



Report to: Development Services Committee

Report Date: October 29, 2024

SUBJECT: 2024 Building Code Changes

PREPARED BY: Stephanie Di Perna, Chief Building Official, Director, Building Standards Ext. 3940

REVIEWED BY: Arvin Prasad, Commissioner of Development Services

RECOMMENDATIONS:

- 1) That the report dated October 29, 2024 entitled "2024 Building Code Changes" be received;
- 2) AND THAT staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to provide information to Council on the 2024 Building Code changes. On April 10, 2024, the Province released Ontario Regulation 163/24 providing changes to the Building Code regulation in the Province.

As of January 1, 2025 the building code in effect will be the National Building Code of Canada 2020 as amended by a number of Ontario specific changes and will be referred to as the 2024 Building Code.

The building code changes increases harmonization with the national model construction codes and aims to promote housing supply and innovation. This latest edition was developed in consultation with industry partners including building officials, fire prevention officials, architects, engineers, builders, and the construction industry. The changes to the Building Code help ensure that Ontario continues to promote high standards of public health and safety, and performance in new and renovated buildings.

DISCUSSION:

Building Code Format

The structure of the new Building Code regulation will change. The Regulation is now limited to one page and references the 2020 National Building Code for the harmonized parts of the Code and the 2024 Ontario Amendment document for the Ontario differences.

The full-length version the Building Code that includes the technical provisions will no longer be available on E-Laws. Digital copies of the 2024 Building Code are available by request to the [Ministry of Municipal Affairs and Housing](#).

Timing and Transition

The 2024 Building Code comes into effect on January 1, 2025, with a three-month grace period until March 31, 2025, for applications for which the working drawings were substantially complete before January 1, 2025.

During the transition period, only one edition of the Building Code, either the 2012 or 2024, could be used in the design and construction of a building.

The version of the Building Code that applies at the time of the permit application is the version that will continue to apply to the building throughout the processes of plans review, permit issuance, construction, inspection and occupancy of the building. **Building Officials are expected to be experts and enforce both codes.**

April 10, 2024- December 31, 2024
Permit applications must be submitted using the 2012 Building Code until December 31, 2024
January 1, 2025
Permit applications to use the new Building Code.
March 31, 2025
Last day to submit permit application using the 2012 Building Code where working drawings were substantially complete before January 1, 2025
April 1, 2025
All permit applications must use the new Building Code.

Technical Changes

The 2024 building Code includes many complex changes. This summary is meant to serve as a high-level explanation of significant changes and is not intended to be an inclusive summary of all technical changes.

Secondary Suites

The Building Code has simplified the design and safety requirements for secondary suites by harmonizing the requirements for new purpose-built secondary suites and conversions of existing buildings to the same standards. Designers wishing to utilize compliance alternatives for buildings greater than 5 years old still have the option to do so.

- Reduction in required ceiling heights from 1.95m to 1.89m.
- Reduction for clear height over stairs and under beams/ducts from 1.95m to 1.85m.
- Exemption provided for a house with a secondary suite for separate exits. (egress from a dwelling unit into a public corridor or exterior passageway does to go in opposite directions to 2 separate exits)
- Shared egress conditions are exempt from requiring an additional means of egress from each dwelling in a house with a secondary suite except where a dwelling unit is above another and the upper unit opens onto an exterior passageway more than 1.5 m above grade, an additional means of egress may be required based on the rating of the floor and number of exits it serves.
- Permissions for open stair risers.
- Replacing fire separations and fire ratings of common areas such as public corridors and columns/beams with specific construction materials with smoke tight barriers without ratings.
- Floor assemblies no longer required to be constructed as fire separations.
- Permissions for wireless smoke alarms.
- Carbon monoxide detectors must be interconnected in a building with a secondary suite.
- Reduction is permitted for the sound transmission class and apparent sound transmission class between walls/floors of adjoining suites where the building is older than 5 years.

Large Buildings (Accessibility)

National Building Code accessibility requirements that enhance the current Ontario Building Code requirements are added to the new code. A few of those changes include; pedestrian entrances are required to be barrier free, addition of accessible water bottle filling stations and changes to service counter requirements for new construction.

The clear width of doors in a barrier free path of travel reduced from 860mm to 850mm.

