Ministry of Municipal Affairs and Housing

Amendments to Ontario's 2012 Building Code: Division B, Part 3 – Fire Protection, Occupant Safety and Accessibility

November 26, 2019

Ontario

Introduction

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- This webinar is part of a series of webinars that will provide an overview of the recent changes to the Building Code.

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- This webinar will cover changes to Part 3 of the Building Code.

- Other webinars hosted by the ministry include:
    - Part 5 - November 19
    - Parts 6,7,8 - November 21
    - Part 9 - November 28
    - Part 4 - December 3
    - Stairs, Guards, and Handrails - December 5

- These presentations will be available on request. If you would like to receive a copy please email codeinfo@mah.gov.on.ca.

In-Effect Dates for Building Code Amendments

The in-effect dates for the Building Code amendments are as follows:

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  - Updating and removing outdated references from the list of applicable law.
  - Making a correction regarding a particular septic technology in the Building Code, known as chamber systems.
  - Removing provisions related to electric vehicle charging infrastructure in houses and non-residential large buildings, such as workplaces.

- July 1, 2019:
  - Amendments to align the Building Code with Fire Code changes related to on-farm cannabis production facilities.

- January 1, 2020:
  - All other amendments with the exception of requirements related to stairs, guards and handrails. This includes the changes to Part 3 of the Code covered in this presentation.

- January 1, 2022:
  - Amendments related to stairs, guards and handrails.

Types of Building Code Amendments

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    1. **New:** New requirements in Ontario's Building Code, including updates to existing requirements and/or referenced standards.

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Building Code Amendments – Part 3

New - Article 3.1.4.2. – Protection of Foamed Plastics

- In combustible buildings, walk-in coolers or freezers made of factory-assembled panels containing foamed plastic insulation are permitted.
- New limitations are provided on the flame spread rating for doors containing foam plastic.

Clarification - Article 3.1.5.5. – Combustible Components for Exterior Walls

- For non-combustible buildings, testing requirements of exterior wall assemblies with combustible components have been clarified.

New - Article 3.1.5.5A. – Factory Assembled Panels

- For factory-assembled panels containing foamed plastic insulation in noncombustible buildings, existing requirements are combined, and new provisions added for walk-in coolers and freezers.

Building Code Amendments – Part 3

Reorganization - Articles 3.1.5.12. - Combustible Insulation and 3.1.5.12A. - Foamed Plastics Insulation

- Requirements for combustible insulation and foamed plastics insulation have been separated into two Articles.

New - Article 3.1.8.4. - Determination of Ratings and Article 3.1.8.5. - Installation of Closures

- Limiting smoke movement is now required in additional types of buildings.
- New standards have been introduced for the leakage rates of smoke dampers and combination smoke/fire dampers used as closures, as well as a leakage-rate for door assemblies installed in fire separations.
- In addition, a new standard also addresses installation requirements for smoke dampers used as closures and leakage-rated door assemblies in required fire separations.

New - Article 3.1.8.7. - Location of Fire Dampers and Smoke Dampers

- A new provision requires air transfer openings or ducts that penetrate certain fire separations to be equipped with smoke dampers or combination fire/smoke dampers.

Building Code Amendments – Part 3

New - Article 3.1.8.8 - Fire Dampers Waived and Article 3.1.8.8.A. - Smoke Dampers Waived

- Article 3.1.8.8. has been rewritten to clarify where fire dampers can be waived.
- A new Article 3.1.8.8.A has been added to address where smoke dampers can be waived.

New - Article 3.1.8.9A - Installation of Smoke Dampers

- A new Article has been added to establish rules for the installation of a smoke damper.

New - Article 3.1.8.12 - Hold-open Devices

- This Article has been expanded to include most closures.

New - Article 3.1.9.3A. - Penetration By Outlet Boxes

- A new Article to address firestopping for all outlet boxes that penetrate a fire separation or a fire-rated assembly. The Article also specifies conditions where noncombustible outlet boxes are not required to be fire stopped.

Building Code Amendments – Part 3

New - Article 3.1.11.7 - Fire Block Material

- This Article now includes Structural Composite Lumber products as fire block materials. The Article now references a new standard, ASTM D5456, for Structural Composite Lumber Products.

New - Article 3.1.15.2. - Roof Coverings

- This Article now excludes non-combustible roofing covering materials for steel building systems described in Article 4.3.4.3., from required roof classifications, A, B and C.

Deletion - Subsection 3.1.21. - Electric Vehicle Charging

- All provisions related to electric vehicle charging have been deleted from the Building Code. This change took effect on May 2, 2019.

New - Article 3.2.3.6. - Combustible Projections

- A new Sentence has been added to address that the face of the roof soffit may project to a property line where it faces a street lane or public thoroughfare.

Building Code Amendments – Part 3

Deletion - Article 3.2.4.6. Integrated Fire Protection and Life Systems

- This Article has been deleted. The testing of life safety systems is now addressed under Article 3.2.10.1.

New - Article 3.2.4.22A. - Residential Fire Warning Systems

- A new Article has been added to permit the use of a residential warning system in lieu of interconnected smoke alarm system.

Reorganization - Article 3.2.4.23. - Two-Way Voice Communication Systems and Article 3.2.4.24. - One-Way Voice Communication Systems

- Voice communication systems have now been separated into two Articles.

New - Article 3.2.6.2. - Limits to Smoke Movement

- A new Sentence has been added which requires air handling systems providing make-up air to a public corridor serving high-rise residential suites to remain operational after the activation of the fire alarm to maintain corridor pressurization.

