



PERSPECTIVES

Premises Liability & The Building Codes: The Role of Codes in Making Premises Safe

Our perspectives feature the viewpoints of our subject matter experts on current topics and emerging trends.

INTRODUCTION

According to the Federal Emergency Management Agency (FEMA), “Building codes protect you from a wide range of hazards—whether it is by implementing safe wiring, fire prevention, or stronger structural integrity. When a community has up-to-date building codes in place, they are more protected against these hazards.”¹ But what is to be done when something happens even if it is presumed the correct building codes are in place? What if someone falls walking across a tile floor or someone trips descending a flight of stairs? How does the building code or any other code address these situations?

This paper will highlight how the building code and other applicable codes and ordinances are utilized to determine what actions may have led to an accident. Several areas of the code, as well as some common scenarios wherein codes become pertinent, will be the focus of the pages that follow. We will discuss slips, trips, and falls; lighting concerns; stairs, and the mechanics of humans traveling on them; the Americans with Disabilities Act (ADA) and its relation to premises liability; and concerns related to snow and ice and their proper removal from pathways during winter months. The following information may be of particular interest or use to adjusters, attorneys, architects, engineers, property owners, and property managers.

SLIPS, TRIPS, AND FALLS

Slips, trips, and falls—while commonplace and, perhaps, mundane accidents—are a major cause of personal injury each year as demonstrated by the following statistics:

- Falls account for over 8 million hospital emergency room visits, representing the leading cause of visits (21.3%). Slip-related falls account for over 1 million visits, or 12% of total falls.
- According to the Consumer Product Safety Commission (CPSC), floors and flooring materials contribute directly to more than 2 million fall injuries each year.
- Half of all accidental deaths in the home are caused by a fall. Most fall injuries in the home happen at ground level, not from an elevation.²

With all these fall incidents occurring, how do codes get involved? One of the first steps in the research of a slip, trip, or fall event is to determine the characteristics of the location where the fall occurred. Aspects such as the type of flooring, whether the surface was wet, whether the surface was dirty, how the event occurred, and the general conditions when the fall took place need to be evaluated.

The building code, as well as other applicable codes such as life safety codes, include some detail as to what standards might be applicable to the situation. While these codes may not specify the exact type or style of flooring to be used in any given situation, there do exist both prescriptive and performance standards in the code that dictate fundamental recommendations such as that “walking surfaces shall be flat and without vertical obstruction of given elevation along paths of travel especially in emergency egress situations.” It is clearly hazardous if a hallway used for emergency evacuation of a building had an unintentional trip hazard that might impair occupants from leaving the structure in rapid and safe fashion. Often, these types of violations or infringements of the code are found in non-emergency situations wherein a single individual is affected, yet they can be just as serious and result in personal injury.

When investigating a slip or trip event, one important consideration to be made is the friction quality or slipperiness of the walking surface. This can differ dramatically depending on whether the walking surface is a relatively rough broom-finished concrete or composed of polished marble floor tiles especially if the tiles have a slight film of water from rainfall that may have been brought indoors on a pedestrian’s footwear. The degree of a floor’s slipperiness, or its friction coefficient, can be determined using a variety of different *tribometers* to test the floor surface.

¹ <https://www.fema.gov/blog/5-reasons-building-codes-should-matter-you>

² <https://nfsi.org/nfsi-research/quick-facts/>



Figure 1 - Excel tribometer testing wet surface

After determining the friction values of the surface, the investigation can ascertain whether the surface itself was part of the problem which led to the slip and fall or whether other contributing factors, such as water or any other liquid substance, may have been spilled in the area.

Applicable codes and standards may dictate which surface finishes are most applicable for any given occupancy and thus be designed for such usage. For example, the floor surface of a hospital emergency room may have differing requirements than that of an office building which may be covered by desks and workstations.

Lighting

We typically do not consider lighting until it is absent or insufficient. Trying to navigate somewhere in dark or near-dark conditions can lead to tripping over an object or encountering an unexpected obstruction, such as a parking curb stop in a parking lot which can lead to an injury.

There are two types of lighting to be concerned about with regard to premises liability and building codes. The first is interior lighting which may not be luminous enough to provide enough visibility for occupant movement. The second is exterior lighting which is often found in parking lots or other situations wherein someone is moving outside or in between structures.

Interior lighting plays an important factor in emergency situations such as when electrical power has gone out and occupants need illumination to descend stairs and/or exit a building (please note that building codes require elements of the means of egress to be illuminated at all times to prevent a hazardous condition). Hallways and staircases

are required to have prescribed amounts of lighting during such events, and the amount is dictated by both building and life safety codes. The amounts can be confirmed using light meters or other means of testing to ensure the proper illumination is provided should an emergency occur and to ensure those inside the building can see properly to be able to exit the structure safely.

