Long-Term Care Regulatory Technical Memorandum

Number: TM 2021-02 (ALF)
Title: Smoke, Heat and Carbon Monoxide Detection
Provider Types: Assisted Living Facility (ALF)
TAC Reference: See Endnote[1]
Date Issued: August 31, 2021

1.0 Subject and Purpose

This technical memorandum (TM) provides guidance on the interpretation of, and compliance with, the requirements for smoke detection, heat detection, and carbon monoxide (CO) detection in an ALF, as established in Texas Administrative Code, Title 26 (26 TAC) Chapter 553, Licensing Standards for Assisted Living Facilities.[2]

The guidance provided in this TM cannot address every unique condition or configuration related to smoke detection, heat detection, and CO detection. Compliance can only be evaluated based upon the particular on-site conditions in each situation. This TM applies only to the provisions of 26 TAC Subchapter D[3] specifically addressed herein. It does not constitute a substantive change to any provision of those sections. Nor does it address or modify any other rule in Chapter 553 or other legal requirement to which an ALF is subject, including requirements for approval by a local authority having jurisdiction (AHJ) for enforcement of its own standards.

2.0 Policy Details & Provider Responsibilities

This TM clarifies the requirements for smoke detection, heat detection, and CO detection in an ALF.

Requirements for installation of smoke detection, heat detection, and CO detection are based on the size[4] of an ALF and the type of ALF license the facility has.

In general, the requirements for new facilities and for existing facilities are the same.[5]

2.1 Fire Alarm System

All ALFs must have a fire alarm system that meets the requirements of NFPA 101, section 9.6, and NFPA 72, except as discussed in this document.[6]

2.2 Smoke Detectors

Smoke detectors are components of a fire alarm system and are intended to protect people and property by generating an alarm early in the development of a fire. Some types of fires burn very slowly, without flames. This is known as a smoldering fire. Smoldering fires generate very little heat, making them difficult to detect by other means.

In the presence of smoke, a smoke detector sends an electronic signal to the fire alarm control panel, which initiates several predetermined actions, such as activating an audible or visible alarm in the building. Smoke detectors usually are powered by the fire alarm system, not by separate electrical wire. Smoke detectors usually do not include a built-in sounding device or alarm.

A smoke detector is different than a smoke alarm. A smoke alarm sounds a built-in alarm when it detects smoke. Smoke alarms are powered by batteries or are connected directly to the building's electrical wiring. A smoke alarm might be connected to a security or burglar alarm, but it is not part of the fire alarm system required in an ALF. Except as discussed in section 2.7.3 of this document, an ALF must have smoke detectors, not smoke alarms.

A smoke detector can be part of a combination detector with a heat detector, a CO detector, or both. These types of detectors are also known as multi-criteria or multi-sensor detectors.

2.3 Heat Detectors

Heat detectors are components of a fire alarm system that senses heat in a room by responding to the thermal energy radiating from a fire. A

heat detector might be used instead of a smoke detector when conditions such as smoke from cooking or automobile exhaust might lead to nuisance alarms. Heat detectors are not able to detect a smoldering fire.

There are two main types of heat detectors:

- rate-of-rise heat detectors; and
- fixed temperature heat detectors.

A rate-of-rise heat detector senses the heat in the room. The detector registers 70 degrees Fahrenheit (F) as a baseline. When the heat in the room rises rapidly above 70 degrees, the alarm is activated. This type of sensor is triggered by the "rate of change" rather than the temperature itself. Usually, the alarm is triggered when the rate of change is a 15 degree increase in less than a minute.

A fixed temperature heat detector focuses on the actual heat in the room, rather than the rate of change in temperature. When the temperature in a room surpasses a preset temperature, the alarm is activated. Typically, the preset temperature that triggers the alarm is around 135 degrees. High temperatures are a good indicator of fire.

Where the ALF rules permit or require a heat detector, a facility can use a rate-of-rise heat detector, a fixed temperature heat detector, or a combination rate-of-rise and fixed temperature heat detector.

A heat detector can be part of a combination detector with a smoke detector, a CO detector, or both. These types of detectors are also known as multi-criteria or multi-sensor detectors.