Building Code Amendments – Part 3

New - Article 3.2.7.3. - Emergency Lighting

- This Article now requires emergency lighting in washrooms for public use.

New - Article 3.2.7.10. - Protection of Electrical Conductors

- A new Sentence has been added to this Article to address protection measures for the distribution panel controlling the emergency lighting units and the electrical conductors leaving this panel.

New - Article 3.2.10.1. - Integrated Fire Protection and Life Safety Systems

- This Article now references a new CSA standard for testing the integration between fire protection and life safety systems, and other systems associated with fire protection and life safety functions.

Building Code Amendments – Part 3

New - Article 3.3.1.12 - Doors and Door Hardware and Article 3.4.6.11. - Doors

- A new requirement has been added to these Articles to set limits on the height of door thresholds, other than for doors required in a barrier-free path of travel.

New - Article 3.3.1.16. - Capacity of Access to Exits and Article 3.4.2.6. - Principal Entrance

- In non-sprinklered buildings, the principal entrance for dance halls and licensed beverage establishments with a high occupant load shall be calculated based on a minimum of one-half of the required exit width.

New - Article 3.4.6.18. - Emergency Crossover Access to Floor Areas

- Crossover floor requirements are now applicable to buildings that are 6 storeys or less and where there are multiple levels below grade.
- This Article has also been amended to require better signage so that the occupants can locate unlocked doors more rapidly.

Building Code Amendments – Part 3

New - Article 3.6.3.5. - Grease Duct Enclosures

- New requirements related to grease duct enclosures used in commercial cooking operations have been added.

New - Article 3.7.4.2. - Plumbing Fixtures, General

- New provisions have been added to clarify requirements for manual controls for faucets used for lavatories.

New - Article 3.7.5.2. - Medical Gas Piping Systems

- A change has been made to the requirements for the design, construction, installation and testing of medical gas piping systems.

Building Code Amendments – Part 3

New - Article 3.8.1.5.(1) - Controls

- This Sentence has been amended regarding location and operation of accessible controls related to building services and safety devices.

Reorganization - Article 3.8.3.3. - Doorways and Doors

- Requirements related to power door operators in Sentence (16) and (17) have been clarified and integrated into one sentence.

Clarification - Article 3.8.3.8. - Water Closet Stall

- Design requirements for water closet stalls have been revised for clarification.

New - Article 3.8.3.9. - Water Closets

- This Article has been revised for clarification and updated to add location and operational criteria for flush controls where there is no automatic flush.

Building Code Amendments – Part 3

Clarification - Article 3.8.3.10. - Urinals

- This Article has been revised for clarification and some duplications related to controls have been removed.

Clarification - Article 3.8.3.11. - Lavatories

- This Article has been revised to provide additional clarification on accessibility requirements for lavatories, mirrors and washroom accessories.

Clarification - Article 3.8.3.12. - Universal Washrooms

- A change has been made to clarify the requirement for power door operators and self-closing devices in universal washrooms.

New - Article 3.8.3.13. - Showers and Bathtubs

- This Article was revised to clarify and enhance accessibility and safety for showers and bathtubs including requirements for grab bars, clear floor spaces, shower heads and faucets, and individual bathtub requirements in some institutional occupancies.

Ministry of Municipal Affairs and Housing

Amendments to Ontario's 2012 Building Code: Division B, Part 4 – Structural Design

December 3, 2019

Ontario

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Building Code Amendments – Part 4

General Changes to Part 4

New - Structural Commentary Material

- Significant portions of the "User's Guide – NBC 2010, Structural Commentaries" (Part 4 of Division B) for snow and wind loads have been moved into Part 4 of Ontario's Building Code.

MMAH Supplementary Standard SB-1

New - Ground Snow Load Values in Table 2

- The ground snow loads in Table 2 of Supplementary Standard SB-1 have been revised. While most values remain unchanged, approximately 6% increase and 5% decrease for certain locations.

New - Seismic Design Data in Table 3

- Seismic hazard values have been updated based on recent seismic source data. The values have also been expanded to incorporate new seismic scenarios. Further, seismic hazard values have been relocated in a new Table 3 of Supplementary Standard SB-1.

Building Code Amendments – Part 4

New - Article 4.1.3.2. - Strength and Stability

- The live load plus snow load combinations in Tables 4.1.3.2.A. and 4.1.3.2.B. have been modified for limit states design to address situations where snow loads and live loads may occur at the same time.

New - Article 4.1.5.14. - Loads on Guards and Handrails

- Changes have been made to the load requirements on guards and handrails.
- Load requirements for handrails have been moved from Part 3 to Part 4.
- Note: These changes come into effect January 1, 2022.

New - Article 4.1.5.15. - Loads on Vehicular Guardrails

- The requirements for vehicle guardrail design have been clarified so that guard loads for vehicles and persons do not need to be considered at the same time.
- Note: These changes come into effect January 1, 2022.

Building Code Amendments – Part 4

Clarification - Article 4.1.5.16. - Loads on Walls Acting as Guards

- Load requirements for walls acting as guards have been modified to clarify that lateral loads act in the outward direction.

New - Subsection 4.1.6. - Loads Due to Snow and Rain (General)

- Much of the guidance material on snow loads found in the "User's Guide – NBC 2010, Structural Commentaries" have been moved into Subsection 4.1.6. of Ontario's Building Code. Snow load calculations have also been revised.

Clarification - Article 4.1.6.5. - Snow Drifts on Multi-Level Roofs

- Calculations for snow accumulation on multi-level roofs have been modified to better account for snow drifting.

