



# NFCA 2024/2027 Code Update

Bill McHugh, Technical Director of NFCA  
Rich Walke, Consultant to the NFCA

NFCA FREE Webinar Series  
Learn – Network – Grow

September 5, 2024

# Thanks Members...

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# Thanks Members...

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- NFCA Contractors
- NFCA Associates
- NFCA Manufacturers

# 2023/2024 NFCA Board of Directors

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# What Does NFCA Provide?

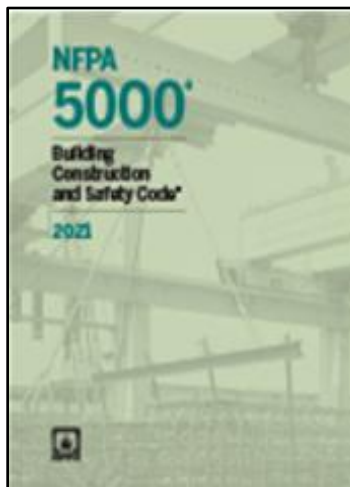
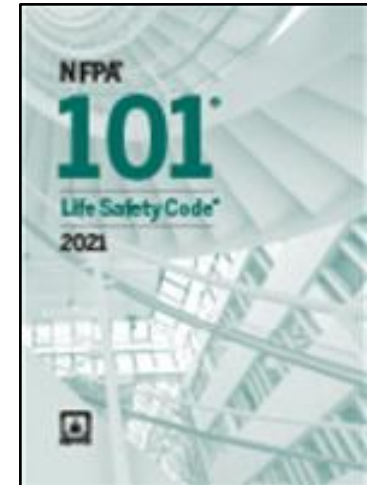
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- **Fireproofing Education & Exams**
  - World-Class SFRM & IFRM Fireproofing Instruction
- **NFCA Contractor Accreditation Program for IFRM & SFRM**
  - Educated fireproofing Companies
  - UL Qualified SFRM Contractor Program
- **Week of Learning - Educational Conference**
  - Network with top Fireproofing Contractors, Manufacturers, Associates
  - A forum for suppliers and contractors to learn from one another
- **NFCA 100-400 Standards** for quality and life safety
- **Technical expertise, Standards and Code development**
- **Fireproofing Handbook of Fireproofing Knowledge**
- **NFCA Website** to find Fireproofing Leaders – [www.NFCA-online.org](http://www.NFCA-online.org)





# NFCA @ ICC, NFPA, Canada CDP



# What does NFCA Do?

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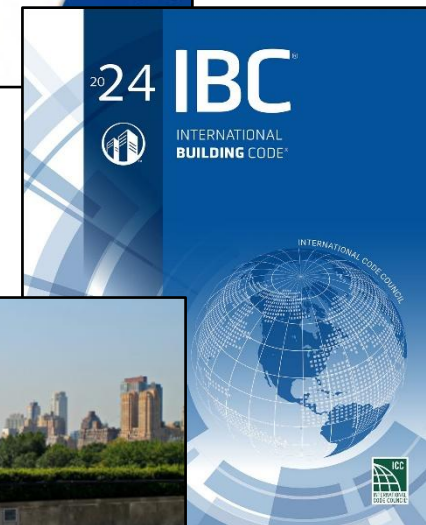
- NFCA @ ICC Codes...
  - 2021/2024 SFRM/IFRM Proposals...
- NFCA @ ASTM Task Groups - Fireproofing
- NFCA @ NFPA Fire Protection Features
- NFCA @ AISC, AISI, CSI/CSC
- NFCA @ National Codes, Canada – NBCC, NFCC
- NFCA @ American Institute of Steel Construction & American Iron and Steel Institute
- Industry Articles
  - Thermal Barriers, Patching, more...
- NFCA @ SFPE/ASCE Meetings
- NFCA requests IAS add NFCA Fireproofing Exam
- NFCA Committee ACTIONS
- NFCA International



# NFCA @ 2027 IBC CDP

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- **International Fire Code**
  - **Maintain Protection & Repairs**
- **Fire-Resistive vs Fire-Resistant**
- **Occupiable Roofs – Fire-Resistance-Rated**
- **Attachments**
- **Table 601 - 20' Rule; Clarifications**
- **Fireproofing Special Inspection**
  - **ASTM Standards – SFRM, IFRM, Boards/Wraps**
  - **Manufacturers Instructions**
- **Parking Garage Fire-Resistance**





# NFCA Contractor Accreditation Program

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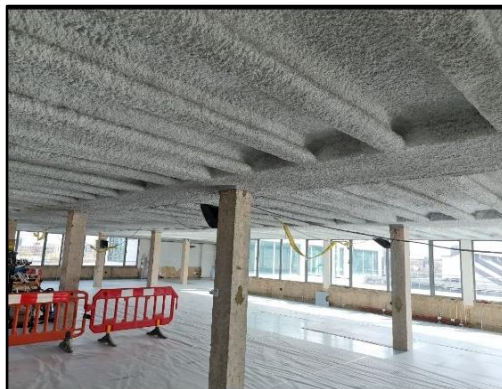
- **NFCA LIVE & VIRTUAL EDUCATION/EXAMS**
  - Contractor Designated Responsible Individual
  - Focus on Fire-Resistance & Fireproofing
  - 2024 Early Fall VIRTUAL
  - 2025 Week of Learning –
    - Omni Interlocken
    - March 31-April 4, 2025



# Contractor Qualifications

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- **UL Qualified SFRM Fireproofing Contractors**
  - **NFCA Education**
    - NFCA HAFK
    - UL Program Guide
  - **NFCA SFRM Fireproofing Exam**
  - **Audits –**
    - Office
    - Field



**Underwriters  
Laboratories**

**Qualified SFRM  
Contractor Program**

# NFCA Contractor Accreditation Program (CAP)

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- NFCA Accreditation “seal” - Registered NFCA mark.
- Contract - NFCA & CAP Contractor.

