

Code Amendment Proposal Petition

NH Department of Safety
Office of the State Fire Marshal
Board of Fire Control
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www.nh.gov/safety/divisions/firesafety

EXHIBIT #: RE: 19-02-15

PETITIONER INFORMATION

Name:

Paul Parisi; Ari Pollack; William McKinney

Date:

April 8, 2019

Representing:

Fire Marshal's Office; NH Home Builders; NH Building Officials

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PROPOSED CODE LANGUAGE

This proposed code amendment (check one):

- Amends (code, edition, section)
 Adopts a new code section (code, edition)
 Repeals (code, edition, section)

Code, Edition, and/or section affected:

NFPA 1, 2015 edition Section 20.11.4

You must provide language for review by the Board of Fire Control. Failure to provide language will invalidate the petition. Please use the following format to show additions and deletions from the code: Strike through = deleted text. Underline and bold = **New Text**

Proposed Language

See Attached

PETITION CRITERIA

Attach to this petition written responses to the following questions. If needed, include in the response an explanation as to why a question does not apply to your proposed code petition. The Board may reject an incomplete petition.

Questions:

- 1. Is your proposed code amendment necessary to correct any unforeseen or probable outcomes resulting from the application of a code section, and if so, why?
2. Is your proposed code amendment needed to protect the health, safety, welfare, comfort and/or security of occupants and the public, and if so, why?
3. Does your proposed code amendment correct inadequate application by a code section to a method, material, or design, and if so, why?
4. Is your proposed code amendment necessary to correct unique geographic or climatic conditions within New Hampshire, and if so, why?
5. Is your proposed code amendment needed to eliminate conflicting, obsolete, or duplicative code provisions or standards among New Hampshire-adopted codes, statutes, or regulations, and if so, why?
6. Does your proposed code amendment provide for the use of unique or emerging technologies or promote advances in construction methods, devices, materials and techniques, and if so, how?
7. Does your proposed code amendment create any adverse fiscal impact or cost savings for the general public, the construction industry, local and state governments, or small businesses? If so, please describe the added or reduced cost of the proposed code amendment, the adverse fiscal impact or cost savings in relation to the current NH State Fire Code, and any standards of measure used to arrive at the result given.

[Handwritten signature]

PETITIONER'S SIGNATURE

Signature:

Date:

4/2/19

Copyright Notice: By signing this proposed code amendment petition, I understand and acknowledge that the work contained in this petition is original, or if not original, I have the right to copy the work. By signing this work, I understand that any rights I may have in this work, including any form of derivative works and compilations, are assigned to the N.H. Board of Fire Control. I also understand that I do not retain or acquire any rights once this work is used in an NH Board of Fire Control publication.

APPLICATION PROCESSING

The Office of the State Fire Marshal reviews all applications and will determine if the application is in conflict with any existing law or rule. The division will return any application found to be in conflict with any existing statute or rule along with the specific reasons for the returned application.

Not Approved: [] Approved: [x] Approved with Modifications: []
Hearing Date: _____ Voting Date: _____
Chair's Signature: [Signature] Date: 4-27-2019
Printed Name: Daniel C. Andrews
Fire Marshal's Signature: [Signature] Date: 4-29-19
Printed Name: PAUL J. PARIS II
Commissioner's Signature: [Signature] Date: 4/29/19
Printed Name: Robert Quinlan

Proposed language:

20.11.4.7 Floor assemblies having been protected by an alternative method that has been evaluated as meeting the criteria for alternative methods of construction as outlined in NFPA 1, section 1.4.1 and/or 1.4.2.

20.11.4.8 Protection in accordance with 20.11.4 shall not be required until eighteen months after the effective date of New Hampshire's adoption of the NFPA 1, 2015

Petition Criteria Questions:

1. The proposed code amendment is a compromise between the NH Building Code officials, the NH Home Builders Association, and NH Fire Marshal's Office as a means to gain support for the adoption of NFPA 1, 2015 edition.
2. The proposed code amendment is necessary to gain consensus on the adoption of a newer model code. Under the current code, homes are being built using lightweight wood frame floor construction without the benefit of being protected from fire exposure. If this amendment is adopted and the code is adopted through the legislative process, we will have floor protection in the code within 18 months of its adoption.
3. N/A
4. N/A
5. This code amendment is necessary to gain consensus on adopting the 2015 edition of model code NFPA 1.
6. This amendment allows for many alternatives to protect lightweight wood frame floor assemblies. These alternatives are outlined in APA's document SR-405, "Fire Protection of Floors Constructed with Prefabricated Wood I-Joists for Compliance with the International Residential Code".
7. If left unamended, this section would otherwise force that homes be built with floor protection, adding expense to homes. For reference, compliance with this code section in some instances has been estimated to add more than \$2,000 to the cost of construction of a single family residence. The planned phase-in period (18 months after adoption) provides a reasonable period of time for educational outreach and lending practices to help the building trades and homeowners adjust to compliance.