New - Article 4.1.6.8. - Snow Drifts at Roof Corners

- A new Article has been added to address snow drift conditions inside roof corners and outside roof corners of multi-level roofs.

Building Code Amendments – Part 4

New - Article 4.1.6.12. - Valleys in Curved or Sloped Roofs

- The calculation of snow loads in valleys of curved or sloped roofs has been moved from the "User's Guide – NBC 2010, Structural Commentaries" into this new Article.

New - Article 4.1.6.13. - Specific Weight of Snow

- A new Article specifies a load calculation to determine the specific weight of snow drifts on roofs.

New - Article 4.1.6.14. - Prohibition of Load Reduction due to Snow Removal

- A new Article prohibits the reduction of design snow loads based on snow removal on a structure.

New - Article 4.1.6.15. - Ice Loading of Structures

- A new Article addresses ice loading on lattice structures and other components connected to a building.

Building Code Amendments – Part 4

New - Subsection 4.1.7. - Wind Load (General)

- Much of the guidance material on wind loads found in the “User’s Guide – NBC 2010, Structural Commentaries” has been moved to Part 4. Wind load requirements have also been updated.

Clarification - Article 4.1.7.1. - Specified Wind Load

- This Article has been modified to clearly define the three acceptable structural design methods for wind, which are static, dynamic and wind tunnel procedures.

New - Article 4.1.7.3. - Internal Gust Factor

- The formula of the internal gust factor for large unpartitioned structures has been reduced in these building types because the internal pressure takes significant time to respond to changes in external pressure.

Building Code Amendments – Part 4

New - Article 4.1.7.5. - External Pressure Coefficients

- Requirements for the external pressure coefficients (C_p) for the design of the main structural system for buildings have been moved from the "User's Guide – NBC 2010, Structural Commentaries" into a new Article.

New - Article 4.1.7.6. - External Pressure Coefficients for Low Buildings

- Requirements for the external pressure coefficients (C_p) for designing buildings less than 20 m high have been moved from the "User's Guide – NBC 2010, Structural Commentaries" into a new Article.

New - Article 4.1.7.7. - Internal Pressure Coefficient

- Guidance material from the "User's Guide – NBC 2010, Structural Commentaries" on internal pressure coefficients from building openings has been moved this new Article.

Building Code Amendments – Part 4

New - Article 4.1.7.8. - Dynamic Procedure

- All factors and coefficients for the dynamic procedures, including the exposure factor and the gust effect factor in the “User’s Guide – NBC 2010, Structural Commentaries” have been moved into this new Article.

New - Article 4.1.7.9. - Full and Partial Wind Loading

- A new Article requires all buildings to be designed for partial loading as well as full loading.

New - Article 4.1.7.11. - Exterior Ornamentations, Equipment and Appendages

- A new Article has been included to address the group effect in the structural design of a building where wind loads on exterior non-building components could impact the building structure.

Building Code Amendments – Part 4

New - Article 4.1.7.12. - Wind Tunnel Procedure

- Specific requirements for wind tunnel procedures have been introduced for the design of main structures as well as claddings.

New - Article 4.1.8.1. Earthquake Loads and Effects - Seismic Design in Low Hazard Areas

- There are no longer any seismic design exemptions for buildings in low seismic zones as no area is entirely free from earthquake hazard.
- This Article has been amended to include a simple and easily applied methodology to design for very low force levels in low hazard, low risk earthquake zones to enhance earthquake resistance.

New - Article 4.1.8.10. Earthquake Loads and Effects - Inclined Columns and Large Cantilevers

- Requirements for the determination of seismic loads to address new building designs incorporating unique structural design elements have been added.

Building Code Amendments – Part 4

New - Article 4.1.8.11. Earthquake Loads and Effects – Higher Mode Factors, M_v, and Base Overturning Reduction Factors, J,

- Values of higher mode factors and base overturning reduction factors have been revised in Table 4.1.8.11.

New - Article 4.1.8.15. Earthquake Loads and Effects – Flexible Roof Diaphragms

- Seismic design provisions have been added for single storey structures with a large area and flexible roof diaphragm of steel or wood.

New - Article 4.1.8.16. Earthquake Loads and Effects – Foundation Provisions

- Significant changes have been made to foundation displacements and overturning resistances.

New - Article 4.1.8.18. Earthquake Loads and Effects – Anchorage of Steel Pallet Storage Racks

- Provisions have been added to account for the seismic design and anchorage of free-standing steel pallet storage racks.

Building Code Amendments – Part 4

New - Article 4.1.8.18. Earthquake Loads and Effects - Anchorage of Elevators and Escalators

- Provisions have been added to account for the seismic design and anchorage of elevators and escalators for earthquake loads.

New - Article 4.1.8.18. Earthquake Loads and Effects - Glazing Systems in Buildings

- Provisions have been added to account for effects of building lateral displacements on a building's non-structural glazing systems during an earthquake event.

New - Articles 4.1.8.19. and 4.1.8.20. - Seismic Isolation

- New Articles have been added to address seismic isolation in the design of new buildings to reduce the earthquake-induced forces and energy transmitted into the structure.

New - Articles 4.1.8.21. and 4.1.8.22. - Supplemental Energy Dissipation

- New Articles have been added to provide design criteria for structures with supplementary energy dissipation systems (also referred to as supplemental damping).

