

DEPARTMENT OF LICENSES AND INSPECTIONS CODE INTERPRETATION No. 0502		CODE OF GENERAL ORDINANCES OF THE CITY OF PHILADELPHIA <hr/> TITLE 4 — BUILDING CONSTRUCTION AND OCCUPANCY CODE
SUBJECT OF INTERPRETATION: SMOKE ALARMS IN ONE- AND TWO-FAMILY DWELLINGS		REFERENCE CODE SECTION(S): R-313.1
ISSUED BY		ISSUE DATE 10/26/2005
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TITLE: Chief Code Official, Dept. of Licenses and Inspections		PAGE 1 OF 2

QUESTION:

When does the code require the installation of hard-wired smoke alarms in one and two family dwellings?

CODE ANALYSIS:

- Section R-313.1 of the 2004 Philadelphia Residential Code requires the installation of smoke alarms in newly constructed and converted one- and two-family dwellings. Hardwired interconnected smoke alarms shall be installed in the following locations:
 - In each sleeping room;
 - Outside each separate sleeping area in the immediate vicinity of the bedrooms;
 - On each additional story of the dwelling, including basements but not including crawl spaces and uninhabitable attics. In dwellings with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
- Section R-313.1.1 of the 2004 Philadelphia Residential Code states, “when interior alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be provided with smoke alarms located as required for new dwellings.” However the exception to this section states that hardwired smoke alarms are not required in existing areas when ceiling and wall finishes have not been removed to “expose the structure”.

DISCUSSION:

- The code is clear that hardwired, interconnected smoke alarms are required throughout the dwelling unit in new construction, and changes of occupancy class.
- The code does not provide a measurable threshold to determine whether enough of the structure has been exposed to trigger the installation of hardwired fire alarms throughout the dwelling. This ambiguity will be addressed by policy.

POLICY:

For the purpose of determining whether hardwired smoke alarms are required, “exposure of the structure” shall mean whenever 50% or more of the interior wall or ceiling membrane is removed.

DIRECTION:

Hard-wired interconnected smoke alarms shall be installed in accordance with the table below.

CONSTRUCTION ACTIVITY	LOCATION OF HARD WIRED, INTERCONNECTED SMOKE ALARMS
New Construction	Throughout the dwelling unit
Conversion from another occupancy	Throughout the dwelling unit
Conversion from a one-family dwelling to a two-family dwelling	Throughout both dwelling units
Addition: without removal of the dwelling units' interior wall or ceiling membrane and exposure of the structure ¹	Throughout the addition ²
Addition: involving removal of the dwelling units' interior wall or ceiling membrane and exposure of the structure ¹	Throughout the dwelling unit
Conversion of a room to a bedroom not involving alterations as in Item 7	Within the new converted bedroom only ²
Interior alterations: involving removal of the dwelling units' interior wall or ceiling membrane and exposure of the structure ¹	Throughout the dwelling unit

¹ See Policy above for definition of exposure of the structure.

² Should the dwelling unit contain an existing smoke alarm system then interconnection to the existing system is required.