20.11.3.3 Interior Floor Finish. (Reserved) [101: 24.3.3.3]

20.11.4 Fire Protection of Floors. In new construction, floor assemblies shall be provided with a continuous membrane of gypsum wallboard having a nominal thickness of not less than ½ in. (13 mm), or equivalent, to protect the floor framing members from a fire exposure from below.

20.11.4.1 Protection in accordance with 20.11.4 shall not be required where the building is protected by an approved automatic sprinkler system installed in accordance with 13.3.1.2.

20.11.4.2 Protection in accordance with 20.11.4 shall not be required for floor assemblies located directly over a crawl space not intended for storage or fuel-fired equipment.

20.11.4.3 Portions of floor assemblies shall be permitted to be unprotected where the aggregate area of the unprotected portions does not exceed 80 ft² (7.4 m²) per story and where fire blocking is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.

20.11.4.4* Protection in accordance with 20.11.4 shall not be required in floor assemblies using wood joists with nominal dimensions not less than 2 in. (51 mm) in thickness by 10 in. (254 mm) in width, or other approved floor assemblies providing equivalent performance.

A.20.11.4.4 Materials such as wood I-Joist, wood or steel trusses, or cold formed steel would not typically be considered equivalent.

20.11.4.5 Protection in accordance with 20.11.4 shall not be required in floor assemblies using wood joist structural composite lumber that are compliant with ASTM D 5456 and that have dimensions not less than 1½ in. (38 mm) in thickness by 9¼ in. (235 mm) in width.

20.11.4.6 Penetrations by mechanical, plumbing, fire protection, and electrical systems through the membrane protection required by 20.11.4 shall not be required to be protected.

The intent of the requirements of 20.11.4 is to provide for a minimal degree of structural fire resistance for floors in new nonsprinklered one- and two-family dwellings to permit for fire department search and rescue operations. It is not uncommon for the room of fire origin to be fully involved by the time the fire department arrives on the scene; in many cases, the fire has extended beyond the room of origin. With no sprinkler system to keep the fire in check, the fire intensity can significantly affect the structural stability of floor construction and increase the risk to search and rescue crews.

While it is noted that the Code requires all new one- and two-family dwellings to be protected by automatic sprinkler systems (see 13.3.2.20.1), it is recognized that not all jurisdictions will include such requirement in their Code adoptions. For this

reason, the Code includes the requirements of 20.11.4 for new nonsprinklered one- and two-family dwellings.

20.11.5 Manufactured Housing. New manufactured housing shall comply with Section 20.11 and NFPA 501, *Standard on Manufactured Housing*.

NFPA 501, *Standard on Manufactured Housing*, covers all the equipment and installations used in the design, construction, transportation, fire safety, plumbing, heat-producing, and electrical systems of manufactured homes that are designed to be used as dwelling units.

20.12 Mercantile Occupancies

Mercantile occupancies include stores, markets, and other rooms, buildings, or structures used for the display and sale of merchandise. This occupancy classification includes, but is not limited to, the following:

1. Supermarkets
2. Convenience stores
3. Department stores
4. Hardware stores
5. Video sales/rental stores
6. Pharmacies
7. Rental equipment centers
8. Automobile sales showrooms
9. Flea markets and craft centers
10. Building materials/supplies centers
11. Shopping centers/malls
12. Office supply stores
13. Computer and electronics stores
14. Sporting goods stores
15. Warehouse club stores

Minor merchandising operations in buildings that house other predominant occupancies, such as a newsstand in an office building, are typically classified as incidental uses and must, therefore, meet the Code requirements of the predominant occupancy (see 6.1.14.1.3).

The life safety provisions for mercantile occupancies are based on their characteristic of displaying merchandise for sales purposes, which introduces significant quantities of fuel in sales areas occupied by persons who are mostly unfamiliar with the building. Mercantile occupancies are also characterized by the use of layouts of merchandise displays and store fixtures that can confuse the egress path. Fires in department stores, mall buildings, and similar mercantile occupancies that once resulted in occupant fatalities have been practically unheard of in the United States over the past two decades. Although some serious fires have occurred in such properties, the established Code provisions have served the life safety needs of the occupants very well.