Building Code Amendments – Part 4

New - Article 4.3.6.1. - Design Basis for Glass

- ASTM E1300, “Determining Load Resistance Glass in Buildings”, issued in 2012, has been added to provide more flexibility for structural designers and to harmonize with U.S. Codes.

Clarification - Article 4.4.2.1. - Design Basis for Storage Garages and Repair Garages

- This Article has been modified to clarify that CSA S413, “Parking Structures” applies to the defined term “storage garages” rather than “parking structures”.

Ministry of Municipal Affairs and Housing

Amendments to Ontario's 2012 Building Code: Division B, Part 5 – Environmental Separation

November 19, 2019

Ontario

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- July 1, 2019:
  - Amendments to align the Building Code with Fire Code changes related to on-farm cannabis production facilities.

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Building Code Amendments – Part 5

NEW - Article 5.1.4.1. - Structural and Environmental Loads

- A new Sentence was added to require that proper design and construction procedures must consider all intended functions of materials and components.

NEW - Article 5.2.2.2. - Determination of Wind Load

- A new Sentence provides a testing requirement for the evaluation of dynamic wind uplift resistance of membrane-roofing systems.
- Some membrane-roofing systems with a proven performance record are exempted from the testing requirement.

DELETION - Article 5.3.1.3. - Location and Installation of Materials Providing Thermal Resistance

- A referenced standard regarding application of thermal insulation has been removed to eliminate duplication.

Building Code Amendments – Part 5

NEW - Article 5.4.1.2. - Air Barrier System Properties

- A referenced standard related to air permeance testing has been added for clarification purposes.

NEW - Article 5.6.1.2. - Installation of Protective Materials

- Referenced standards related to the installation of protective materials have been deleted.
- A new standard related to protective materials forming part of a vegetative roofing system has been added.

REORGANIZATION - Section 5.7. Surface and Ground Water

- Requirements for surface water and ground water have been reorganized into two separate sections for clarification purposes.

Building Code Amendments – Part 5

NEW - Section 5.8. - Sound Transmission

- A new metric called apparent sound transmission class (ASTC), is introduced in order to consider indirect (flanking) sound transmission. This is an alternative rating that can be used to meet the sound transmission requirements of the Building Code.

CLARIFICATION - Article 5.10.1.1. - Standards Applicable to Environmental Separators and Assemblies Exposed to the Exterior

- Table 5.10.1.1. has been updated and revised to remove withdrawn and outdated standards, and new standards have been referenced.

NEW - Subsection 5.10.4. - Other Fenestration Assemblies

- Minimum performance requirements and standard test procedures for curtain wall, window wall, storefront and glazed architectural structures have been added.

Ministry of Municipal Affairs and Housing

Amendments to Ontario's 2012 Building Code: Division B, Part 9 – Housing and Small Buildings

November 28, 2019

Ontario

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Building Code Amendments – Part 9

New - Subsection 9.3.1. - Concrete

- The standard for the strength and water cement ratio of delivered concrete has now been updated to the 2014 edition, CSA A23.1-14, “Concrete Materials and Methods of Concrete Construction”.

New - Article 9.6.1.3. - Structural Sufficiency of Glass

- This Article now provides that glass must be designed in conformance with Article 4.3.6.1., which provides a new option to use a newly-referenced standard regarding the structural sufficiency of glass, ASTM E 1300, “Standard Method for Determining Load Resistance Glass in Buildings”.
- In addition, Sentence 9.6.1.3.(2) has been changed to incorporate tables for structural glass design, which were previously located in the appendices of the Code.

New - Article 9.9.11.2. - Visibility of Exits

- A new Sentence has been added to require signs to be posted at exterior exit doors that may be subject to obstructions, such as storage or parking.

Building Code Amendments – Part 9

Clarification - Article 9.9.11.3. - Exit Signs

- This Article has been revised to reflect editorial changes related to the referenced standards.

New - Article 9.10.13.14. - Fire Stop Flaps

- This Article has been revised to reference CAN/ULC-S112.2, “Standard Method of Fire Test of Ceiling Fire Stop Flap Assemblies”.

New - Article 9.10.16.1. - Required Fire Blocks in Concealed Spaces

- This Article has been revised to introduce a new fire blocking design criteria regarding unsprinklered concealed spaces.

New - Article 9.10.17.10.(2) - Protection of Foamed Plastics

- A new Sentence was added to require protection measures for walk-in coolers or freezers consisting of factory assembled walls, floors and ceiling panels containing foamed plastic insulation.

Building Code Amendments – Part 9

New - Article 9.10.18.10. - Commissioning of Life Safety and Fire Protection Systems

- This Article was amended to reference CAN/ULC-S1001," Standard for integrated Systems Testing of Fire Protection and Life Safety Systems," where two or more fire protection or life safety systems are integrated.

New - Article 9.10.19.1. - Required Smoke Alarms

- This Article has been revised to require smoke alarms in shared means of egress and common areas in a house.

New - Article 9.10.19.8. - Residential Fire Warning Systems

- A new Article was added to reference CAN/ULC-S540," Standard for Residential Fire and Life Safety Warning Systems: Installation, Inspection, Testing and Maintenance" as an option to the currently required interconnected smoke alarms.

Building Code Amendments – Part 9

Deletion - Article 9.10.22.2. - Vertical Clearances above Cooktops

- This Article has been revised to remove the reference to “asbestos millboard”.

New - Section 9.11. - Sound Transmission

- A new metric called apparent sound transmission class (ASTC), is introduced in order to consider indirect (flanking) sound transmission. This is an alternative rating that can be used to meet the sound transmission requirements of the Building Code.

