

# PROPOSED CHANGE TO THE 2015 ONTARIO FIRE CODE

(O. Reg. 213/07, as amended current to January 1, 2015)

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**CHANGE NUMBER: N/A**

**CODE REFERENCE: Section 2.11**

**DESCRIPTION OF PROPOSED CHANGE:** Section 2.11 is being revised to add new requirements for auditing and testing of non-compliant combustible cladding on certain high risk buildings.

- Add a new requirement
  - Making a technical change to an existing requirement**
  - Making an editorial/administrative change to an existing requirement**
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## **EXISTING OFC PROVISIONS**

### SECTION 2.11 INSULATION AND RE-INSULATION

#### Subsection 2.11.1. General

2.11.1.1. The installation of insulation, including the replacement of insulation, shall be carried out in accordance with the Building Code.

2.11.1.2. Unless otherwise approved, combustible insulation shall be protected as prescribed in the Building Code.

2.11.1.3. Insulation shall not be placed in building roof-ceiling or floor-ceiling assemblies, as described in Parts 3 and 9 of Division B of the Building Code, where the assemblies are required to have a **fire-resistance rating** unless the insulation does not reduce the **fire-resistance rating** of the assemblies.

## **PROBLEM**

The recent Grenfell Tower fire in London, England raised awareness of the potential dangers of combustible exterior wall assemblies on high buildings. While recognizing the limited numbers of high buildings in Ontario that may fall into this category, the outcome of the Grenfell Tower incident compels a proactive approach to assessing and addressing the potential fire risk that may exist for these high rise buildings. Buildings at greatest risk include those buildings where exterior wall assemblies, cladding or cladding systems are not installed in accordance with the Ontario Building Code. A standardized approach is needed for identifying such buildings, assessing the extent of hazard and establishing options for mitigation of the hazard.

## PROPOSED OFC CHANGE

### SECTION 2.11 INSULATION AND ~~RE-INSULATION~~ EXTERIOR WALL ASSEMBLIES AND CLADDING

#### Subsection 2.11.1. ~~General~~ Insulation

2.11.1.1. The installation of insulation, including the replacement of insulation, shall be carried out in accordance with the Building Code.

2.11.1.2. Unless otherwise approved, combustible insulation shall be protected as prescribed in the Building Code.

2.11.1.3. Insulation shall not be placed in building roof-ceiling or floor-ceiling assemblies, as described in Parts 3 and 9 of Division B of the Building Code, where the assemblies are required to have a **fire-resistance rating** unless the insulation does not reduce the **fire-resistance rating** of the assemblies.

#### Subsection 2.11.2. Exterior Wall Assemblies and Cladding

##### Application

2.11.2.1.(1) This Subsection applies to **buildings with residential occupancies, care occupancies and care and treatment occupancies** that are

- (a) **greater than 6 storeys in building height,**
- (b) **not sprinklered throughout the building, and**
- (c) **provided with a non-concrete or non-masonry exterior wall surface above the 3<sup>rd</sup> storey that**
  - (i) **is continuous over 3 or more consecutive storeys, and**
  - (ii) **covers more than 10% of the exterior wall area of each face of a storey.**

##### Audit

2.11.2.2.(1) Where the **owner** cannot demonstrate that the building exterior wall assembly, cladding or cladding system was constructed, installed or renovated in compliance with the **Building Code**, then an audit shall be

- (a) conducted to document the construction of the components of the exterior wall assembly, cladding or cladding system, and whether the components are combustible or noncombustible as defined by the 2012 Ontario Building Code,
- (b) carried out by a **Professional Engineer or Architect,**
- (c) completed by January 1, 2020, and

(d) retained at the **building** throughout the life of the installation in compliance with Subsection 1.1.2. of this Code.

(2) Where the cladding or cladding system in Clause 2.11.2.2.(1)(a) is installed over a masonry or concrete exterior wall layer, then the audit only needs to be conducted of the cladding portion.