IFRM Accredited Contractor



National Fireproofing  
Contractors Association

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SFRM Accredited Contractor



National Fireproofing  
Contractors Association

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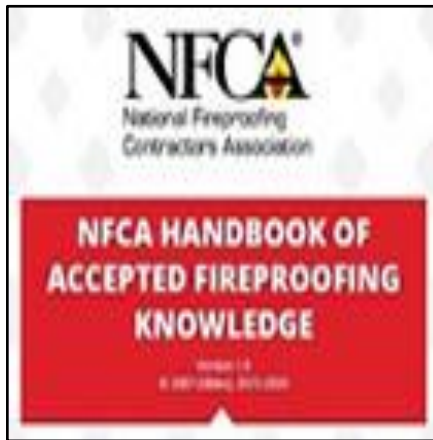
IFRM and SFRM

Accredited Contractor



National Fireproofing  
Contractors Association

# NFCA Handbook of Accepted Fireproofing Knowledge (HAFK)



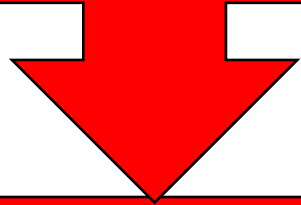
- Study Resource for NFCA Fireproofing Exams
- Fireproofing in 'One Place'
- NFCA Members = \$500 Discount
- **FREE HAFK PDF for AHJ's & Specifiers with Design Firms, Independent Specifiers**
- **SAFETY HANDBOOK INCLUDED**
- More New Chapters coming...

[www.nfca-online.org](http://www.nfca-online.org)



# UL Qualified SFRM Contractor Program

The UL Qualified SFRM Contractor Program is an independent, 3<sup>rd</sup> party credential.



## Program requirements

Pass the NFCA Fireproofing Exam – (DRI)

Understanding NFCA Handbook of Fireproofing knowledge

Knowledge of the UL Product Iq of UL Fire resistance designs

Management system requirement

- Establish and effectively maintain a **management system** that meets the UL Program Requirements



# UL Qualified Fireproofing Contractor Program

- **NFCA DRI**
- **Management System (MS)**
  - **Audits**
  - **Contractor's Office**
  - **A Jobsite**
- **Consider....**

## UL Qualified Spray-Applied Fire Resistive Material (SFRM) Contractor Program requirements

### Mark Integrity Program

#### Introduction:

This document outlines the contractor company requirements for participation in the UL Qualified Spray-Applied Fire Resistive Material (SFRM) Contractor Program.

The SFRM installation industry serves residential, institutional, commercial and industrial structures. The industry addresses the need to limit the damaging effects of fire by insulating structural building elements from fire. SFRMs help horizontal assemblies including floor/ceiling, roof/ceiling and building elements such as beams and columns obtain fire endurance ratings. SFRM contractors install certified SFRMs to establish a protective system for a structure to protect fire and life safety and comply with specification and customer requirements.

In order for a SFRM installation contractor organization to qualify for UL's SFRM Contractor Program, the contractor organization shall employ a knowledgeable individual who successfully demonstrates their competency to UL through successful completion of the Designated Responsible Individual (DRI) program at a contractor company that has been recognized in the NFCA Contractor Accreditation Program (CAP).

The company that enrolls in the UL Qualified SFRM Contractor program also has to establish, implement and maintain a management system focused on the application of SFRMs. A management system is used to describe the contractor's SFRM operations.

The Management System approach requires the Contractor

may be determined by the construction documents that have had final approval by code authorities. Where special inspection is implemented, the AHI ultimately determines the acceptability of the installation.

Because the SFRM contractor firm's selection and installation of SFRMs to requirements relies on staff knowledge, the UL Qualified SFRM Contractor Program requires at least one individual employed by the Contractor organization to be designated as a Designated Responsible Individual (DRI) who has demonstrated his/her knowledge via examination and meets other related requirements defined in this document.

### Definitions

**Authority Having Jurisdiction (AHJ)** — The organization, office or individual responsible for implementing the adopted code. This is typically the building official or fire marshal, or another governmental agency who may also be the final authority signing the "Certificate of Occupancy Permit".

**Certificate** — The SFRM Contractor Certificate. This is a document issued after an audit has been completed, and conformance to all UL Qualified SFRM Contractor Program Requirements has been determined. The Certificate is valid until Dec. 31 of the following year from which the certificate was issued.