New - Article 9.13.2.2. - Dampproofing Materials and Article 9.13.3.2. - Waterproofing Materials

- These Articles have been revised to update the reference standards for dampproofing and waterproofing materials.

Building Code Amendments – Part 9

New - Article 9.14.3.1. - Material Standards

- This Article has been revised to delete the reference standard for asbestos-cement drain pipes.

New - Article 9.15.1.3. - Foundations for Deformation Resistant Buildings

- The Article has been revised to update the standard for site preparation, foundation and installation of buildings.

New - Article 9.15.2.4. - Wood Frame Foundation

- The Article has been revised to update the standard for permanent wood foundations for housing and small buildings.

New - Article 9.15.5.1.(1) - Support of Floor Joists

- This Sentence has been amended to include definitions related to masonry terminology, which are “solid masonry,” and “solid masonry unit”.

Building Code Amendments – Part 9

New - Article 9.15.5.3. - Pilasters

- This Article has been amended to include the newly defined term, “solid masonry”.

New - Article 9.16.5.1. - Wood Floors

- The Article has been revised to update the standard for permanent wood foundations for housing and small buildings.

New - Article 9.20.2.1. - Masonry Unit Standards

- This Article has been revised to update the masonry unit material standards, which have been replaced with current applicable standards.

New - Article 9.20.4.2. - Masonry Units

- Previously, the requirements related to mortar joints for solid masonry units and hollow masonry units were addressed under separate Articles. They have now been combined under the new Article 9.20.4.2.

Building Code Amendments – Part 9

New - Article 9.20.6.5. - Parapet walls

- A new Sentence was added to address semi-solid or hollow masonry units used in parapet walls.

New - Article 9.20.8.2. - Cavity Walls Supporting Frame Members

- This Article has been rewritten to add the newly defined term, “solid masonry units".

New - Article 9.20.8.5. - Projection of Masonry Veneer beyond Supporting Members

- The Article has been updated to remove reference to hollow masonry units and has been replaced with the newly defined term “solid masonry units”. In addition, the term width was changed to thickness.

New - Article 9.23.6.3. - Anchorage of Smaller Buildings

- The Article has been revised to update the standard for site preparation, foundation and installation of buildings.

Building Code Amendments – Part 9

New - Article 9.23.15.7. - Thickness or rating of roof sheathing

- The Article has been revised to update a standard for wood fibre insulating boards for buildings.

New - Article 9.23.16.2. - Thickness, Rating and Material Standards for Sheathing

- The Article has been revised to update the standards listed in Table 9.23.16.2.A. “Wall Sheathing Thickness and Specifications”.

New - Article 9.25.2.2. - Insulation Materials

- This Article has been revised to update the referenced insulation material standards.

New - Article 9.25.5.1.(4) - Low Permeance materials

- A new Sentence was added under this article to allow certain materials to be installed outboard of an exterior assembly.

Building Code Amendments – Part 9

New - Article 9.26.1.1. and Article 9.26.1.1.A. - Roofing

- Article 9.26.1.1. has been revised to define the terms “roof” and “roofing”. A new Article 9.26.1.1.A. has also been added to address what kind of performance is expected from roofs and how to demonstrate compliance.

New - Article 9.26.2.1. - Roofing Material Standards

- This Article has been revised to update the reference standards for roofing materials.

New - Article 9.26.2.2. - Installation of Materials

- A new Article has been added to state that roofing materials shall be installed as per the manufacturer's instructions.

Deletion - Article 9.27.5.1. - Attachment of Cladding

- This Article has been revised to remove the reference to asbestos cement shingles.

Building Code Amendments – Part 9

New - Article 9.27.8.1. - Plywood Material Standards

- This Article has been revised to replace an outdated standard for hardwood and decorative plywood with a more up-to-date industry-supported standard.

New - Article 9.29.8.1. - Insulating Fibreboard Finish Material Standard

- The referenced standard under this Article has been updated to reflect the latest edition of the Underwriters' Laboratories of Canada (ULC) standard.

New - Article 9.32.1.4. - Venting of Laundry-Drying Equipment

- A new Article has been introduced to establish detailed requirements for the venting of laundry-drying equipment to the outdoors.

New - Article 9.32.3.9. - Fan Ratings

- The title of the referenced HVI 915 standard has been updated.

Building Code Amendments – Part 9

Deletion - Article 9.34.4.1. - Electric Vehicle Charging Stations

- The electric vehicle charging provisions under the 2012 Building Code have been deleted.

New - Article 9.35.3.1. - Foundation Required

- This Article has been amended to include an additional foundation option.

New - Article 9.35.3.3. - Drainage

- This Article has been revised to exempt small garages meeting the drainage requirements under certain circumstances.

Ministry of Municipal Affairs and Housing

Amendments to Ontario's 2012 Building Code:
Division B, Part 6 - Heating, Ventilating, and Air-Conditioning
Division B, Part 7 - Plumbing
Division B, Part 8 - Sewage Systems

November 21, 2019

Ontario

Introduction

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- This webinar is part of a series of webinars that will provide an overview of the recent changes to the Building Code.

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- This webinar will cover changes to Part 6 of the Building Code.

- Other webinars hosted by the ministry include:
  - Part 5 - November 19
  - Parts 3 - November 26
  - Part 9 - November 28
  - Part 4 - December 3
  - Stairs, Guards, and Handrails - December 5

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In-Effect Dates for Building Code Amendments

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- May 2, 2019:
  - Updating and removing outdated references from the list of applicable law.
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- July 1, 2019:
  - Amendments to align the Building Code with Fire Code changes related to on-farm cannabis production facilities.

