

TWO UNIT HOUSES

2024 Ontario Building Code Changes

These are highlights only. A digital copy of the 2024 Building Code Compendium is available on the [provincial website](#).

MOSTLY HARMONIZED WITH THE NATIONAL CODE

Ontario's two-unit house provisions have mostly harmonized with the National Building Code's (NBC's) requirements for *secondary suites*, except for overall suite size provisions.

DEFINITIONS REVISED

Definition of *house* has been removed from Division A 1.4.1.2. New has been added for a *Secondary Suite*: *A self-contained dwelling unit located in a building or portion of a building of only residential occupancy that contains only one other dwelling unit and common spaces, and where both dwelling units constitute a single real estate entity.*

LOWER CEILING HEIGHTS

Currently ceiling heights in residential occupancies are a minimum of 2.3m and 2.1m in the basement, *secondary suites* are permitted to have not less than 1.95m. Lower ceiling heights over stairs located under beams serving a *secondary suite*, not less than 1.85m.

EGRESS

A new egress exception has been added for houses with secondary suites.

SMOKE ALARMS

New provision requiring smoke alarms in secondary suites with houses to be interconnected throughout the entire building.

STRUCTURAL

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NEW REQUIREMENTS ADDED FOR CALCULATIONS

Calculating vibration when machinery or equipment will be operated in a building and calculations for serviceability limit states.

ADDITIONAL REQUIREMENTS ADDED

Additional requirements added for vehicle loading areas, roofs with solar panels, attached canopies, seismic category table, and requirements for care of treated wood.

STORAGE RACKS

New subsection added for the design of storage racks.

SUBSURFACE INVESTIGATIONS

An engineer is now required for subsurface investigation, including groundwater conditions.

RADON MITIGATION

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ROUGH-IN FOR RADON MITIGATION REQUIRED

Ontario has harmonized with the NBC on mitigating the effects of radon – new houses require a rough-in for a subfloor depressurization system if subsequently required (changes will include corresponding revisions to reference Supplementary Standard SB-9 and a new Appendix Note to clarify buildings occupied for a few hours a day may not be required to follow suit).

ROUGH-INS

Rough-ins for radon control systems will be required in most new residential buildings. Non-residential buildings will also require planning for future radon ingress. Prescriptive requirements for a rough-in of radon control system have been added.

PLUMBING AND SEPTIC SYSTEMS

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PLUMBING

PLUMBING DESIGNED FOR SEISMIC FORCES

Plumbing systems in Part 3 buildings shall be designed and installed to accommodate seismic forces.

SHUT OFF VALVES

Pipes that convey water from a gravity water tank or from a private water supply system shall be fitted with a shut-off valve at the source of supply. All other buildings shut-off valves shall be provided on the water supply to every fixture or group of fixtures in the same room.

MAXIMUM FLUSH CYCLE

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

NEW PROVISIONS FOR NON-POTABLE RAINWATER HARVESTING SYSTEMS

For the purposes of distributing rainwater from a storage tank by the way of plumbing appurtenances. Permitted to be used for water closets and urinals, clothes washers, floor-mounted service sinks and laundry trays, trap primers, irrigation systems, hydronic systems, make-up water systems for heat rejection systems, or any other system where the rainwater is not ingested. These systems must be designed, fabricated and installed in accordance with good engineering practices.

CATCH BASINS

New requirements for maintenance holes and catch basins.

TRAPS

Interceptors can now be used as a trap under certain parameters. A floor drain that drains to a storm drainage system shall be protected by a trap.

SUMPS OR TANKS

Provisions added for sumps or tanks that receive subsurface water from a subsoil drainage pipe, it shall be provided with a water-and-air-tight cover.

MAKE-UP WATER CONNECTIONS

Make-up water connections shall be equipped with backflow prevention devices.



SEPTIC SYSTEMS

Ontario has updated its standard for prefabricated septic tanks and sewage holding tanks, which will include a safety screen below cleanout covers. Ontario has also made changes related to Type A Dispersal Beds to distinguish materials used for the 'mantle.'

HOUSES AND SMALL BUILDINGS

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STAIRS

Additional provisions and changes to stairs, change in size for nosing, new requirements for open stair risers.

WINDOWS

Most windows located on the second storey or above in dwelling units will now require a guard, a limiter, or be located 900mm above the floor.

FIRE SAFETY

Additional provisions for fire separations and smoke-tight barriers to include requirements for passage of smoke, testing and firestops. Decibel level of audible signaling device added for smoke alarms.

