

Ontario's Building Code Technical Bulletin: Highlights of Amendments to Ontario's 2012 Building Code

Ontario Regulation 88/19, amending Ontario's 2012 Building Code, was filed on May 2, 2019. The amendment includes changes to the following parts of Division B in the Building Code:

- Part 3 (Fire Protection, Occupant Safety and Accessibility)
- Part 4 (Structural Design)
- Part 5 (Environmental Separation)
- Part 6 (Heating, Ventilating and Air-Conditioning)
- Part 7 (Plumbing)
- Part 8 (Sewage Systems)
- Part 9 (Housing and Small Buildings)

Separate bulletins have been prepared for each of these parts.

In addition, the regulation impacts definitions set out in Part 1 of Division A in the Building Code (Compliance and General).

A number of standards referenced in the Building Code and set out in Division B, Table 1.3.1.2., are also updated. They are now more consistent with those listed in the National Building and Plumbing Codes. Certain redundant standards have been withdrawn, edition references have been revised, and new standards have been added.

For the full range of changes, code users are advised to consult the official source documents, including:

- The Building Code Act, 1992;
- The 2012 Building Code (O. Reg. 332/12) as amended, and
- Ontario Regulation 88/19.

The above documents are available on [the Government of Ontario's e-laws site](#).

Unless otherwise noted in the other bulletins, the in-effect date for the above amendments is January 1, 2020.

A separate regulation amending the Building Code (O. Reg 87/19), was filed on May 2, 2019 to address farm buildings with cannabis operations (Division A, 1.3.1.2.):

- New provisions address farm buildings containing hazardous extraction operations where flammable liquids, combustible liquids or flammable gases are used as extraction solvents related to cannabis processing;
- These amendments are consistent with the amendments to the Fire Code set out in Ontario Regulation 33/19;
- **These amendments come into effect July 1, 2019.**

The above documents are available on [the Government of Ontario's e-laws site](#)

Ontario's Building Code Technical Bulletin: Highlights of Amendments to Part 3 of Ontario's 2012 Building Code

Ontario Regulation 88/19, amending Ontario's 2012 Building Code, was filed on May 2, 2019.

This bulletin provides general information on certain amendments that have been made to Part 3 of Division B in the Building Code (Fire Protection, Occupant Safety and Accessibility), including the relevant new or affected sections of the Building Code.

Unless otherwise noted, the in-effect date for the amendments described below is January 1, 2020.

For the full range of changes, code users are advised to consult the official source documents, including:

- The Building Code Act, 1992; and
- The 2012 Building Code (O. Reg. 332/12) as amended, and
- Ontario Regulation 88/19

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Smoke Tightness of Closures in Fire Separations and Smoke Dampers (3.1.8.4., 3.1.8.5. and 3.1.8.7.)

New requirements have been introduced for 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 separation in specific areas.

While the current fire damper requirements are maintained, a new provision has been added that requires an air transfer opening, or a duct that penetrates an assembly required to be a fire separation in certain applications, be equipped with either a smoke damper or a combination fire/smoke damper.

Factory-Assembled Panels (3.1.4.2. and 3.1.5.5A.)

Two new articles have been added to address the protection of factory-assembled panels containing foamed plastic insulation installed in walk-in coolers or freezers located in buildings of both combustible and non-combustible construction.

Foamed Plastic Insulation (3.1.5.12A.)

Requirements with respect to foam plastic insulation have been rearranged and a new article has been added to address protection of foamed plastics insulation and combustible insulation separately.

Soffit Protection (3.2.3.6.)

A new provision has been added that clarifies and relaxes roof soffit protection when facing a street, lane or a public thoroughfare. It provides harmonization with similar provisions for spatial separation in Part 9.

Integrated Fire Protection and Life Safety Systems (3.2.10.1.)

A new article has been added which requires the testing of the integration between fire protection and life safety systems, and other systems associated with fire protection and life safety functions.

The testing is to be conducted based on the newly developed CSA Standard (CSA/ULC-S1001, "Integrated Systems Testing of Fire Protection and Life Safety Systems").

Residential Fire Warning System (3.2.4.22A.)

A new article has been added to permit the use of a residential warning system in lieu of interconnected smoke alarm system. The new system allows the connection of heat detectors, CO alarms, other life safety devices and remote monitoring capabilities. The system is also required to have the capability of supervising the interconnected devices.

Smoke Movement in Residential High-Rise Buildings (3.2.6.2.)

A new article has been added which requires air handling systems providing make-up air to a corridor serving residential suites to remain in operation after the activation of the fire alarm to maintain corridor pressurization.