Large Buildings (Fire Safety)

Changes to harmonize Ontario's provisions for fire protection systems (standpipe, fire alarms, and fire sprinklers) with National Building Code. Standpipe system design will fully align with the international standard (NFPA 14) for design, construction, installation and testing of a standpipe system. Changes include:

- Standpipe riser to be located within the exit stair, provides more coverage for the hose system, and requires higher system demand (min. pressure and flow rate).
- Buildings required to be sprinklered must also be equipped with a fire alarm system.
- Buildings containing superimposed major occupancies (occupancy types stacked vertically within a building), sprinkler coverage would be required on storeys below those storeys already requiring sprinkler protection due to the nature of the occupancy.
- Mezzanine and interconnected floor space design changes to exit/egress facilities, fire compartments, smoke control design, combustible contents limitations, and floor area and travel distance limitations.
- Buildings with an interconnected floor space are required to be sprinklered

Large Buildings (Exterior Cladding)

The changes remove the 6-storey limitation for the use of combustible cladding and combustible wall components in a building required to be non-combustible construction (e.g., concrete) provided the exterior wall assembly is tested to ULC standard for performance under fire conditions.

Carbon Monoxide

Carbon monoxide (CO) alarm requirements are expanding to Care Occupancies (e.g., long term care), additional spaces in residential occupancies and some commercial establishments.

Radon

All new houses are required to have a rough-in under the basement slab for a subfloor depressurization system.

Structural Design

Structural design changes in the following areas:

- Buildings would be designed to meet the new applicable seismic loads for the geographic locations and site conditions.
- Revises the descriptions of the types of buildings in the Importance Categories which are the parameters that dictate the required design strength.
- Introduces provisions to calculate wind and snow loads for roofs with roof-mounted solar panels, if the building is intended to have solar panel.
- Introduces provisions to calculate wind loads for attached canopies, roof parapets and balcony guards near the tops of buildings.
- Relocates the information on load combinations for serviceability.
- Storage Rack Systems: New requirements for structural design of storage racks.
- Underpinning of buildings are now required to be designed and reviewed by Professional Engineers.

Farm Buildings

The Building Code introduced a section under Division B to regulate large farm buildings. Small Farm Buildings will continue to be regulated under the National Farm Building Code.

The changes for large farm buildings establishes new major building occupancies and introduces general technical requirements including fire

protection and occupant safety requirements, structural design requirements heating, ventilation and air conditioning (HVAC) requirements.

Septic Systems

Changes to septic systems include an update to CSA standards, clarify the use of distribution piping with filter beds and distinguishes the materials used in Type A Dispersal Beds.

Plumbing

Plumbing changes in the following areas:

- Align terminology with construction industry terminology.
- To allow alternative temperature limiting devices.
- Introduce new acceptable plumbing materials.
- To reduce the maximum water temperature from 49 to 43 °C in health care facilities and seniors' residence facilities and childcare centres.
- To harmonize with National non-potable (rainwater harvesting/greywater collection) water systems requirements.
- Clarify technical requirements including those for shower heads, domestic water tanks and grease interceptors.

Heating and Ventilation

Heating and ventilation changes in the following areas:

- Harmonize with the National house ventilation requirements and general HVAC requirements, except the carbon monoxide level for repair garages.
- Harmonize requirements regarding equipment and design to minimize the growth and transmission of Legionella and other bacteria.
- Change maximum temperature for exposed piping to 52°C from 70°C.
- Update the referenced edition of the Ventilation Standard applicable to large buildings and to further harmonize Ontario's requirements with National's

including ventilation of storage and repair garages, and ducts and duct linings.

Building Code Training for the Building Sector

Building Code training courses are offered through various post-secondary institutions and the Ontario Building Official Association. The courses prepare the building sector for Building Code examinations and supports professional development. The building sector is responsible to ensure they are up to date on the Building Code and understand its current requirements.

The Ministry is developing a comprehensive approach to help the building sector understand the new requirements in the 2024 Building Code and to help build capacity in the sector. Details are available through the [Ministry](#).

Impact on Operations

Building Officials must demonstrate expertise from the start with the new code coming into effect. These changes, while essential to harmonize building code standards across the Country, are also urgent and necessary. Intensive staff training, staff downtime and changes to most of the departments standard operating procedures are required to ensure that staff are ready to comply with the new regulations. The building code changes have directly affected the operations and resources of the department affecting the delivery of our core service.

NEXT STEPS:

1. Building By-law changes required to address new code items and changes in review and inspections procedures.
2. Significant department technical training required.
3. Changes to most Standard Operating Procedures and outward facing code compliance guides.

FINANCIAL CONSIDERATIONS:

Additional cost related to department training and changes to operating procedures and guides will be funded from the building reserve fund.

HUMAN RESOURCES CONSIDERATIONS:

Not applicable.

ALIGNMENT WITH STRATEGIC PRIORITIES:

Goal 1 - Exceptional Services by Exceptional People

Goal 3 – Safe, Sustainable and Complete Community.

BUSINESS UNITS CONSULTED AND AFFECTED:

RECOMMENDED BY:

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