

Legal Basement Apartment Requirements

City of Cambridge

Basement Apartment is a separate self-contained suite containing bathroom and kitchen facilities that is subordinate to a legally existing residential home. Basement Apartment is not a "Duplex" as per the [City of Cambridge](#) Zoning By-Laws.

Newly created basement apartments provide additional affordable rental apartments in the established neighbourhoods of the City of Cambridge. Basement apartments provide the added income to make home ownership more affordable in the City of Cambridge. Constructing a legal basement apartment is an economical and sustainable use of existing infrastructure and a remedy for urban sprawl in the City of Cambridge. Construction of new basement apartments is already occurring throughout established urban neighbourhoods in the City of Cambridge.

Homeowners in the [City of Cambridge](#) renovate their homes to have a rental apartment in the basement to accommodate changing household needs and financial situations. Legal basement apartments in the City of Cambridge contribute to the health, vitality, and value of neighbourhoods, including improving property values.

Legalizing the basement apartment ensures that the basement apartment meet all required fire, building and housing standards including the Ontario Building Code, Ontario Fire Code and the municipal by-laws of the [City of Cambridge](#). A legal and safe basement apartment will improve homeowner's relationship with tenants, neighbours and the City of Cambridge.

Basement apartments that are not legal, pose a fire risk and other safety concerns such as not enough building exits, fire separations between units, working smoke alarms, carbon monoxide detectors and illegal and unsafe electrical and plumbing connections.

On June 12, 2018, the City of Cambridge approved the Zoning By-law amendment - City of Cambridge Zoning By-law 108-18 - to address all the concerns with basement apartments in the City of Cambridge.

As per the Zoning By-law 108-18, the requirements to have a basement apartment as follows:

- Minimum Required Lot Frontage: 11m (36ft)
If it is a corner lot, the required lot frontage is 15m (49ft-3in)
- Minimum Required Lot Area: 450sq.m.(4,844sq.ft.)
- Maximum Permitted Floor Area of the basement apartment: 40% of total floor area of the house
- Provide direct entrance to basement apartment from the side yard or rear yard
- Minimum setback from side lot line to exterior staircase: 1.2m
- Maximum permitted number of bedrooms in the basement apartment: 2
- Required additional parking for one-bedroom basement apartment:
1 parking space,
- Required additional parking for two-bedroom basement apartment:
2 parking spaces
- Tandem parking permitted and parking between regulatory building line and street line.

A building permit is required to create a basement apartment within an existing house in the [City of Cambridge](#).

Requirements for a basement apartment in the City of Cambridge are based on the 2012 [Ontario Building Code](#) Part 9 (as updated January 1, 2018) and Part 11 if the house has been in existence for more than 5 years.

When applying for a building permit to have a legal basement apartment the following must be submitted:

- ✓ Application Form for a building permit to Construct a basement apartment (The City of Cambridge requires 3 weeks to review the application for the building permit)
- ✓ Building Permit fees required by the City of Cambridge: \$0.45 per sq.ft. of previously finished areas being modified, and unfinished areas being finished.

- ✓ Security Deposit of \$250 deposit (refundable upon final sign-off for the building permit by the City of Cambridge Building Inspector)
- ✓ Site plan drawn to scale showing the required parking spaces and all dimensions and location of existing buildings.

Required Stamped Engineering Drawings to obtain the Building permit

- ✓ Existing floor plans for all floors showing window/door sizes & locations, room names, stair location, wall locations & construction, etc (for all floors).
- ✓ Proposed floor plans showing new wall construction, fire separations (new and existing), new windows and doors, room names, plumbing locations for kitchen, bathrooms & laundry, ceiling heights (overall, under beams and ducts), etc.
- ✓ Elevations (applicable if adding egress windows/doors with glazing)

Requirements of City of Cambridge Zoning By-law 108-18

- A basement apartment is permitted to be in a Detached house, Semi Detached or Linear Townhouse or in an accessory structure
- A maximum of 2 bedrooms is permitted within the basement apartment (any room with a door and closet is deemed a bedroom).
- The principle dwelling and secondary unit must be connected to municipal sewer and water services of adequate size (upgrading may be required). If on private water and sewer, proof must be provided to show that they are capable to accommodate the secondary unit, satisfactory to the City of Cambridge.

<u>Fire Resistance Rating</u>	<u><5 years old</u>	<u>>5 years old</u>
Floor Fire Separation	45min	30min /15min
Wall Fire Separation	45min	30min
Supporting Structure		
L.B. Walls, Beams & Columns	45min	30min

- Exiting to meet the requirements of the Ontario Building Code. If an exit is shared by the basement apartment, a larger egress window is required, and interconnected smoke alarms are required in every bedroom and common space throughout the entire house.

- An egress window is required in basement units containing a bedroom except for walk-out basement conditions, where direct access to exterior is provided to the basement apartment.
- A minimum ceiling height in existing basements of 6'-5" is required (including under beams and ducts) in the path of travel from all rooms to each exit.
- Smoke alarms are required in each new bedroom and ALL common areas on each floor. Smoke alarms are required to be interconnected (within unit or throughout entire building) with visual signaling.
- Carbon monoxide detectors are required on each floor serving a bedroom.
- If the basement apartment is sharing a furnace, a smoke duct detector is required to be installed in the supply or return air plenum which will shut off the furnace if smoke is detected.
- A furnace/boiler room not able to achieve a continuous fire separation is required to install a fire sprinkler system which is to be installed by a certified sprinkler installer. A backflow device and a 25mm water service upgrade may be required for the sprinkler system.
- Any doors between basement apartment and the main house must have a minimum 20 min fire protection rating with a self-closing device.
- All penetrations through fire separations are required to be fire stopped with an approved fire stop device. Existing penetrations are acceptable in existing fire separations.
- The basement apartment is required to have a Kitchen, Living Room, Dining Room, Bathroom and a Bedroom. These areas can be used separate or as combined spaces.

<u>Individual Room Area</u>	<u>Minimum Area Required</u>
Living Room	145sq.ft. (13.5sq.m.)
Dining Room	75sq.ft. (7.0sq.m.)
Kitchen (1 bedroom)	40sq.ft. (3.7sq.m.)
Kitchen (2 bedrooms)	45sq.ft. (4.2sq.m.)
Master Bedroom (closets)	95sq.ft. (8.8sq.m.)
Master Bedroom (no closets)	105sq.ft. (9.8sq.m.)
Second Bedroom (closets)	65sq.ft. (6.0sq.m.)

Second Bedroom (no closets) 75sq.ft. (7sq.m.)

Bathroom sufficient size to accommodate toilet, sink, bathtub or shower

Combo Room Area

Minimum Area Required

Bachelor Unit

(Living, Dining, Bedroom, Kitchen)	145sq.ft. (13.5sq.m.)
Living, Dining (1 bedroom)	153sq.ft. (14.25sq.m.)
Living, Dining, Kitchen (1 bedroom)	193sq.ft. (17.95sq.m.)
Living, Dining (2 bedroom)	180sq.ft. (16.75sq.m.)
Living, Dining, Kitchen (2 bedroom)	226sq.ft. (20.95sq.m.)

Natural Lighting

Minimum Window Sizes

Rooms

< 5 Years Old

> 5 Years Old

Living and Dining Room	10%	5%
Bedrooms and Other Finished Rooms	5%	2.5%
Kitchen, Washrooms, Laundry and		
Basement Rec room	0%	0

Door Uses

Minimum Size Required

Entrances and Utility Rooms	32" x 78"
Bathroom, Washroom, and Closets	24" x 78"
Bedrooms and Rooms not mentioned	30" x 78"

- A space for laundry facilities are to be provided within the basement apartment or must be available in a conveniently accessible common space.

- An exterior light is required at the separate exterior entrance into a basement apartment
- Lighting is required for all stairs with 3-way switches.
- If a separate basement side entrance is proposed, check with the municipal zoning plans examiner to determine whether the separate basement side entrance is permitted in the location proposed on the property.