Stairs, Guards and Handrails (3.3.2.8A., 3.3.5.9., 3.4.6.4., 3.4.6.5., 3.4.6.5., 3.4.6.6., 3.4.6.8., and 3.4.6.9.)

Note: All amendments related to stairs, guards and handrails provisions will come into force on January 1, 2022.

A new article has been created and new requirements have been added to an existing article for the installation of handrails in aisles with steps in assembly occupancies.

A new article has been added for guards located in industrial occupancies.

A new requirement has been added to harmonize the landing dimension with similar requirements in Part 9.

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

Changes have been made to handrail requirements to clarify where handrails are required and where they need to be continuous.

The loading requirements for handrails have been moved from Part 3 to Part 4.

Changes were made to the rise and run dimensions of public stairs.

A new provision has been added to the tread and riser requirements to restrict open stair risers.

A new provision has been added to clarify the permitted configurations of exit stairs.

Door Threshold (3.3.1.12. and 3.4.6.11.)

A new requirement has been added that sets limits on the height of door thresholds, other than those in a required barrier-free path of travel.

Plumbing Fixtures, General (3.7.4.2.11.)

A change is made to provide additional clarification on manual control faucets that serve lavatories.

Medical Gas Piping (3.7.5.2.)

A change was made to the requirements for the design, construction, installation and testing of medical gas piping systems. Medical gas piping systems are also required to be in conformance with Ontario's Fire Code, or in the absence of such requirements, with the National Fire Code of Canada.

Accessibility – Controls (3.8.1.5.)

A change was made to clarify all common requirements for accessible controls related to the operation of building services and safety devices.

Accessibility – Water Closet Stalls and Enclosures (3.8.3.8.(1), 3.8.3.8.(7)(b), and 3.8.3.9.)

A change was made to provide additional accessibility requirements and clarification for water closets, water closet stalls and enclosures.

Accessibility – Urinals (3.8.3.10.)

A change was made to clarify provisions for accessibility requirements for urinals within a barrier-free washroom.

Accessibility – Lavatories, Mirrors and Washroom Accessories (3.8.3.11.)

A change was made to provide clarification on accessibility requirements for lavatories, mirrors and washroom accessories within a barrier-free washroom.

Accessibility – Universal Washroom (3.8.3.12)

A change was made to provide additional clarification on accessibility requirements for universal washroom doors.

Accessibility – Showers and Bathtubs (3.8.3.13.)

A change is made to provide additional clarification on accessibility requirements for showers and bathtubs including requirements for grab bars, clear floor spaces, shower heads and facets, and individual bathtub requirements for Group B Division 2 or 3 occupancies.

Electric Vehicle Charging (3.1.21.)

Note: Amendments related to electric vehicle charging requirements in the Building Code came into effect on the date the regulation was filed – May 2, 2019.

All requirements including transition provisions related to electric vehicle charging in non-residential buildings have been deleted.

Ontario's Building Code Technical Bulletin:

Highlights of Amendments to Part 4 of Ontario's 2012 Building Code

Ontario Regulation 88/19, amending Ontario's 2012 Building Code, was filed on May 2, 2019.

This bulletin provides general information on certain amendments that have been made to Part 4 of Division B in the Building Code (Structural Design), including the relevant new or affected sections of the Building Code.

Unless otherwise noted, the in-effect date for the amendments described below is January 1, 2020.

For the full range of changes, code users are advised to consult the official source documents, including:

- The Building Code Act, 1992; and
- The 2012 Building Code (O. Reg. 332/12) as amended, and
- Ontario Regulation 88/19

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Limit States Design (Tables 4.1.3.2.A. and B.)

A change was made to increase the companion load factor for live loads plus snow loads.

Guards Design (4.1.5.14.)

Note: All amendments related to stairs, guards and handrails provisions will come into force on January 1, 2022.

A change was made to the existing provision that clarifies where point loads for guards are applied. The design must take into account the points of application that produce the most critical effect.

Changes were also made to establish deflection limits for guard pickets as well as to clarify that guard loads do not need to be applied concurrently with vehicle guardrail loads.

Relocation of Loads on Handrails from Part 3 to Part 4 (relocated to 4.1.5.14.)

Note: All amendments related to stairs, guards and handrails provisions will come into force on January 1, 2022.

Loading requirements for handrails have been moved from Part 3 to Part 4.

Snow Loads (4.1.6.)

Guidance on snow loads previously provided in the Part 4 Structural Commentary to the National Building Code has been transferred into Part 4 of Division B. Provisions for snow loads have also been updated, including the calculation of the basic roof snow load factor, specific weight of snow, calculation of the accumulation factor, and the calculation for loads due to sliding snow.