**Continuing Education Unit (CEU)** — For purposes of awarding CEU credit, the International Association of Continuing Education and Training (IACET) definition will be used for those individuals involved in the UL Qualified SFRM Contractor Program as follows: One (1) CEU is equal to 10 contact hours of participation in an approved education

# NFCA CAP Contractors

- Successful Contractor meeting requirements
- Listed @ NFCA-Online.org

The screenshot displays the NFCA (National Fireproofing Contractors Association) website. At the top, the NFCA logo is on the left, and contact information is on the right: 800 Roosevelt Rd, Bldg C- 312, Glen Ellyn, IL 60137, P 708-236-3411, F 708-449-0837, and [info@nfca-online.org](mailto:info@nfca-online.org). A navigation bar contains links: Home, About, Join, Member List, Events, Accreditations, NFCA Education, Resources, and Members Only. The main content area is titled "NFCA Contractor Members" and includes a description: "NFCA Contractor Members have completed a minimum of 2 years and 20 jobs in the passive fireproofing business. NFCA Interim Contractor Members have not yet fulfilled these requirements." Below this are two buttons: "Sort by Company" and "Sort by State". A section for "Member's First Letter" shows a grid of letters from A to Z, with a "7" in the first position. On the left sidebar, under "ABOUT", there are links for Join, Contact, Board, and Committees. Under "MEMBER LIST", there are links for Contractors (NFCA IFRM Accredited, NFCA SFRM Accredited, NFCA Contractors, Interim Members, UL Qualified Contractors). On the right sidebar, under "CONTRACTORS OPERATING IN...", there is a list of states and the District of Columbia: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Guam, and Hawaii.

**NFCA**  
National Fireproofing  
Contractors Association

800 Roosevelt Rd, Bldg C- 312  
Glen Ellyn, IL 60137  
P 708-236-3411  
F 708-449-0837  
[info@nfca-online.org](mailto:info@nfca-online.org)

Home About Join Member List Events Accreditations NFCA Education Resources Members Only

**ABOUT**

- Join
- Contact
- Board
- Committees

**MEMBER LIST**

- Contractors
  - NFCA IFRM Accredited Contractors
  - NFCA SFRM Accredited Contractors
  - NFCA Contractors
  - Interim Members
  - UL Qualified Contractors

**NFCA Contractor Members**

NFCA Contractor Members have completed a minimum of 2 years and 20 jobs in the passive fireproofing business. NFCA Interim Contractor Members have not yet fulfilled these requirements.

Sort by Company Sort by State

Member's First Letter:

7 A B C D E F G H I J K L M N O P Q  
R S T U V W X Y Z

**CONTRACTORS OPERATING IN...**

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Guam
- Hawaii

# Beams, Floors & Fire-Resistance Full Scale, Load Applied VIDEO...

SHORT  
VIDEO

The NFCA represents **fireproofing contractors** and **manufacturers**, **equipment suppliers**, **inspection agencies**, who install, inspect or provide passive fire protection for structures as required by

preservation of the safety. Member **fireproofing contractors** install **Sprayed Fire-Resistive Material (SFRM)**, **Intumescent Fire-Resistive Material (IFRM)**

products to complex listings and manufacturers instructions.

The NFCA works to improve the proper use and application of fireproofing products through development of standard practices and educational programs for the industry.

[Learn more about NFCA](#)

LONG  
VIDEO

**BUILDING CODES & FIRE TESTING** - The Building Codes require horizontal fire-resistance-rated assemblies to be full-scale tested (12' x 14', approx 3m x 4m) with a load applied where a load is expected. Why? Small-scale horizontal fire testing does not allow for a load to cause deflection of the assembly. **Small-scale fire testing for horizontal assemblies and without a load applied does not reflect real world conditions and is not safe, unless there is NEVER going to be a load applied in the field.** [Learn More](#)

**FREE FIREPROOFING EDUCATION- NFCA's Fire-Resistance FIREPROOFING WEBINAR RECORDING**- Get a detailed look at structural fireproofing and the acceptance criteria needed for approvals and substitution requests. Check out this program on fire test standards ASTM E119, UL 263 and CAN/ULC-S-101. Testing products - in a full scale furnace with loads applied where applicable - proves fire-resistance. [FREE NFCA Fire-Resistance Education PPT Slides](#)

**Feb. 9, 2024** - Want to know what's going on in Fireproofing Industry that affects your business? Be IN THE KNOW by attending the [NFCA Week of Learning '24?](#) [Book your hotel room today!](#) Group rates expire Feb. 12! [Email us](#) if you don't get NFCA's Rate.

**Feb. 7, 2024** - Want to know who's going to be at the [NFCA Week of Learning '24?](#) [Check out the attendees!](#) (Don't see



# NFCA Membership

- Thank you NFCA Members – You make NFCA programs possible!
- **Not a Member? Join Now!**
- Annual Contractor Membership \$1495
- **NFCA CAP SFRM / IFRM Program**
- **UL Qualified Fireproofing Contractor Program**
- Contact [info@NFCA-online.org](mailto:info@NFCA-online.org) for an application
- **NFCA Membership is an investment in your company and your industry**



**NFCA Fireproofing Class**

# NFCA ICC 2027 CDP – Cycle A, B

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## **ICC Cycle A – IBC Chapter 7, 10, 17 – IFC ALL – 2024, 2026**

- January 8, 2024 – Proposals Due
- April 7-16 – CAH Hearing #1
- July 9 – Comments Due
- October 23–31 – CAH Hearing #2
- March 14, 2025 – Public Comments Due
- April 19-28, 2026 – Public Comment Hearing

## **ICC Cycle B – IBC General, IBC Structural – 2025, 2026**

- January 2025 – Proposals Due
- April 27 - May 6, 2025 – CAH Hearing #1

# NFCA ICC 2027 CDP – Cycle A, B

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## ICC Code Committees of Interest to NFCA:

- **E = Egress**
- **F = Fire Code / Wildland Interface**
- **FS = Building Code – Fire Safety, Chapter 7, 8, some 17**
- **S = Structural**
- **EB = Existing Buildings**
- **Etc.**