One of the unique stipulations that has arisen in the last few years is how the energy conservation code correlates to these requirements. While the need for illumination is necessary as part of building codes for egress purposes, some standards of the energy conservation could also apply to the lighting fixtures being used. The overall intent is to provide the proper lighting levels to be able to see in an emergency, yet those same fixtures must also comply with any energy conservation codes that may be in effect.

There also exist certain situations where interior lighting is subject to some specific requirements while also having to be kept intentionally low for the proper/intended usage of the area. These involve environments such as movie theaters, performance halls, and some assembly spaces. While the illumination levels during the event are kept intentionally low to allow for proper enjoyment of, for instance, a performance, there still exists the need for illumination on stairs and aisles so those attending the event can move around safely. Of course, emergency lighting is also required, but premises liability aspects can come into play if someone is moving around during a movie or a concert and cannot navigate stairs or aisles safely.

Exterior lighting is critical for allowing individuals to travel safely in places such as parking lots as they enter and leave a building during the hours of darkness. There is of course a security aspect to having lighting in these areas, but there is an additional need for individuals to be able to see to avoid potential obstacles and trip hazards such as curbs,

parking stops, and other items. These elements of lighting start to bridge away from building codes themselves to local ordinance and those requirements found at the local enforcement level.

While the building code, life safety code, and even any electrical codes in place detail the interior requirements for a given building, additional elements such as parking lot lighting are typically detailed within a local site development or zoning ordinance. This is done due to specific considerations such as pedestrian and vehicular travel around the parking lot and whether illumination extends outside of the immediate parking areas. While the brightest pole lights possible could be used to wash the entire parking lot in a full white light, neighbors in the area might not be pleased when that same light travels into their windows throughout the night and affects their personal living space. It is for this and similar reasons these code requirements are often made at the local level, utilizing established standards for such areas.

Current initiatives involved with such standards include the Dark Sky Initiative and Dark Sky Movement and their work to eliminate light pollution in areas around the country. This is done not only by eliminating lighting but also by using certain lighting technology and fixtures to provide the best lighting needed while avoiding overuse and extensive light pollution. While these adoptions are not yet widespread, some have already been established in some municipal locations such as Groveland, Florida³ and implemented in some state parks such as Kissimmee Prairie Preserve State Park in Florida.⁴

Some exterior lighting standards that affect many parts of the State of Florida are the Sea Turtle Lighting requirements established by the Florida Fish and Wildlife Conservation Commission⁵, enforced locally by ordinance throughout the state⁶ as detailed under Florida law.⁷ The general intent of these standards is to prevent over-lighting of beach areas that could affect the way sea turtle hatchlings find their way into the water once hatched. Having too much landward light can cause the turtles to travel in the wrong direction, away from water, leading them into potentially fatal situations.

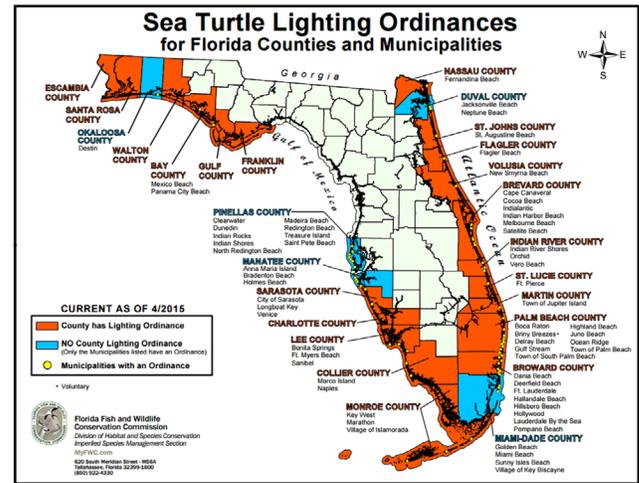


Figure 2 - Sea turtle lighting ordinances in Florida

The Sea Turtle Ordinance in place around Florida is another such code and standard that must be evaluated when making determinations as to the cause and effect of a premises liability situation. For example, if someone trips and falls on an exterior stairway on a coastal building and claims the lighting may not have been bright enough or located high enough on the structure, it is necessary to research the claim to identify if lighting conditions were subject to compliance with the local marine turtle ordinance. In some locations, even the windows on the seaward side of the building must have the required tinting to prevent interior lighting from being emitted through the glazing, which, if unblocked or not reduced, can cause problems in turtle hatchlings’ instinctive navigation toward the beach.