Wind Loads (4.1.7.)

Guidance on wind loads previously provided in the Part 4 Structural Commentary to the National Building Code has been transferred into Part 4 of Division B. Provisions for wind loads have also been updated, including the introduction of a separate topographic factor and the introduction of specific requirements for wind tunnel testing.

Earthquake Load and Effects: Low Hazard Zones (4.1.8.1.)

Requirements that consider earthquake forces and effects have been extended to all locations in the province. A separate simple and easily applied methodology has also been provided for low hazard earthquake zones.

Earthquake Load and Effects: Seismicity (4.1.8.2., 4.1.8.4., 4.1.8.18. and Supplementary Standard SB-1)

Values of seismic hazard in the seismic hazard model have been updated for various locations, and period-based foundation factors have been introduced.

The method for the determination of design spectral acceleration has been revised such that the higher mode factors conform to the new hazard model. The hazard cap was also revised for both the static procedure and the dynamic procedure.

Earthquake Loads and Effects: Structural Systems (Table 4.1.8.9.)

Structural systems have been updated to be compatible with the material design standard referenced in Section 4.3. of Part 4 and the height restrictions for the seismic-force resisting systems (SFRS) in buildings have been clarified.

Earthquake Load and Effects: Inclined Columns (4.1.8.10.(5) and Table 4.1.8.6.)

New provisions have been added identifying buildings with inclined columns that are subjected to gravity-induced lateral demands as being structurally irregular buildings.

Earthquake Loads and Effects: Single Storey Buildings with Steel or Wood Diaphragms (4.1.8.11.(4))

New provisions have been added related to time period and diaphragm forces for single storey buildings with steel or wood roof diaphragms.

Earthquake Loads and Effects: Foundation Provisions (4.1.8.16.)

A new requirement has been added to the calculation of displacements to include increases due to foundation movements.

Earthquake Loads and Effects: Elevators, Escalators and Racking Storage Systems (Table 4.1.8.18.)

New requirements have been added for anchorage design for elevators, escalators and steel pallet storage racks accounting for the seismic loads and effects.

Earthquake Load and Effects: Seismically Isolated Structures (4.1.8.19. and 4.1.8.20.)

New requirements have been added for structures with seismically isolated structures (sometimes also referred to as base isolated structures).

Earthquake Load and Effects: Supplemental Energy Dissipation (4.1.8.21. and 4.1.8.22.)

New Requirements have been added for structures with supplementary energy dissipation systems (also referred to as supplemental damping).

Structural Glass Design (4.3.6.1.)

Specific requirements on structural glass design are added including reference to ASTM E1300, “Practice for Determining Load Resistance of Glass in Buildings”.

Ontario's Building Code Technical Bulletin:

Highlights of Amendments to Part 5 of Ontario's 2012 Building Code

Ontario Regulation 88/19, amending Ontario's 2012 Building Code, was filed on May 2, 2019.

This bulletin provides general information on certain amendments that have been made to Part 5 of Division B in the Building Code (Environmental Separation), including the relevant new or affected sections of the Building Code.

Unless otherwise noted, the in-effect date for the amendments described below is January 1, 2020.

For the full range of changes, code users are advised to consult the official source documents, including:

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- The 2012 Building Code (O. Reg. 332/12) as amended, and
- Ontario Regulation 88/19

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Structural and Environmental Loads (5.1.4.1.)

A new requirement has been added to reflect where building materials, components or assemblies perform more than one function, they are required to satisfy the requirement of all those functions.

Determination of Wind Load (5.2.2.2.)

A new requirement has been added to clarify that the wind uplift resistance of membrane roofing assemblies required to conform with the requirements of CSA A123.21 "Dynamic Wind Uplift Resistance Membrane-Roofing Systems". However, the Building Code also recognizes proven past performance.

Installation of Protective Materials (5.6.1.2.)

This article has been revised and rearranged. A requirement that includes a new referenced standard has also been added. The new sentence addresses the protective materials in a vegetative roofing system and their resistance to root and rhizome penetration by requiring

testing of components in accordance with ANSI/GRHC/SPRI VR-1 standard.

Protection from Surface Water (5.7.)

Sections addressing “Surface Water” and “Moisture in the Ground” have been combined under the new Section 5.7. The new section also provides a description of the differences between waterproofing and dampproofing and addresses surface preparation and directing water away from buildings and assemblies.

Sound Transmission (5.8.)

A new sound transmission rating, apparent sound transmission class (ASTC), was introduced in order to consider contributions of flanking sound transmission. This is an alternative rating that can be used to meet the sound transmission requirements of the Building Code. The existing rating sound transmission class which considers only direct sound transmission has also been maintained. This section also now includes detailed and simplified calculation methods for ASTC.