# NFCA ICC '18, '21, '24 – Code Results

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- IBC – Full Scale, Load Applied, .... Etc.
- IBC – Performance Based Structural Fire Design
- IBC – Continuous Inspection, AND visual *before* concealment
- IBC – “Fire Resistance NOT Eliminated”
- *Section 104.11, Fire Safety, Equivalency = IBC Chapter 7*
- IBC – **Intumescent** Coatings / Mastic Coatings **Combined = IFRM**
- IBC – SFRM– *Resistant to Resistive*
- IFC – Fireproofing added to Chapter 7, *Fire & Smoke Protection Features*
- IFC - Maintain Protection & How To Maintain Fireproofing
- NFCA @ IFC Chapter 7 Commentary – How to Maintain
- NFPA 101, NFPA 1 – LISTINGS



# Full Scale, Load Applied 2021 CDP

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- **ICC Code Development – Fire-Resistance-Ratings determined...**
  - FS2-21 – ASTM E119 / UL 263 **Full Scale (NEW)**
  - FS4-21 – ASTM E119 / UL 263 **With Load Applied (NEW)**
- **Proposals – DISAPPROVED**
  - *“ASTM E119 / UL 263 is already in Section 703”*
  - *“Full Scale Furnace and Load Applied is already required by the Standards”.... required by the CODE.*

# Full Scale, Load Applied VIDEO...

SHORT  
VIDEO

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products to complex listings and manufacturers instructions.

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# NFCA @ IBC, IFC '27...SUMMARY

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- Fire Code - Resistive, Maintain Protection, Repairs
- Table 601 - 20' Rule; Clarifications
- Occupiable Roofs – Fire-Resistance-Rated
  - High Rise & Low Rise
- Clarify Attachments
- Parking Garage Fire-Resistance
- Fireproofing Special Inspection
  - ADD NEW ASTM Drafts - SFRM, IFRM, Boards/Wraps, Delete AWCI 12b
  - Reference Manufacturers Installation Instructions
- ICC Existing Building Inspection Guide
  - “Milestone Inspections”

# F89-24 – Resistant to RESISTIVE

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## Approved as Submitted

- IFC Section 708.1 -
- Sprayed Fire-Resistant Resistive Materials
- Intumescent Fire-Resistant Resistive Materials



# F90-24 – PATCHING – FOLLOW LISTING

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- **Approved as Submitted**
- **708.2 Repair of Spray Fire-Resistant Materials and Intumescent Fire-Resistant Materials.** Where damaged, materials used to protect columns, beams and horizontal assemblies shall be repaired, replaced or restored in accordance with the listing, the manufacturer's repair instructions and with the same materials and thicknesses used in the listing. Where the listing is not known, repairs shall be made with the same material type and thickness that exists.

# F90-24 – PATCHING – FOLLOW LISTING

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## Kevin Scott, KH Scott Assoc. Comment to be heard @ October Hearings - Fire Marshal 'Field' Perspective

- **708.2 Repair of sprayed fire-resistant fire-resistive materials and intumescent fire-resistant fire-resistive materials.** ~~Where damaged, materials~~ Materials used to protect columns, beams and horizontal assemblies shall be securely bonded to the substrate without evidence of deterioration or damage, or delamination, cracks or voids through which the substrate is exposed. Where the original material and listing is known or can be identified, such damage shall be repaired, replaced or restored in accordance with to the requirements of the listing in accordance with the manufacturer's repair instructions. and with the same materials and thicknesses used in the listing provided the original material is known or can be identified. Where the listing original material or listing is not known or is no longer available, repairs shall be made with the same material type and thickness that exists as originally used.

# F91-24 – Annual Visual Inspection

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## Approved as Submitted

- **708.1 Maintaining protection.** Where required when the building was originally permitted and constructed, spray fire-resistant materials, and intumescent fire-resistant materials and other materials used to provide fire-resistance protection, shall be visually inspected to verify that the materials do not exhibit exposure to the substrate.

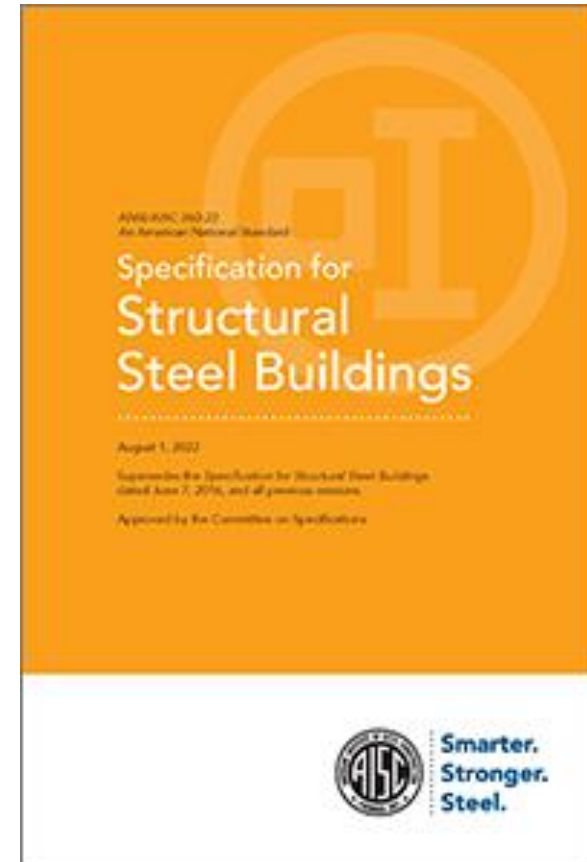
# NFCA's Watch List – Concrete / Steel / Wood Industries

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**Strategic move by all three structural building element industries, to reference:**

- AWS / FDS
- **AISC 360**
- ACI 216 / PCI 318

**Consensus changes....**





# FS-2 Restrained/Unrestrained

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## Approved as Submitted

- FS2-24 – Steve Szoke, ACI & Shamim Rashid-Sumar, NRMCA
- **703.2.1.3 Restrained classification.**
- **Exception:** Unless otherwise determined by the registered design professional, concrete girders, beams, and slabs connected to structural concrete framing or structural concrete walls in accordance with **ACI 318** shall be considered restrained. Restrained concrete construction shall be identified on the construction documents.