2.4 CO Detectors

CO is a colorless, odorless, and tasteless gas that is poisonous to humans. CO is a product of burning carbon fuel such as wood, charcoal, gasoline, diesel fuel, natural gas, propane, coal, or heating oil. CO is produced when the fuel does not burn completely. Even small amounts of CO can cause permanent injury or death. CO enters the body through breathing. CO is dangerous because it binds with red blood cells and starves the body of oxygen after the CO passes into the lungs.

The health effects of CO depend on the CO concentration and length of exposure. CO concentration is measured in parts per million (ppm). A person can be poisoned by a small amount of CO over a longer period of time or by a large amount of CO over a shorter amount of time. Most people will not begin feeling the effects of CO poisoning until they have been exposed to 50 ppm for eight hours. As CO levels increase and remain above 50 ppm, symptoms become more noticeable and can include headaches, fatigue, and nausea. The symptoms of CO poisoning are often described as being "flu-like." At substantial CO concentrations above 150 to 200 ppm, disorientation, unconsciousness, and death are possible. A CO detector is a safety device that sounds an alarm when it senses the buildup of CO in a room. For example, a CO detector will sound an alarm after three and a half hours of continuous exposure at a level of 50 ppm but will sound alarm after only eight minutes of continuous exposure at a level of 400 ppm.[7]

CO detectors are connected to a fire alarm control panel or to a separate CO detection control panel and notify building occupants with a distinctive audible alarm that is separate from the audible or visible fire alarm.

A CO detector can be part of a combination detector with a smoke detector, a heat detector, or both. These types of detectors are also known as multi-criteria or multi-sensor detectors.

2.5 Small ALFs

The requirements for detection are same for all small ALFs, except as noted in this section.

2.5.1 Smoke Detectors in a Small ALF

An small ALF must install smoke detectors in the following locations, except as noted in sections 2.5.2 and 2.8 of this document:[8]

- Resident bedrooms;
- Corridors;
- Hallways:
- Living rooms;

- Dining rooms
- Offices;
- Kitchens;
- Laundries;
- Attached garages used for parking cars; and,
- Any public or common area.

A smoke detector is not required in an attached garage if the facility does not park a vehicle in the garage.

A smoke detector is not required in a garage that is not attached to the facility, even if the facility does park a vehicle in the garage.

2.5.2 Heat Detectors in a Small ALF

To reduce nuisance alarms from common activities that might generate smoke, a small ALF can install a heat detector in the following locations, instead of the smoke detectors discussed in section 2.5.1 of this document:[9]

- Kitchens;
- Laundries; and
- Attached garages used for car parking.

2.5.3 Heat Detectors in the Attic of a Small ALF

Small ALFs that have an automatic fire sprinkler system must protect the attic.[10] A small ALF that does not have a fire sprinkler system is not required to protect the attic.

The ALF rules refer to NFPA 101 for the attic protection requirements. NFPA 101 lists different options for protecting the attic depending on how the attic is used.[11]

If a small ALF has an automatic sprinkler system and has gas-fired equipment in the attic (e.g., a gas-fired furnace or water heater), it must protect the entire attic with automatic sprinklers that are part of the approved automatic sprinkler system.[12]

If a small ALF has an automatic sprinkler system and does not have gas-fired equipment in the attic (e.g., a gas-fired furnace or water heater), it has four options for protecting the attic:

- Protect the attic throughout with a heat detection system arranged to activate the building fire alarm system;
- Protect the attic throughout with automatic sprinklers that are part of the approved automatic sprinkler system;
- Ensure the attic is made of noncombustible or limited-combustible construction. It is not common for a small ALF to be noncombustible or limited-combustible construction;[13] or
- Ensure the attic is constructed of fire-retardant-treated wood.[14]

NFPA 101 refers to attics that are used for living purposes or storage, but HHSC does not allow an ALF to use an attic for storage purposes.[15] In addition, this TM assumes an attic does not and cannot meet the living space requirements for an ALF, making an attic unusable as living space.[16]

2.5.4 CO Detectors in a Small ALF

A small ALF must install a CO detector in any room that contains a working fireplace.[17]

A working fireplace is a fireplace that produces a flame. Examples of working fireplaces include fireplaces that burn wood, natural gas, propane, or a combination of fuels.

