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CLARIFICATION OF THE VBBL REQUIREMENTS FOR CARBON MONOXIDE ALARMS

This Bulletin clarifies provisions of the Vancouver Building By-Law (VBBL) for the installation of carbon monoxide alarms in every building that contains a residential occupancy and also contains a fuel-burning appliance or a storage garage.

The VBBL requires that carbon monoxide alarms be provided in each suite of residential occupancy where a fuel-burning appliance is installed in that suite. In cases where a fuel-burning appliance is installed in a service room that is not located in a suite of residential occupancy, but is installed in a service room located outside a suite, a carbon monoxide alarm must be placed in every suite of residential occupancy that shares a wall or floor/ceiling assembly with the service room.

A carbon monoxide alarm required to be installed by the VBBL in a suite of residential occupancy must be located in each bedroom, or within 5 m of each bedroom door.

A carbon monoxide alarm must also be installed in a service room that is provided with a fuel burning appliance and that is located outside a suite.

Furthermore, carbon monoxide alarms are also required in a residential suite that shares a wall or floor/ceiling assembly with a storage garage or that is adjacent to an attic or crawl space to which the storage garage is also adjacent. For these situations, the carbon monoxide alarm must be located as follows:

- a) in each bedroom, or
- b) within 5 m of each bedroom door.

It should be noted that this change has been introduced in the VBBL 2007 in comparison with the VBBL 1999.

While the previous edition of the VBBL mandated carbon monoxide alarms in those suites where a solid-fuel burning appliance is installed, the requirements for carbon monoxide alarms in the VBBL 2007 are not limited to solid-fuel burning appliances. Specific provisions for the installation of carbon monoxide alarms may be found in Subsection 6.2.4 and in Article 9.32.4.2 of the VBBL.

Sentences 9.32.4.1.(6) and (7) of the VBBL 1999 had been amended so as to mandate a permanent connection of carbon monoxide alarms to an electrical circuit and their interconnection with the smoke alarms installed in a dwelling unit. A similar requirement was intended for the VBBL 2007, but was missed. Therefore, the errata to the VBBL 2007 will be issued later this year.

Meanwhile, the following is interpreted as the requirement for the installation of carbon monoxide alarms under provisions of the VBBL 2007:

1. Sentence 6.2.4.1.(2) is to be read to require that carbon monoxide alarms:

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"be permanently connected to an electrical circuit, shall have no disconnect switch between the overcurrent device and the carbon monoxide alarm, and be wired so that its activation will activate smoke alarms required by Article 3.2.4.20"

2. Sentence 9.32.4.2.(2) is to be read to require that carbon monoxide alarms:
"be permanently connected to an electrical circuit, shall have no disconnect switch between the overcurrent device and the carbon monoxide alarm, and be wired so that its activation will activate smoke alarms required by Subsection 9.10.19"

This interpretation is intended to improve performance and reliability of the required carbon monoxide alarms by mandating their permanent connection similarly to the requirement for connection of smoke alarms, and by mandating interconnection of carbon monoxide alarms with smoke alarms installed in a dwelling unit. It is also consistent with the requirements of the VBBL 1999 for a permanent connection of carbon monoxide alarms and for their interconnection with smoke alarms, and will provide consistency with the existing safety approach of the City with respect to this subject.

It should be also noted that requirements for wiring methods, installation and interconnection of carbon monoxide alarms are contained in Rule 32-110 of the 21st edition of the Canadian Electrical Code, Part I.

Note: Some manufacturers (i.e. "Kidde's", etc.) make an approved combination "smoke alarms/CO alarms" that meet the design and construction requirements of the ULC S531 and CSA6.19-01, and the ULC provides certification of such combination devices. Manufacturers should be contacted for specific details.

A. Z. Tsisserev, P.Eng.
ELECTRICAL SAFETY MANAGER,
CHIEF ELECTRICAL INSPECTOR & CITY ELECTRICIAN

W. M. Johnston, P.Eng.
DIRECTOR, LICENCES & INSPECTIONS, AND
CHIEF BUILDING OFFICIAL