# FS-2 Restrained/Unrestrained

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## AISC Comment (Bonnie Manley) to be heard @ October ICC Hearings....

- **703.2.1.3 Restrained classification....AISC adds....**
- **Exceptions:**
  2. Unless otherwise determined by the registered design professional, cast-in-place or prefabricated concrete floor or roof construction secured to structural steel framing members, and individual structural steel beams and girders that are welded or bolted to integral framing members, shall be considered restrained construction in accordance with AISC 360, Appendix 4, Section 4.3.3.

# FS-2 Restrained/Unrestrained

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- **AISC proposal refers to AISC 360, Appendix 4, Section 4.3.3.**
  - **3. Restrained Construction**
    - For floor and roof assemblies and individual beams in buildings, a restrained condition exists when the surrounding or supporting structure is capable of resisting forces and accommodating deformations caused by thermal expansion throughout the range of anticipated elevated temperatures. Cast-in-place or prefabricated concrete floor or roof construction secured to steel framing members, and individual steel beams and girders that are welded or bolted to integral framing members, shall be considered restrained construction.
- **Will AISC stay the same....or change...CONSENSUS CHANGE.**
- **NFCA on COMMITTEE?**

# FS-3 Extension of Data – E119/E2032

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## Approved as Submitted

### FS3-24 Marcello Hirschler, GBH International

- **703.2.2 Analytical methods.** The fire resistance of building elements, components or assemblies established by an analytical method shall be by any of the methods listed in this section, based on the fire exposure and acceptance criteria specified in ASTM E119 or UL 263.
  - 1. Fire-resistance designs documented in approved sources.
  - 2. Prescriptive designs of fire-resistance-rated building elements, components or assemblies as prescribed in Section 721.
  - 3. Calculations in accordance with Section 722.
  - 4. Extension of fire resistance rating data obtained from tests in accordance with ASTM E119 or UL 263 for beams, floor and roof assemblies, columns; walls, and partitions, based on the principles contained in [ASTM E2032](#).
  - 5. Engineering analysis based on a comparison of building element, component or assemblies designs having fire-resistance ratings as determined by the test procedures set forth in ASTM E119 or UL 263.
  - 6. Fire-resistance designs certified by an approved agency.

# FS9-24 – Edward Lisinski, American Wood Council

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## Disapproved 7-4 – NFCA Opposed to AWC's Equivalence

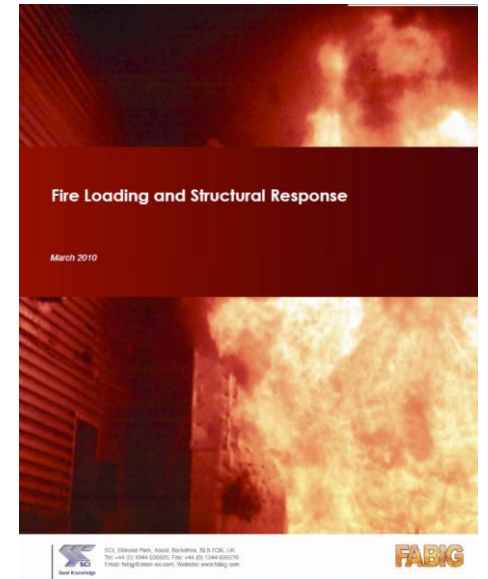
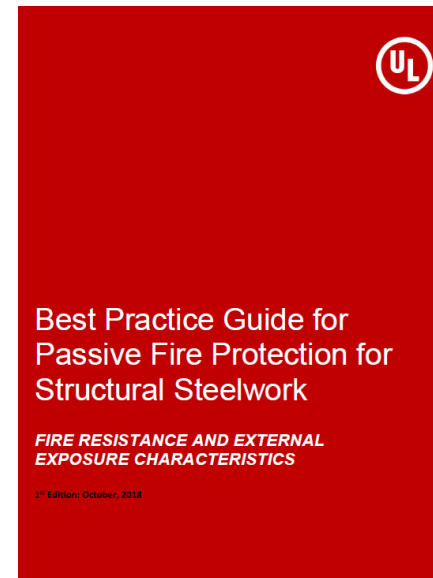
- **704.5.2 Connections to structural wood members.** Where a structural wood member is required to have a fire-resistance rating, structural connections to that member shall be protected from fire exposure for the time corresponding to the required fire-resistance rating of the member. Protection time shall be determined by one of the following:
  1. Testing in accordance with Section 703.2.1 where the connection is part of the fire-resistance test.
  2. Engineering analysis that demonstrates that the temperature rise at any portion of the connection is limited to an average temperature rise of 250°F (139°C), and a maximum temperature rise of 325°F (181°C), for a time corresponding to the required fire-resistance rating of the structural element being connected. For the purposes of this analysis, the connection includes connectors, fasteners and portions of wood members included in the structural design of the connection.
  3. Engineering analysis in accordance with ANSI/AWC FDS.