Referenced Standards (5.10.)

Standards applicable to environmental separators and assemblies exposed to the exterior have been updated. Standards that have been withdrawn were also removed and outdated standards replaced with current editions. New standards that reflect materials currently used by industry were also added.

Other Fenestration Assemblies (5.10.4.)

A new subsection has been added to address other fenestration assemblies which are assemblies that have not been explicitly covered by the previous editions of the Building Code.

The new subsection establishes minimum performance requirement as well as laboratory and in-situ standard test procedures for curtain walls, window walls, storefronts and glazed architectural structures (referred to as other fenestration assemblies). It also provides guidance on how to properly identify these products and their applications by clarifying the recognized industry terminology.

Ontario's Building Code Technical Bulletin:

Highlights of Amendments to Part 6 of Ontario's 2012 Building Code

Ontario Regulation 88/19, amending Ontario's 2012 Building Code, was filed on May 2, 2019.

This bulletin provides general information on certain amendments that have been made to Part 6 of Division B in the Building Code (Heating, Ventilating and Air-Conditioning), including the relevant new or affected sections of the Building Code.

Unless otherwise noted, the in-effect date for the amendments described below is January 1, 2020.

For the full range of changes, code users are advised to consult the official source documents, including:

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Indoor Air Contaminants (6.2.2.4.)

Clarifications have been made to the requirements that reduce the level of the indoor air contaminants of concern and growth and spread of bio-contaminants.

Grease Duct Enclosures (6.2.2.6.)

A new requirement has been added to clarify that the fire-resistance rating of factory-built and field-applied grease duct enclosures are to be determined in conformance with the CAN/ULC-S144, "Standard Method of Fire-Resistance Test-Grease Duct Assemblies".

Foamed Plastic Insulation (6.2.3.4.)

A new requirement has been added to allow the use of foamed plastic insulation, under certain conditions, to insulate heating ducts in Part 9 residential buildings.

Air Washers, Evaporative Coolers, Cooling Towers and Evaporative Condensers (6.2.3.14. and 6.2.3.15.)

The requirements have been modified to clarify that air washers and evaporative cooling sections have different design considerations to that of towers and evaporative condensers. ASHRAE Guideline 12, “Minimizing the Risk of Legionellosis Associated with Building Water Systems,” is referenced to minimize health risks with airborne legionella associated with HVAC equipment such as cooling towers, evaporative towers and evaporative condensers.

Ontario's Building Code Technical Bulletin: Highlights of Amendments to Part 7 of Ontario's 2012 Building Code

Ontario Regulation 88/19, amending Ontario's 2012 Building Code, was filed on May 2, 2019.

This bulletin provides general information on certain amendments that have been made to Part 7 of Division B in the Building Code (Plumbing), including the relevant new or affected sections of the Building Code.

Unless otherwise noted, the in-effect date for the amendments described below is January 1, 2020.

For the full range of changes, code users are advised to consult the official source documents, including:

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- The 2012 Building Code (O. Reg. 332/12) as amended, and
- Ontario Regulation 88/19

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Selection and Installation of Grease Interceptors (7.2.3.2.(3))

A new provision has been added about the selection and installation of grease interceptors which are required to conform to new referenced standards.

Cast Iron Frames and Covers (7.2.6.1.(3))

Cast iron frames and covers for maintenance holes and catch basins are now required to conform to a new referenced standard.

Stainless Steel Related Requirements (7.2.6.10. to 7.2.6.15., 7.3.2.8. and 7.3.4.3.(2))

New requirements have been added for stainless steel pipes and fittings. The new requirements address applicable standards, welding and support of the stainless-steel piping and joints.

Copper Tube Limitation (7.2.7.4.(5))

A new restriction has been introduced for the use of copper tubing below the flood level rim of urinals.

Methods of Mounting and Attaching Water Closets (7.2.10.2.)

Revised provisions now permit alternative methods of mounting and attaching modern water closets.

Spill-resistant Pressure Vacuum Breakers (7.6.2.10.)

A new provision has been added to permit spill-resistant pressure vacuum breakers.

Maximum Flow Rates for Lavatory Water Supply Fittings (Table 7.6.4.1.)

Flow rate requirements have been revised and more efficient water supply fittings for lavatories are now required.

Automatic Shut-off for Lavatory Faucets (7.6.4.1.(3))

A new provision has been added for lavatory faucets located in public washrooms. They are required to be equipped with automatic shut-off when not in use.

