

CHAPTER 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS

SECTION 907—FIRE ALARM AND DETECTION SYSTEMS

907.5.2 Alarm notification appliances. *Alarm notification appliances* shall be provided and shall be *listed* for their purpose.

907.5.2.1 Audible alarms. *Audible alarm notification appliances* shall be provided and emit a distinctive sound that is not to be used for any purpose other than that of a fire alarm.

Exceptions:

1. *Audible alarm notification appliances* are not required in critical care areas of Group I-2, Condition 2 occupancies that are in compliance with Section 907.2.6, Exception 2.
2. A *visible alarm notification appliance* installed in a nurses' control station or other continuously attended staff location in a Group I-2, Condition 2 suite shall be an acceptable alternative to the installation of *audible alarm notification appliances* throughout a suite or unit in Group I-2, Condition 2 occupancies that are in compliance with Section 907.2.6, Exception 2.
3. Where provided, audible notification appliances located in each enclosed occupant evacuation elevator lobby in accordance with Section 3008.9.1 shall be connected to a separate *notification zone* for manual paging only.

907.5.2.1.1 Average sound pressure. The *audible alarm notification appliances* shall provide a sound pressure level of 15 decibels (dBA) above the *average ambient sound level* or 5 dBA above the maximum sound level having a duration of not less than 60 seconds, whichever is greater, in every *occupiable space* within the building.

907.5.2.1.2 Maximum sound pressure. The total sound pressure level produced by combining the ambient sound pressure level with all audible notification appliances operating shall not exceed 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 105 dBA, *visible alarm noti-*

fication appliances shall be provided in accordance with NFPA 72 and *audible alarm notification appliances* shall not be required.

907.5.2.1.3 Audible alarm signal frequency in Group R-1, R-2 and I-1 sleeping rooms. Audible alarm signal frequency in Group R-1, R-2 and I-1 occupancies shall be in accordance with Sections 907.5.2.1.3.1 and 907.5.2.1.3.2.

907.5.2.1.3.1 Fire alarm system audible signal. In sleeping rooms of Group R-1, R-2 and I-1 occupancies, the *audible alarm signal* activated by a *fire alarm system* shall be a 520-Hz low-frequency signal complying with NFPA 72.

907.5.2.1.3.2 Smoke alarm signal in sleeping rooms. In sleeping rooms of Group R-1, R-2 and I-1 occupancies that are required by Section 907.2.8 or 907.2.9 to have a *fire alarm system*, the *audible alarm signal* activated by *single- or multiple-station smoke alarms* in the *dwelling unit* or *sleeping unit* shall be a 520-Hz signal complying with NFPA 72. Where a sleeping room *smoke alarm* is unable to produce a 520-Hz signal, the 520-Hz *alarm signal* shall be provided by a *listed* notification appliance or a *smoke detector* with an integral 520-Hz sounder.

907.5.2.2 Emergency voice/alarm communication systems. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any *automatic fire detector*, sprinkler waterflow device or *manual fire alarm box* shall automatically sound an alert tone followed by voice instructions giving *approved* information and directions for a general or staged evacuation in accordance with the *building's* fire safety and evacuation plans required by Section 404 of the *International Fire Code*. In *high-rise buildings*, the system shall operate on at least the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the *building* by paging zones. At a minimum, paging zones shall be provided as follows:

1. *Elevator groups*.
2. *Interior exit stairways*.
3. Each floor.
4. *Areas of refuge* as defined in Chapter 2.

Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a constantly attended area and a general

occupant notification shall be broadcast over the overhead page.

907.5.2.2.1 Manual override. A manual override for emergency voice communication shall be provided on a selective and all-call basis for all paging zones.

907.5.2.2.2 Live voice messages. The emergency voice/alarm communication system shall have the capability to broadcast live voice messages by paging zones on a selective and all-call basis.

