

2024 Ontario Building Code Updates

The new 2024 Ontario Building Code (OBC) came into effect on Jan. 1, 2025. These significant updates impact building design, construction, and safety standards. This **overview** highlights the key changes to help you understand the requirements and ensure compliance when planning your next building project and applying for building permits.

For details on the new 2024 Ontario Building Code, including timing and transition provisions, please visit the [Ontario website](#).

Topics covered:

- **Farm Buildings (Part 2)**
- **Large buildings (Part 3)**
- **Structural (Part 4)**
- **Environmental and HVAC (Parts 5,6)**
- **Plumbing and Septic Systems (Parts 7,8)**
- **Houses and Small Buildings (Part 9)**
- **Change of use and Division C (Parts 10,11)**
- **Two Unit Houses**
- **Fire Protection**
- **Accessibility**
- **Radon Mitigation**

New definitions

- **Adfreezing:** the process where soil sticks to a foundation unit because the water in the soil freezes. This is also called “frost grip.”
- **Alloyed Zinc:** A zinc alloy with 0.15% titanium, 0.74% copper, and 99.11% zinc. It has corrosion resistance and physical properties that allow it to form watertight joints.
- **Back pressure:** Pressure that exceeds the supply pressure.
- **Braced wall panel:** A section of a wood-frame wall designed and built to resist lateral forces from wind or earthquakes through bracing, sheathing, cladding, or interior finishes.

- **Braced wall band:** An imaginary, continuous and straight band that runs in a vertical and horizontal line through a building and where braced wall panels are placed.
- **Mechanically vented (referring to a fuel-fired space-or water-heating appliance):** An appliance where a mechanical device fully vents combustion products outdoors. The venting system vents these products upstream or downstream from the combustion system. The segment downstream of the combustion system is sealed and does not include draft hoods or draft controls.
- **Protected floor space:** A part of a floor area shielded from fire, serving as an exit from an interconnected floor space.
- **Rim joist:** A structural element that frames the perimeter of the floor and does not include blocking elements or pieces. A rim joist can run parallel, perpendicular, or at an angle to the floor joists.

Farm buildings (Part 2)

Farm buildings with low human occupancy (one person per 40 m² or less during normal use) must follow the 2024 OBC if they are:

- Larger than 600 m² in building area
- Taller than three storeys or
- Any size and classified as Group G, Division 4

Small farm buildings remain under the National Farm Building Code if they:

- Are no more than three storeys tall
- Are no larger than 600 m²
- Are used for Group G, Division 1, 2, or 3 agricultural occupancies

New definitions

- **(Group G) Agricultural occupancy :** Buildings on farmland used for producing crops, raising animals, or preparing, storing, or processing agricultural products.
- **(Group G, Division 1) High-hazard agricultural occupancies:** Buildings that contain large amounts of highly flammable or explosive materials, creating a special fire hazard.
- **(Group G, Division 2) Agricultural Occupancies:** Agricultural Occupancies not classified in Group G categories.

- **(Group G, Division 3) Greenhouse agricultural occupancies:** Buildings made mainly of light-transmitting roofs and walls for growing plants.
- **(Group G, Division 4) Agricultural occupancies with no human occupants :** Buildings not intended for human use during normal operations, typically used for storing agricultural materials and by-products.

Large buildings (Part 3)

Midrise wood frame construction (over 4 storeys)

- Designers can now use combustible cladding on midrise wood-frame buildings, which previously required noncombustible cladding under the 2012 OBC.
- The six-storey limit for combustible cladding and wall components has been removed. Combustible materials protected by masonry or concrete are now allowed for unlimited storeys.

Mezzanines and interconnected floor space

- Low-occupancy mezzanines and platforms in noncombustible F2 or F3 buildings are now counted as storeys.
- Buildings with interconnected floor space must be fully sprinklered, rather than partially.
- New requirements specify protected floor space, draft stops on each floor, and limits on combustible content in interconnected spaces.
- B3 occupancies can now include interconnected floor spaces.
- Mezzanines over 500 m² must end at vertical fire separations, with updated egress requirements.

Wood frame construction

- Added requirements for connecting preservative-treated wood.
- New tables define fastening and anchoring for sheathing, subflooring, and seismic areas.
- Increased anchorage requirements for high-wind and seismic zones.
- Steel beams must now be primed.
- Updated braced wall panel support and new requirements for wood frame bracing, rafter installation, and ceiling joists.