To legalize a separate basement side entrance typically the following drawings and plans are required.

- Legal Survey
- Existing and proposed construction details including foundation & exterior wall drawings, location and size of basement separate side entrance, stair and landing dimensions, drain location, locations of proposed underpinning, locations of any support columns, and structural framing above, detail drawings of separate side entrance stair construction, location and size of separate side entrance door, size of lintel(s) required over the separate side entrance door, location of exterior side entrance light and light switch, stages of proposed underpinning, numbered to show sequence of work and distance to foundations of adjacent buildings, including depth of the basement footings of the adjacent building.
- Detail drawings of any drain connection to storm sewer, or sump pit.

Basement foundation walls with new openings wider than 3'11" or walls having openings more than 25% of its length shall be considered laterally unsupported and may require a Professional Engineer's review

Where the depth of the basement separate side entrance causes the existing foundation to have less than typical 4 ft of frost coverage the basement foundation must be extended to provide the required minimum 4 ft of frost protection. Where the proposed underpinned foundation is to be constructed below the level of the basement footings of the adjacent building and within the angle of repose of the soil, the underpinning and related construction must be designed by a Professional Engineer. The moisture in the soil freezes during the winter and cause frost upheaval.

The level of frost penetration and the amount of moisture in the soil (from poor grading and high groundwater table) determine the amount of frost pressure.

To avoid the 4ft depth of excavation excavate to the bottom of the existing basement footing to provide frost protection, required frost protection could be attained by excavating 1ft below the walkout grade, installing vertical insulation against the basement footing, extending insulation horizontally for a length equal to the frost depth (Typically 4 ft) away from the bottom of the footing, overlapping the insulation at the horizontal and vertical transition and sloping the insulation away from the basement foundation for heat retention under the footing and proper drainage away from the footings.

Adequate insulation should be used to retain the heat immediately adjacent to the footing, which comes from the heat flowing from inside of the house to the soil beneath and beside the footing; and geothermal heat from the deep soil—heat stored in the earth below the frost level. Heat loss at corners is most pronounced because it occurs in two directions.

Horizontal insulation installed in “wings” sloping outward, around the perimeter of the slab, extends the heat flow path; controls heat loss; and moves the line of frost penetration away from the footing.

Adequate measures must also be taken to avoid damage to the insulation during construction. While in warmer parts of Ontario, only a 4 ft (1.2 m) wing will be required; in more severe climates, the width of the wing might need to extend out 6 ft (1.8 m) from the foundation perimeter. Use Expanded Polystyrene Type II or III, or Extruded Polystyrene Type IV insulation. The perimeter drainage should be extended out around the walkout and reconnected at both ends. Ensure perforated drainpipe remains 6 inches above weeping tiles with gravel in between to act as a filter for the weepers.

Removal of Load Bearing Walls

Removal or opening load bearing walls compromise the structural integrity of the walls and floors since uniform distributed loading is replaced with two point loads due to the removal or opening of load bearing wall. Also, two new point loads on the floor caused by the removal or opening of load bearing wall require additional proper support underneath the floor.

If plumbing, electrical and HVAC duct located in the load bearing wall, the plumbing, electrical and HVAC duct located in the load bearing wall should be modified and relocated.

Relocation of plumbing, electrical and HVAC duct located in the load bearing wall may sometimes results in alterations to the interior ceilings and walls including undesirable bulkheads.

Stamped Engineering Drawing Requirements for a Building Permit Application to Remove a Load Bearing Wall

- Structural Engineer stamped point load calculation including how the load will be transferred from the floor where the wall is being removed to the floor below.
- Plan view (For the floor level where the wall is being removed)
- Direction of the existing floor joists span
- New beam sizes and supports
- Distance measured from the new beam to the next wall or beam that is supporting the floor joists (for each side of the beam)
- Plan view (For all floor levels above and below the floor where the wall is being removed)
- Direction of the existing floor joists span
- All existing beams below the new posts from above and their sizes and post locations
- Distance measured from the existing beam to the next wall or beam that is supporting the floor joists (for each side of the beam)

We will visit your basement apartment, measure and prepare proper drawings and plans to obtain the municipal building permit to construct or legalize your basement apartment. The required engineering drawings to obtain building permit to construct or legalize a basement apartment are prepared by licensed professional engineers (P.Eng) and will cost \$1,895^{+HST}.

The required engineering drawings and plans to obtain building permit to construct or legalize a separate entrance to the basement apartment, will cost \$1,595^{+HST}. \$500 discount will apply if we prepare the drawings to legalize the basement apartment at the same site.

The required engineering drawings and plans to obtain building permit to remove a load bearing wall, will cost \$1,295^{+HST}. \$500 discount will apply if we prepare the drawings to legalize the basement apartment at the same site.

If required by the Municipal Authorities, HVAC Heat Loss/ Gain and Duct Sizing Calculations by a Licensed Professional Mechanical Engineer will cost additional \$750^{+HST}.



Land & Building Experts

Professional Engineers Ontario

Certificate of Authorization # 100205934

647 340 8649 – Land Line – Call 24/7

416 727 8336 (Text Messages)



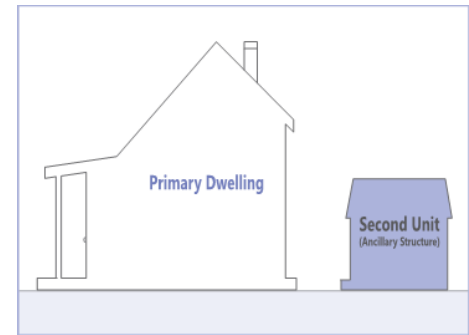
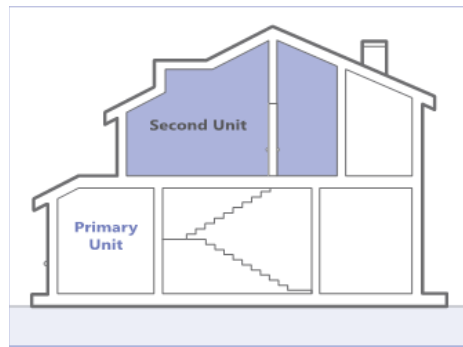
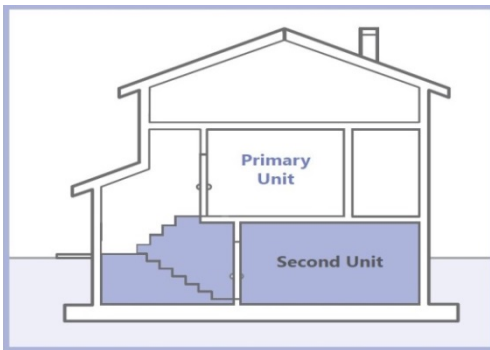
Secondary Dwelling Units City of Cambridge

April 10, 2019

Secondary Dwelling Units

Definition: Secondary residential unit is a separate dwelling unit containing bathroom and kitchen facilities that is subordinate to a legally existing residential structure

- Secondary Dwelling Unit is **not** a Duplex



Benefits



- **Benefits:**

- Additional (affordable) rental units
- Assists with home ownership costs
- Intensification within built up areas



- **Considerations:**

- Ontario Building Code Requirements
- Cost of installing safe, legal units
- Neighbourhood compatibility
(e.g. Parking, landscaping, amenity area)



Policy Basis

- **Planning Act:**
 - Directs Municipalities to create Official Plan policies to allow secondary units
 - No appeal of 2nd unit OP policies / ZBL regulations
- **2014 Provincial Policy Statement:**
 - Requires Municipalities to facilitate residential intensification, including second units
- **Provincial Growth Plan:**
 - Provide a diverse range and mix of housing options, including second units and affordable housing.
- **Regional Official Plan:**
 - Encourages Municipalities to permit, where appropriate, individual lot intensification, such as secondary apartments
- **Cambridge Official Plan:**
 - Permitted within in all residential zones within the existing home or attached structure

History



Previous Options:

- Site-specific zoning to permit secondary unit on property
- Secondary unit legally existed between July 14, 1994 and May 21, 1996

(need to prove existence)

June 12, 2018:

Council approves Zoning By-law amendment (By-law 108-18)



Purpose



- By-law 108-18 – Removes need for site-specific re-zoning for each secondary unit
- Require a Zoning By-law check to ensure all requirements are met
- **Still Require a Building Permit**
(must comply with Ontario Building Code)

Regulations: Within Existing Structure

- **Minimum Lot Frontage:** 11m
- **Minimum Corner Lot Frontage:** 15m
- **Minimum Lot Area:** 450m²
- **Floor Area Maximum:** 40% of total floor area of the principal dwelling
- **Entrance:** Direct entrance to secondary unit may be provided from the interior or exterior side yard or rear yard
- **Min. setback** from side lot line to exterior staircase: 1.2m
- **Maximum number of bedrooms:** 2
- **Parking:** One Bedroom : 1 space, Two Bedroom: 2 spaces. (Tandem Parking permitted and parking between regulatory building line and street line.)