- January 1, 2020:
  - All other amendments with the exception of requirements related to stairs, guards and handrails.

- January 1, 2022:
  - Amendments related to stairs, guards and handrails.

Types of Building Code Amendments

- The changes outlined in this presentation have been classified into the following categories:

    1. **New:** New requirements in Ontario's Building Code, including updates to existing requirements and/or referenced standards.

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Division B, Part 6 – Heating, Ventilating, and Air-Conditioning

Building Code Amendments – Part 6

New - Sentence 6.2.1.1.(1) - Good Engineering Practice

- A housekeeping change was made to reference the 2015 edition of the model National Energy Code for Buildings (NECB) in Part 6 of Ontario's Building Code. This change makes Part 6 consistent with Supplementary Standard SB-10, which already references the 2015 edition of the NECB.

New - Sentences 6.2.1.4.(6) and (7) - Installation Standards

- Two standards related to hydronic heating systems and performance testing of solid fuel burning appliances and equipment have been updated.

Deletion - Sentence 6.2.1.6.(2) - Heat Recovery Ventilators

- This Sentence has been revised to delete the reference to the Green Energy Act.

Deletion - Sentence 6.2.1.10.(1) – Asbestos

- This Sentence has been revised to prohibit the use of any material containing asbestos in heating, ventilating or air-conditioning systems.

Building Code Amendments – Part 6

New - Sentences 6.2.2.4.(1) and (3) - Air Contaminants

- These Sentences have been updated to require that the design of HVAC systems must minimize the growth and spread of bio-contaminants.

New - Sentence 6.2.2.6.(1) - Commercial Cooking Equipment

- The design, construction and installation of all commercial cooking equipment is now required to conform with NFPA 96 standard requirements.

New - Article 6.2.3.1A. - Drain Pans

- A new Article has been added to address the provisions for drain pan installations.

Deletion - Sentence 6.2.3.2.(1) - Materials in Air Duct Systems

- This Sentence has been revised to prohibit the use of asbestos cement in duct connectors, ducts, fittings and plenums.

Building Code Amendments – Part 6

New - Sentence 6.2.3.12.(6) - Supply, Return, Intake and Exhaust Air Openings

- The new provision sets the minimum distances for outdoor air intakes from sources of contamination.

New - 6.2.4.8. - Coverings, Linings and Insulation

- New Sentences have been added to address the use of foamed plastic insulation as part of air duct systems within small buildings or for insulating an air duct in a house or dwelling unit.

Division B, Part 7 – Plumbing

Building Code Amendments – Part 7

New - Sentence 7.2.3.2.(4) - Interceptors

- New CSA B481.0 and CSA B481.3, have been added to govern the selection and installation of grease interceptors.

Deletion - Article 7.2.5.1. - Asbestos-Cement Drainage Pipe and Fittings

- Reference standards related to asbestos-cement drainage pipe and fittings have been deleted.

New - Sentence 7.2.5.9.(2) - CPVC Pipe, Fittings and Solvent Cements

- A new Table 7.2.5.9. has been added to provide the maximum permitted pressure for CPVC piping at various temperature ranges.

Table 7.2.5.9.
Maximum Permitted Pressure for CPVC Piping at Various Temperatures
Forming part of Sentence 7.2.5.9.(2)

Item	Column 1 Maximum Temperature of Water, °C	Column 2 Maximum Permitted Pressures, kPa
1.	10	3150
2.	20	2900
3.	30	2500
4.	40	2100
5.	50	1700
6.	60	1300
7.	70	1000
8.	82	690

Building Code Amendments – Part 7

New - Clause 7.2.5.10.(1)(g.1) - Plastic Pipe, Fittings and Solvent Cement Used Underground

- A new standard CAN/CSA-B182.8 has been added to permit the use of profile polyethylene storm sewer and drainage pipe and fittings.

New - Sentence 7.2.6.1.(3) - Cast Iron Drainage and Vent Pipe and Fittings

- A new standard CAN/CSA-B70.1 regarding cast iron frames and covers for maintenance holes has been added.

Deletion - Article 7.2.6.2. - Cast Iron Fittings for Asbestos-Cement Drainage Pipe

- The reference standard for cast iron fittings used with asbestos-cement piping has been deleted.

Building Code Amendments – Part 7

New - Articles 7.2.6.10. to 7.2.6.15. and 7.3.2.8. - Stainless Steel Pipes, Tubes, Joints, Fittings and Flanges

- The use of stainless steel tubes and pipes is now addressed through reference to new stainless steel standards.

Table 7.2.6.15.
Permitted Use of Stainless Steel Tube and Pipe

Item	Column 1 Stainless Steel Tube or Pipe	Column 2 Underground Water Distribution System	Column 3 Above-ground Water Distribution System	Column 4 Building Sewer	Column 5 Underground Drainage System	Column 6 Above-ground Drainage System	Column 7 Underground Venting System	Column 8 Above-ground Venting System
1.	Stainless steel pipe	P	P	P	P	P	P	P
2.	Stainless steel tube	P	P	N	N	N	N	N

New - Sentence 7.2.7.4.(5) - Copper Tube

- A new limitation has been added to prohibit the use of copper tube in fixture drain pipes or a portion of the vent pipe serving urinals.

Building Code Amendments – Part 7

New - Clause 7.2.10.2.(1)(a) - Screws, Bolts, Nuts and Washers

- The method of installing water closets has been modified to allow for direct attachment to the floor flange.