- Rafter-to-joist nailing chart updated to include 300 mm spacing with increased nailing.

Safety within floor areas

- Reduced maximum travel distance for unsprinklered floor areas from 25 m to 15 m.
- Tactile indicators are now required at the top of unenclosed stairs and drop-offs over 300 mm without guards.
- Doorways in classifications A, B-1, C, D, E, and F must have a minimum width of 850 mm.
- Exit doors must now have tactile "EXIT" signs on the approach side in the direction of travel.

Building facing a street

- Group D buildings (up to 6 storeys, sprinklered, and noncombustible) and Group E buildings (up to 3 storeys, sprinklered) must now have 25% of their perimeter within 15 m of a street (up from 10%).

Roof assembly fire resistance rating

- Roof assembly fire resistance ratings can only be waived for gymnasiums, swimming pools, arenas, and rinks if specific conditions are met.
- Previously, this waiver applied to all sprinklered buildings with certain monitoring and signaling requirements.

New provisions for 18-storey encapsulated mass timber buildings

- The province has expanded the current 12-storey limitation for encapsulated mass timber to 18 storeys.

Structural (Part 4)

- Engineers must now calculate vibration when machinery or equipment will operate in a building, considering serviceability limit states.
- New requirements cover vehicle loading areas, roofs with solar panels, attached canopies, a seismic category table, and treated wood care.
- The design of storage racks now has its own subsection.
- Engineers are required to perform subsurface investigations, including checking groundwater conditions.
- The definition of post-disaster buildings now includes control centers for natural gas distribution, air and marine transportation, sewage treatment, water storage, and water treatment facilities.
- New loading criteria have been added for canopies and solar panels on roofs.

Environmental and HVAC (Parts 5,6)

The new BCO introduces terms like “non-heating season ventilation” and “heating season ventilation.” It also covers natural and mechanical ventilation systems for non-heating seasons.

Airtightness

Updated requirements include air barrier installation details and airtightness standards. Below-grade airtightness now addresses radon and soil gases.

New setback

Outdoor air intakes must be installed at least 0.3 m above roofs, landscape grades, or other surfaces, considering snow accumulation (6.3.2.9). Vented combustion products require new setbacks (6.3.2.15).

Evaporative heat rejection systems

Added to reduce the spread of disease-causing microorganisms.

Air handling systems

These systems must now include smoke detectors.

Carbon monoxide alarms

A carbon monoxide alarm is defined as a device with an audible alarm that activates when airborne carbon monoxide exceeds a set level for a specific duration.

Must be installed in residential or care suites with:

- A fuel-burning appliance or flue
- A forced-air fuel-burning appliance that heats the suite directly
- A room, suite, or area sharing walls, floors, or ceilings with the suite
- A storage garage sharing walls, floors, or ceilings with the suite

Service rooms, each sleeping room, and public corridors serving residential suites require an alarm. In corridors, alarms must be installed so there is at least one in each section and no more than 25 m apart.

Exposed pipe temperature

Maximum allowed temperature reduced from 70°C to 52°C.

Ventilation systems

Updated to reduce health risks and include changes to outdoor air intake placement, building drainage system connections, maintenance access, and crawlspaces that are unconditioned and unoccupied.

Plumbing and septic systems (Parts 7,8)

Seismic forces

Plumbing systems in Part 3 buildings must now be designed to handle seismic forces.

Pipe sizing

The sizing of pipes has changed to Nominal Pipe Size (NPS), which refers to the commercially designated diameter of pipes, fittings, traps, and similar items.

Shut-off valves

- Pipes from a gravity water tank or private water supply must have a shut-off valve at the source.
- In all other buildings, shut-off valves are now required for the water supply to each fixture or group of fixtures in the same room.

Maximum flush cycle

New restrictions on the amount of water used in flush cycles for water closets and urinals. A table for maximum water flow rates has been added.

Rainwater harvesting

New provisions for non-potable rainwater harvesting systems:

- These systems can now be used for water closets, urinals, clothes washers, floor-mounted sinks, irrigation, hydronic systems, and more.
- Rainwater systems must be designed and installed according to good engineering practices.

Catch basins

New requirements for maintenance holes and catch basins. Increased developed length between building and first manhole from 30m to 75m.