ICF FOUNDATION SYSTEMS

ICF foundation walls have been updated to include up to 2-storey buildings instead of just houses.

NEW REQUIREMENTS IN WOOD-FRAME CONSTRUCTION

Connections to preservative-treated wood have been added. New tables and fastening requirements have been added for fastening sheathing and subflooring. Anchorage requirements for buildings have been increased based on seismic region. New anchor bolt spacing table added. All exterior steel beams must now be primed. New support requirements for braced wall panels. New subsection added relating to bracing requirements for wood frame buildings. New provisions added relating to the installation of rafters and ceiling joists. The rafter-to-joist nailing chart has been updated to include 300mm on centre rafters and increased nailing requirements. Updated to include additional requirements for high winds and seismic areas.

INSULATION/VAPOUR BARRIER

Insulation requirements increased to full height of foundation and crawl space walls. Protection from mechanical damage provisions amended. Additional vapour barrier materials are permitted in foundations. Requirements have been added regarding the protection of vapour barrier. Additional requirements have been added to vapour barrier conformity testing.

CLADDING

New requirements for the attachment of siding to ICF forms. Additional siding types are permitted to be attached directly to some types of sheathing. New subsection for polypropylene siding.

FIRE PROTECTION

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COMBUSTIBLE DUST

Relates to standpipe requirements for grain handling and storage facilities as well as design of hazardous areas. Definition for Combustible Dusts added to Div. A 1.4.1.2 Dusts and particles that are ignitable and liable to produce an explosion.

SPRINKLER SYSTEM

If a storey in a building or a floor area is required to have an automatic sprinkler system installed throughout, the automatic sprinkler system shall also be installed throughout all lower storeys in the building. Buildings classified as Assembly Building in conformance with 3.2.2.21, 3.2.2.22, 3.2.2.29, and 3.2.2.32 are now required to be sprinklered. Buildings classified as Group B3 any height, any area and sprinklered now added in 3.2.2.42. Buildings classified as Group D, any height, any area, is now required to be sprinklered.

FIRE ALARM AND DETECTION SYSTEM

A fire alarm system shall be installed in buildings in which an automatic sprinkler system is installed, with the exception of a building containing fewer than 9 sprinklers. The actuation of each waterflow detecting device shall be separately indicated on the fire alarm system annunciator. Where a fire alarm system is installed, a manually operated fire alarm station shall be installed on the roof at each exit from a helicopter landing area. Audible signal devices in sleeping rooms in a building of residential or care occupancy shall emit a low frequency signal.

HOSE STATIONS

Hose connections shall be located in exits, in accordance with NFPA 14, and shall be provided with sufficient clearance to permit the use of a standard fire department hose key. Hose stations shall be located in the floor area within 5m (used to be 3m) of exits and at other locations to provide coverage of the entire floor area. Where a building or part thereof is used as a distillery and the building is sprinklered, a small hose (38 mm) stations are permitted to be supplied from interior sprinkler piping. Where a hose station is provided in grain handling and storage facilities in which combustible dusts are produced in quantities or concentrations that create an explosion or fire hazard, fog and fine spray nozzles shall be used

instead of nozzles that discharge a solid stream of water to prevent combustible dusts from being raised into suspension.

LIGHTING AND POWER

MINIMUM LEVEL OF ILLUMINATION

The minimum level of illumination is now required for the entire length of escalators and moving walks, controls, signs displaying visual information, locations where doors are equipped with an electromagnetic lock, universal washrooms and showers.

EMERGENCY POWER

Two (2) hour emergency power now required for equipment that supplies water for fire suppression, if the supply depends solely on electrical power supplied to the building.

LARGE FARM BUILDINGS

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NEW BUILDING CLASSIFICATION

All farm buildings that are more than 600m² in building area or more than 3 storeys in building heights used for major occupancies classified as Group G, Division 1, 2 or 3 *agricultural occupancies with no human occupants*, and

Farm buildings or part of buildings containing an *agricultural occupancy* that has an occupant load of not more than one person per 40m² shall be classified according to their *major occupancy* as belonging to Group G, Division 1, 2, 3 or 4.

Small Farm Buildings that are not more than 3 storeys in building heights and not more than 600m² in building area used for major occupancies classified as Group G Division 1, 2 or 3 agricultural occupancies, shall conform to the *National Building Code of Canada*.