2.6 Large Type A ALFs

The requirements for detection are same for all large Type A ALFs, except as noted in this section.

2.6.1 Smoke Detectors in a Large Type A ALF

A large Type A ALF must install smoke detectors in the following locations, except as noted in sections 2.6.2, 2.8, or 2.9 of this document:[18]

- Resident bedrooms;
- Corridors;

- Hallways:
- Living rooms;
- Dining rooms
- Offices;
- Kitchens;
- Laundries;
- Attached garages used for parking cars; and
- Any public or common area.

A smoke detector is not required in an attached garage if the facility does not park a vehicle in the garage.

A smoke detector is not required in a garage that is not attached to the facility, even if the facility does park a vehicle in the garage.

2.6.2 Heat Detectors in a Large Type A ALF

To reduce nuisance alarms from common activities that might generate smoke, a large Type A ALF can install a heat detector in the following locations, instead of the smoke detectors discussed in section 2.6.1 of this document:[19]

- Kitchens;
- Laundries; and
- Attached garages used for car parking.

2.6.3 Heat Detectors in the Attic of an Existing Large Type A ALF

An existing large Type A ALF that has an automatic fire sprinkler system must protect the attic.[20] An existing large Type A ALF that does not have a fire sprinkler system is not required to protect the attic.

The ALF rules refer to NFPA 101 for the attic protection requirements. NFPA 101 lists different options for protecting the attic depending on how the attic is used.[21]

If an existing large Type A ALF has an automatic sprinkler system and has gas-fired equipment in the attic (e.g., a gas-fired furnace or water heater), it must protect the entire attic

with automatic sprinklers that are part of the approved automatic sprinkler system.[22]

If an existing large Type A ALF has an automatic sprinkler system and does not have gas-fired equipment in the attic (e.g., a gas-fired furnace or water heater), it has four options for protecting the attic:

- Protect the attic throughout with a heat detection system arranged to activate the building fire alarm system;
- Protect the attic throughout with automatic sprinklers that are part of the approved automatic sprinkler system;
- Ensure the attic is made of noncombustible or limited-combustible construction. It is not common for a large Type A ALF to be noncombustible or limited-combustible construction;[23] or
- Ensure the attic is constructed of fire-retardant-treated wood.[24]

NFPA 101 refers to attics that are used for living purposes or storage, but HHSC does not allow an ALF to use an attic for storage purposes.[25] In addition, this TM assumes an attic does not and cannot meet the living space requirements for an ALF, making an attic unusable as living space.[26]

2.6.4 CO Detectors in a Large Type A ALF

A large Type A ALF must install a CO detector in any room that contains a working fireplace.[27]

A working fireplace is a fireplace that produces a flame. Examples of working fireplaces include fireplaces that burn wood, natural gas, propane, or a combination of fuels.

2.7 Large Type B ALFs

The requirements for detection are same for all large Type B ALFs, except as noted in this section.

2.7.1 Smoke Detectors in a New Large Type B ALF

New large Type B ALFs have three options for smoke detection.

One option for smoke detection in a new large Type B ALF is to provide a corridor smoke detection system. In a corridor smoke detection system, a new large Type B ALF must install smoke detectors in all the following locations:

- In all corridors in smoke compartments containing resident sleeping rooms;[28]
- In all corridors where spaces are open to the corridor, whether resident sleeping rooms are present in the smoke compartment or not; and
- In all spaces open to corridors.[29]

The second option for smoke detection in a new large Type B ALF is to install system smoke detectors in all resident rooms.[30]

The third option for smoke detection in a new large Type B ALF is to install automatic door-closing devices on doors between corridors and resident rooms. The automatic door-closing devices must have integral smoke detectors on the resident room side of the door. The integral smoke detector must activate the fire alarm in addition to closing the resident room door.

A new Large Type B ALF that has resident living units that contain independent cooking equipment must also provide the additional detection discussed in section 2.9 of this document.

2.7.2 Smoke Detectors in an Existing Large Type B ALF

Existing large Type B ALFs have two options for smoke detection.

