

# Seattle Permits

—part of a multi-departmental series on City services & permitting

## Wired Emergency Communications Systems

Updated April 2016

Two-way communications service within a building provides a reliable method for firefighters and other emergency response personnel to communicate with each other during the course of an emergency. The fire code recognizes two means: wired fire department communication systems and radio communication enhancement systems.

This Client Assistance Memo (CAM) describes requirements for wired fire department communication systems.

Information regarding radio communication enhancement systems is presented in CAM #5123, which is available from the Seattle Fire Department web-site at [www.seattle.gov/fire/firecode](http://www.seattle.gov/fire/firecode). Buildings having emergency responder radio enhancement systems may omit signal boosters and antennas in areas of the building that have minimum required radio coverage signal strength levels within the building without the use of a radio coverage system. However, when choosing a wired communication system in lieu of radio, the wired fire department system must be installed throughout the required stairs and elevator lobbies, etc.

This CAM also includes information about separate Seattle Building Code requirements related to communications systems.

### 2012 Seattle Fire Code — Code Requirements

*Seattle Fire Code (SFC) Section 907.2.13.2 — Fire department communication system*

Where a wired fire department communication system is approved in lieu of a radio communication enhancement system in accordance with SFC Section 510, the wired fire department communication system

shall be designed and installed in accordance with NFPA 72. In compliance with SFC Section 508, the system shall operate between a fire command center, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. A device for the wired fire department communication system shall be provided at each floor level within the enclosed exit stairway. Eight portable hand-sets for the wired fire department communication system shall be provided in the fire command center.

Note: Two-way telephone communication service control equipment and portable handsets are normally located inside a building fire command center. For buildings without a fire command center, the communication system control equipment and a minimum of eight portable handsets shall be installed inside the building at the main building entrance, co-located with the fire alarm control panel or annunciator. The control equipment and handsets may be secured in locked cabinet(s) where a Knox Box is installed containing keys for the cabinet(s).

The 2012 Seattle Fire Code can be viewed at: [www.seattle.gov/dpd/codesrules/codes/fire/default.htm](http://www.seattle.gov/dpd/codesrules/codes/fire/default.htm).

### City of Seattle — Permitting and Inspection Process

Wired communication systems are required to be installed under a Seattle Department of Construction and Inspection (SDCI) electrical permit. Wired fire department communication systems that are part of the building fire alarm system are normally included in the fire alarm system plans submittal, which is reviewed by SFD and installed under the fire alarm system permit. For information on SDCI electrical permits, visit: <http://www.seattle.gov/dpd/permits/permittypes/electrical/default.htm>.

After the SDCI electrical inspection/signoff and functional pre-testing by the contractor to verify proper performance of the system, acceptance testing must be



witnessed by a Seattle Fire Department inspector. To schedule an inspector, call the SFD Engineering Section at (206) 386-1443 between the hours of 8:00 a.m. and 9:00 a.m. Inspections should be scheduled at least five working days in advance, with more advance notice recommended. It is the responsibility of the contractor to perform all acceptance tests and provide the necessary equipment for the tests.

### **Additional Two-Way Wired Communications Systems Required by the Seattle Building Code**

The Seattle Building Code (SBC) Section 1007.6.3 has additional requirements for a separate two-way wired communication system. SBC Section 1007.6.3 requires an 'Area of Refuge' two-way communication system that also communicates with the building fire command center. For buildings without a fire command center, the communication system control equipment is normally installed inside the building at the main building entrance, co-located with the fire alarm control panel or annunciator.

The following sections of the SBC are excerpted for customers' reference:

#### *SBC Section 1007.6.3 — Two-way communication*

*Areas of refuge shall be provided with a two-way communication system complying with Sections 1007.8.1 and 1007.8.2.*

#### *SBC Section 1007.8 — Two-way communication*

*A two-way communication system shall be provided at the elevator landing on each accessible floor that is one or more stories above or below the story of exit discharge complying with Sections 1007.8.1 and 1007.8.2.*

*Exceptions:*

- 1. Two-way communication systems are not required at the elevator landing where the two-way communication system is provided within areas of refuge in accordance with Section 1007.6.3.*
- 2. Two-way communication systems are not required on floors provided with exit ramps conforming to the provisions of Section 1010.*

#### *1007.8.1 System requirements*

*Two-way communication systems shall provide communication between each required location and the*

*fire command center or a central control point location approved by the fire department. Where the central control point is not constantly attended, a two-way communication system shall have a timed automatic telephone dial-out capability to a monitoring location. The two-way communication system shall include both audible and visible signals. The two-way communication system shall have a battery backup or an approved alternate source of power that is capable of 90 minutes use upon failure of the normal power source.*

#### *1007.8.2 Directions*

*Directions for the use of the two-way communication system, instructions for summoning assistance via the two-way communication system and written identification of the location shall be posted adjacent to the two-way communication system.*

For high rise buildings, SBC 403.5.3.1 requires a stairway telephone or other two-way communication device every fifth floor in each stairway connected to a constantly attended location, similar to the passenger phones or 'push-to-talk boxes' that are installed in elevators. SBC Section 1008.1.9.11 also requires the same communication system for stairways that are serving more than four stories in non-high rise buildings.

Since these communication systems are provisions of the Seattle Building Code, the Seattle Fire Department defers all requirements for the installation, inspections and final acceptance of these systems to the Department of Planning and Development.

SFC Section 1030.8 requires that all two-way communication systems for areas of refuge be inspected and tested on a yearly basis to verify that all components are operational. Documentation of the testing must be maintained on the premises and be made available to the fire department upon request.

The Seattle Building Code can be viewed at: <http://www.seattle.gov/dpd/codesrules/codes/building/default.htm>.