Stairs

We may not think that a set of stairs would conflict too much with natural human movement or hinder one’s ability to travel up and down without incident, but incorrectly built stairs can quickly become a dangerous component of a building. As a person either ascends or descends a set of stairs, they inherently “learn” the pattern of the stairs within the first few steps. If a stair tread (the horizontal part the foot contacts) or the stair riser (the vertical segment

³ <http://groveland-fl.gov/534/Dark-Sky-Initiatives>

⁴ <https://www.floridastateparks.org/learn/dark-sky-designation>

⁵ <https://myfwc.com/wildlifehabitats/wildlife/sea-turtle/lighting/>

⁶ <https://myfwc.com/conservation/you-serve/lighting/ordinances/>

⁷ http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0100-0199/0161/Sections/0161.163.html#:~:text=The%202019%20Florida%20Statutes&text=161.163%20Coastal%20areas%20used%20by,by%20sea%20turtles%20for%20nesting.

between each tread) is off by just a fractional amount, the difference can lead to a misstep or other miscalculated movement. This, in turn, can result in a fall.

The building codes are typically very specific as to the tolerances allowed for treads, risers, their respective widths/heights, and the allowable variations in the entire staircase. In addition, the safety aspects of a staircase, including the handrail height and functionality (grasp ability, support strength), are all detailed in such a way as to illustrate what constitutes a code-compliant set of stairs. This is done for both commercial buildings as well as for a single-family home.

A concern that often arises is how and/or whether stair codes change over time. Some of the code requirements currently in place can be more stringent and more specific to tolerances than those concerning stairs built 50 years ago. This is an important part of any investigation in a premises liability situation related to stairs as it is necessary to determine if the stairs were indeed compliant when originally constructed. If they were compliant originally, at what point would they be deemed in violation of the latest codes yet still in acceptable condition? Additionally, were any activities (repairs, renovations) performed during the lifetime of the stairs that would have initiated the need to reconstruct the stairs to the latest code requirements? Many times, the code will allow existing components to remain in place even if not fully compliant, but when certain work is done in the form of alterations (reconfiguring of space, changes in occupancy, and intended use of the structure), these activities will trigger additional work to be done when certain thresholds are exceeded.

This is another aspect of a premises liability investigation which involves permit history research and the review of any historical work performed to determine 1) if all necessary code upgrades were done when required or 2) whether something such as unpermitted work allowed components to be ignored or overlooked, leading to a current code violation.

Americans With Disabilities Act (ADA)

The Americans with Disabilities Act (ADA), or “accessibility code” as it is referred to in some states, is another set of

standards requiring consideration whenever a premises liability situation is being evaluated. The intent of this code is to make structures and their related environment more accessible for those with mobility challenges. In doing so, this code can also provide guidance for situations where following the guidelines can result in a safer, more user-friendly situation regardless of whether accessibility is the primary factor being considered.

The floor elevation requirement is one such example. Essentially, no vertical rise larger than 1/4” (1/2” if the element is beveled) shall exist in any walking path. The intent is to eliminate any vertical changes that might encumber a person in a wheelchair or someone walking with the assistance of a cane. However, adherence to this standard can also be beneficial to anyone walking along a path as it eliminates a trip hazard from being present. While 1/4” seems relatively small, it is still enough of a rise to catch someone’s shoe and cause them to trip thereby creating risk of a fall. If this 1/4” standard is exceeded not only does it present an obstacle for a wheelchair, but additionally, if in the middle of an open walkway or at the threshold of a doorway, it can cause a pedestrian to stumble.

A common violation of this standard occurs when ceramic or other floor tile is in place and is damaged through normal usage of the building. The breaking of a tile may occur, and, in the process, pieces of the tile become dislodged and thus are removed in the cleanup. While this may not seem like a major code violation event, the gap and depression left by the broken tile pieces can indeed create a significant rise in elevation that can exceed the 1/4” standard, thereby producing a trip hazard.

Items such as elevations in flooring, while identified in the building, life safety, and accessibility codes, can also have presence in any property maintenance codes which may have been adopted by the Authority Having Jurisdiction (AHJ). While not adopted by every jurisdiction, property maintenance codes establish the standards that any location and property owner shall follow to ensure their building and respective property remains safe and in good care condition during normal operations. Some have identified the property maintenance code as the set of intermediate standards used for code enforcement between new construction and any future repairs and renovations.

As mentioned earlier, some code requirements may not be triggered until damage repairs or elective operational work is performed. The property maintenance code covers that time frame and those areas to help ensure buildings are maintained and areas of use are kept in relatively safe condition. For instance, some fire marshals in certain locations conduct annual inspections of commercial properties to inspect fire protection systems and emergency egress components such as door “panic” hardware. In jurisdictions where a property maintenance code has been adopted, additional standards such as proper door operation, the condition of flooring, and safety standards related to lighting and electrical systems can also be enforced.

