

**PHOTO-ELECTRIC ALARM
ALTERNATIVE
SOLUTION
FURNACE ROOMS &
SECONDARY SUITES**

Further information

Please refer to Secondary Suite Code Specifications, for a detailed list of requirements.



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This guide has been prepared to outline the City of North Vancouver policy with regard to requiring the installation of smoke alarms in lieu of compliant fire separations in furnace rooms in single family dwellings with Secondary Suites.

Rationale

The B.C. Building Code requires furnace rooms to be separated by construction that will achieve a fire resistance rating of either 30 or 45 minutes. Most furnace rooms within single family dwellings are ducted to a furnace plenum that feeds a horizontal trunk duct. Branch ducts are then fed from this trunk duct to rooms and spaces. The arrangement of the plenum and trunk duct requires an extreme amount of duct repositioning to correctly install the drywall and fire dampers so that a code complying fire separation is achieved.

Alternative Solution

Clause 1.2.1.1.(1)(b) of the 2006 B.C. Building Code allows for alternative solutions to achieve the required level of fire protection. The City is allowing the installation of a hardwired 120 volt photo-electric alarm interconnected with the building's other required smoke alarms, as an equivalent measure of code performance for those furnace rooms that cannot be completely protected using rated drywall. This will provide early warning to the occupants, in case of a fire, allowing them to vacate the premise as soon as possible.

The furnace room's walls and ceilings must still be, as much as possible, protected by fire rated drywall in attempt to minimize the fire risk. Please review this issue with the Building Inspector prior to starting the work.

Other system design alternate solutions may also be acceptable. Proposals must be approved by the Building Inspector.