One option for smoke detection in an existing large Type B ALF is to provide a corridor smoke detector system. In a corridor smoke detection system, an existing large Type B ALF must install smoke detectors in the following locations:

- In all corridors in the ALF; and
- In all spaces open to corridors.[31]

The other option for smoke detection in an existing large Type B ALF is to install system smoke detectors in all resident rooms and at smoke barriers and horizontal exits for door service.[32]

An existing large Type B ALF that has resident living units that contain independent cooking equipment must also provide the additional detection discussed in section 2.9 of this document.

2.7.3 Smoke Alarms or Smoke Detectors in a Large Type B ALF with a Kitchen Open to a Corridor

A large Type B ALF can have a kitchen that is open to a corridor if the kitchen prepares meals for no more than 30 individuals. There can only be one such kitchen open to a corridor in each smoke compartment.[33]

NFPA 101 includes special smoke detection requirements when an ALF has a kitchen open to a corridor as discussed by this section. There are other special requirements not addressed in this document that provide safety for residents when an ALF has a kitchen open to a corridor. An ALF must have all the safety features in NFPA 101 for a kitchen covered by this section.[34]

A large Type B ALF that has a kitchen open to a corridor must provide smoke detection that is different than the smoke detection required for other areas that are open to a corridor as discussed in sections 2.7.1 and 2.7.2 of this document.

A large Type B ALF that has a kitchen open to a corridor must have smoke detection specifically to protect the kitchen.

One option for smoke detection at a kitchen open to a corridor is to install at least two photoelectric smoke alarms with the following features:[35]

- The smoke alarms must be powered by building power, with a battery backup.
- The smoke alarms must be interconnected so that detection by either smoke alarm causes the other smoke alarm to sound.
- The smoke alarms must be able to be silenced.
- The smoke alarms must be located between 20 feet and 25 feet from any cooktop or range in the kitchen that is open to a corridor. The distance from the cooktop or range to the smoke alarm is measured in a straight line along the

floor from the closest edge of the cooktop or range to a point directly under the center of the smoke alarm.[36]

The other option for smoke detection at a kitchen open to a corridor is to install a single system smoke detector, instead of two photoelectric smoke alarms, with the following features:[37]

- The smoke detector must be located between 20 feet and 25 feet from any cooktop or range in the kitchen that is open to the corridor. The distance from the cooktop or range to the smoke detector is measured in a straight line along the floor from the closest edge of the cooktop or range to a point directly under the center of the smoke detector.[38]
- The smoke detector must issue a local audible alarm only instead of activating the fire alarm system.
- The local audible alarm can be silenced and reset by a button on the smoke detector or by a switch located within 10 feet of the smoke detector instead of being silenced and reset from the fire alarm control panel or a fire alarm annunciator panel.
- System smoke detectors discussed in sections 2.7.1 and 2.7.2 of this document are at least 25 feet from any cooktop or range in the kitchen that is open to the corridor. The distance from the cooktop or range to any smoke detector discussed in sections 2.7.1 and 2.7.2 of this document is measured in a straight line along the floor from the closest edge of the cooktop or range to a point directly under the center of the smoke detector.[39]

2.7.4 Heat Detectors in a Large Type B ALF

Heat detectors are not required in a large Type B ALF except in resident living units with independent cooking equipment as discussed in section 2.9 of this document.

2.7.5 Heat Detectors in the Attic of a Large Type B ALF

Heat detectors are not required in the attic of a large Type B ALF.

2.7.6 CO Detectors in a Large Type B ALF

A large Type B ALF must install a CO detector in any room that contains a working fireplace.[40]

A working fireplace is a fireplace that produces a flame. Examples of working fireplaces include fireplaces that burn wood, natural gas, propane, or a combination of fuels.

2.8 Small ALFs and Large Type A ALFs Constructed to Meet Health Care Occupancy Requirements

Small ALFs and large Type A ALFs have the option of installing smoke detectors that meet the smoke detector requirements for a health care occupancy in NFPA 101, as discussed in section 2.7.1 of this document, instead of installing smoke detectors according to sections 2.5.1 or 2.6.1 of this document.[41]

The smoke detector requirements for a health care occupancy are the same requirements that a large Type B ALF must meet. This option can make it easier to license a former hospital or nursing home as an ALF without adding smoke detectors. This option can also make it easier to reclassify a small ALF or a large Type A ALF to a large Type B ALF.

