



# Fire Safety in ACLFs and RHAs

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# REGULATORY REQUIREMENT

## BUILDING STANDARDS 1200-8-25-.09 (1)

An ACLF shall construct, arrange, and maintain the condition of the physical plant and the overall ACLF living facility environment in such a manner that the safety and wellbeing of residents are assured.



# CODE CHANGES

- ✔ 2006 edition of the National Fire Protection Code (NFPA101)
- ✔ 2005 National Electrical Code,
- ✔ 1999 edition of the U.S Public Health Service Food Code
- ✔ 2004 Americans with Disabilities Act (A.D.A.),
- ✔ 1999 edition of North Carolina Handicap Accessibility Codes with 2004 amendments apply to all new and existing facilities.



# REGULATORY REQUIREMENT

## **BUILDING STANDARDS      1200-8-25-.09 (5)**

No new ACLF shall be constructed, nor shall major alterations be made to an existing ACLF **without prior approval of the department**, and unless in accordance with plans and specifications approved in advance by the department. Before any new ACLF is licensed or before any alteration or expansion of a licensed ACLF can be approved, the applicant must furnish two (2) complete sets of plans and specifications to the department, together with fees and other information as required. Plans and specifications for new construction and major renovations, other than minor alterations not affecting fire and life safety or functional issues, shall be prepared by or under the direction of a licensed architect and/or a licensed engineer and in accordance with the rules of the Board of Architectural and Engineering Examiners.



# WHAT THAT MEANS IS ...

To renovate OR alter construction, permission must first be requested, then Granted by the Department of Health prior to starting work.

Ensure that a licensed contractor is used, as required.



# Plan Submission — if required

Follow the requirements contained in:

## **Architectural and Engineering Guidelines for Submission, Approval and Inspection of Occupancies Licensed by the Department of Health**

### Plan Review Submittal Form

- Review Fee
- Plans (2 complete sets)
- Specifications



# Substantial Renovation

**Facilities Construction Director will determine if architectural drawings will be required.**

Projects requiring review:

- Projects renovate more than ten percent (10%) of any smoke compartment.
- Change or alter medical gas or be classified as hazardous.
- Change or alter the existing life safety classification of the building.
- Change or alter the construction type or life safety of the facility.

Alterations any of the following systems:

- Fire Alarm System
- Fire Suppression System
- Mechanical System
- Electrical System



# Exemptions

- ✓ Areas renovated less than 10% of any smoke compartment.
- ✓ Only one renovation shall be initiated in a single year.
- ✓ No licensure deficiencies as of last State or Local survey.
- ✓ Submit a statement of the project scope.
- ✓ All work shall be executed in accordance with currently adopted codes.



# Locking Hardware

- Submit request, in writing to the Facilities Construction Director,
- Provide two copies of floor plan indicating area to be secured and doors to be locked, and
- Provide two copies of manufacturer's literature to determine minimum standards and requirements for installation of equipment.



# LIFE SAFETY CODE

## Requirement

33.2.2.5.5 No door in any means of escape, other than those meeting 33.2.2.5.5.1 or 33.2.2.5.5.2, shall be locked against egress when the building is occupied.

33.2.2.5.5.1 Delayed egress locks complying with 7.2.1.6.1 shall be permitted on exterior doors only.



# LIFE SAFETY CODE

## Requirement

### Special Locking Arrangements

7.2.1.6.1 Delayed-Egress Locks. Approved, listed, delayed-egress locks shall be permitted to be installed on doors serving low and ordinary hazard contents in buildings protected throughout by an approved, supervised automatic fire detection system in accordance with Section 9.6 or an approved, supervised automatic sprinkler system in accordance with Section 9.7, and where permitted in Chapter 12 through Chapter 42, provided that the following criteria are met:

- (2) The doors shall unlock upon actuation of one of the following:
  - (a) An approved, supervised automatic sprinkler system in accordance with Section 9.7
  - (b) Not more than two heat detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6
  - (c) Not more than two smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6



# LIFE SAFETY CODE

## Requirement

### Special Locking Arrangements

- 7.2.1.6.1 (3) The doors shall unlock upon loss of power controlling the lock or locking mechanism.
- 7.2.1.6.1(4)\* An irreversible process shall release the lock within 15 seconds, or 30 seconds where approved by the authority having jurisdiction, upon application of a force to the release device required in 7.2.1.5.9 under the following conditions:
- (a) The force shall not be required to exceed 67 N (15 lbf).
  - (b) The force shall not be required to be continuously applied for more than 3 seconds.
  - (c) The initiation of the release process shall activate an audible signal in the vicinity of the door.
  - (d) Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.



# LIFE SAFETY CODE Requirement

## Special Locking Arrangements

7.2.1.6.1 (5) A readily visible, durable sign in letters not less than 25 mm (1 in.) high and not less than 3.2 mm ( in.) in stroke width on a contrasting background that reads as follows shall be located on the door adjacent to the release device:

**PUSH UNTIL ALARM SOUNDS  
DOOR CAN BE OPENED IN 15 SECONDS**



# LIFE SAFETY CODE

## Requirement

Emergency Egress and Relocation Drills.