Regulations: Within an Accessory Unit



- **Not intended for required parking**
- Not exceeding 4.5m in height
- Maximum 1 storey
- Maximum 10% of lot area
- Not permitted where a garden suite, secondary dwelling unit or home occupation exist on the same lot
- Not permitted within a floodplain

Regulations : General



- Not permitted where a garden suite, secondary dwelling
- Not permitted within a floodplain
- Not permitted where principal dwelling used for a home occupation

Process



- **Check with Planning Division re: zoning regulations** (must meet all other zoning regulations)
- **Apply for Building Permit** (guideline available)
- Must comply with Ontario Building Code
- Potential Funding: Ontario Renews Program (Region of Waterloo) – forgivable loans

Possible Funding



Ontario Renews Program

(administered by the Region of Waterloo)

- forgivable loans up to \$25,000 (10 year term)
- Maximum House value: \$403,645
- Maximum income levels (2018):

– 1 person	\$33,210
– 2 persons	\$41,343
– 3 persons	\$50,827
- (See Region of Waterloo Website for details / application forms)

Building Permit Submission



Application package for complete submission:

- Application form for a Permit to Construct or Demolish
- Permit fees paid at time of permit submission
 - Rate is per square foot, and
 - Refundable deposit of \$250.00
- Schedule 1: Designer Information form
- Two sets of drawings

Drawings



- Site plan or Survey
 - ✓ Show the required parking spaces and all dimensions
 - ✓ Show the location of existing/proposed buildings and all setbacks (if applicable)
- Existing floor plans:
 - ✓ Include all floor levels
 - ✓ Window and door sizes and locations
 - ✓ Room names, stair location, wall locations
 - ✓ Identify proposed construction.
- Proposed floor plans:
 - ✓ New wall construction, fire separations, new windows and doors, room names, plumbing locations for kitchen, bathrooms & laundry, ceiling heights (overall, under beams and ducts), etc.
 - ✓ Elevations

Designer Requirements



All submitted drawings must be prepared by either the owner, or prepared and reviewed by a qualified designer, architect, professional engineer or a combination.

Some drawings must be designed by a professional engineer when the design falls outside of the prescriptive requirements of the Building Code.

The Building Code requires qualified, registered designers, who review and take responsibility for design activities, to include the following information on documents submitted for permit:

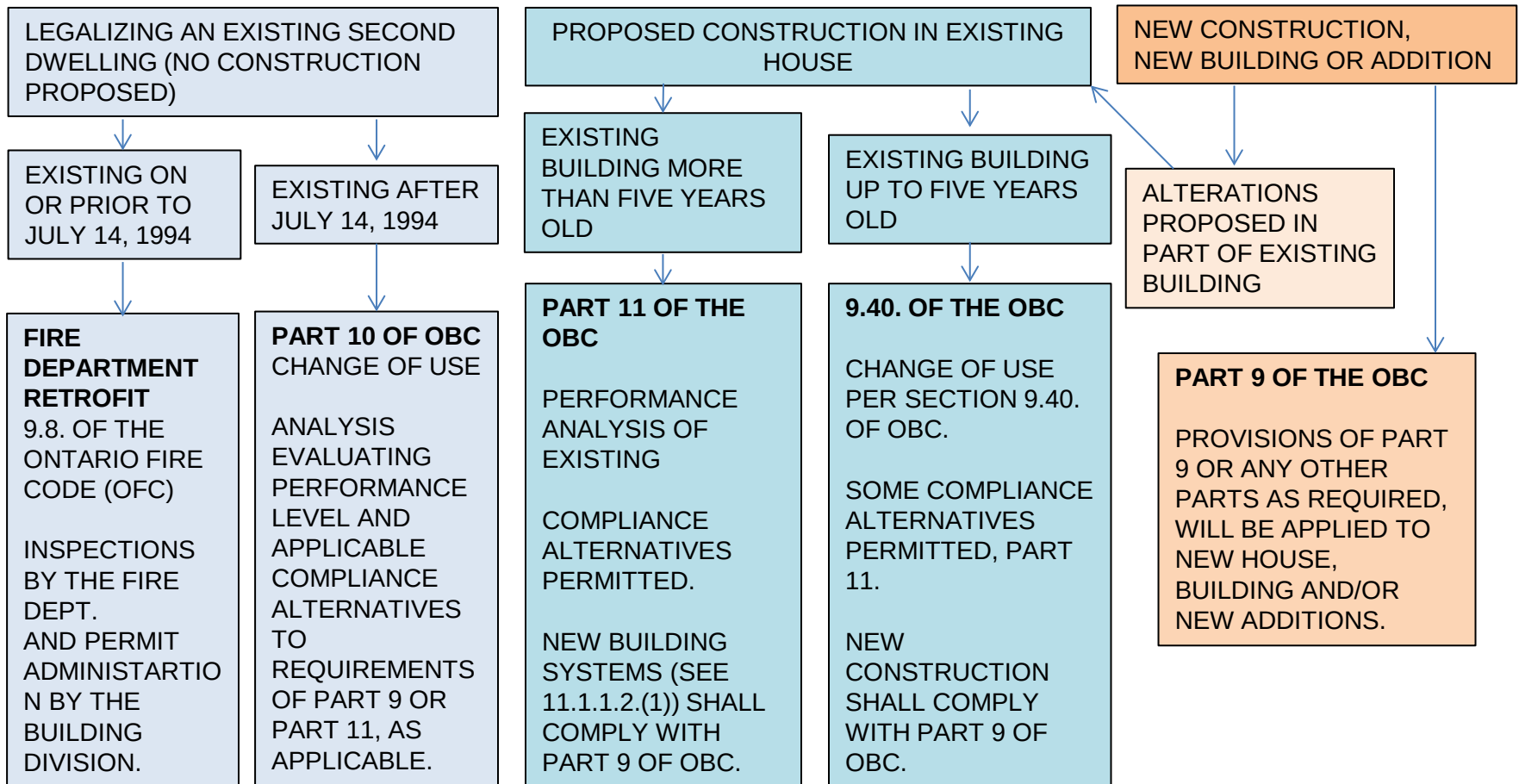
- The name and building code identification number (BCIN) of the registered firm.
- A statement that the qualified person has reviewed and taken responsibility for the design activities.
- The name and BCIN of the qualified person.
- The signature of the qualified person.

