



DEPARTMENT OF ADMINISTRATIVE SERVICES

PROPOSED CHANGE OF THE CONNECTICUT STATE BUILDING CODE AND FIRE SAFETY CODE

DATE SUBMITTED: _____

CODE INFORMATION

Proposed change to: Building Code Fire Safety Code

Code section(s): _____

PROPONENT INFORMATION

Name: _____ Representing: _____

Telephone: _____ Email: _____

Address: _____
Street Address Town State Zip Code

PROPOSAL INFORMATION

Description of change and reason for change (attach additional information as needed):

Proposed text change, addition or deletion (attach additional information as needed):

Supporting data and documents (attach additional information as needed)

This Proposal is original material. (Note: Original material is considered to be the submitter’s own idea based on or as a result of his/her own experience, thought or research and, to the best of his/her knowledge, is not copied from another source.)

This Comment is not original material, its source (if known) is as follows: (such as material / code development proposal from a prior development cycle or proposal submitted to model code committee etc.)

I would like to make an in-person presentation of my proposal.

Release

I hereby grant the State of Connecticut full rights to the use of this material without benefit to me, including, but not limited to, publication and reproduction rights.

Proponent’s Signature _____

Printed Name _____

PLEASE EMAIL (PREFERRED) TO DAS.CodesStandards@CT.GOV OR MAIL OR FAX (SEE BELOW)

Department of Administrative Services
Office of the State Building Inspector
450 Columbus Boulevard, Suite 1303
Hartford, CT 06103
Tel: 860-713-5900 Fax: 860-713-7410
Affirmative Action/Equal Opportunity Employer

SMOKE DETECTION & VISIBLE NOTIFICATION REQUIREMENTS

R-2 STRUCTURES

Proposed Section Addition to IBC and IFC 907.2.11

After a Code review of smoke detection & visible notification requirements R-2 structures (see attached copy of summary), if there are two separate systems - a smoke alarm system and a fire alarm system, then we need a pointer in the smoke alarm section to the future visual requirement...

(Add) 907.2.11.8 In R-2 occupancies where smoke alarms are installed and a separate building fire alarm system is also installed, capability for future visible alarm notification in the vicinity of the smoke alarm system is required in accordance with 907.5.2.3.3.

SMOKE DETECTION & VISIBLE NOTIFICATION REQUIREMENTS

R-2 STRUCTURES

Dec 12-2023

COMMENTS BY Joseph V. Cassidy, PE - Code Consultant

For new R-2 dwellings, the intent of the code is for all units to have the capability to add visible notification if needed for a particular tenant. This is different from the R-1/l-1 requirement where there is a table with specific numbers of units to have visuals installed. The commentary to 907.5.2.3.3.1 discusses the "capacity" options.

2021 IBC IFC 907.5.2.3.3 Group R-2.

In Group R-2 occupancies required by Section 907 to have a fire alarm system, each *story* that contains *dwelling units* and *sleeping units* shall be provided with the capability to support future visible alarm notification appliances in accordance with Chapter 11 of ICC A117.1. Such capability shall accommodate wired or wireless equipment.

❖ Group R-2 occupancies with a fire alarm system are required to have the capability to support visual alarm notification appliances in accordance with Chapter 11 of ICC A117.1. This requirement has been in the code, and the language is intended to provide more specific guidance as to what is meant by "capability." Note that this requirement includes all dwelling and sleeping units, not just those classified as either Type A or B. Sections 1106.2 through 1106.4.4 of ICC A117.1 address smoke and fire alarm requirements as they pertain to accessible communication features. More specifically, Section 1106.2 states that where unit smoke detection is provided, it shall provide audible notification in compliance with NFPA 72. Section 1106.3 focuses on buildings where fire alarm systems are provided. If a fire alarm system is provided in the building, ICC A117.1 requires that the wiring be extended to a point within the unit in the vicinity of the smoke detection system. Based on the type of unit and the strategy used by the designer, this location may vary. Section 1106.4 addresses the visible alarm requirements specifically and has various issues it addresses, as follows:

- 1.1. Complies with Section 702 of ICC A117.1, which focuses on the requirements of NFPA 72, and that such notification devices be hardwired.
- 2.2. Addresses the fact that all visible notification devices be activated within the unit, either when the smoke alarms in the unit activate or when that portion of the building fire alarm system in that portion of the building activates.
- 3.3. Allows the same visible notification for the smoke alarms in the unit and the building fire alarm system.
- 4.4 Prohibits the use of the visible notification for anything other than the operation of the smoke alarms in the unit or the building fire alarm system.

2021 IBC IFC 907.5.2.3.3.1 Wired equipment.

Where wired equipment is used to comply with the future capability required by Section

907.5.2.3.3, the system shall include one of the following capabilities:

- 1.1. The replacement of audible appliances with combination audible/visible appliances or additional visible notification appliances.
- 2.2. The future extension of the existing wiring from the unit smoke alarm locations to required locations for visible appliances.
- 3.3. For wired equipment, the fire alarm power supply and circuits shall have not less than 5-percent excess capacity to accommodate the future addition of visible alarm notification appliances, and a single access

point to such circuits shall be available on every story. Such circuits shall not be required to be extended beyond a single access point on a story. The fire alarm system shop drawings required by Section 907.1.2 shall include the power supply and circuit documentation to accommodate the future addition of visible notification appliances.

❖ In terms of the specific capability requirements, this section provides direction as to what may be meant by bringing the wiring to the unit. There has been confusion in the past when it was interpreted that all units are required to be prewired for visible appliances, which was not the intent of ICC A117.1. More specifically, the requirements provide three options for future capability, as follows:

1.1. Replacement of audible appliances with combination audible/visible appliances or additional visible appliances.

2.2. Extension of wiring from the unit smoke alarm locations to the required locations of visible appliances.

3.3. Excess power supply and circuit capacity for potential connection to visible alarm notification appliances. Only a single access point for each circuit is required on each story. As noted with this option, the fire alarm system shop drawings required by Section 907.1.2 shall include the power supply and circuit documentation to accommodate the future addition of visible notification appliances.

It is important to note that the location of visual alarms, if installed, are driven by the requirements of NFPA 72 which may vary the approach taken based on the configuration of the space

COMMENTS BY John Murphy B.O. Code Consultant

2021 IEBC

For Existing Buildings either altered, renovated or a conversion of a structure from a different occupancy, under the IEBC the following code path is applicable for the above provisions of the code.

❖ Newly created or altered R-2 Dwellings within Existing Buildings being converted to residential in 21 IEBC section 904.2 for Level 3 under Classification of work (Chapter 6) and section 1011.2.2 under Change of use (Chapter 11) apply and refer to the above requirements

2021 IBC 907.5.2.1.3 audible signal Frequency in Group R-1 and R-2 sleeping room

Audible frequency in Group R-1 and R-2 occupancies shall be in accordance with sections 907.5.2.1.3.1 and 907.5.2.1.3.2.

All sleeping rooms shall have audible alarm signal Fire alarm system with a 520-Hz low -frequency signal complying with NFPA 72

2017 ICC/ANSI A117.1 702.1 General.

Audible and visible alarms and notification appliances that are part of a building fire alarm system shall be installed in accordance with NFPA-72 listed in Section 106.2.4, be powered by a commercial light and power source, be permanently connected to the wiring of the premises electric system and be permanently installed.

Exception: Audible and visible notification appliances provided within dwelling or sleeping units shall comply with Sections 1106.2 through 1106.4.4. It is important to remember that the location of visible notification devices, if installed, are driven by the requirements of NFPA 72, which may vary the approach taken based on the configuration of the space.

End of Combined Report

Issued by Michael V. Musco PE – Code Consultant