907.5.2.2.3 Alternative uses. The emergency voice/alarm communication system shall be allowed to be used for other announcements, provided that the manual fire alarm use takes precedence over any other use.

907.5.2.2.4 Emergency voice/alarm communication captions. Where stadiums, arenas and *grandstands* have 15,000 *fixed seats* or more and provide audible public announcements, the emergency/voice alarm communication system shall provide prerecorded or real-time captions. Prerecorded or live emergency captions shall be from an *approved* location constantly attended by personnel trained to respond to an emergency.

907.5.2.2.5 Standby power. *Emergency voice/alarm communications* systems shall be provided with standby power in accordance with Section 2702.

907.5.2.3 Visible alarms. *Visible alarm notification appliances* shall be provided in accordance with Sections 907.5.2.3.1 through 907.5.2.3.3.

Exceptions:

1. *Visible alarm notification appliances* are not required in *alterations*, except where an existing *fire alarm system* is upgraded or replaced, or a new *fire alarm system* is installed.
2. *Visible alarm notification appliances* shall not be required in *exits* as defined in Chapter 2.
3. *Visible alarm notification appliances* shall not be required in elevator cars.
4. Visual alarm notification appliances are not required in critical care areas of Group 1-2, Condition 2 occupancies that are in compliance with Section 907.2.6, Exception 2.

5. *A visible alarm notification appliance* installed in a nurses' control station or other continuously attended staff location in a Group I-2, Condition 2 suite shall be an acceptable alternative to the installation of *visible alarm notification appliances* throughout the suite or unit in Group I-2, Condition 2 occupancies that are in compliance with Section 907.2.6, Exception 2.

907.5.2.3.1 Public use areas and common use areas. *Visible alarm notification appliances* shall be provided in *public use areas* and *common use areas*.

Exception: Where *employee work areas* have audible alarm coverage, the notification appliance circuits serving the *employee work areas* shall be initially designed with not less than 20 percent spare capacity to account for the potential of adding visible notification appliances in the future to accommodate hearing-impaired employee(s).

907.5.2.3.2 Groups I-1 and R-1. *Habitable spaces* in *dwelling units* and *sleeping units* in Group I-1 and R-1 occupancies in accordance with Table 907.5.2.3.2 shall be provided with visible alarm notification. Visible alarms shall be activated by the in-room *smoke alarm* and the *building fire alarm system*.

**TABLE 907.5.2.3.2
VISIBLE ALARMS**

NUMBER OF SLEEPING UNITS	SLEEPING ACCOMMODATIONS WITH VISIBLE ALARMS
6 to 25	2
26 to 50	4
51 to 75	7
76 to 100	9
101 to 150	12
151 to 200	14
201 to 300	17
301 to 400	20
401 to 500	22
501 to 1,000	5% of total
1,001 and over	50 plus 3 for each 100 over 1,000

907.5.2.3.3 Group R-2. In Group R-2 occupancies required by Section 907 to have a *fire alarm system*, each *story* that contains *dwelling units* and *sleeping units* shall be provided with the capability to support future *visible alarm notification appliances* in accordance with Chapter 11 of ICC A117.1. Such capability shall accommodate wired or wireless equipment.

907.5.2.3.3.1 Wired equipment. Where wired equipment is used to comply with the future capability required by Section 907.5.2.3.3, the system shall include one of the following capabilities:

1. The replacement of audible appliances with combination audible/visible appliances or additional visible notification appliances.
2. The future extension of the existing wiring from the unit *smoke alarm* locations to required locations for visible appliances.
3. For wired equipment, the fire alarm power supply and circuits shall have not less than 5 percent excess capacity to accommodate the future addition of *visible alarm notification appliances*, and a single access point to such circuits shall be available on every *story*. Such circuits shall not be required to be extended beyond a single access point on a *story*. The *fire alarm system* shop drawings required by Section 907.1.2 shall include the power supply and circuit documentation to accommodate the future addition of visible notification appliances.