Building Permit Compliance



TWO DWELLING HOUSE

(Secondary Suite, Secondary Dwelling Unit)



Design Considerations



Design of areas, spaces and doorways

- Room sizes and ceiling heights

Natural light and ventilation – doors and windows

- Window areas, door and window construction

Stairs, handrails and guards

Means of egress, exiting and signs

- Exit doorways, egress from bedrooms, emergency lighting

Fire safety and protection requirements

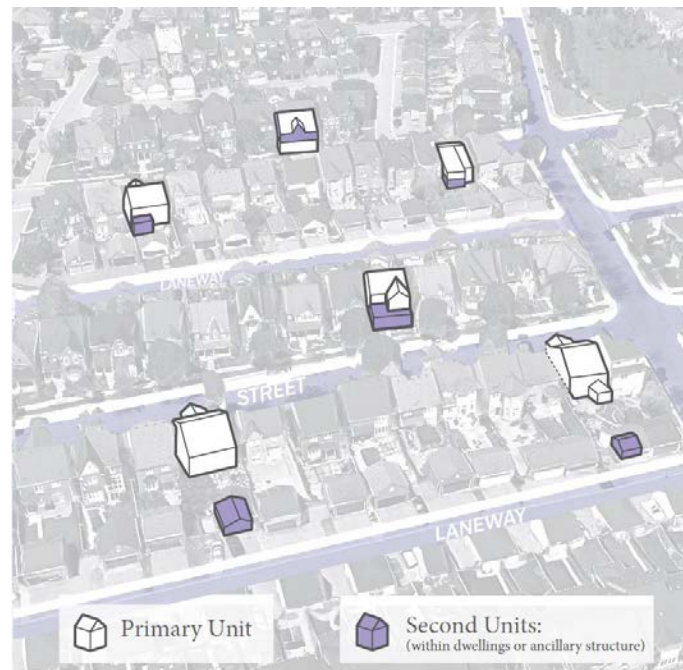
- Fire separations, smoke alarms, sprinklering

Health and safety – building services

- Plumbing, HVAC, mechanical ventilation

Thank You!

Questions?



Adding a Second Unit in an Existing House

Ontario Building Code
Information

This document was developed with the input of:

- Ministry of Municipal Affairs and Housing
- Large Municipal Chief Building Officials Group
- Ontario Building Officials Association
- Ontario Association of Fire Chiefs

Disclaimer: This document is provided for convenience only and should not be relied upon as a substitute for construction, engineering, architectural or legal advice. The Ministry of Municipal Affairs and Housing does not assume responsibility for errors or oversights resulting from use of this document.

Adding a Second Unit to an Existing House

Adding a second unit is a great way to provide independent living for a family member or make a little extra money to help pay off the mortgage. But there are things you need to consider as you decide whether to build a second unit. Is your home detached, semi-detached or a rowhouse that is more than five years old? Are you considering renovating it to add a second unit? If the answers are yes, then this guide can help you. It fulfills a commitment made in Ontario's Housing Supply Action Plan to provide homeowners with a user-friendly guide and checklist to help you build legal second units.

Note: If your house is less than five years old, different Building Code rules apply. **Contact your local building department** for more information.

Before deciding to add a second unit, it is important that you **first speak with your local municipal planning and building departments**. They can tell you whether or not you can add a second unit on your property and answer any questions that you have related to local zoning, the Building Code and other by-laws.

There are several important factors you need to consider before adding a second unit, including:

- Applicable municipal zoning requirements
- Necessary building permits
- Designing your unit to comply with the Building Code
- Required building inspections during construction

It is important to meet planning and Building Code requirements. Doing so will help ensure that your house and second unit are legal, safe and healthy places to live.

To help you through the sometimes complex design and building process, we recommend you hire a qualified professional such as an architect, professional engineer or a designer registered with the Ontario government. These professionals and your builder can act



What is a second unit?

A second unit is a self-contained dwelling unit with a private kitchen, bathroom facilities and sleeping areas. It can be located in your house or on your property, above a laneway garage or in a coach house. This document generally applies to Building Code requirements for second units in houses, and not for second units in garages or coach houses, though some of the same rules apply.



Did You Know?

For the construction of a second unit in an existing house, development charges are not collected.

Also, the Government is considering potential regulations that might further address barriers to establishing second units such as local parking requirements.

as your agent regarding matters with your local municipality. They can help you get all necessary approvals, including a building permit, and also arrange construction inspections.

Municipal Zoning and Other By-Laws

Know your municipality's zoning by-laws. They affect the construction of your second unit. **Ask your local planning and building department** about:

- The zoning requirements and standards for second units that apply to your property. This includes rules around parking requirements, exits and entrances, servicing or minimum or maximum unit size.
- Whether you need to apply for rezoning or a minor variance.
- Any other applicable agreements and approvals that are required before you can add a second unit.
- Whether your second unit will need to be licensed or registered with your municipality.

If you cannot comply with your municipality's by-laws, you will not be able to add a second unit.

Getting a Building Permit

To add a second unit in your house, you will need a building permit. You or your agent can apply for one at your local building department. You will need to submit:

- A completed application form and any other forms and supporting documents requested by the municipality
- Construction drawings (most municipalities require at least two sets of drawings)
- Payment of the building permit fee

You should also **check with your municipality** to find out if:

- You need to hire a licensed contractor to do the work.
- They accept electronic permit applications, as this can speed up processing time.

Once your complete application has been submitted, you will hear back within 10 business days whether it has been approved or not. Incomplete applications or improper design may mean your permit will be delayed or not accepted.

Building Inspections

Once your building permit has been issued, building inspectors from the municipality must review work at various stages during construction. Inspectors will need to check framing, insulation, plumbing, interior finishes and other items as outlined in the Building Code. Make sure to **confirm with your inspector** what needs to be inspected.

You or your agent are responsible for informing your building department when different stages of construction are ready for inspection.

Any second unit, whether it is new or existing, must be a safe place to live. If you already have an existing second unit in your house and have concerns with its design, you are encouraged to **contact your local building department**.

Building Code Requirements for Second Units

Ontario's Building Code sets out minimum construction standards for how to build a second unit in your house. These minimum standards are described in the sections that follow. In some cases, you may wish to build beyond the minimum requirements of the Building Code. Building beyond the Building Code provides homeowners many advantages, including greater occupant comfort and amenities that can make your second unit a nicer place to live.



Age of Your House

Different Building Code rules apply depending on the age of your house.

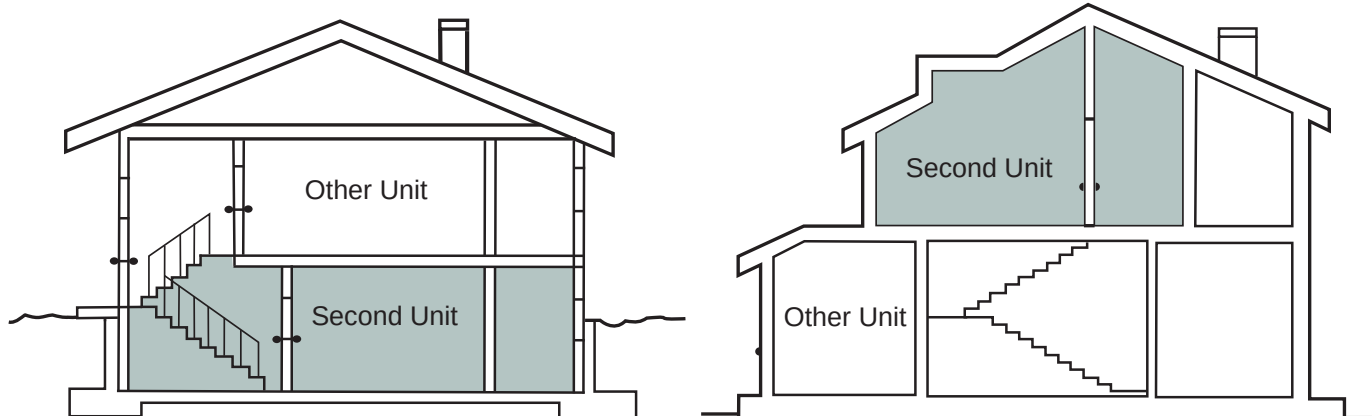
If your house is more than five years old, it is classified as an existing house and you have more flexibility under the Building Code when you make renovations.

If your house is less than five years old, then it is classified as a new building and under the Building Code it generally must meet

new construction requirements. For more information on adding a second unit to a **new** house, **contact your local building department**.