GROUP	DIVISION	DESCRIPTION OF AGRICULTURAL OCCUPANCIES
G	1	High-hazard agricultural occupancies
G	2	Agricultural occupancies not elsewhere classified in Group G
G	3	Greenhouse agricultural occupancies
G	4	Agricultural occupancies with no human occupants

ADDITIONAL HIGHLIGHTS

FIRE PROTECTION

Fire alarm provisions, firefighting provisions (similar to Part 3 content)

SAFETY WITHIN FARM BUILDINGS

Travel distance, exits, emergency lighting

HAZARDOUS SUBSTANCES PROCESSES AND EQUIPMENT

Exhaust ventilation and explosion venting, liquid manure storage, storage of pesticides, cannabis operations

STRUCTURAL LOADING

Loads due to use and occupancy, snow and earthquake loading (similar to Part 4 content)

HVAC

Ventilation for greenhouses, silos, and grain storage bins, below-floor liquid manure (similar to Part 6 content)

ENVIRONMENTAL AND HVAC

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ENVIRONMENTAL

AIRTIGHTNESS

New requirements and details added related to the installation of air barriers and requirements for airtightness. Below grade airtightness requirements updated to include radon and soil gases.

HVAC

NEW SETBACKS

Outdoor air intakes shall be installed not less than 0.3m above roofs, landscape grades or other surfaces, taking into account anticipated snow accumulation levels. Provisions added for required setbacks for vented products of combustion.

EVAPORATIVE HEAT REJECTION SYSTEMS

This has been added to minimize the potential proliferation and transmission of disease-causing micro-organisms.

AIR HANDLING SYSTEM

Air handling systems shall incorporate smoke detectors.

CARBON MONOXIDE ALARM

A carbon monoxide alarm must now be installed in a suite of residential occupancy or care occupancy where:

- there is a fuel burning appliance or flue installed,
- a forced air fuel burning appliance provides heated air directly to the suite,
- is located in a room or suite or area that share a common wall or floor or ceiling assembly,
- or a storage garage shares a common wall or floor to ceiling assembly with the suite.

When a carbon monoxide alarm is required to be installed, it should be installed in service rooms, each sleeping room, in public corridors serving suite of residential occupancy. Where carbon monoxide alarms are required in a public corridor, it shall be installed so that there is at least one alarm in each portion of the corridor and not more than 25m apart.

DEFINED TERMS

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There are approximately 20 new definitions added to Division A 1.4.1.2:

Adfreezing means the adhesion of soil to a foundation unit resulting from the freezing of soil water.
(Also referred to as “frost grip”)

Agricultural occupancy (Group G) means the occupancy of a building or part thereof that is located on land that is associated with and devoted to the practice of farming, and is used for the purpose of producing crops, raising farm animals, or preparing, marketing, storing or processing agricultural products.

Agricultural occupancy with no human occupants (Group G, Division 4) means an agricultural occupancy that is not intended to be occupied by persons under normal use and is generally used for the storage of agricultural materials and by-products.

Alloyed zinc means an alloy of zinc having the corrosion resistance and physical properties of an alloy containing 0.15% titanium, 0.74% copper and 99.11% zinc, and so tempered as to be capable of being formed into the shape required for watertight joint.

Back pressure means pressure higher than the supply pressure.

Braced wall panel means a portion of a wood-frame wall where bracing, sheathing, cladding or interior finish is designed and installed to provide the required resistance to lateral loads due to wind or earthquake.

Braced wall band means an imaginary continuous straight band extending vertically and horizontally through the building or part of the building, within which braced wall panels are constructed.

Carbon monoxide alarm means a carbon monoxide detection device with an integral audible alarm device designed to sound an alarm within the room, suite or space in which it is located when the concentration of airborne carbon monoxide exceeds a pre-determined level and duration.

Combustible dusts means dusts and particles that are ignitable and liable to produce an explosion.

Demountable stage means a structure that

- (a) consists of one or more platforms together with any wall, roof or other structures attached to or located on any of the platforms,
- (b) is intended to be used for public or private performances or events, other than performances or events associated with movie or television productions,
- (c) is intended to be erected, assembled or installed for a limited specified time.
- (d) is capable of being dismantled at its location and moved to be reconstituted elsewhere or is erected for one-time use,
- (e) is not located inside a fully enclosed building
- (f) is primarily for use by performers and workers, and
- (g) may or may not be mounted on wheels

Demountable support structure means any structure that

- (a) is capable of supporting banners, stage sets, props, sound equipment, lighting equipment or other equipment,
- (b) is intended to be used for public or private performances or events, other than performances or events associated with movie or television productions,
- (c) is intended to be erected, assembled or installed for a limited specified time,
- (d) is capable of being dismantled at its location and moved to be reconstituted elsewhere or is erected for one-time use,
- (e) is not attached to or located on a demountable stage,
- (f) is not located inside a fully enclosed building,
- (g) is primarily for use by performers and workers, and
- (h) may or may not be mounted on wheels.

