



## CAMPUS FIRE SAFETY CODE TALK

Campus Fire Safety e-NewZone

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### CAMPUS FIRE ZONE

OCTOBER 2014

*Oh the Weather Outside is Frightful-  
Making Winter Code Compliance Delightful*

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With apologies to Sammy Cahn and Jule Styne who composed this popular song in 1945 (in the middle of summer), it is not too early to be thinking about winter preparations for your campus buildings and property. We are not even through fall yet, but before you know it, colder temperatures and snow will be on our door step. By the time the first ever College Football Playoff Championship game takes place on January 15, 2015, both *The Old Farmer's Almanac* and *The Farmer's Almanac* predict that large areas of the US will have already experienced below normal temperatures and measurable snow. Perhaps the polar vortex will take another trip south to visit the US.

So what things should you be preparing for this fall in anticipation of winter? On the fire safety side of the equation, there are lots of planning activities to be doing and lots of things to make your campus population aware of. Let's take a look at a few of these subjects that your winter preparations and plans should consider.

**FIRE DEPARTMENT VEHICLE ACCESS:** According to NFPA 1, *Fire Code*, emergency vehicle access to almost any building or structure is required. The code specifies myriad rules on dimensions, weight limits, grades and the like for the access roads, surfaces and bridges. A general code provision also mandates that the access road cannot be obstructed in any manner. NFPA 1 acknowledges that significant snowfall is an obvious hindrance to this rule. What plan do you have in place to send escort plow equipment out on fire and medical emergencies?

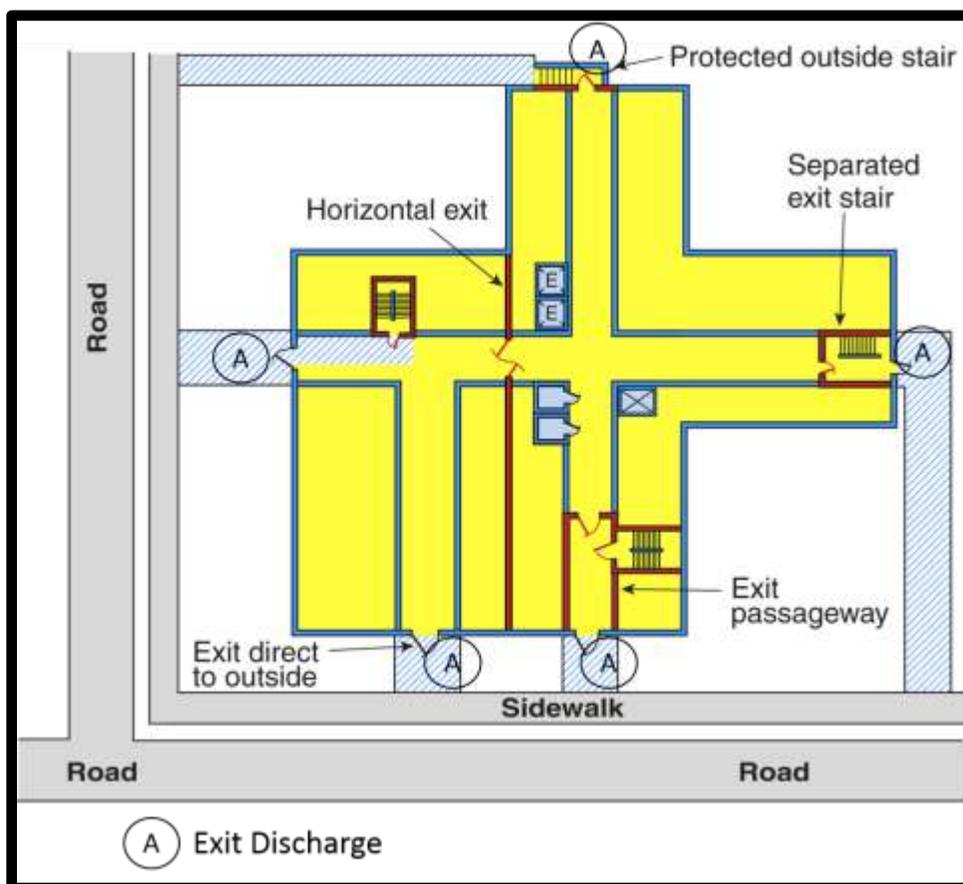


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**NFPA 1: A.18.2.4.** However, it should be understood that a severe snowstorm can make these roads temporarily inaccessible. In many parts of the country, the annual snowfall is of such magnitude that alternative arrangements such as temporary roads over the snow accumulation could be necessary.