Location of Your Second Unit

You can build a second unit in any part of your house. It can be all on one floor or on multiple levels. Most second units are built in the basement or attic. Building Code rules can vary depending on where the second unit is located in your house.



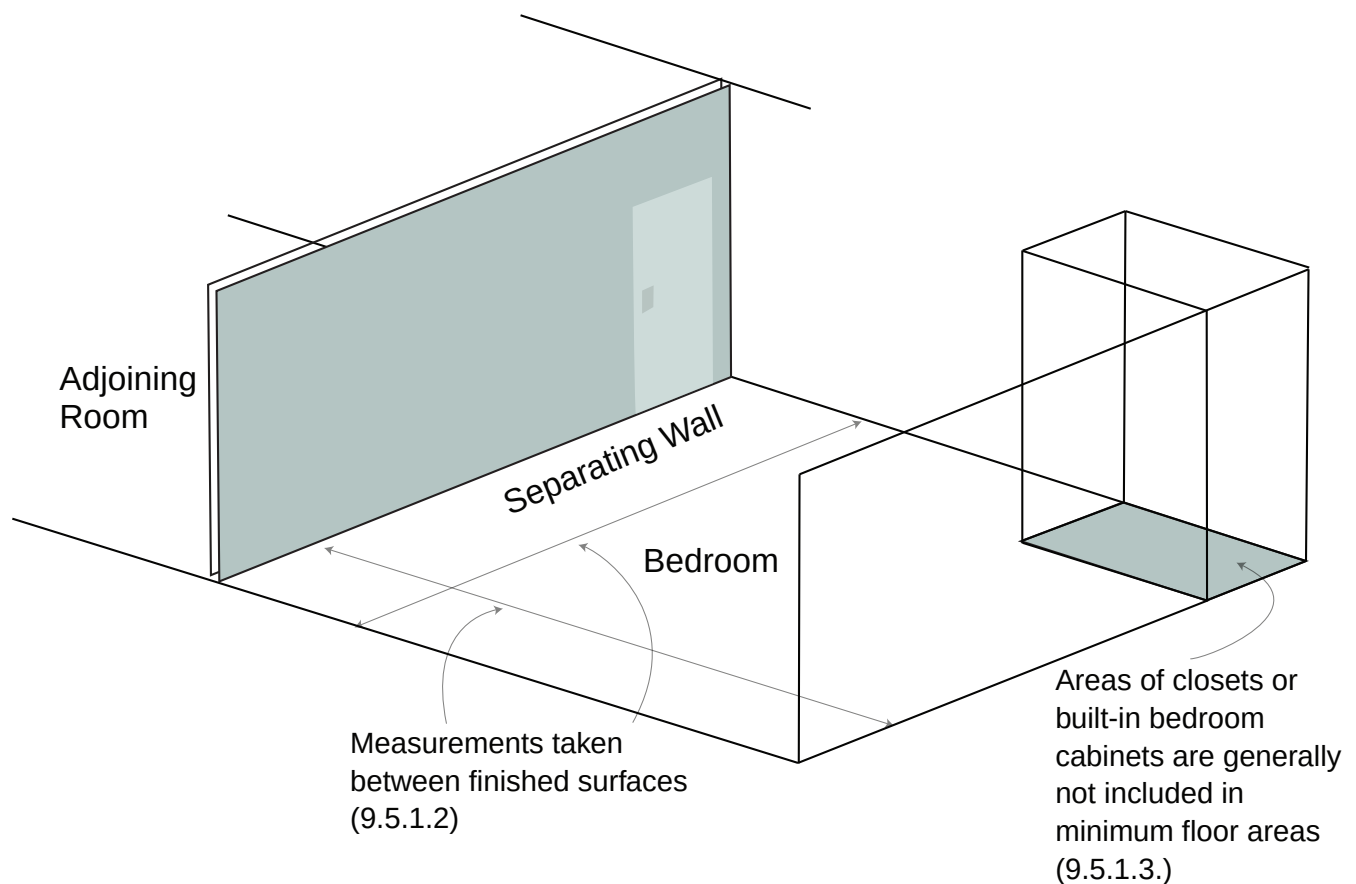
Examples of Second Unit Locations

Room Sizes and Floor Area

The Building Code sets out minimum room sizes in dwelling units, including second units. Room sizes vary depending on whether rooms are separated by walls or the unit is open concept. For example, the minimum area of a dining room separated by walls is 7 m² (75 ft²), while an open concept bachelor unit combining sleeping, living, and dining areas and kitchen space is permitted to be 13.5 m² (145 ft²). Generally, minimum sizes for rooms and spaces includes:

Room/Space:	Minimum Required Floor Area:
Living area	13.5 m ² (145 ft ²)
Dining area	7 m ² (75 ft ²)
Kitchen	4.2 m ² (45.2 ft ²)
Combined living, dining and kitchen areas in a one-bedroom unit	11 m ² (118.4 ft ²)
Master bedroom (without built-in closet)	9.8 m ² (95 ft ²)
Other bedrooms (without built-in closets)	7 m ² (75 ft ²)
Bathroom	Sufficient space for sink, toilet and shower stall or bath
Combined sleeping, living and dining areas and kitchen space	13.5 m ² (145 ft ²)

(Relevant Building Code provisions - Division B, Subsections 9.5.4. to 9.5.9.)