33.7.3.3 The drills shall involve the actual evacuation of all residents to an assembly point, as specified in the emergency plan, and shall provide residents with experience in egressing through all exits and means of escape required by this Code.



# LIFE SAFETY CODE Requirement

**33.7.3.6 If the board and care facility has an evacuation capability classification of impractical, those residents who cannot meaningfully assist in their own evacuation or who have special health problems shall not be required to actively participate in the drill. Section 19.7 shall apply in such instances.**



# LIFE SAFETY CODE Requirement

19.7.1.5 Infirm or bedridden patients shall not be required to be moved during drills to safe areas or to the exterior of the building.

NOTE: This exception to the code is not intended for those residents not wanting to participate in the drill.



# REGULATORY REQUIREMENT

## BUILDING STANDARDS

**1200-8-25-.09** (16) a A negative air pressure shall be maintained in the soiled utility area, toilet room, janitor's closet, dishwashing and other such soiled spaces, and a positive air pressure shall be maintained in all clean areas including, but not limited to, clean linen rooms and clean utility rooms;



# REGULATORY REQUIREMENT

## 1200-8-25-.10 (2)

(f) Keep corridors and exit doors clear of equipment, furniture and other obstacles at all times. Passage to exit doors leading to a safe area shall be clear at all times;



# REGULATORY REQUIREMENT

**1200-8-25-.10 (5)**

(c) Maintain all electrical equipment in good repair and safe operating condition;





# REGULATORY REQUIREMENT

## 1200-8-25-.10 (8)

(a) The ACLF maintains all safety equipment in good repair and in a safe operating condition;



# Safety Equipment

- ✓ Sprinkler systems
- ✓ Fire Alarm systems
- ✓ Kitchen Hood Suppression systems
- ✓ Rated Assemblies
- ✓ Magnetic locking devices
- ✓ Nurse call system
- ✓ Exit lights/signs
- ✓ Emergency Generator

# Improper installation





# Marble Mountain Burn Video

You need a MP4 compatible media player on your computer to be able to play this video.

A free codec download that will enable Windows Media Player to play the video.

The free file can be downloaded at: <http://www.mediacodec.org/>

You may not need to download the Media Player (an option to unselect when installing) IF your computers already have it installed. I'm sure most computers that any of the facilities have will also have Windows Media installed.

The link to the Marble Mountain Demonstration Burn is at:

<http://www.ircfiresprinkler.org/resources.htm>

SCROLL DOWN TO: Videos: Marble Mountain Demonstration Burn and click on the link.



# Automatic Sprinkler Systems

**Wet systems > Greater than 40 degrees F**

**Dry systems → air compressor maintenance**

**Maintained in accordance with NFPA 25**



# Automatic Sprinkler Systems

Shall be tested/serviced per NFPA 25

Gauges on wet pipe inspect monthly.

Gauges on dry pipe inspect weekly,  
(monthly if a low air pressure alarm is on dry systems)

**Water flow alarm devices tested quarterly.**

Obstruction inspection every five years.

Gauge maintenance every five years.

Sample head testing per NFPA 25 (2002 edition)



# Automatic Sprinkler Systems

A supply of spare sprinklers must be maintained on the premises (never fewer than six). The stock of spare sprinklers must correspond to all types and temperature ratings installed in the building.

A sprinkler wrench must be kept on hand in a cabinet near the sprinkler riser.

The 18 inch clearance from every sprinkler deflector must be maintained; this would include materials placed on shelves in closets, storage rooms, etc.



# Fire Alarm System

Testing per manufacturer's recommendations and NFPA 72.

Smoke detector sensitivity

All initiating devices, audible and visual alarms

Fire alarm system testing and servicing must be performed annually (also if system modified/repared) by qualified (licensed/certified) person (NFPA 72, 10.2.2.5).

Reports should be complete with all information as specified in NFPA 72, 10.6.



# Fire Alarm System

Maintenance, inspection, and testing records shall be maintained.

Sensitivity testing records should be separately maintained.



# Kitchen Hood Suppression System – NFPA 96

10.6.2 Where a fire alarm signaling system is serving the occupancy where the extinguishing system is located, the activation of the automatic fire-extinguishing system shall activate the fire alarm signaling system.

11.2.1\* An inspection and servicing of the fire-extinguishing system and listed exhaust hoods containing a constant or fire-actuated water system shall be made at least every 6 months by properly trained and qualified persons.

Systems serving high-volume cooking operations such as 24-hour cooking, charbroiling, or wok cooking should be serviced quarterly.

11.4.2 Hoods, grease removal devices, fans, ducts, and other appurtenances shall be cleaned to bare metal prior to surfaces becoming heavily contaminated with grease or oily sludge.

