

Design Guide for Existing Buildings Accessory Dwellings

The BC Building Code (BCBC) options listed here are for the conversion of existing buildings. They are a summary intended as a guide. Every project is unique and there may be further requirements. Please check with the BCBC, your designer, or reach out to the City's building staff.

What else is required?

- **Safe exiting** – an exit door directly to the exterior.
- **Bedroom windows** – minimum clear opening area of 0.35 m² with no dimension less than 38 cm)
- **Electrical** – permits from Technical Safety BC, typically taken out by your electrician
- **Ventilation** – is required to provide fresh air to the suite in compliance with BCBC 9.32.3.4.(6).
- **Heating Systems** – should be independent of the main dwelling and cannot be interconnected without the protection of fire dampers and a duct smoke detector to shut down the system.
- **Ceiling Height** – is regulated by the building code and slightly relaxed for existing buildings.
- **Plumbing** – supply lines upgraded to meet the minimum code requirements.

TABLE 1. CONSTRUCTION OPTIONS FOR AN ADU IN AN EXISTING BUILDING			
Regulation	Option 1 Owner Acknowledgement Required	Option 2	Option 3
Fire Resistance Rating (FRR in mins)	15 minutes	30 minutes	45 minutes
Sound Transmission Class (STC)	Approximately 32-35 STC	Approximately 34-37 STC	43 STC
BC Building Code References	9.10.9.16(4)(a), Table D-2.3.4-F, and A-1.1.1.2.(1)*	9.10.9.16(4)(b) and A-1.1.1.1.(6)	9.10.9.16(4)(c) and 9.11.1.1.(2)

* Based on the BC Building Code, A-1.1.1.2.(1) related to existing buildings only. Research has proven that:

- A wood framed floor will withstand a fire for at least 10 min, and with gypsum board protection, resulting in at least 15min FFR; and
- There is limited increase in STC with the addition of resilient channel and additional gypsum board. Sound separation is not related to the level of safety.

Excerpt only, please see complete design guide for more information

What does this mean?

Regulation	Option 1 Means	Option 2 Means	Option 3 Means
Wall Construction	Wood studs with ½" gypsum board both sides.	Add resilient channel and layer of ½" gypsum board to one side.	Many options for increased fire and sound rating.**
Ceiling Construction	Wood joists with ½" gypsum board on underside.	Add resilient channel and layer of ½" gypsum board to ceiling.	Many options for increased fire and sound rating.**
Smoke Alarm Locations in each unit	Smoke alarms should be located in each dwelling (and interconnected within each dwelling) – in all bedrooms, as well as between bedroom door and all other spaces, in any common spaces and at least one on each storey.		
Smoke Alarm Interconnection between units	All smoke alarms in both dwellings and common spaces will be photo-electric type and interconnected.	One additional photo-electric in each dwelling and common spaces shall be interconnected.	Not required.
Carbon Monoxide Alarms (CO)	Where the home has an attached garage or a solid fuel fired appliance (wood burning), a CO Alarm is required inside each bedroom or within 5m of each bedroom door, all interconnected.		

** There are referenced assemblies in the BC Building Code Tables in 9.10.3.1. as well as listings for walls and floor/ceilings available through drywall manufacturers or testing agencies, such as Underwriters Laboratories of Canada.