2.9 Large ALFs Containing Living Units with Independent Cooking

A large ALF that has resident living units that contain independent cooking equipment must have additional smoke detector and heat detectors.[42]

A living unit is a portion of a facility arranged as a separate unit with one or more bedrooms, a toilet and bathing facility, and living or dining spaces, with or without facilities for cooking. A living unit is used exclusively by the residents who live in the bedrooms in the living unit.[43]

A living unit has independent cooking equipment when it has an electric or gas stove or range.[44]

A large ALF with resident living units that contain independent cooking equipment must have additional smoke detectors that sound an alarm only within the living unit. The smoke detectors must be installed in the following locations in the living unit:

- Bedrooms;
- Corridors;
- Hallways;
- Living rooms;
- Dining rooms;
- Offices;
- Kitchens; and
- Laundries.

A large ALF with resident living units that contain independent cooking equipment must also have a heat detector in the kitchen within the living unit. The heat detector must active the ALF's fire alarm.

2.10 Smoke Detection for Protection of Fire Alarm Systems

An ALF must install smoke detectors to warn the ALF of a fire that might adversely affect components of the fire alarm system and prevent it from operating properly.[45]

2.11 Inspection, Testing and Maintenance (ITM)

An ALF must have a program to inspect, test, and maintain the ALF's fire alarm system and, if an ALF has CO detectors, the CO detection system.[46]

An ALF must contract with a company that has an Alarm Certificate of Registration (ACR) issued by the Texas State Fire Marshal's Office.[47] The contracted fire alarm company must visit the ALF at least once every six months.

Even though the tasks might be performed by the contracted fire alarm company, an ALF is responsible for ensuring the following ITM tasks are performed:[48]

- Fire alarm system and CO detection components that require visual inspection are visually inspected;
- Fire alarm system components and CO detection components that require testing are tested; and

- Fire alarm system components and CO detection components that require maintenance are maintained.

An ALF must ensure ITM is performed at the frequencies set in NFPA 72 and NFPA 720 and using the methods defined in NFPA 72 and NFPA 720.[49]

Scheduled frequencies for different tasks in the NFPA standards vary from weekly to annually. An ALF must ensure any ITM tasks are performed by qualified individuals, even though the contracted fire alarm company is not required to visit the ALF more often than once every six months.

An ALF must ensure records of ITM activities are maintained at the ALF and are readily accessible when needed. An ALF should understand the information in the ITM records and should be able to explain:

- What ITM was performed;
- What date ITM was performed on; and
- Whether components that did not pass inspection or testing, or that were required to be replaced on a regular frequency, were replaced.

3.0 Background/History

Health and Safety Code §247.0263 requires HHSC to provide "guidance on the interpretation of minimum life safety code standards" prescribed under Health and Safety Code, Chapter 247, Assisted Living Facilities, and ALF rules, in 26 TAC Chapter 553. The statute requires a TM to be published at least twice a year.

4.0 Resources

None

5.0 Contact Information

If you have any questions about this letter, please contact the Policy and Rules Section by email at LTCRPolicy@hhsc.state.tx.us or call (512) 438-3161.

Endnote References:

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[1] All references to Texas Administrative Code, Title 26, Part 1, Chapter 553, Licensing Standards for Assisted Living Facilities, can be viewed at the Texas Office of the Secretary of State website.