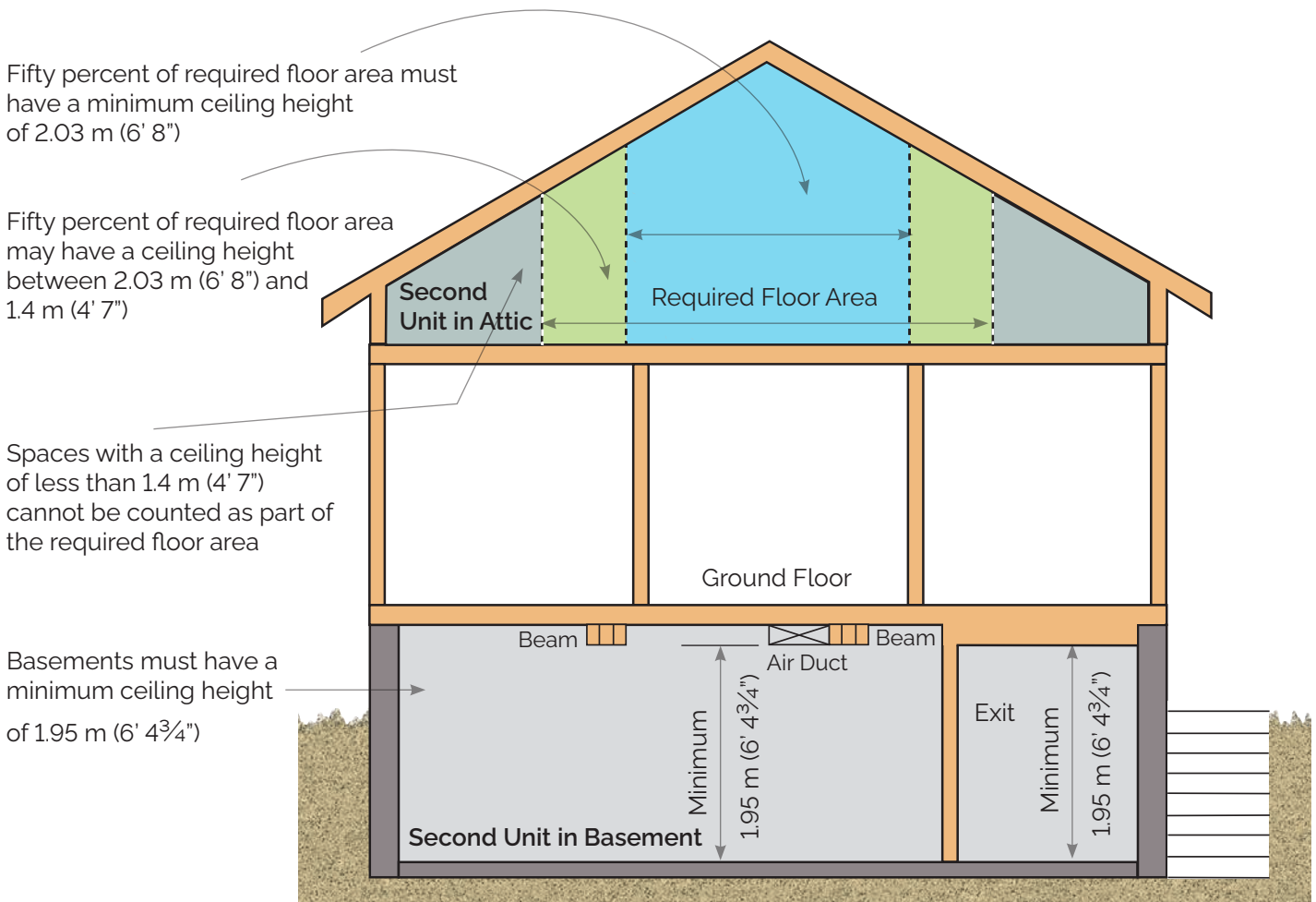
Room Sizes and Floor Areas

Ceiling Heights

You are also required to have minimum ceiling heights in your rooms. Meeting the ceiling height requirements can sometimes be a challenge in an existing house. Choose the location of your second unit carefully. Ceiling height requirements for second units vary in different parts of your house such as in basements and attics.

- A basement second unit is permitted to have a ceiling height of 1.95 m (6' 4 $\frac{3}{4}$ ") over the entire required floor area, including the route inside the unit leading to the exit.
- An attic second unit – which may have sloped ceilings – would meet the Building Code if at least 50% of the required floor area has a ceiling height of 2.03 m (6' 8"), but this does not include areas with low ceilings less than 1.4 m (4' 7") high.

(Relevant Building Code provisions – Division B, Table 11.5.1.1.C., Compliance Alternative 102)



Second Unit Ceiling Height

Windows

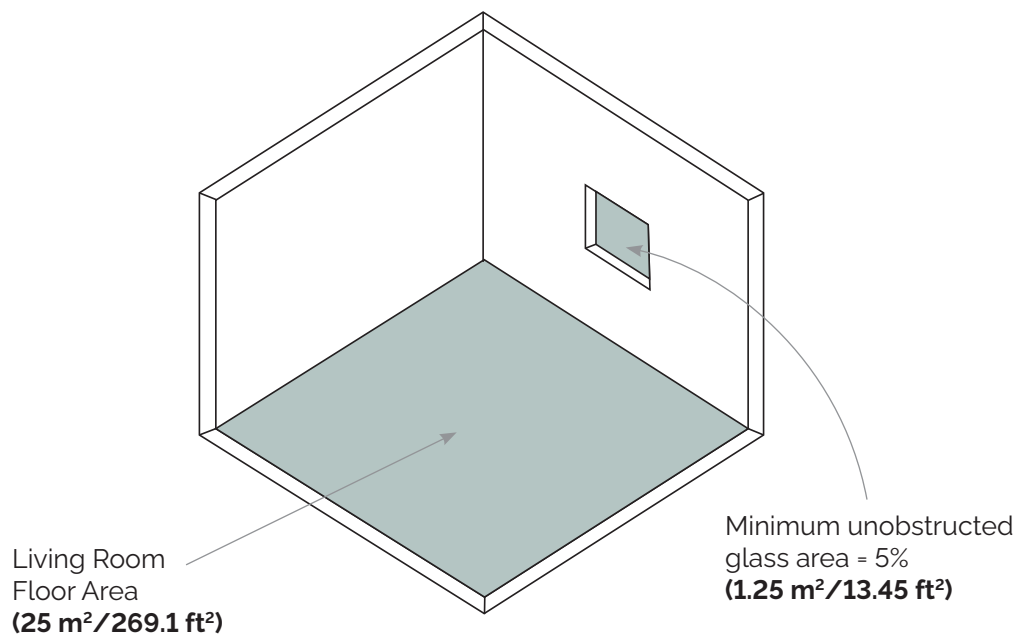
Windows are required in a second unit. The size of windows you need is determined by the size of the unit. Larger units will require more or bigger windows. Window sizes are also based on what type of room they are in. Some windows can also be used as another way to exit a second unit. For more information, please see the section on “Exits” on page 15.

Where the window is not being used as an exit, minimum window sizes are:

Room/Space:	Minimum Required Window Area:
Living and dining rooms	5% of the floor area
Bedrooms	2.5% of the floor area
Laundry room, kitchen, bathroom	Windows not required

(Relevant Building Code provisions – Division B, Article 9.7.2.3. as modified by Table 11.5.1.1.C., Compliance Alternative 107)

For example, if you are planning to have a dining area of 10 m² (108 ft²), the minimum size of the window(s) must be 0.5 m² (5'4"ft²). The diagram below shows another example:



Window Sizes and Floor Areas



Plumbing

Your second unit will have to meet plumbing requirements. At minimum you will need:

- A hot and cold water supply
- A sink, bathtub or shower, toilet, or a drainless composting toilet in the bathroom
- A kitchen sink
- Access to laundry facilities, which may be provided in a shared laundry room or a separate laundry area in the second unit

You will need a qualified plumber to do this work.

(Relevant Building Code provisions – Division B, Articles 9.31.4.1. to 9.31.4.3.)

Second units must also have their own separate water shut-off valves. This allows plumbing work or repairs to be done in one unit without affecting water flow in the other.

(Relevant Building Code provisions – Division B, Sentences 7.6.1.4.(1) and 7.6.1.6.(1))

If your house is in an area that is subject to flooding or sewer backup, you may need to install a backwater valve when you add a second unit. Backwater valves help prevent sewage in municipal drain pipes from entering floor drains and plumbing fixtures in the lower levels of your house.

(Relevant Building Code provisions – Division B, Article 7.4.6.4.)

Septic Systems

Adding a second unit to a house served by a septic system is permitted as long as the septic system has the capacity to handle the increase in sewage.

Check with your building department to make sure your existing septic system is sized properly. If not, you will need to upgrade your septic system so that it can safely treat the extra sewage flow.

(Relevant Building Code provisions – Division B, Sentence 11.4.2.5.(4))

(Note: some municipalities rely on regional health units or conservation authorities to enforce the septic system requirements of the Building Code. Your **local building department will advise** you if that is the case.)

Heating and Ventilation

The Building Code allows a house with a second unit to have a single furnace and common system of air ducts. For fire safety, you will have to install a special type of smoke detector in the main supply or return air ducts. When

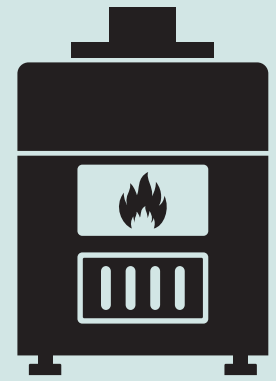
activated, this device turns off the fuel supply and electrical power to the furnace causing it to shut down and preventing the spread of smoke from one unit to the other.

Duct-type smoke detectors must meet a specific performance standard known as UL 268A. To ensure you have the right detector and the installation is done properly, you should hire a qualified contractor to do the work.

(Relevant Building Code provisions – Division B, Table 11.5.1.1.C., Compliance Alternative 195)

Ventilation is also required for the bathroom and kitchen of your second unit. This can be provided by a ceiling exhaust fan or a window that opens to outside.

(Relevant Building Code provisions – Division B, Article 9.32.1.2. as modified by Table 11.5.1.1.C., Compliance Alternative 194)



Going Beyond Code:

While the Building Code allows one furnace to heat an entire house including the second unit, you might want to consider installing a second furnace and air ducts when adding a second unit. Sharing one furnace and air ducts between two units may mean cooking smells, recreational smoke and other odours, as well as noise, may transfer from one unit to the other. Having one thermostat controlling the temperature of both units may also become an issue for residents of both units.