New - Sentences 7.3.3.8.(1) and (4) - Connection of Floor Outlet Fixtures

- Other means of connections to fixture drains are permitted and require that every floor flange and fixture be securely set on a firm base and fastened to the floor or trap flange of the fixture.

New - Sentence 7.3.4.3.(2) - Insulation of Support

- This provision introduces new installation requirements for hangers or supports for stainless steel piping.

Deletion - Clause 7.3.4.5.(2)(d) - Support for Horizontal Asbestos-Cement Piping

- Horizontal piping support for asbestos-cement drainage pipe have been deleted.

Building Code Amendments – Part 7

New - Clause 7.3.4.5.(2)(m) - Support for Horizontal Piping

- New requirements for horizontal piping support for stainless steel pipes and tubes have been introduced.

Clarification - Sentence 7.5.5.5.(2) - Provision for Future Installations

- The revision replaces the word “house” with “building,” since this requirement is applicable to all buildings.

New - Sentence 7.5.9.1.(1) - Air Admittance Valve as a Vent Terminal

- The use of air admittance valves has been expanded to also allow dual vents.

New - Sentences 7.6.2.10.(1) and (4) - Vacuum Breakers and Flood Levels

- Spill-resistant pressure vacuum breakers have been added.

Building Code Amendments – Part 7

New - Table 7.6.4.1. - Water Supply Fittings

- Permitted maximum flow rates for lavatory faucets in residential and other occupancies have been reduced.

New - Sentences 7.6.4.1.(3) to (5) - Water Supply Fittings

- Lavatories and showers for public use are now required to be equipped with an automatic shut-off when they are not in use.

New - Sentences 7.6.5.2.(2) to (4) - Showers

- Thermal shock requirements for shower supply fittings have been introduced.

Division B, Part 8 – Sewage Systems

Building Code Amendments – Part 8

New - Sentence 8.7.3.2.(1) - Absorption Trenches

- The centreline distances between absorption trenches have been changed for certain types of leaching chambers.

Ministry of Municipal Affairs and Housing

Amendments to Ontario's Building Code: Stairs, Guards, and Handrails

December 5, 2019

Ontario

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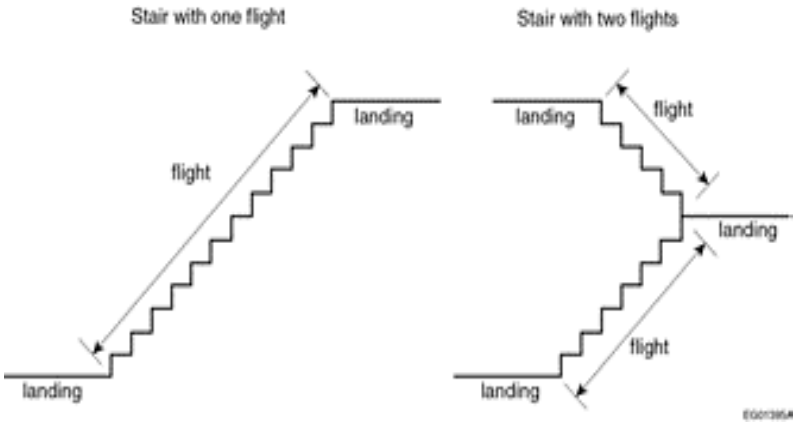
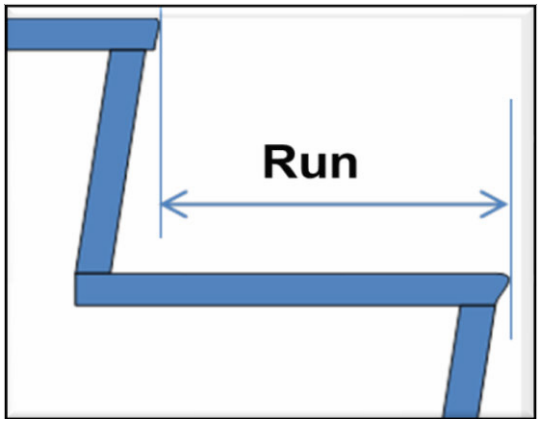
Amendments to Stairs, Guards and Handrails

New - Definitions, Division A, Article 1.4.1.2.

- Three new defined terms relating to stairs and ramps have been added to provide clarity. These new terms are “flight”, “tapered tread”, and “run”, and can be found in Part 1 in Division A.



Illustrations courtesy of Codes Canada



Ontario

Amendments to Stairs, Guards and Handrails

New - Article 3.3.1.15. - Tapered Treads in a Curved Flight

- This Article was revised to introduce consistent terminology and states the appropriate way of constructing tapered treads in curved flights of stairs.

New - Article 3.3.2.8A. - Handrails in Aisles with Steps

- A new Article has been added for the installation of handrails in aisles with steps in assembly occupancies.

New - Article 3.3.5.4. - Repair and Storage Garages

- This Article was amended to clarify requirements for vehicle guardrails in storage garages.

New - Article 3.3.5.9. - Guards

- This new Article has been added to address the size of openings through guards in industrial occupancies.

Amendments to Stairs, Guards and Handrails

New - Article 3.4.6.4. - Dimensions of Landings

- A new requirement has been added to harmonize the dimensions of landings with similar requirements in Part 9.

New - Article 3.4.6.5. - Handrails

- Changes have been made to handrail requirements to clarify where handrails are required and where they need to be continuous.
- There are additional changes to address the clearance and height of handrails.
- The loading requirements for handrails have been moved from Part 3 to Part 4.