**Maintain permanent records for the operation, maintenance, inspection, and testing records.**



# REGULATORY REQUIREMENT

**1200-8-25-.10 (2) (a) Eliminate fire hazards;**





# REGULATORY REQUIREMENT

**1200-8-25-.10-** (10) An ACLF shall maintain its physical environment in a safe, clean and sanitary manner by doing at least the following:

(f) Maintain the building and its heating, cooling, plumbing and electrical systems in good repair and in clean condition at all times; and



# Monitor HVAC, Plumbing, and Electrical Systems

- The facility is responsible to maintain HVAC equipment such as, Exhaust fans, ductwork, filters, Electrical equipment and fire dampers.
- Monitor at least monthly.
- Maintain records of this periodic maintenance in a log.



# Maintain Rated Assemblies

- ✓ Fire Dampers
- ✓ Hazardous Areas and Exit Stairwells
- ✓ Rated doors
- ✓ Rated walls
- ✓ Rated ceilings



# **CODE REQUIREMENT**

## **NFPA 90A, 3-4.7**

**Fire Dampers - every 4 years, fusible links (where applicable) shall be removed; all dampers shall be operated to verify that they fully close; the latch, if provided, shall be checked; and moving parts shall be lubricated as necessary.**



# Maintain Rated Assemblies

- ✓ UL Fire stopping
- ✓ In accordance with the manufacturer's instructions and approved UL System for the applicable application



With so many tasks to keep track of...

How do you keep up with it all?

How does your facility keep track????



# REGULATORY REQUIREMENT

## **1200-8-25-.12      RECORDS AND REPORTS**

(7) An ACLF shall retain legible copies of the following records and reports for thirty-six (36) months following their issuance. The reports shall be maintained in a single file, and shall be made available for inspection during normal business hours to any resident who requests to view them. Each resident and each person assuming any financial responsibility for a resident must be fully informed, before admission, of the existence of the reports in the ACLF and given the opportunity to inspect the file before entering into any monetary agreement with the ACLF.



# REGULATORY REQUIREMENT

## 1200-8-25-.10 RECORDS AND REPORTS

- (a) Local fire safety inspections.
- (b) Local building code inspections, if any.
- (c) Department licensure and fire safety inspections and surveys.
- (d) Orders of the Commissioner or Board, if any.
- (e) Maintenance records of all safety equipment.



# Maintenance and Testing Reports

- ✓ Emergency Lights/Exit Signs
- ✓ Sprinkler Systems
- ✓ Alarm Systems
- ✓ Portable Extinguishers
- ✓ Hood Suppression System
- ✓ Generator



# Maintain Rated Assemblies

Doors – check for:

- ✔ proper operation
- ✔ resists passage of smoke,
- ✔ closes to a positive latch



# REGULATORY REQUIREMENT

## 1200-8-25-.16 DISASTER PREPAREDNESS.

(1) The administration of every facility shall have in effect and available for all supervisory personnel and staff, written copies of the following required disaster plans, for the protection of all persons in the event of fire and other emergencies for evacuation to areas of refuge and/or evacuation from the building. A detailed log with staff signatures of training received shall be maintained. All employees shall be trained annually as required in the following plans and shall be kept informed with respect to their duties under the plans. A copy of the plans shall be readily available at all times. *Each of the following plans shall be exercised annually:*

- (a) Fire Safety Procedures Plan
- (b) Tornado/Severe Weather Procedures Plan
- (c) Bomb Threat Procedures Plan:
- (d) Flood Procedure Plan, if applicable
- (e) Severe Cold Weather and Severe Hot Weather Procedure Plans
- (f) Earthquake Disaster Procedures Plan



# REGULATORY REQUIREMENT

## 1200-8-25-.14 DISASTER PREPAREDNESS.

- (4) ACLFs which elect to have an emergency generator shall ensure that the generator is designed to meet the ACLF's HVAC and essential needs and shall have a minimum of twenty-four (24) hours of fuel designed to operate at its rated load. This requirement shall be coordinated with the Disaster Preparedness Plan or with the local resources.
- (a) All generators shall be exercised for thirty (30) minutes each month under full load, including automatic and manual transfer of equipment.
- (b) The emergency generator shall be operated at the existing connected load and not on dual power. The ACLF shall maintain a monthly log and have trained staff familiar with the generator's operation.



# LIFE SAFETY CODE

## Requirement

### FIRE DRILLS

33.7.3.3 The drills shall involve the actual evacuation of all residents to an assembly point as specified in the emergency plan and shall provide residents with experience in egressing through all exits and means of escape required by this Code.

33.7.3.6 If the board and care facility has an evacuation capability classification of impractical, **those residents who cannot meaningfully assist in their own evacuation or who have special health problems shall not be required to actively participate in the drill.** Section 19.7 shall apply in such instances.



# LIFE SAFETY CODE Requirement

## FIRE DRILLS

19.7.1.5 Infirm or bedridden patients shall not be required to be moved during drills to safe areas or to the exterior of the building.

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QUESTION: Are most residents in an Assisted Living facility considered Infirm or bedridden?

IF THE ANSWER IS NO, The “Defend-in-Place” concept would not BE applicable.



# Questions?