2.11.2.3.(1) The audit in Sentence 2.11.2.2.(1) is deemed acceptable if (a) it demonstrates that the exterior wall assembly, cladding or cladding system complies with the **Building Code**, or

(b) the **Professional Engineer** or **Architect** is satisfied that the existing assembly will provide protection for life safety similar to the protection provided by compliance with the **Building Code** and is **approved** by the **Chief Fire Official**.

2.11.2.4.(1) Where the exterior wall assembly, cladding or cladding system is not deemed acceptable under Article 2.11.2.3. and the audit in Sentence 2.11.2.2.(1) shows that the exterior wall assembly

(a) consists of **combustible construction**, which could include combustible insulation, the wall assembly shall

(i) be **tested** to ULC-S134, “Fire Test of Exterior Wall Assemblies”, and

(ii) meet the **test** criteria specified within Sentences 3.1.5.5.(3) and (4) of Div. B of the 2012 Ontario Building Code, or

(b) has a noncombustible exterior surface over foam plastic insulation, the exterior cladding assembly shall

(i) be **tested** to ULC-S101, “Fire Endurance Tests of Building Construction and Materials”, and

(ii) meet the **test** criteria specified within Sentence 3.2.3.8.(2) of Div. B of the 2012 Ontario Building Code.

2.11.2.4.(2) Where the **test** results required under Clauses 2.11.2.4.(1)(a) or (b), (a) do not meet the **test** criteria specified, the Chief Fire Official shall be notified, or

(b) meet the **test** criteria specified, the **test** results shall be retained at the **building** throughout the life of the installation in compliance with Subsection 1.1.2. of this Code.

### Protection

2.11.2.5.(1) Where the sample fails the appropriate **test** in Sentence 2.11.2.4.(1), the **owner** shall

- (a) make changes to the exterior wall assembly of the **building** to comply with the 2012 Ontario Building Code, or
- (b) install sprinklers throughout the **floor areas** of the **building** that have an exterior wall assembly, cladding or cladding system that fails the **test**, and three **storeys** above those **floor areas**,
  - (i) in conformance with NFPA 13, “Standard for the Installation of Sprinkler Systems”, and
  - (ii) with waterflow indicating devices connected to the **building** fire alarm system.

2.11.2.6. Sentence 2.11.2.5.(1) shall be completed by July 1, 2021.

### **RATIONALE FOR CHANGE**

To minimize impact and ensure that requirements target buildings at highest risk only, the proposed Fire Code amendments focus on non-sprinklered buildings greater than 6 storeys in building height, that include residential, care, and care and treatment occupancies. Buildings that meet these criteria are at highest risk given they are most susceptible to delayed evacuation during fires. The proposed Fire Code changes outline a tiered and progressively more in depth approach to assessing the possible hazard posed by exterior wall assemblies, cladding or cladding systems that are not in compliance with the Building Code and with providing mitigation options. The proposed code changes will ensure a standardized approach to assessing and addressing this risk.

### **IMPACT**

The proposed Fire Code changes have been narrowed in scope to address buildings at highest risk only. Where these buildings include exterior wall assembly, cladding or cladding system installations and Building Code compliance is not demonstrated, owners will be required to undertake an audit and based on findings, may be required to undertake further testing and possibly other steps to mitigate the hazard. Audits are anticipated to cost in the range of several thousand dollars. Costs escalate for those buildings that may be required to undertake testing of samples. Any building that is required to replace cladding will face significant costs that will range based on the size of building. However, several compliance options are being provided for owners.

### **OBJECTIVE BASED ANALYSIS OF THE CHANGE OR NEW PROVISION**

N/A

### **FUNCTIONAL STATEMENT(S) AND LINK(S) TO OBJECTIVE(S)**

- 2.11.2.1. – Note1
- 2.11.2.2. – Note1
- 2.11.2.3. – Note1
- 2.11.2.4. – Note1
- 2.11.2.5. – [F02-OS1.2,OP1.2]
- 2.11.2.6. – Note1

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