

SPECIAL INSPECTIONS OF INSTALLED FIRESTOP SYSTEMS

2015 IBC – CHAPTER 17 SPECIAL INSPECTIONS AND TESTS

SECTION 1704 SPECIAL INSPECTIONS AND TESTS, CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATION

1704.2 Special Inspections and Tests

Where application is made to the *building official* for construction as specified in Section 105, **the owner** or the owner's authorized agent, other than the contractor, **shall employ** one or more *approved agencies* to provide *special inspections* and tests during construction on the types of work specified in Section 1705 and identify the *approved agencies* to the *building official*. These *special inspections* and tests are in addition to the inspections by the *building official* that are identified in Section 110.

* The approved special inspection agency shall be employed by the owner, not the contractor.

SECTION 1705 REQUIRED SPECIAL INSPECTIONS AND TESTS

1705.1 General

Special inspections and tests of elements and nonstructural components of buildings and structures shall meet the applicable requirements of this section.

1705.1.1 Special Cases

Special inspections and tests shall be required for proposed work that is, in the opinion of the building official, unusual in its nature, such as, but not limited to, the following examples:

1. Construction materials and systems that are alternatives to materials and systems prescribed by this code.
2. **Unusual design applications** of materials described in this code.
* Should your project require Engineered Firestop Systems due to unusual as-built conditions, the Building Official may require special inspections by an approved agency.
3. **Materials and systems required to be installed in accordance with additional manufacturer's instructions** that prescribe requirements not contained in this code or in standards referenced by this code.
* The IBC requires installed firestop systems tested and listed by an approved third-party facility like UL. And, the UL Fire Resistance Directory XHEZ Guide Info for Through Penetration Firestop Systems states that firestop fill materials used in listed firestop systems must be installed in accordance with the manufacturer's instructions provided with the materials. Since there are additional manufacturer's installation instructions required for the proper installation of firestop materials and systems, the Building Official may require special inspections for installed firestop systems on any type of project.

1705.17 Fire-Resistant Penetrations and Joints

In **high-rise buildings** or in buildings assigned to **Risk Category III or IV**, *special inspections for through-penetrations*, membrane penetration firestops, *fire-resistant joint systems* and perimeter fire barrier systems that are tested and *listed* in accordance with Sections 714.3.1.2, 714.4.2, 715.3 and 715.4 shall be in accordance with Section 1705.17.1 or 1705.17.2.

1705.17.1 Penetration Firestops

Inspections of penetration firestop systems that are tested and *listed* in accordance with Sections 714.3.1.2 and 714.4.2 shall be conducted by an *approved agency* in accordance with ASTM E2174.

1705.17.2 Fire-Resistant Joint Systems

Inspection of fire-resistant joint systems that are tested and *listed* in accordance with Sections 715.3 and 715.4 shall be conducted by an *approved agency* in accordance with ASTM E2393.

* Section 1705.17 requires special inspections of installed firestop systems on all *high-rise buildings*, and all buildings assigned to *risk category III* or *IV*.

- *High-rise building* – A building with an occupied floor located more than 75 feet above the lowest level of fire department vehicle access.
- *Risk category III* – Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to:
 - Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300.
 - Buildings and other structures containing Group E occupancies with an occupant load greater than 250.
 - Buildings and other structures containing educational occupancies for students above the 12th grade with an occupant load greater than 500.
 - Group I-2 occupancies with an occupant load of 50 or more resident care recipients but not having surgery or emergency treatment facilities.
 - Group I-3 occupancies.
 - Any other occupancy with an occupant load greater than 5,000.
 - Power-generating stations, water treatment facilities for potable water, wastewater treatment facilities and other public utility facilities not included in Risk Category IV.
 - Buildings and other structures not included in Risk Category IV containing quantities of toxic or explosive materials that:
 - Exceed maximum allowable quantities per control area as given in Table 307.1(1) or 307.1(2) or per outdoor control area in accordance with the International Fire Code; and Are sufficient to pose a threat to the public if released.
- *Risk category IV* – Buildings and other structures designated as essential facilities, including but not limited to:
 - Group I-2 occupancies having surgery or emergency treatment facilities.
 - Fire, rescue, ambulance and police stations and emergency vehicle garages.
 - Designated earthquake, hurricane or other emergency shelters.
 - Designated emergency preparedness, communications and operations centers and other facilities required for emergency response.
 - Power-generating stations and other public utility facilities required as emergency backup facilities for Risk
 - Category IV structures.
 - Buildings and other structures containing quantities of highly toxic materials that: Exceed maximum allowable quantities per control area as given in Table 307.1(2) or per outdoor control area in accordance with the International Fire Code; and Are sufficient to pose a threat to the public if released.
 - Aviation control towers, air traffic control centers and emergency aircraft hangars.
 - Buildings and other structures having critical national defense functions.
 - Water storage facilities and pump structures required to maintain water pressure for fire suppression.