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Special Inspections Scope

2018 NC Building Code, Chapter 17 Special Inspections

1704.1 General. Special inspections and tests, statements of special inspections, responsibilities of contractors, submittals to the building official and structural observations shall meet the applicable requirements of this section.

Where application is made for construction as described in this section, the owner shall employ one or more special inspectors to provide inspections during the construction on the types of work listed in accordance with section 1705.1. These inspections are in addition to the inspections specified in the *North Carolina Administrative Code and Policies*.

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 inspection 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
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

1705.1.2 Special elements always requiring special inspections. Special inspections in accordance with Section 1704 and 1705 are required for the following elements only, regardless of the building structure that they are in:

1. Piles, piers and special foundations in accordance with Sections 1705.7, 1705.8, 1705.9, 1810.3.5.2.4 and 1810.3.5.2.5; (**Note:** includes post-tension concrete)
2. Sprayed fire-resistant materials in accordance with Section 1705.14;
3. Mastic and intumescent fire-resistant coatings in accordance with Section 1705.15
4. Smoke controls and smoke exhaust systems in accordance with 1705.18;
5. Retaining walls and retaining systems exceeding 5 feet of unbalanced backfill height in accordance with Section 1807.2;

Special inspections are not required for other elements unless the building or structure is one identified in Section 1705.1.3.

1705.1.3 Structure requiring special inspections. Special inspections in accordance with Sections 1704 and 1705 are required for the building, building components or other structures according to the following:

1. Buildings or other structures listed in Table 1604.5 in Risk Category II if:
 - i. Building height exceed 45 feet (13.7m) or three stories; or
 - ii. The building is an underground building in accordance with Section 405.1,
2. Buildings or other structures listed in Table 1604.5 in Risk Categories III or IV.

Note: Please see attached memo re: SI for Fire-Resistant Penetrations and Joints per Section 1705.17



2018 Administrative Code (107.5 Special Inspections)

107.5 Special Inspections. Special inspections required by the building code or the building inspector shall be performed by a NC registered design professional or an inspector under his responsible charge.

The table below is included for your use and is referenced in section 1705.1.3 of the 2018 NCBC

**TABLE 1604.5
RISK CATEGORY OF BUILDINGS AND OTHER STRUCTURES**

RISK CATEGORY	NATURE OF OCCUPANCY
I	Buildings and other structures that represent a low hazard to human life in the event of failure, including but not limited to: <ul style="list-style-type: none"> • Agricultural facilities. • Certain temporary facilities. • Minor storage facilities.
II	Buildings and other structures except those listed in Risk Categories I, III and IV.
III	Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to: <ul style="list-style-type: none"> • 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.^a • 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: <ul style="list-style-type: none"> 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 <i>International Fire Code</i>; and Are sufficient to pose a threat to the public if released.^b
IV	Buildings and other structures designated as essential facilities, including but not limited to: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> Exceed maximum allowable quantities per control area as given in Table 307.1(2) or per outdoor control area in accordance with the <i>International Fire Code</i>; and Are sufficient to pose a threat to the public if released.^b • 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.

a. For purposes of occupant load calculation, occupancies required by Table 1004.1.2 to use gross floor area calculations shall be permitted to use net floor areas to determine the total occupant load.

b. Where approved by the building official, the classification of buildings and other structures as Risk Category III or IV based on their quantities of toxic, highly toxic or explosive materials is permitted to be reduced to Risk Category II, provided it can be demonstrated by a hazard assessment in accordance with Section 1.5.3 of ASCE 7 that a release of the toxic, highly toxic or explosive materials is not sufficient to pose a threat to the public.



MECKLENBURG COUNTY **Code Enforcement**

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May 15, 2019

Subject: Special Inspections Policy for Fire-Resistant Penetrations and Joints per 2018 NCBC Section 1705.17

From: David Gieser – Director of Inspections

Requirements for Special Inspections of Fire-Resistant Penetrations and Joints took effect with the 2018 North Carolina State Building Code. This requirement applies to all high-rise, Risk Category III, and Risk Category IV buildings. However, the text of the code does not address the extent of the scope of the work. As a result, Section 1705.17 of the Code could apply to any project in the effected buildings, from a modification to a fire-rated room, to the complete construction and up-fit of a new facility.

Mecklenburg County Code Enforcement recognizes that for a very small project, possibly with only one rated penetration, this new code requirement could be the only trigger for the Special Inspections Requirement. As a result, the following guidelines shall be implemented to determine if the scope of work in an effected project will require Special Inspections for Fire-Resistant Penetrations and Joints. This policy does not apply to other sections of Chapter 17 Special Inspections requirements.

High-rise and Risk Category III and IV buildings shall require Special Inspections under the following conditions:

- NCEBC Alteration Level 3, requires Special Inspections for Firestopping
- NCEBC Chapter 14 Compliance, requires Special Inspections for Firestopping
- NCEBC Change of Use, requires Special Inspections for Firestopping
- NCEBC Additions, requires Special Inspections for Firestopping
- NCSBC 2018 requires Special Inspections for Firestopping

Work considered to be Alterations Levels 1 & 2 under the NC Existing Building Code would not require Special Inspections described in 1705.17 of the 2018 NCSBC.

NOTE: Mecklenburg County Code Enforcement reserves the right to waive or require Fire-Resistant Penetrations and Joints Special Inspections based on the scope of work presented for permit or encountered during inspections. However, every effort will be made to apply these guidelines upfront for projects submitted for permit under the 2018 and later codes.