# FS-10 Attachments

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- **NFCA Task Force – 10 Monthly Virtual Meetings**
- Carl Fernald, Paul Steele, Mat Stephenson, Steve Winston, Rich Walke, Bill McHugh, Board Members, Many Manufacturer Members
  - Rich Walke @ AISC TG8 Meeting, June 13
  - **Research found**
  - UL (UK 2018) – 18” Coatback
  - FABIG Tech Note 11 (UK 2010)
    - AISC?? UL?? ICC NTA??
    - **Fire Modeling?**
    - **Fire Testing?**
  - *Is ICC 2024 the Solution?*



# FS-10 NFCA Attachments

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## Requested **DISAPPROVAL**

- **704.5.1 Secondary attachments to structural members.** Where primary and secondary structural steel members require fire protection, any additional structural steel members having direct connection to the primary structural frame or secondary structural member, and having a cumulative unprotected footprint greater than 4.65 square inches (3,000 mm ) per 3 linear feet or per linear meter of primary or secondary steel, shall be protected with the same fire resistive material and thickness as required for the structural member. The protection shall extend away from the structural member a distance of not less than ~~42~~ 18 inches (305457 mm), or shall be applied to the entire length where the attachment is less than ~~42~~ 18 inches (305457 mm) long. Where an attachment is hollow and the ends are open, the fire-resistive material and thickness shall be applied to both exterior and interior of the hollow steel attachment.

# FS-10 NFCA Attachments

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## NFCA Requested **DISAPPROVAL**

- **704.5.1 Secondary attachments to structural members.**
  - Need Data to prove or disprove protection requirements.
    - AISC Research @ Purdue University??
    - NFCA Research @ UL, ICC NTA ??
  - ***Is current 2024 IBC OK??***

# FS28-24 – Paul Battaglia, Sound Control

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## DISAPPROVED

- **707.5.1 Supporting construction.**
- 3. Supporting construction for 1- and 2-hour fire barriers in buildings of Type IIB, IIIB and VB construction is not required to be fire resistance rated in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
- **Sprinklered Buildings**
- **DISAPPROVED 13-0 – Fire Partitions OK, Fire Barriers, NO.**
- ***“Supporting construction is critical to fire resistance”***

# FS33-24 – David Renn, PE, SE, City and County of Denver/CO Chapter, ICC

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## APPROVED AS SUBMITTED

- **711.2.3 Supporting construction.**
- 4. Horizontal assemblies that have a fire-resistance-rating for the sole purpose of complying with Section 708.4 for fire partition continuity and the fire partition is exempt from supporting construction requirement of Section 708.4.2.
- **Type IIB, IIIB and VB are NOT RATED anyway...**



# FS81-24 – Bonnie Manley, AISC & Jon-Paul Cardin, CFSteel Group

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## Approved as Submitted

- The purpose of this proposal is to **delete five archaic systems** that are no longer included for new building applications in ....
- *AISC 360-22's mandatory Appendix 4, Structural Design for Fire Conditions, (specifically Appendix 4, Section 4.3).*
- These entries have been retained in AISC 360 Appendix 4 commentary for historical purposes.
- *Opposed philosophically...code officials agreed. Might be a PC.*

# FS82-24 – Ed Lisinski, American Wood Council

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## APPROVED AS SUBMITTED, 7-4

- Prescriptive Fire Resistance
- TABLE 721.1(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS
- TABLE 721 (3) TABLE 721.1(3) MINIMUM PROTECTION FOR FLOOR AND ROOF SYSTEMS
  - r. Fire-resistance-rated assemblies, as prescribed in the ANSI/AWC FDS, shall be permitted.

Adds new Standard: ANSI/AWC FDS-2024: Fire Design Specification (FDS) for Wood Construction

# FS84-24 – Steve Szoke, ACI & Shamim Rashid-Sumar, NRMCA

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## APPROVED AS SUBMITTED

- **721.1 General. Prescriptive Fire Resistance**
  - **721.1.1 Concrete.** Prescriptive details of fire resistance-rated concrete building components shall comply with Section 721.1, ACI/TMS 216.1, or PCI 124.
  - **721.1.2 Masonry.** Prescriptive details of fire resistance-rated masonry building components shall comply with Section 721.1 or ACI/TMS 216.1.

# FS85-24 – Bonnie Manley, AISC

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## APPROVED AS SUBMITTED, NFCA PC w/AISC Support

- Section 722 Calculated Fire Resistance
  - 3. Steel assemblies and composite steel and concrete assemblies shall be permitted in accordance with AISC 360 Appendix 4, Section 4.3 ~~Chapter 5 of ASCE 29~~.

NOTE: AISC 360 section on Calculating SFRM and IFRM Thicknesses....

**NFCA's Bill McHugh testified in opposition to FS85**

# FS85-24 – Bonnie Manley, AISC

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- **FROM 2022 AISC 360 ....**
- (b) Sprayed and intumescent or mastic fire-resistant materials. The fire resistance of columns protected with sprayed or intumescent or mastic fire-resistant coatings shall be determined on the basis of standard fire-resistance rated assemblies, any associated computations, and limits as provided in the applicable rated assemblies.
- The fire resistance of wide-flange columns protected with sprayed fire-resistant materials is permitted to be determined as follows:



# FS85-24 – Bonnie Manley, AISC

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- NFCA's Rich Walke worked with AISC
- NFCA/AISC Comment to be heard @ IBC October Hearings
- ....
- NFPA 5000 Task Group –
- Rich Walke, NFCA; Bonnie Manley, AISC; Cathy Stashak, ILSFM Office
  - Exception: Establishing equivalency to the standard fire-resistance rating using the advanced methods of analysis of AISC 360 Appendix 4, Section 4.2 in combination with the fire exposure specified in ASTM E119 or UL 263 as the design-basis fire, as permitted in AISC 360 Appendix 4, Section 4.3.1, shall be in accordance with the requirements of Section 104.2.3.