Electrical Facilities and Lighting



To ensure adequate lighting in rooms and spaces, the Building Code requires that your second unit must have:

- A light and switch in every room and space of your second unit
- A switch at both the top and bottom of the stairs

(Relevant Building Code provisions – Division B, Articles 9.34.2.2. and 9.34.2.3.)

The Electrical Safety Code, produced by Ontario's Electrical Safety Authority (ESA), has further requirements when adding a second unit.

- You will need to get a separate electrical permit to do the electrical work in your second unit.
- The ESA will inspect the electrical work in your second unit.

It is recommended that you hire a licensed electrical contractor to do the work.

They can also get the electrical permit and arrange inspections for you.

- For further information you can contact ESA directly at 1-877-ESA-SAFE (372-7233) or esasafer.com.

Fire Safety

For fire safety you will need a fire separation between your second unit and the rest of the house. A fire separation acts as a physical barrier to slow the spread of fire from one part of the house to the other. The fire separation must be continuous and include protected openings if necessary (e.g. fire dampers) in order to work properly.

What is a fire separation?

A fire separation can be a floor, wall, door with a self-closing device, or a combination of those things. It can be built using typical building materials such as lumber and drywall. For example, a 30 minute fire separation can be built using 38 mm x 89 mm (2" x 4") wood studs, 13 mm (1/2") thick drywall on both sides, and fibre-type insulation between the studs. Lath and plaster construction typically found in older houses is an example of a 15 minute fire separation.

When adding a second unit, the Building Code requires a 30 minute fire separation between units, and also between units and common areas. If the renovation of your house to add a second unit requires the alteration of an existing floor or ceiling, you are required to make that a 30 minute fire separation (see floor/ceiling diagram). A fire separation can be reduced to 15 minutes if the entire house has interconnected smoke alarms.

(Relevant Building Code provisions – Division B, Table 11.5.1.1.C., Compliance Alternatives 147, 152 and 153)

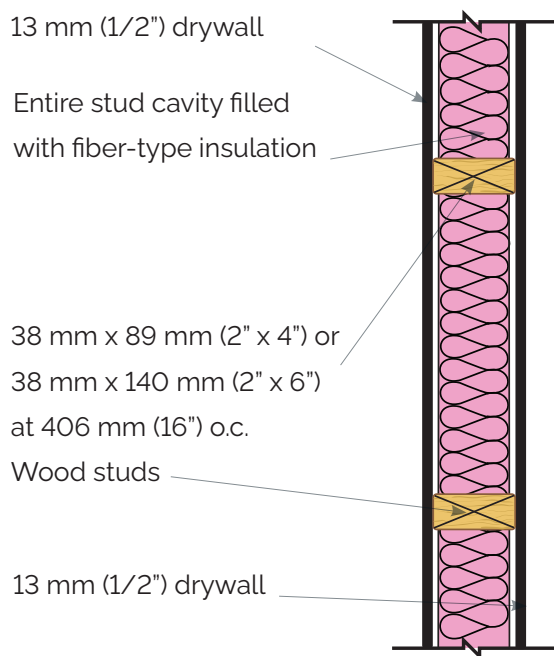


Diagram of wall showing typical 30 minute fire separation

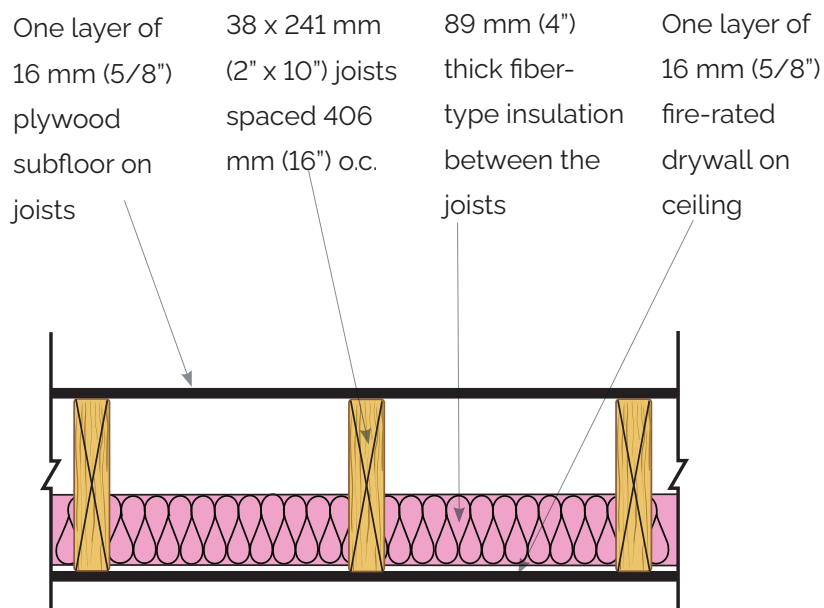


Diagram of typical floor/ceiling that would generally achieve a 30 minute fire separation

Good-to-Know: A wall built to meet the Building Code's fire separation requirements will help to reduce noise between units.

Going Beyond Code:

Noise and vibration travelling between units is a common problem for people that live in multi-unit residential buildings, including houses with second units. It is a good idea to build extra noise protection in the walls, floors and ceilings that divide your second unit from the remainder of the house. There are many different ways to construct a wall so that it has greater noise protection, including additional insulation, extra layers of drywall, etc.



Going Beyond Code:

To enhance the fire safety of your second unit you should consider installing smoke alarms in storage rooms and service areas that are interconnected with the smoke alarms in the second unit. Fires that start in remote areas of a house can often be the most deadly as they can burn for longer periods before being detected.

Smoke Alarms

You will need smoke alarms (sometimes known as smoke detectors) in your second unit that must meet the CAN/ULC S531 performance standard. A label on the alarm will indicate whether it meets this standard. Your smoke alarms must also have a flashing light when they are activated. Smoke alarms are widely available at hardware and home renovation stores.

Proper placement of smoke alarms is important. They must be located:

- On every level of a house
- Outside sleeping areas (which, depending on the layout of a floor, can also count as the smoke alarm for that level)
- In each bedroom in the second unit
- In common areas of the house shared by occupants of both units, such as entrances and laundry rooms

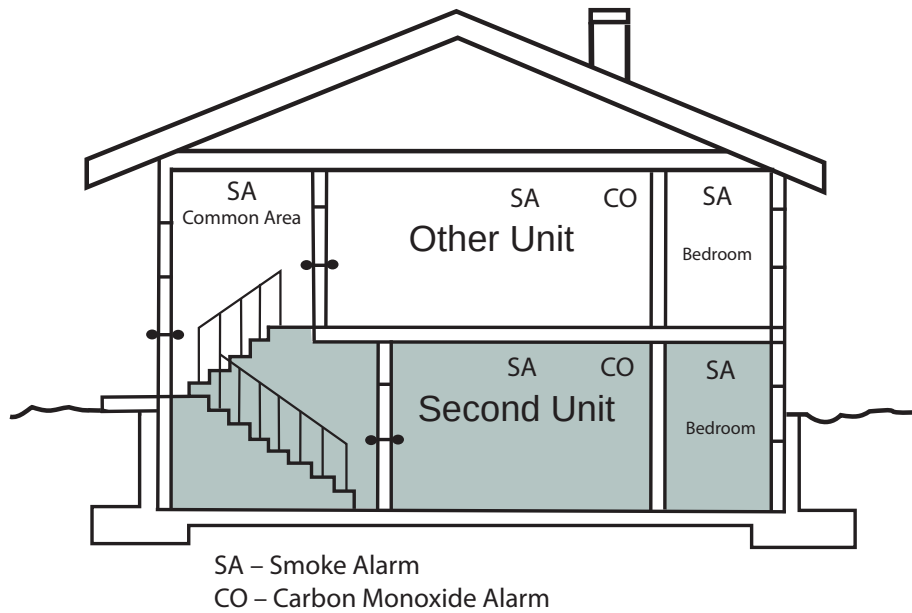
(Relevant Building Code provisions – Division B, Subsection 9.10.19.)