Greenhouse agricultural occupancy (Group G, Division 3) means an agricultural building or part thereof that is primarily constructed of roofs and walls designed to transmit natural light.

High-hazard agricultural occupancy (Group G, Division 1) means an agricultural occupancy containing sufficient quantities of highly combustible and flammable or explosive materials which, because of their inherent characteristics, constitute a special fire hazard.

Mechanically vented (as applying to a fuel-fired space- or water-heating appliance) means an appliance and its combustion venting system in which the products of combustion are entirely exhausted to the outdoors by a mechanical device, such as a fan, blower or aspirator, upstream or downstream from the combustion zone of the appliance, and the portion of the combustion venting system that is downstream of the fan, blower or aspirator is sealed and does not include draft hoods or draft control devices.

Nominal pipe size (NPS) means the nominal diameter by which a pipe, fitting, trap or other similar item is commercially designated.

Protected floor space means that part of a floor area protected from the effects of fire and used as part of a means of egress from an interconnected floor space.

Ramp means a path of travel having a slope steeper than 1 in 20.

Rim joist means the outermost member in floor framing, other than blocking, be it parallel, perpendicular or on an angle to the floor joists.

Secondary Suite means a self-contained dwelling unit located in a building or portion of a building of only residential occupancy that contains only one other dwelling unit and common spaces, and where both dwelling units constitute a single real estate entity.

Underpinning means the process of strengthening the foundation or lowering the level of a foundation of an existing building.

CHANGE OF USE, RENOVATION AND DESIGN

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CHANGE OF USE

FARM BUILDINGS

These parts have been modified to include Group G classification for farm buildings and to include houses with secondary suites.

HVAC

Additional provisions for heating and air conditioning for buildings with not more than four residential units. New provisions for change of major occupancy to Group B2 HVAC systems.

DIVISION C DESIGN

UNDERPINNING

Added requirement for underpinning to be designed by Professional Engineer and defined term underpinning.

GENERAL REVIEW

New requirements for Agricultural Building General review.

DEMOLITION PERMIT

The exemption requirements revised to only exempt farm buildings on farms, rather than all buildings on farms.

OCCUPANCY REQUIREMENTS REVISED

An occupancy permit cannot be issued unless compliance with section 168.3.1 of the Environmental Protection Act has been achieved.

ACCESSIBILITY REQUIREMENTS

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PEDESTRIAN ENTRANCES TO BE BARRIER-FREE

All entrances to a barrier-free storey of a building shall be barrier-free and shall connect to a barrier-free path of travel. (3.8.1.2)

ACCESS TO PARKING AREAS

Access to parking areas has been changed to Barrier-Free Paths of Travel to Building Entrances, Exterior Passenger Loading Zones, and Access to Parking Areas. A sentence has been added to include storage garages.

IMPROVEMENTS TO SIGNAGE

Signs providing visual information shall be installed to indicate the location of barrier-free entrances, ramps, exterior passenger loading zones, barrier-free washrooms, showers, elevators, parking spaces and assistive listening systems or adaptive technologies. Tactile information signs required (Braille).

WATER-BOTTLE FILLING STATIONS

Provisions added for water-bottle filling stations, at least one shall be designed barrier-free to be equipped with controls that are automatic, located on a barrier-free floor level, accessible height and clearances for operation.

POWER DOOR OPERATORS

Doors equipped with a self-closing device shall be equipped with power door operators. (3.8.3.3)

SERVICE COUNTERS

In each location where information, goods or services are provided to the public at service counters in buildings of assembly occupancy, at least one of the service counters shall be equipped with:

- (a) an assistive listening system or adaptive technology, and
- (b) an amplification system, where there is a barrier to communication, such as a glass screen. (3.8.3.7)

SHOWER ROOM AND DRESSING ROOM

At each location where a showering facility is provided for use by the general public or customers, or as part of a common-use area for employees, at least one universal dressing and shower room shall be provided. (3.8.3.13)