Traps

- Interceptors can now be used as traps under certain conditions
- A floor drain that connects to a storm drainage system must be protected by a trap

Sumps and tanks

Provisions for sumps or tanks receiving subsurface water must now have a water- and air-tight cover.

Make-up water connections

These connections must be equipped with backflow prevention devices.

Hot water temperature control

Temperature control in hot water systems for care and childcare facilities reduced from 49 to 43 degrees Celsius.

Septic systems

- New standards for prefabricated septic and sewage holding tanks, including a safety screen below cleanout covers.
- Filter bed - The lines of distribution pipes or leaching chambers shall be evenly spaced over the surface of the filter medium to which the sanitary sewage is applied, with the outer most distribution pipe or leaching chamber not more than 600 mm (~23 5/8 in) from the perimeter of that area with a maximum spacing between the centre lines of the distribution pipes or leaching chambers
- Changes for Type A Dispersal Beds to clarify materials used for the 'mantle.'

Houses and small buildings (Part 9)

Stairs

Changes to stair design include:

- Nosing size adjustments
- New requirements for open stair risers
- Balusters must resist openings larger than 100mm under a 0.1kN load
- The triangular space between the guard and step is now restricted to a 150mm diameter opening

Windows

Windows on the second storey or higher in dwelling units must now:

- Have a guard, limiter, or be placed 900mm above the floor.

Fire safety

New provisions for fire separations and smoke-tight barriers, including:

- Requirements for smoke passage, testing, and firestops.
- New decibel level requirements for smoke alarm signals.

ICF foundation systems

Insulated Concrete Form (ICF) foundation walls now apply to buildings up to two storeys high with a maximum floor-to-floor height of 3m.

Wood frame construction

Updates include:

- New requirements for connections to preservative-treated wood
- Updated fastening and anchorage requirements
- Increased seismic and high-wind area considerations
- New provisions for rafters, ceiling joists, and braced wall panels The rafter-to-joist nailing chart has been updated with new spacing and increased nailing requirements

Insulation and vapour barrier

New requirements include:

- Insulation extending to full height of foundation and crawl space walls
- Additional vapour barrier materials allowed in foundations
- New testing and protection requirements for vapour barriers

Cladding

New rules for attaching siding to ICF forms and sheathing. Insulated vinyl and polypropylene siding are now permitted.

Snow loads

Snow load calculations are now required for roof steps over 2m where the upper roof is 1 in 6 or less and exceeds 600m².

Ventilation and vents

- New requirements for the distance between vent pipes and property lines, and below vented soffits (1.8m)
- Ventilation is now required for storage garages with more than 4 vehicles (previously 5 vehicles)

Carports

Revised to allow only one unit for carports and removed the provision for houses with two units.

Basement temperature

The indoor design temperature for unfinished basements has been lowered from 22°C to 18°C.

Change of use and Division C (Parts 10,11)

Farm buildings

Part 10 and 11 have been updated to include a Group G classification for farm buildings and houses with secondary suites.

Heating, Ventilation, and Air Conditioner (HVAC)

- New provisions for heating and air conditioning systems in buildings with up to four residential units.
- Additional provisions for HVAC systems in Group B2 buildings with a change of major occupancy, referencing Part 6.

Underpinning

A new requirement states that underpinning must be designed by a Professional Engineer. "Underpinning" is now defined as the process of strengthening or lowering the foundation of an existing building.

General review

New requirements have been added for the general review of agricultural buildings.

Occupancy requirements

An occupancy permit cannot be issued unless the building complies with section 168.3.1 of the Environmental Protection Act.

Two unit houses

Definitions revised

The term "house" has been removed from Division A 1.4.1.2, and a new definition for "Secondary Suite" has been added. A secondary suite is a self-contained dwelling unit located in a building with only one other dwelling unit, sharing common spaces, and both units together form a single real estate entity.

Lower ceiling heights

Ceiling height requirements for secondary suites are slightly lower than other residential spaces:

- Minimum ceiling height in residential areas is 2.3m, and 2.1m in basements
- Secondary suites can have a minimum ceiling height of 1.95m
- Ceiling heights over stairs under beams in secondary suites must be at least 1.85m

Egress

A new exception for egress has been added for houses with secondary suites, unless the second floor opens onto an exterior passageway.

Smoke alarms

Smoke alarms in secondary suites can now also be interconnected wirelessly throughout the entire building (previously hard wired - 9.10.9.5).

Fire safety barriers

A continuous, smoke-tight barrier made of 5/8" type X drywall is required on the underside of floors and on both sides of walls between units.