Carbon Monoxide Alarms

In addition to smoke alarms you may also have to install carbon monoxide alarms. They are required if your house has a furnace that uses natural gas, propane or other similar fuels. They are also required if your house has an attached garage. Carbon monoxide alarms can be either electrically powered or battery operated and must be located:

- Near bedrooms and sleeping areas in the second unit
- In the furnace room, if the furnace room is a separate space from the residential units

(Relevant Building Code provisions – Division B, Articles 9.33.4.1. and 9.33.4.2. as modified by Table 11.5.1.1.C., Compliance Alternative 197)



Location of Smoke Alarms and CO Detectors

Exits

Your second unit needs safe exits. There are different rules for exits depending on where in your house the second unit is located. Providing a separate exit for the second unit is preferable. If that is not possible:

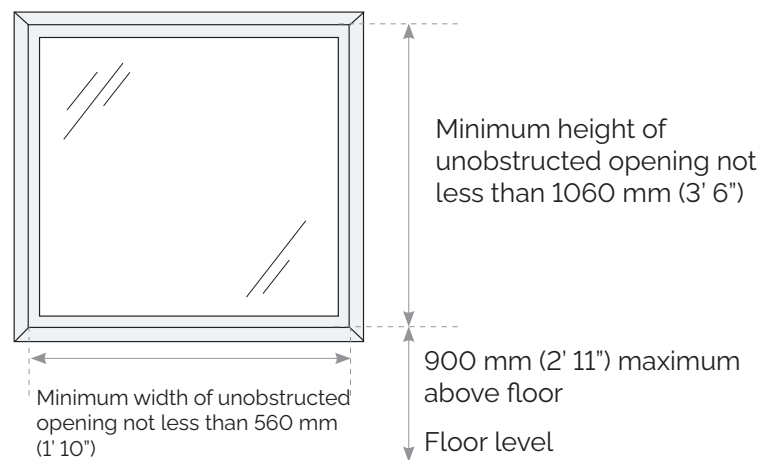
- A common exit for both units in your house is allowed if the exit area has a 30 minute fire separation and contains smoke alarms that are interconnected to both units.



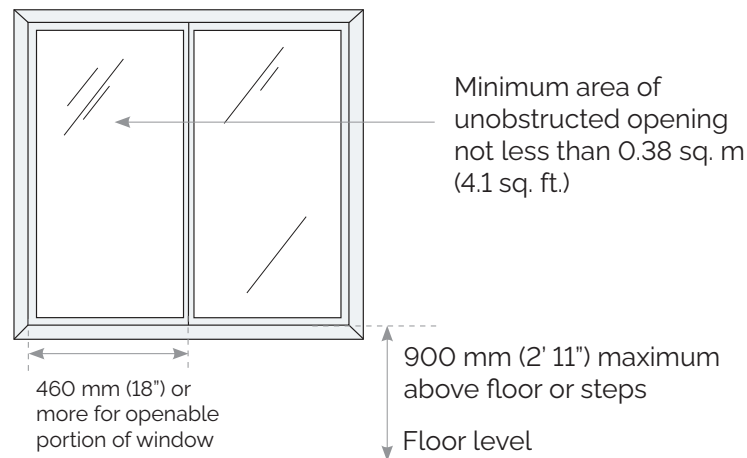
- In cases where the exit from one unit leads through another unit, a second means of escape must be provided by using a window.
- Windows that may be needed in an emergency as a second means of escape must be large enough for a person to get through and be easy to open without the use of tools.

- There are different requirements (shown in the diagrams below) for means of escape windows depending on whether they are located in the basement or upper floors.

(Relevant Building Code provisions – Division B, Table 11.5.1.1.C., Compliance Alternative 136)

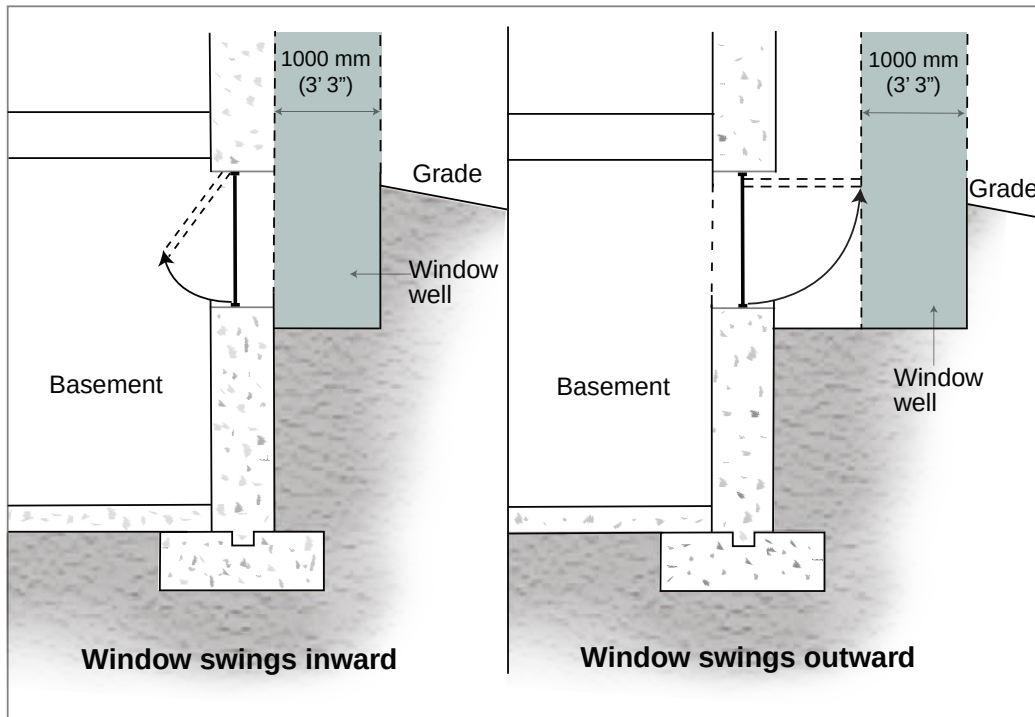


Escape window for upper floors



Note: Sill height no more than 1000 mm (3' 3") above or below adjacent ground level.

Ground floor or basement escape window



Window wells for basement escape windows (sectional view)

Moving Forward with Your Project

Now that you know the basics for adding a second unit to your house, this can help you make an informed decision on whether to proceed.

As mentioned, and for best results, it is highly recommended you contact your local municipality early in your planning and design process, and also hire qualified professionals to help you.

To find your municipality's website, check out: ontario.ca/page/list-ontario-municipalities There, you can find a contact number for your local building department. You can also **find further information online or at your local building department.**

To read Ontario's Building Code check out: ontario.ca/laws/regulation/120332

You can check the qualifications of a provincially registered Building Code designer at:

quarts.mah.gov.on.ca/BCINSearchWeb/search.html

To find out more about second units, visit:

- The Landlord Self Help Centre website landlordselfhelp.com
- The Canada Mortgage and Housing Corporation – Secondary Suites cmhc-schl.gc.ca/en/developing-and-renovating/accessible-adaptable-housing/secondary-suites

Second Unit Checklist

Here is a checklist summarizing the important things to consider when adding a second unit to your house:

- ☐ **Municipal Zoning and Other By-Laws**

- ☐ Official Plan Policies
- ☐ Licencing and/or Registration, if applicable
- ☐ Parking, if applicable

- ☐ **Building Permit**

- ☐ **Inspections**

- ☐ **Building Code Requirements for Second Units**

- ☐ Age of your House
- ☐ Location of Your Second Unit
- ☐ Room Size and Floor Area
- ☐ Ceiling Heights
- ☐ Windows
- ☐ Plumbing
- ☐ Heating and Ventilation
- ☐ Electrical Facilities and Lighting
- ☐ Fire Safety
- ☐ Smoke Alarms
- ☐ Carbon Monoxide (CO) Alarms
- ☐ Exits

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