Multiple Shower Heads in Public Showering Facilities (7.6.4.1.(5))

A new provision has been added that requires that where multiple shower heads are served by one temperature control, each shower head must be capable of automatically shutting off the flow of water when not in use.

Ontario's Building Code Technical Bulletin: Highlights of Amendments to Part 8 of Ontario's 2012 Building Code

Ontario Regulation 88/19, amending Ontario's 2012 Building Code, was filed on May 2, 2019.

This bulletin provides general information on certain amendments that have been made to Part 8 of Division B in the Building Code (Sewage Systems), including the relevant new or affected sections of the Building Code.

Unless otherwise noted, the in-effect date for the amendments described below is May 2, 2019.

For the full range of changes, code users are advised to consult the official source documents, including:

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- The 2012 Building Code (O. Reg. 332/12) as amended, and
- Ontario Regulation 88/19

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Absorption Trenches (8.7.3.2.)

Provisions in the relevant sections of Part 8 have been revised to address pipe spacing for different types of installation for Type I and II leaching chambers.

Ontario's Building Code Technical Bulletin: Highlights of Amendments to Part 9 of Ontario's 2012 Building Code

Ontario Regulation 88/19, amending Ontario's 2012 Building Code, was filed on May 2, 2019.

This bulletin provides general information on certain amendments that have been made to Part 9 of Division B in the Building Code (Housing and Small Buildings), including the relevant new or affected sections of the Building Code.

Unless otherwise noted, the in-effect date for the amendments described below is January 1, 2020.

For the full range of changes, code users are advised to consult the official source documents, including:

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- Ontario Regulation 88/19

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Structural Sufficiency of Glass (9.6.1.3.)

Changes have been made that removes the reference to an outdated CGSB standard and provides additional options for the design of glass to either Part 4 or to new Part 9 prescriptive tables based on various 1-in-50 hourly wind pressures and building location.

Dimensions for Runs and Rectangular Treads (9.8.4.2.)

Note: All amendments related to stairs, guards and handrails provisions will come into force on January 1, 2022.

The run dimension of stairs serving single dwelling units have been increased.

Stairs, Steps, Ramps, Landings, Handrails and Guards:
Spiral Stairs (9.8.4.5A)

Note: All amendments related to stairs, guards and handrails provisions will come into force on January 1, 2022.

A new article has been added that permits spiral stairs in buildings under certain conditions.

Stairs, Steps, Ramps, Landings, Handrails and Guards:
Handrails (9.8.7.)

Note: All amendments related to stairs, guards and handrails provisions will come into force on January 1, 2022.

New requirements have been added that increase the maximum height of a handrail and clarify ergonomic design provisions.

New Residential Fire Warning Systems (ULC-S 540)
(9.10.19.1. and 9.10.19.8.)

A provision has been added to address the use and installation of residential fire warning systems.

Sound Transmission (9.11.1.1.)

A new Apparent Sound Transmission Class rating has been introduced to take into account flanking sound transmission as an alternative method in addition to the Sound Transmission Class (STC) rating.

This includes three compliance paths, one of which is new and an enhanced prescriptive method that uses existing STC ratings and additional prescriptive requirements to reduce noise transferred through flanking wall and floor assemblies.

Referenced Standards for Roofing, Dampproofing, and Waterproofing Materials and Installation (9.13.2., 9.13.3. and 9.26.2.)

Several out of date standards have been replaced with current and more applicable standards, covering a variety of material types and applications.

Dampproofing of Floors on Ground (9.13.2.6.)

The existing requirements for dampproofing of floors on ground have been revised and expanded to provide additional dampproofing options.

Wood Roof Trusses (9.23.13.11.)

Existing roof truss design requirements have been updated to reflect current truss manufacturing processes.

Purpose of Roofing (9.26.1.1.)

The terms “roof” and “roofing” have been defined for the purposes of Section 9.26.

Venting of Laundry – Drying Equipment (9.32.1.1.(5) and 9.32.1.4.)

A new article has been added that provides a Part 9 alternative method for the venting of laundry drying equipment.

Garages and Carports: Foundation Required (9.35.3.1.(2))

A new requirement has been added prescribing the types of foundations that may be used for small 1 storey detached garages less than 55 m² in floor area that are not of masonry or masonry veneer construction.

Garages and Carports: Small Garages (9.35.3.3.(1))

A new requirement has been amended to exempt small garages from complying with the foundation drainage requirements where the finished ground level is at or near the elevation of the garage floor.

Electric Vehicle Charging (9.34.4.)

Note: Amendments related to electric vehicle charging requirements in the Building Code came into effect on the date the regulation was filed – May 2, 2019

The current electric vehicle charging requirements pertaining to houses have been deleted.