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TECHNICAL BULLETIN

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Topic: **Reduction in fire-resistance ratings and area increase with automatic sprinkler system**

This document is to clarify allowable reductions for fire-resistance ratings and area increases based upon installation of an “automatic sprinkler system”, in accordance with the above sections of the *Building Code of New York State*.

BCNYS Section 302.3.3 exception 1 allows for a reduction by one-hour of fire-resistance rated assemblies due to the installation of an automatic sprinkler system in most use groups (does not refer to section 903.3.1). A NFPA 13R sprinkler system in a residential occupancy is adequate and in this case provides the same level of protection that NFPA 13 would provide. Specifically, NFPA 13R sends the designer back to NFPA 13 (Section 2-5.2) for areas outside the dwelling unit. Areas outside the dwelling unit, i.e. corridors, horizontal exits, stairs, is where fire-resistance rated construction occurs and is protected the same under either reference standard.

It is important to make a distinction between the area increase and height/story increase. Section 504.2 of the code allows for 13R to increase the height/story to a maximum of four stories and 60 feet. The reason for this; the main difference between 13 and 13R is the protection of the attic space. An increase in height/story changes little, if any, the area not covered by sprinkler protection. However, an area increase using 13R would create a much larger area that is not covered by sprinkler protection.

Section 506.3 allows an area increase where an “automatic sprinkler system” is installed in accordance with section 903.3.1.1. Although section 903.3.1.1 refers to sections 903.3.1.1.1, 903.3.1.2 (NFPA 13R) and 903.3.1.3 (NFPA13D), the intention of the code is to only allow for the use of NFPA 13 for the area increase. The exempt locations in section 903.3.1.1.1 are allowed, because that section is a subsection of 903.3.1.1.

Sections 708.3 and 711.3 permit the reduction of the dwelling unit and guestroom separations in buildings of Types IIB, IIIB, and VB construction to not less than -1/2 hour in buildings equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1. As stated above, section 903.3.1.2, NFPA 13R sprinkler systems cannot be used.

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