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| DEPARTMENT OF LICENSES AND INSPECTIONS<br><b>CODE INTERPRETATION</b><br><b>No. 0801</b> |           | CODE OF GENERAL ORDINANCES OF THE CITY OF PHILADELPHIA<br>TITLE 4 — BUILDING CONSTRUCTION AND OCCUPANCY CODE |
| SUBJECT OF INTERPRETATION:<br>CARBON MONOXIDE ALARMS<br>HARDWIRED AND INTERCONNECTED    |           | REFERENCE CODE SECTION(S):<br>B-908.7, EB-911.2, F-908.7 and R-325   |
| ISSUED BY   |           | ISSUE DATE<br>9/8/2008   |
| NAME: Robert F. Murray, P.E.  | SIGNATURE | REVISION DATE  |
| TITLE: Chief Code Official, Dept. of Licenses and Inspections                           |           | PAGE 1 OF 2  |

### QUESTION:

When does the Building Construction and Occupancy Code require the installation of carbon monoxide alarms that are hardwired and/or interconnected?

### CODE ANALYSIS:

The Building, Existing Building, and Residential Codes refer to the Fire Code to set their carbon monoxide alarm requirements.

Section F-908.7 of the 2007 Philadelphia Fire Code requires installation of a carbon monoxide alarm(s) “in any new or existing building with a Group R-3 or Group R-4 occupancy” where one or more fossil fuel or wood burning appliances are installed in the building or where a garage is attached to the building. Routinely, the required carbon monoxide alarms shall be hardwired and, if more than one is required, interconnected. The exception is existing Group R-3 and R-4 occupancies where the alarms need not be either.

Section F-908 makes no mention of alterations to existing R-3 or R-4 occupancies affecting the carbon monoxide alarm requirement or the exception. The Existing Building Code applies the requirements of the Building Code to all new elements when Level 2 or higher alterations are being done. The Building Code refers to F-908, thereby retaining the exception for existing R-3, R-4 occupancies.

Section F-908.7.2 permits but does not require combination smoke and carbon monoxide alarms. Fire Code Section F-908.7.3 applies smoke alarm location requirements only to carbon monoxide alarms only when they are combination CO/smoke alarms.

### DISCUSSION:

Any new R-3 or R-4 occupancy must be reviewed for the required carbon monoxide alarm installation.

Although smoke alarm and carbon monoxide alarm installation requirements differ, an opportune occasion to check for adherence to carbon monoxide alarm requirements in an existing R-3 or R-4 is at the installation of hardwired, interconnected smoke alarms.

### POLICY:

Carbon monoxide alarms are not required to be hardwired and/or interconnected if the use is a pre-existing R-3 or R-4 occupancy and, unlike smoke alarms (see Code Interpretation 0502), alterations to such existing R-3 or R-4 occupancies do not subject carbon monoxide alarms to requirements to be hardwired or interconnected.

As with all life safety requirements in the code, the Department shall strive to make certain that carbon monoxide alarm requirements are met.

**DIRECTION:**

Plans for a newly constructed R-3 or R-4 or for a change of occupancy to an R-3 or R-4 shall indicate all required carbon monoxide alarms. These shall be hardwired and, where more than one is required, interconnected.

When plans for an existing R-3 or R-4 occupancy are submitted that include the installation of hardwired or interconnected smoke alarms, those plans shall also indicate the required CO detectors (whether hardwired/interconnected or not, whether combination or not, whether existing or to be installed). When inspecting this smoke alarm installation, an inspector shall also inspect for the CO alarm(s) indicated on the plan.