New - Article 3.4.6.6. - Guards

- A new requirement has been added to harmonize the height of guards serving exit stairs with similar requirements in Part 9.

Amendments to Stairs, Guards and Handrails

New - Article 3.4.6.8. - Treads and Risers

- This Article was amended to increase the minimum run for stairs from 255 mm to 280 mm.
- The amendment also reduces the maximum rise for stairs from 200mm to 180mm.
- A new provision has been added to the tread and riser requirements to restrict open stair risers.

New - Article 3.4.6.9. - Curved Flights in Exits

- This Article was revised to clarify the permitted stair configurations for Part 3 building exit stairs.

Amendments to Stairs, Guards and Handrails

New - Article 4.1.5.14. - Loads on Guards and Handrails

- Changes have been made to the load requirements on guards and handrails.
- Load requirements for handrails have been moved from Part 3 to Part 4.

Clarification - Article 4.1.5.15. - Loads on Vehicular Guardrails

- The requirements for vehicle guardrail design have been clarified that guard loads for vehicles and persons do not need to be considered at the same time.

Clarification - Article 4.1.5.16. - Loads on Walls Acting as Guards

- Load requirements for walls acting as guards have been modified to clarify that lateral loads act in the outward direction.

Note: This change will come into effect on January 1st, 2020

Amendments to Stairs, Guards and Handrails

New - Article 9.8.3.1. - Straight and Curved Runs

- This Article has been amended to introduce new stair configurations.

New - Article 9.8.4.2. - Dimensions for Runs and Rectangular Treads

- This Article has been amended to increase the minimum stair run for stairs inside dwelling units.

New - Article 9.8.4.3. - Dimensions for Tapered Treads

- This Article has been amended to clarify the dimensions and method of measurement for tapered treads.

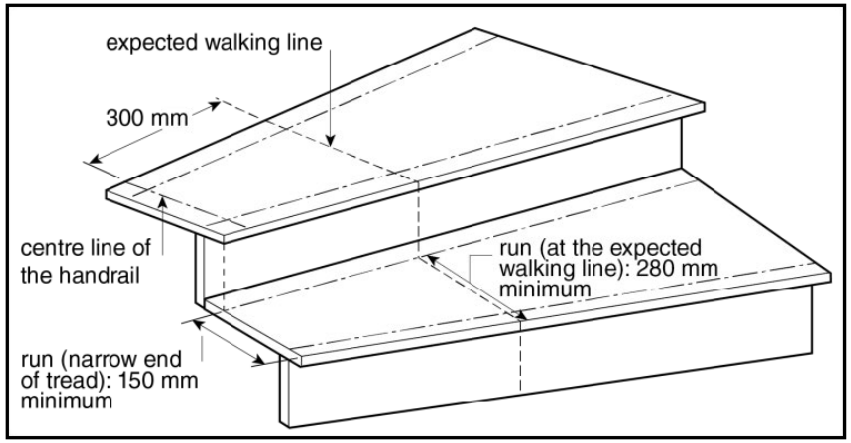


Illustration courtesy of Codes Canada

Ontario

Amendments to Stairs, Guards and Handrails

New - Article 9.8.4.4A. - Uniformity of Runs in Flights with Mixed Treads within a House or Dwelling Unit

- A new Article has been added to clarify the requirements for a uniform run where flights include where both tapered and rectangular treads.

New - Article 9.8.4.5A. - Spiral Stairs

- A new Article has been added to allow the use of spiral stairs in dwelling units in Part 9 buildings under certain conditions.

Clarification - Article 9.8.5.2. - Ramp Width

- This Article has been amended to eliminate the references to “exit ramps and public ramps”.

New - Article 9.8.6.3. - Dimensions of Landings

- This Article has been amended to modify the required length of stair landings.

Amendments to Stairs, Guards and Handrails

New - Article 9.8.7.1. - Required Handrails

- A new Sentence has been added to require that handrails be installed on the narrow end of the treads in a house or an individual dwelling unit where the flights of stairs consist of tapered treads or a mix of tapered treads and rectangular treads.

New - Article 9.8.7.2. - Continuity of Handrails

- This Article has been amended to clarify continuous handrail requirements.

New - Article 9.8.7.4. - Height of Handrails

- This Article has been amended to increase the maximum handrail height from 965 mm to 1070 mm.

New - Article 9.8.7.5. - Ergonomic Design

- This Article has been amended to add a clearance distance between the handrail and a rough or abrasive surface of 60 mm.

Amendments to Stairs, Guards and Handrails

New - Article 9.8.8.1. - Required Guards

- This Article has been amended to remove the specific guard requirements for certain small interior stairs and ramps.

New - Article 9.8.8.2. - Load on Guards

- Table 9.8.8.2. was changed to provide consistency for the minimum surface area on which the concentrated load on guard elements serving public stairs would apply, and resolves the difference between Part 4 and Part 9.

New - Article 9.8.8.3. - Height of Guards

- This Article was amended to exclude spiral stairs from the guard height requirements.
- Additionally, the specific requirements for guard heights for exit stairs and landings have been removed.

Amendments to Stairs, Guards and Handrails

New - Article 9.8.8.4. - Guards for Floors and Ramps in Garages

- This Article was amended to reduce the minimum curb height from 150mm to 140mm.

New - Article 9.8.8.5. - Openings in Guards

- This Article was amended to relax the opening requirements for guards located in industrial occupancies other than storage garages.
- This Article was also amended to clarify requirements for the size of openings.