**EGRESS FACILITIES:** NFPA 1 as well as NFPA 101, *Life Safety Code* provide comprehensive rules for how the means of egress is designed and laid out in a building. A key area that can be snow and ice sensitive is the exit discharge. The exit discharge is defined as: That portion of a means of egress between the termination of an exit and a public way. [See Figure 1] This component of the means of egress will normally begin at an exterior exit door and extend some distance away from the building. It may be to a sidewalk, a parking lot or some similar open space.



**FIGURE 1: Exit Discharge as Defined by NFPA 101**



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NFPA 101 also requires the means of egress to be available under all circumstances.

**NFPA 101: 7.1.10 Means of Egress Reliability.**

**7.1.10.1\* General.** Means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency.

The code does not grant waivers or exceptions when snow has accumulated nor does it limit this rule to the area immediately in front of the exterior exit door. Walkway's and the like leading away from the building are part of the defined exit discharge and need to allow for unfettered access to the areas previously mentioned. [See Figure 2]

Any exterior or outside stairs or exterior bridges that also serve as a horizontal exit should ideally be covered from the elements. If they are not, they must be included in your snow removal plan.



**FIGURE 2: Someone Has To Do It-Clearing the Exit Discharge**



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**HYDRANT CLEARING AND MARKING:** Make sure your snow removal plan includes a “wellness” visit to the fire hydrants. NFPA 1 requires that access to hydrants be readily available. NFPA 25, *Standard for the Inspection, Testing and Maintenance of Water Based Fire Protection Systems* has a specific provision requiring hydrants to be kept free and clear of ice and snow. Some campus jurisdictions may enforce the provision from NFPA 1 that requires use of an approved flag or similar device attached to the hydrant. While helpful during any night time operation, the flag can also help the approaching apparatus driver to spot the hydrant that may be surrounded by properly cleared snow. [See Figure 3]

**FIGURE 3:  
Cleared  
Hydrant with  
Flag**





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Related provisions from NFPA 25 also require access to outside valves and fire department connections to be available at all times.

**SNOW REMOVAL-THE BIG PICTURE:** As you know, NFPA prides itself on its robust code development procedures that are approved by the American National Standards Institute-ANSI. ANSI organizations engage in and develop standards on nearly every topic imaginable-and some you wouldn't think of. You guessed it, there is standard for snow removal. Developed by the Accredited Snow Contractors Association, ASCA, ANSI/ASCA A1000-2014: *System Requirements for Snow and Ice Management Services* offers the best practice techniques for this sometimes laborious task. The ASCA document, just like the fire, life safety and building codes we use, offers a set of "when" and "how to" provisions, some of which address the needs of the enforced fire code. These include:

Do not bury or plow snow onto a fire hydrant, post indicator valve, or fire hookup along the building wall.

Do not block building doorways or emergency exits.

A preseason meeting with the facilities personnel who keep campus roads and walkways clear of snow can get everyone on the same page so the fire protection systems and features, and the pathways leading away from buildings are maintained in a useable manner.

**SPACE HEATERS:** These devices are normally used to supplement the centralized building heating system. They are not a substitute for central systems. Gas fired space heaters have extensive restrictions on where they can be used and are regulated by NFPA 54, *National Fuel Gas Code*. The more readily available and popular space heater is referred to as a portable electric heater. The university policy on use of such portable heaters in classrooms, faculty offices and dormitories should be reviewed. NFPA's Fire Analysis and Research Divisions tells us that heating equipment was involved in 3% of dormitory fires, 16% of property damage, and 23% of injuries. NFPA 1 offers several requirements for use of the equipment as follows:



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### NFPA 1: 11.5.3 Portable Electric Heater.

**11.5.3.1** The AHJ shall be permitted to prohibit use of portable electric heaters in occupancies or situations where such use or operation would present an undue danger to life or property.

**11.5.3.2** Portable electric heaters shall be designed and located so that they cannot be easily overturned.

**11.5.3.3** All portable electric heaters shall be listed.

A [Heating Safety Tip Sheet](#) from NFPA can also be provided to the campus student population.

This month's article has touched on just a few of the cold weather elements that can challenge the fire protection systems and features that NFPA codes address. It is by no means a comprehensive list but it should serve as a prompt for campus fire marshals and administrators to have proactive plans in place as the winter season approaches. Once your winter plan has been reviewed and updated as necessary, you can sit back and *let it snow, let it snow, let it snow.*

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