific fraud. There are many variables and contingencies in the causal analysis of a premises liability case. Expert conclusions may be massaged to assure a desired outcome *or* are contingent on many factors including the proper selection of testing devices and testing procedures, environmental conditions and accurate reporting.

To defeat the abuse of an expert witness opinion in a premises liability claim, it is important to hire a credible, reliable and honest expert to review, to document and to expose any inconsistencies in the proffered opinion. An expert opinion may be attacked on many grounds including a foundational deficiency, and that the opinion is not based on verifiable "scientific reasoning". There is no shortcut for adequate case preparation and the study and application of government standards, building codes and industry guidelines to the premise liability case.