FCIA ICC/NFPA 2021 Code Development Cycle

Prepared by:
William E. Koffel, P.E., FSFPE
Overview

• Past Accomplishments
  • Covered by Bill McHugh
  • Presentation as the 2017 Spring Conference

• ICC Code Development Cycle
  • FCAC Proposals
  • Other proposals of interest

• NFPA 1/101/5000 Code Change Cycle
ICC Code Development Cycle

• The groups of code change hearings
  • 2018 – Group A – most of the building code other than structural and IFC
    • Public Proposals due – January 8, 2018
    • Proposals posted – February 28, 2018
    • Code Development Committee hearings – April 15 – April 25
    • Public Comments due – July 16
    • Final Action Hearings – October 24 – 31
  • 2019 – Group B – IEBC and IRC
    • Public Proposals due – January 7, 2019
    • Proposals posted – March 4, 2019
    • Code Development Committee hearings – April 28 – May 8, 2019
    • Public Comments due – July 24, 2019
    • Final Action Hearings – October 23 – 30, 2019
  • 2020 – Group C – No longer exists
• **703.2 Repair of Penetrations.** Where damaged, materials used to protect membrane- and through-penetrations shall be replaced or restored with materials or systems that comply with code requirements applicable at the time when the assembly was constructed, remodeled or altered.

• **704.2 Repair of Joints and Voids.** Where damaged, materials used to protect joints and voids shall be replaced or restored with materials or systems that comply with code requirements applicable at the time when the assembly was constructed, remodeled or altered.
FCAC Proposals for ICC Group A

- **705.10 Penetrations.** Penetrations of exterior walls required by this section to have a *fire-resistance rating* shall comply with Section 714.

  **Exception:** Penetrations in exterior walls that are permitted to have unprotected openings.
FCAC Proposals for ICC Group A

• **714.4.2 Membrane penetrations.** Penetrations of membranes that are part of a *horizontal assembly* shall comply with Section 714.4.1.1 or 714.4.1.2. Where floor/ceiling assemblies are required to have a *fire-resistance rating*, recessed fixtures shall be installed such that the required *fire resistance* will not be reduced.

  **Exceptions:**

  7. The ceiling membrane of a maximum 1- and 2-hour fire-resistance-rated horizontal assembly is permitted to be interrupted with the double wood top plate of a wall assembly that is sheathed with Type X gypsum wallboard, provided that all penetrating items through the double top plates are protected in accordance with Section 714.4.1.1 or 714.4.1.2 and the ceiling membrane is tight to the top plates.
SECTION 715
FIRE-RESISTANT JOINT SYSTEMS

• **715.1 General.** The provision of this section shall govern the materials and methods of construction used to protect joints and voids in or between horizontal and vertical assemblies.
FCAC Proposals for ICC Group A

- **CONTINUITY HEAD-OF-WALL JOINT SYSTEM.** An assemblage of specific materials or products that are designed to resist the passage of fire through voids created at the intersection of fire barriers and the underside of nonfire-resistance-rated roofs for a prescribed period of time.

- **F RATING.** The time period that the through-penetration firestop system or continuity head-of-wall joint system limits the spread of fire through the penetration or void when tested in accordance with ASTM E814 or UL 1479.
FCAC Proposals for ICC Group A

• **707.9 Voids at intersections.** The voids created at the intersection of a *fire barrier* and a nonfire-resistance-rated roof assembly or a nonfire-resistance-rated exterior wall assembly shall be filled. An approved material or system shall be used to fill the void, and shall be securely installed in or on the intersection for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate expected building movements and to retard the passage of fire and hot gases which complies with Section 715.

• **ASTM E2837-17** Standard Test Method for Determining the Fire Resistance of Continuity Head-of-Wall Joint Systems Installed Between Rated Wall Assemblies and Nonrated Horizontal Assemblies
FCAC Proposals for ICC Group A

SECTION 715
FIRE-RESISTANT JOINT SYSTEMS
JOINTS AND VOIDS
FCAC Proposals for ICC Group A

- **PERIMETER FIRE BARRIER.** An assemblage of specific materials or products that are designed to resist for a prescribed period of time the passage of fire through voids created at the intersection of exterior curtain wall assemblies and fire-resistance-rated floor or floor/ceiling assemblies.

- **F RATING.** The time period that the *through-penetration firestop system* or *perimeter fire barrier* limits the spread of fire through the penetration or void when tested in accordance with ASTM E814 or UL 1479.
• **715.4 Exterior curtain wall/fire-resistance-rated floor intersections.** Where fire-resistance-rated floor or floor/ceiling assemblies are required, voids created at the intersection of the exterior curtain wall assemblies and such fire-resistance-rated floor or floor/ceiling assemblies shall be sealed and protected with an approved perimeter fire barrier to prevent the interior spread of fire. Such systems shall be securely installed and tested in accordance with ASTM E 2307 to provide an *F rating* for a time period not less than the *fire-resistance rating* of the floor or floor-ceiling assembly. Height and fire-resistance requirements for curtain wall spandrels shall comply with Section 705.8.5.

• **715.4.1 Fire test criteria.** *Perimeter fire barriers* shall be tested in accordance with the requirements of ASTM E2307.
707.9 **Voids at intersections.** The voids created at the intersection of a fire barrier and a nonfire-resistance-rated roof assembly or a nonfire-resistance-rated exterior wall assembly shall be filled. An approved material or system shall be used to fill the void, and shall be securely installed in or on the intersection for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate expected building movements and to retard the passage of fire and hot gases.
715.5 Voids at intersections of fire barriers and underside of nonfire-resistance-rated roofs and floors. The voids created at the intersection of a fire barrier and the underside of a nonfire-resistance-rated roof or floor sheathing, slab or deck above shall either be filled with an approved material or system, or protected by an approved continuity head-of-wall joint system installed as tested in accordance with ASTM E2837 to provide an F rating for a time period not less than the required fire-resistance rating of the wall assembly in which it is installed. Such materials or systems shall be securely installed in accordance with the manufacturer’s installation instructions in or on the void for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate expected building movements and to resist the passage of fire and hot gases. Continuity head-of-wall joint systems shall also be installed in accordance with the listing criteria.
Other Proposals of Interest

- Use of Metal Composite Material (MCM) panels
- Tall Wood Buildings
- Modifications for sprinkler systems
  - WPI Study
NFPA 1/101/5000 2021 Editions

• Critical Dates
  • Public Input Closing Date – June 27, 2018
  • First Draft Posted – February 27, 2019
  • Public Comment Closing Date – May 8, 2019
  • Second Draft Posted – January 22, 2020
  • Technical Report Session – June 2020
Questions?

William E. Koffel, P.E., FSFPE
(Registered in DC, MD, NY, OH, PA, VA, WA)
wkoffel@koffel.com

Koffel Associates, Inc.
8815 Centre Park Drive,
Suite 200
Columbia, MD 21045-2107
410-540-9008
www.koffel.com

• Follow us on LinkedIn