Heating systems

If the heating system is shared between units, the return air cannot be interconnected between them.

Thermostats

Each dwelling unit must have its own thermostat for independent control.

Fire protection

Combustible dust

This applies to standpipe requirements for grain handling and storage facilities and the design of hazardous areas. Combustible dust refers to particles that are flammable and can cause explosions.

Sprinkler system

- If a building or storey requires an automatic sprinkler system, it must be installed throughout all lower storeys. Additional requirements include:
- Additional assembly occupancies must now be sprinklered.
- Group B3 and Group D buildings of any size or height are now required to have sprinklers.

Fire alarm and detection system

A fire alarm system is required in buildings with sprinklers, except those with fewer than 9 sprinklers. Key requirements include:

- Waterflow detection must trigger separate indicators on the alarm system
- A manually operated alarm station must be on the roof of buildings with helicopter landing areas
- Audible alarms in sleeping areas of residential or care buildings must use low-frequency signals.

Cont'd over

Standpipe

- Hose connections must be located in exits and comply with NFPA 14 standards, with enough clearance for fire department hoses (3.2.5.10).
- For one-storey medium hazard occupancy (F2) buildings up to 1500m², an exemption applies (reduced area from 2000m² - 3.2.5.8)
- The water pressure at the top connection must be 690 kPa.

Category	2024	2012
Standpipe exemption for 1 storey F2 buildings	Max 1500m ²	Max 2000m ²
Water pressure at topmost hose connection	690 k Pa (3.2.5.9)	450 kPa
Hose connection location	Must be in exit	Exit or floor area
Hose stations	Required if unsprinklered. Within 5m of exits	Required within 3m of exits
Fire pumps (3.2.5.18)	NFPA 20 for all pumps	NFPA 20 if pressure>280kPa
Distilleries	38mm hose stations supplied by sprinkler piping	-

Hose stations

Hose stations must be within 5 meters of exits in unsprinklered areas. Special provisions include:

- In distilleries, small hoses can be supplied from sprinkler piping.
- In facilities where combustible dust is a fire hazard, fog or fine spray nozzles are required to avoid dust explosions.

Lighting and power

A minimum level of lighting is required along escalators, moving walks, controls, signs with visual information, doors with electromagnetic locks, and in universal washrooms and showers.

Emergency power

Buildings must now have two hours of emergency power for water-supplied fire suppression systems that rely solely on electricity.

Clarification for firefighting

Specific guidelines have been clarified for buildings that don't face a street and for buildings without dwelling units above another (Part 9 only).

Accessibility

Pedestrian entrances

All entrances to barrier-free storeys must be barrier-free and connected to a barrier-free path of travel (3.8.1.2).

Floor areas

In two-storey buildings, floor areas above or below the entrance storey do not require a barrier-free path unless the building has an elevator, large assembly areas, or a floor area exceeding 600m².

Access to parking

Changes now require barrier-free paths of travel to building entrances, exterior passenger loading zones, and parking areas, including storage garages.

Signage

Signs must indicate the location of barrier-free entrances, ramps, washrooms, elevators, parking spaces, and assistive listening systems. Tactile (Braille) signage is required.

Water bottle filling stations

At least one water bottle filling station must be barrier-free, with automatic controls, accessible height, and proper clearance for operation.

Power door operators

Doors with self-closing devices must also be equipped with power door operators (3.8.3.3).

Service counters

At least one service counter in public areas must be equipped with an assistive listening system or adaptive technology, and an amplification system if there's a barrier to communication, such as a glass screen (3.8.3.7).

Shower and dressing rooms

At least one universal dressing and shower room must be provided in areas with public or customer use, or in common-use employee areas (3.8.3.13).

Elevator requirements

The elevator's clear floor area must be 1.5m x 1.0m, with defined entry doors and gate sizes.

Radon mitigation

The following updates change the current three compliance options, now including a full system or a rough-in with the new requirements:

- All new houses must include a rough-in for a subfloor depressurization system, ensuring readiness for future radon mitigation if needed.
- Changes also clarify that buildings occupied for less than four hours a day may be exempt, with updates to Supplementary Standard SB-9 and a new Appendix Note.
- Most new residential buildings now require radon control rough-ins.
- Non-residential buildings must plan for potential radon entry.
- Prescriptive requirements for these rough-ins have been introduced.