Snow and Ice

Many people have experienced walking on an exterior surface during the winter season and suddenly losing traction—and balance—due to accumulation of ice on the ground. With quick response, and perhaps luck, some are able to avoid a fall and personal injury. But slipping on ice is common, happening to many pedestrians every winter, especially in climates prone to snowy/icy conditions. So how do codes address potential hazards caused by snow and ice, and what actions might be expected to counter these wintertime factors? People walking on an exterior surface during the winter season can lose traction due to the presence of snow and/or ice on the walking surface. In climates prone to cold weather, snow and ice are expected, whereas the same conditions in warm climates would be unexpected. Regardless of the geographic location and climate, snow and ice are slippery, and can create a potential hazard to pedestrians. However, unlike stairs, ramps, and ADA issues, snow and ice are not specifically addressed by the building codes.

Unlike building code related premises liability issues, which are more uniform nationwide, the presence of snow and ice on a walking surface is addressed regionally and based on climate. Does the presence of snow and ice on a walking surface create a potential slip and fall hazard? Compared to a clean, dry, concrete sidewalk, it certainly does. However, the presence of snow and ice on a walking surface does not necessarily create an unsafe condition. Consider 1/2” of fresh snow on a sidewalk in Minneapolis, Minnesota; Chicago, Illinois; Denver, Colorado; or Boston, Massachusetts. In these climates, in the winter months,

the presence of snow and/or ice on a walking surface is routine and would not, in and of itself, constitute an unsafe condition.

Conversely, the same 1/2” of snow on a steep concrete sidewalk in downtown San Francisco, California would constitute a dangerous condition since the presence of snow would be rare. That same 1/2” of snow would be a dangerous condition in Houston, Texas; Orlando, Florida; or Phoenix, Arizona.



Figure 3 - Chicago, IL. 36 inches of snow annually. An example of a partially covered sidewalk that may or may not be considered dangerous depending on the location/ climate.



Figure 4 - Breckenridge, CO. 366 inches of snow annually. Extreme example of snow on a walking surface in a cold-weather climate. In this location, snow and ice on the sidewalk would be considered normal.

Within the Denver metropolitan area, snow and ice removal is determined by the local jurisdiction (City, County, or Town) and is dictated by the type of property (commercial versus residential), the severity of the event (amount of snow), and the end of the snow event. Therefore, to properly evaluate a slip and fall related to snow and/or ice it is critical to determine the jurisdiction and the snow and ice removal requirements of the specific location. Unfortunately, the requirements can vary widely within a relatively small geographic area, even within a few miles. In the Denver metropolitan area many jurisdictions require snow removal at a residential property within 24 hours of the cessation of a snow event; commercial properties have less time, often four hours. However, one jurisdiction does not require snow removal at all. Within a metropolitan area, the snow removal requirements can vary, literally, from one side of the street to the other side of the street.

For these reasons weather research is also required to determine when the snow event ended—specifically, to correlate weather conditions to the expected completion of sidewalk clearing. Property maintenance companies often keep detailed logs of the weather, in addition to logs of the amount of time, time of day, services provided (snowplow, shoveling, application of ice melt, etc.), and hours for their employees. If possible, correlating information from these timesheets to the weather can help determine whether a walking surface was properly cleared after a snow event.

This issue becomes more complex when a slip and fall occurs during or shortly after a snow event and a minor amount of snow and/or ice remained on a walking surface after the snow was removed. It is important to keep in mind that shoveling and/or plowing snow does not produce a clean and dry walking surface. Also, snowmelt off a roof on a sunny winter day can flow down onto a sidewalk on the shady/north side of a building and refreeze on the sidewalk. Unique weather conditions, various climates, and differing jurisdictional requirements justify thorough research and local knowledge when determining standard of care for snow and ice removal and whether a dangerous condition was present.

CONCLUSION

The relationship between a premises liability situation and the condition of any components of any given building can often be found in the building or related codes. While

not every situation in a premises liability case may have a direct code citation, there are a host of codes, standards, and ordinances that require review and evaluation prior to making specific determinations.

These requirements can often be based on the specific event, i.e., slipping on ice in Colorado or falling on an exterior set of stairs at a beach home in Florida. As such, they must be evaluated with geographic context in mind (to account for factors such as a snow and ice removal ordinance in effect or a sea turtle lighting standard). Being able to successfully navigate the code and standards in any given place and accurately determining their applicability is paramount to the proper handling of any premise liability situation.

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