Relating to all ALFs:

- 26 TAC §553.101(23), definition of NFPA 72
- 26 TAC §553.101(27), definition of NFPA 720
- 26 TAC §553.104(g), program for ITM
- 26 TAC §553.104(j)(7), storage in attic spaces

Relating to existing small Type A ALFs:

- 26 TAC §553.115(a)(2), smoke detectors
- 26 TAC §553.115(c), attic protection
- 26 TAC §553.117(d)(2)(E)(iv), CO detection at working fireplace

Relating to existing small Type B ALFs:

- 26 TAC §553.125(a)(2), smoke detectors
- 26 TAC §553.125(c), attic protection
- 26 TAC §553.127(d)(2)(E)(iv), CO detection at working fireplace

Relating to existing large Type A ALFs:

- 26 TAC §553.135(a)(2), smoke detectors
- 26 TAC §553.135(c), attic protection
- 26 TAC §553.137(e)(2)(E)(iv), CO detection at working fireplace

Relating to existing large Type B ALFs:

- 26 TAC §553.145(a)(2), smoke detectors
- 26 TAC §553.146(c), protection of kitchens open to corridors
- 26 TAC §553.147(e)(2)(E)(iv), CO detection at working fireplace

Relating to new small Type A ALFs:

- 26 TAC §553.215(a)(2), smoke detectors

- 26 TAC §553.215(c), attic protection
- 26 TAC §553.217(d)(2)(E)(iv), CO detection at working fireplace

Relating to new small Type B ALFs:

- 26 TAC §553.225(a)(2), smoke detectors
- 26 TAC §553.225(c), attic protection
- 26 TAC §553.227(d)(2)(E)(iv), CO detection at working fireplace

Relating to new large Type A ALFs:

- 26 TAC §553.235(a)(2), smoke detectors
- 26 TAC §553.237(e)(2)(E)(iv), CO detection at working fireplace

Relating to new large Type B ALFs:

- 26 TAC §553.245(a)(2), smoke detectors
- 26 TAC §553.246(c), protection of kitchens open to corridors
- 26 TAC §553.247(e)(2)(F), CO detection at working fireplace

[2] See endnote 1.

[3] See endnote 1.

[4] A small ALF is a facility licensed for 16 or fewer residents. A large ALF is a facility licensed for 17 or more residents.

[5] An existing facility is one that operated with a license as an ALF before August 31, 2021, and that has not subsequently become unlicensed. A new facility is one that became licensed as an ALF on or after August 31, 2021.

[6] NFPA 101, *Life Safety Code*, 2012 edition
NFPA 72, *National Fire Alarm and Signaling Code*, 2010 edition.
National Fire Protection Association (NFPA)
1 Batterymarch Park
Quincy, Massachusetts 02169-7471

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[7] Levels of carbon monoxide exposure range from low to dangerous:

- Low level: 50 ppm and fewer
- Mid-level: Between 51 ppm and 100 ppm
- High level: More than 101 ppm if no one is experiencing symptoms
- Dangerous level: More than 101 ppm if someone is experiencing symptoms

CO Levels That Will Sound an Alarm	
CO Level	Alarm Response Time
40 ppm	10 hours
50 ppm	8 hours
70 ppm	1 to 4 hours
150 ppm	10 to 50 minutes
400 ppm	4 to 15 minutes

[8] When the ALF rules require a smoke detector, a smoke alarm cannot be substituted for a smoke detector that is connected to the fire alarm system. See 26 TAC §§553.115(a)(2)(A), 553.125(a)(2)(A), 553.215(a)(2)(A), and 553.225(a)(2)(A).

[9] See 26 TAC §§553.115(a)(2)(B), 553.125(a)(2)(B), 553.215(a)(2)(B), and 553.225(a)(2)(B).

[10] See 26 TAC §§553.115(c), 553.125(c), 553.215(c), and 553.225(c). Existing small ALFs have until August 31, 2024, to install the attic protection. See provider letter (PL) 2021-32, Implementing ALF Life Safety Code Rules, for more information. New small ALFs must protect the attic as part of the requirements to obtain a license.

[11] See NFPA 101, 32.2.3.5.7 for new small ALFs and 33.2.3.5.7 for existing small ALFs.

[12] See NFPA 101, 32.2.3.5.7.1 for new small ALFs and 33.2.3.5.7.1 for existing small ALFs. Existing small ALFs have until August 31, 2024, to install the fire sprinklers in the attic. See PL 2021-32, Implementing ALF Life Safety Code Rules, for more information. New small ALFs must install fire sprinklers in the attic as part of the requirements to obtain a license.

[13] Types of construction are classified according to NFPA 220, *Standard on Types of Building Construction,* 2012 edition.