# FS90-24 – Bonnie Manley, AISC

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## APPROVED AS SUBMITTED – NFCA supports Listings...

- **722.5.3 Composite Structural Steel and Concrete Columns.** The fire-resistance rating of structural steel columns acting compositely with concrete (filled or encased) shall be permitted to be based on the size of the composite member and concrete protection in accordance with [AISC 360, Appendix 4, Section 4.3.2b.](#)
- **722.5.4 Composite and Noncomposite Structural Steel I-shaped Beams and Girders.** The fire-resistance rating of composite or noncomposite structural steel I-shaped beams and girders shall be permitted to be based on the size of the element and the type of protection provided in accordance with [AISC 360, Appendix 4, Section 4.3.2c.](#)

# NFCA Watch List – Steel Industry

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## FS90-24 – Bonnie Manley, AISC, CONTINUED.....

- **722.5.5 Concrete Floor Slabs on Steel Deck.** The fire-resistance rating of composite concrete floor slabs on steel deck shall be permitted to be determined in accordance with AISC 360, Appendix 4, Section 4.3.2f.
- **722.5.6 Composite Plate Shear Walls.** The fire-resistance rating for unprotected composite plate shear walls shall be permitted to be determined in accordance with AISC 360, Appendix 4, Section 4.3.2g.

# Fireproofing Special Inspection

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- *“ASTM Fireproofing Inspection Standards are developed, maintained, by Fireproofing Industry Consensus.”*

# NFCA Special Inspection Proposals

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## **S2-24 – SFRM Inspection**

- Adds **ASTM WK70851**
- Deletes duplicate info re: ASTM E605, E736 - Ch. 17

## **S3-24 – SFRM Inspection in accordance with the IBC AND Manufacturers Installation Instructions (MII)**

***Environment, Installation, Substrate Temperature,  
much more ---- NOT in Listings.***



# NFCA Special Inspection Proposals

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**DISAPPROVED, Standard Not Done...**

**ASTM Ballot was out this month.**

- **S4-24** – Adds NEW ASTM Special Inspection of Fireproofing Board & Wrap Materials - WK70807
- **S5-24** – Adds NEW Special Inspection of Intumescent Fire-Resistive Materials WK70852
  - Deletes AWCI 12b

# NFCA ICC 2027 CDP – Cycle B

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## ICC Cycle B - IBC General, IBC Structural – 2025, 2026

- January 2025 – Proposals Due
- April 27 - May 6, 2025 – Hearings

# NFCA Occupiable Roofs 1 Story

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## Table 601 Footnote b

b. Occupiable roofs of single-story buildings without a required fire-resistance ratings on the floor construction of the first floor shall have a fire-resistance rating of 1 hr on the occupiable roof. The requirement for a fire-resistance rating on the supporting construction does not apply in this application for all types of construction and all occupancies.

# NFCA Occupiable Roofs >1 floor

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## Table 601, Footnote b

b. The fire-resistance rating of an occupiable roof shall be equal to or greater than the required fire-resistance rating of the floor construction below.

# NFCA Occupiable Roofs Table 601, Footnote b

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## Table 601, Footnote b

b. ~~Except in Group F-1, H, M and S-1 occupancies,~~ Where every part of the roof construction is 20 ft or more above the floor or mezzanine immediately below, fire protection of structural members in roof construction shall not be required, including protection of primary structural frame members, roof framing and d e c k i n g ~~where every part of the roof construction is 20 feet or more above any floor or mezzanine immediately below.~~ except where any of the following conditions apply:

1. In Group F-1, H, M and S-1 occupancies.
2. Where the roof is occupiable.

# NFCA Parking Garage Proposals – 4hrs.

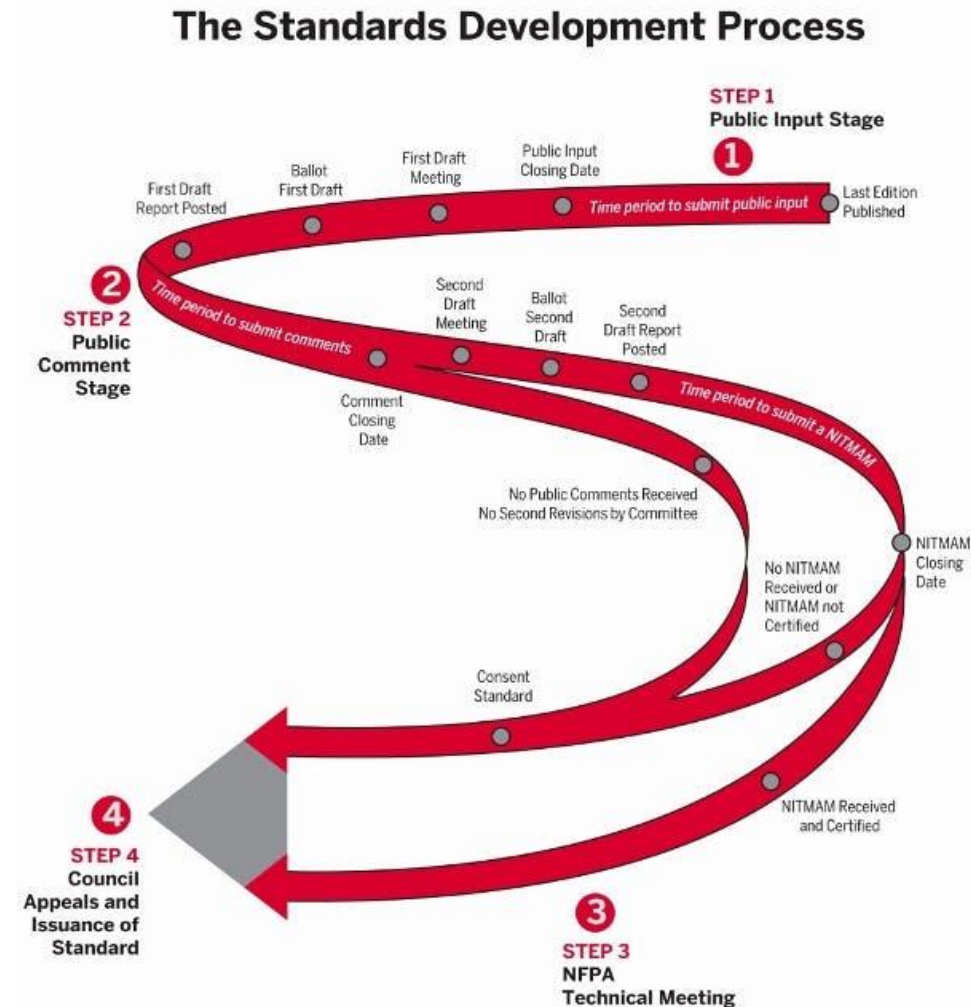
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- **406.5.1, 406.6.4.1 –**
  - Separate from Other Occupancies by 4 hour *fire-barriers*
  - Open & Enclosed Structures
- **510.4 Parking beneath Group R Occupancies**
- **510.7.1 Fire Separation** – No Less than 4 hours, plus supporting construction
  - 4 hours = closest approximation to UL 1709
  - Openings, Penetrations, Joints & Voids = NO UL 1709 Fire Testing
- ***But....maybe we submit UL1709 Fire Exposure....***



# NFCA @ NFPA Fire Protection Features

- NFPA 5000
- NFPA 101





# NFCA @ NFPA Fire Protection Features

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- **PI 110** – Marcelo Hirschler,
- Delete 'Other Test Methods' in Equivalency Section
- **APPROVED**

# NFCA @ NFPA Fire Protection Features

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## PI 23 - AWC – American Wood Council

- **APPROVED AS MODIFIED**
  - NFCA, change 'Standard to Specification'
  - What section of AWS/FDS?

# NFCA @ NFPA Fire Protection Features

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- PI 43 - AISC – Bonnie Manley
- 8.2.3.2.3 Where calculations are used to establish the fire resistance rating of structural steel assemblies and composite steel and concrete assemblies, the provisions of AISC 360 Appendix 4, Section 4.3 shall be permitted.
- NFPA Task Group Formed to study issue further...
  - Rich Walke, Bonnie Manley, Cathy Stashak

# Canada's Codes

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- **NBCC & NFCC - National Building / Fire Code of Canada –**
- Attachments
- Fireproofing Special Inspection
- Occupiable Rooftops
- Installation in Accordance with Manufacturers
- Manufacturers Instructions and Listings
- Replicate recent IBC changes
- Annual Visual Inspection
- 2025's Fire Protection Chapter – Commenting NOW.



# Other Codes...

- UAE Fire & Life Safety Code of Practice
- India
- Australasia
- Mexico/Latin America
- More....



# NFCA Code Team

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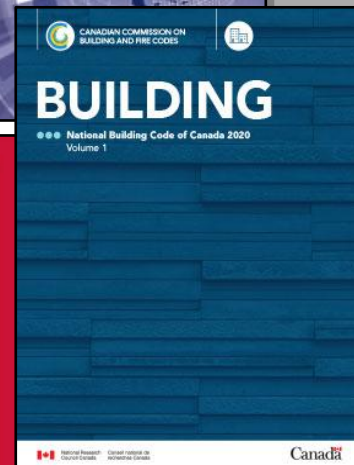
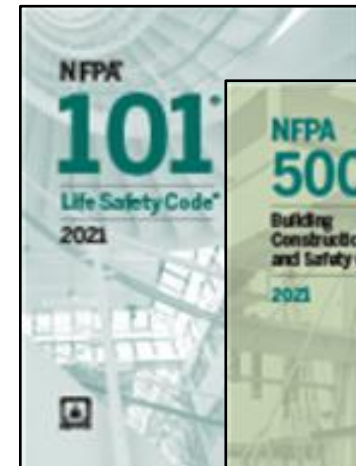
- **Committee**

- Don Armand, Donalco Western
- Linda Frost, Schmitt Contracting
- Daniella Lopez, Nevell Group
- Paul Steele, Raymand Group

- **Consultant/Staff**

- Rich Walke, CTI Consultant to NFCA
- Bill McHugh, NFCA
- Abhishek Chhabra, Consultant to NFCA - Global







**Thanks for Attending!!!**



**Bill McHugh, Technical Director of NFCA**

**Rich Walke, Consultant to the NFCA**

**National Fireproofing Contractors Association**

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