Noncombustible construction is also known as Type I construction. Limited-combustible construction is also known as Type II construction. Noncombustible and limited-combustible construction is construction where structural elements, walls, floors and roofs are constructed using noncombustible or limited-combustible materials. Noncombustible and limited-combustible materials are materials that will not ignite, burn, support combustion or release flammable vapors when exposed to fire or heat.

[14] Fire-retardant-treated wood (FRTW) is wood impregnated with chemicals by a pressure process or other means during manufacture. FRTW is defined in NFPA 703, *Standard for Fire-Retardant-Treated Wood and Fire-Retardant Coatings for Building Materials,* 2012 edition. Wood coated with a fire-retardant coating is not FRTW. FRTW is not considered a noncombustible or limited-combustible material.

[15] See 26 TAC §553.104(j)(7).

[16] See 26 TAC §§553.112, 553.122, 553.212 and 553.222.

[17] See 26 TAC §§553.117(d)(2)(E)(iv), 553.127(d)(2)(E)(iv), 553.217(d)(2)(E)(iv) and 553.227(d)(2)(E)(iv). Existing small ALFs have until August 31, 2022, to install a CO detector in rooms containing a working fireplace. See PL 2021-32, Implementing ALF Life Safety Code Rules, for more information. New small ALFs must install a CO detector in rooms containing a working fireplace as part of the requirements to obtain a license.

CO detection must be installed according to the requirements for household carbon monoxide detection systems in NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment,* 2012 edition.

[18] When the ALF rules require a smoke detector, a smoke alarm cannot be substituted for a smoke detector that is connected to the fire alarm system. See 26 TAC §§553.135(a)(2)(A) and 553.235(a)(2)(A).

The ALF rules replace the smoke alarm and smoke detection systems requirements for large Residential Board & Care Occupancies in NFPA 101. A large Type A ALF must meet the ALF rules and does not have to provide smoke alarms or smoke detection systems requirements found in NFPA 101, 32/33.3.3.4.7, Smoke Alarms, or 32/33.3.4.8, Smoke Detection Systems.

[19] See 26 TAC §§553.135(a)(2)(B) and 553.235(a)(2)(B).

[20] See 26 TAC §§553.135(c). Existing large Type A ALFs have until August 31, 2024, to install the attic protection. See PL 2021-32, Implementing ALF Life Safety Code Rules, for more information.

[21] See NFPA 101, 33.3.3.5.4.

[22] See NFPA 101, 33.3.3.5.4.1. Existing large Type A ALFs have until August 31, 2024, to install the fire sprinklers in the attic. See PL 2021-32, Implementing ALF Life Safety Code Rules, for more information.

[23] See endnote 13.

[24] See endnote 14.

[25] See endnote 15.

[26] See 26 TAC §§553.132.

[27] See 26 TAC §§553.137(e)(2)(E)(iv) and 553.237(e)(2)(E)(iv). Existing large Type A ALFs have until August 31, 2022, to install a CO detector in rooms containing a working fireplace. See PL 2021-32, Implementing ALF Life Safety Code Rules, for more information. New large Type A ALFs must install a CO detector in rooms containing a working fireplace as part of the requirement to obtain a license.

CO detection must be installed according to the requirements for household carbon monoxide detection systems in NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment,* 2012 edition.

[28] Resident sleeping rooms include individual resident bedrooms and resident living units.

[29] A space is considered open to a corridor if it is not separated from the corridor by partitions that form a barrier to limit the transfer of smoke with doors protecting openings in the partition that resist the passage of smoke. Doors that resist the passage of smoke will automatically latch when the door is closed. Smoke resistant doors in corridor walls do not have to be self- or automatic-closing. See NFPA 101, 18.3.6.2, Construction of Corridor Walls.

Resident rooms, resident living units (apartments), hazardous areas and kitchens that do not meet the requirements of NFPA 101, 18/19.3.2.5.3, as modified by NFPA Tentative Interim Amendment TIA 12-2, cannot be open to a corridor (see section 2.7.3 and endnote 33 of this document). NFPA issues a tentative interim amendment (TIA) on an emergency basis when the responsible NFPA technical committee and NFPA Correlating Committee determine the amendment cannot wait for the next revision cycle. TIAs are processed according to the NFPA Regulations Governing the Development of NFPA Standards.

[30] A resident room means an individual resident bedroom or a living unit. An individual resident bedroom must have a smoke detector. When a resident room is a living unit, each bedroom, living room, dining room or kitchenette in the living unit must have a smoke detector. If a resident living unit includes independent cooking equipment the living unit must have the detectors required by section 2.9 of this document.

[31] See endnote 29.

[32] See endnote 30.

[33] See NFPA 101, 18.3.2.5.3 and 19.3.2.5.3 as modified by TIA 12-2.

[34] See 26 TAC §§553.146(c) and 553.246(c).

[35] See NFPA 101, TIA 12-2, 18/19.3.2.5.3(11).

[36] The smoke alarm does not have to be located in the kitchen area itself, if locating it in the kitchen area would place it less than 20 feet from the range or cooktop. See NFPA 101, TIA 12-2, 18/19.3.2.5.3(12).

[37] See NFPA 101, TIA 12-2, 18/19.3.2.5.3(13).

[38] The smoke alarm does not have to be located in the kitchen area itself, if locating it in the kitchen area would place it less than 20 feet from the range or cooktop. See NFPA 101, TIA 12-2, 18/19.3.2.5.3(12).

[39] See NFPA 101, TIA 12-2, 18/19.3.2.5.3(14).

[40] See 26 TAC §§553.147(e)(2)(E)(iv) and 553.247(e)(2)(F) and NFPA 101, 18.5.2.3(2)(f) and 18.5.2.3(3)(d). Existing large Type A ALFs have until August 31, 2022, to install a CO detector in rooms containing a working fireplace. See PL 2021-32, Implementing ALF Life Safety Code Rules, for more information. New large Type B ALFs must install a CO detector in rooms containing a working fireplace as part of the requirement to obtain a license.

CO detection must be installed according to the requirements for household carbon monoxide detection systems in NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment,* 2012 edition.

[41] See 26 TAC §§553.115(a)(2)(C), 553.125(a)(2)(C), 553.135(a)(2)(C), 553.215(a)(2)(C), 553.225(a)(2)(C) and 553.235(a)(2)(C).

[42] See 26 TAC §§553.135(a)(2)(D), 553.145(a)(2)(B), 553.235(a)(2)(D) and 553.245(a)(2)(B).

[43] See 26 TAC §553.101(13).

[44] See 26 TAC §553.101(12).

A stove is a portable or fixed apparatus that burns fuel or uses electricity to provide heat (as for cooking or heating). Merriam-Webster. (2004). Stove. In *Merriam-Webster's Collegiate Dictionary* (11th ed., p. 1231).

A range is a cooking stove that has an oven and a flat top with burners or heating elements. Merriam-Webster. (2004). Range. In *Merriam-Webster's Collegiate Dictionary* (11th ed., p. 1029).

[45] See NFPA 101 9.6.1.8, Protection of Fire alarm System.

[46] See 26 TAC §553.104(g).

[47] The State Fire Marshal's Office (SFMO) is part of the Texas Department of Insurance. The SFMO investigates fires; inspects state agency buildings and buildings located in areas where there is no local fire marshal; provides outreach, policy and research on fire protection; licenses protection companies and personnel; and, licenses and permits the manufacture, distribution and retailing of fireworks in Texas.

[48] An ALF that does not have CO detection does not have to perform ITM on CO detection components or systems. An ALF that has CO detection on August 31, 2021, must perform ITM on CO detection components no later than August 31, 2022 (see 26 TAC §553.104(g)(5)(D)).

[49] See NFPA 72, 2010 edition, Chapter 14, Inspection, Testing, and Maintenance for requirements for visual inspection, testing, maintenance and recordkeeping requirements for ITM of fire alarm systems and components.

See NFPA 720, 2012 edition, Chapter 8, Inspection, Testing, and Maintenance for requirements for visual inspection, testing, maintenance and recordkeeping requirements for ITM of CO detection system and components.

See endnote 6 for instructions on how to read NFPA codes and standards free of charge.