Life Safety Code©

  - Promulgated by the National Fire Protection Association (NFPA) (not a government agency)

- Life Safety Code is not the only code facilities must meet but one of many i.e. International Building Code (IBC), Ohio Fire Code, Ohio Building Code, Uniform Building Code, Local Codes and ordinances etc.

- It is NOT a building code. It focuses on safety of all persons in a building by protecting them from fire, smoke and toxic fumes
Organization of the LSC

- Introductory chapters, definition and applications
- Core chapters
  - Means of egress
  - Construction
  - Building services/ equipment
  - Finishes and contents
- Occupancy chapters
  - Healthcare chapters 18 and 19
- Annex
  - Further explains code but is not agreed to by consensus so is not 'part of the code'

United States - LSC

Inspection, Testing and Maintenance and Record Keeping

- A majority of the citations of the TOP 10 deficiencies are a result of inspection, testing or maintenance issues, with many involving just record keeping
- Record Keeping and Documentation of everything you do and your contractor does is key to success
- If deficient issues are discovered by Contractor's testing or inspection report, you must fix it immediately
Ohio Life Safety Code Survey

- Ohio average facility receives 3.3 LSC deficiencies (US 3.6)
- Deficiency free – 19.1
- 10% of NFs report fires

Redundancy

- A minimum of 2 staff members must know where all Inspection, Testing and Maintenance Records are located and have access to these records 24/7

Reasons for Increased Oversight

- 31 Deaths in two fires in 2003
  - Tennessee
  - Connecticut
- GAO reports on Disaster Planning Nursing Home Fire Safety
  - Building is not sprinklered
  - Fire originates in patient sleeping area
  - Door to room of fire origin is not closed or is reopened during the fire
  - Patient known to be outside the danger area during the fire found dead inside the danger zone after the fire
Defend-in-Place

- 18/19.1.1.3
  “constructed, maintained & operated to minimize the possibility of a fire emergency requiring the evacuation of occupants.”
- The residents (4+ cannot self evacuate) of a health care facility can remain safe even when close to a fire if the corridor walls have been constructed properly, if the appropriate smoke and fire barriers have been installed, if hazardous areas are protected and if approved fire detection and suppression systems have been installed and maintained.

Compartmentalization

- Because history has shown that smoke is the cause of most fire deaths, proper protection against smoke must be installed and properly maintained in a health care facility.
- All health care buildings must be subdivided into separate smoke compartments into which patients can be moved without having to leave the building or change floors.

Compartmentalization

- Think in terms of boxes.
- What are the boxes made of?
- Are there holes in the boxes?
- Have we altered the box?
- Imagine a box is on fire and filled with smoke
- Who is in the box?
S&C Memos

- Survey and certification memos inform state and regional offices of CMS
- “Google” Survey and Certification memo

Move to 2012

- Partial adoption of specific items
- Survey and Certification letters
  - March 9, 2012
  - August 30, 2013

Adoption of the Life Safety Code (LSC)

- 1967 ..... Adopted by CMS in 1971
- 1970 ..... Not adopted
- 1973 ..... Not adopted
- 1976 ..... Not adopted
- 1979 ..... Not adopted
- 1982 ..... Not adopted
- 1985 ..... Adopted by CMS in 1988
- 1988 ..... Not adopted
- 1991 ..... Not adopted
- 1994 ..... Not adopted
- 1996 ..... Not adopted
- 2000 ..... Adopted by CMS in 2003
New vs. Existing

• NEW 18 = constructed/remodeled after March 2003
• EXISTING 19 = constructed/remodeled before March 2003

Organization of Chapters 18/19

• x.1 General Requirements – chapter 6
• x.2 Means of Egress – chapter 7
• x.3 Fire Protection – chapter 8
• x.4 Special Provisions – chapter 11
• x.5 Building Services – chapter 9
• x.6 Reserved
• x.7 Operating Features – chapter 4

Culture Change

• Allows for facilities that have enhanced their environments to obtain a waiver until CMS accepts the 2012 Life Safety Code
• Facility must comply with ALL the requirements of the 2012 LSC for each waiver
  – You do not have to document financial hardship
  – You do not have to document alternative protection
  – The waived requirements apply to both new and existing buildings
**CMS Waiver Letter**

S&C-12-21-LSC

- Means of Egress – Corridor storage
- Cooking Facilities – Nursing unit location
- Fireplaces
- Combustible Decorations

**Means of Egress**

Chapters 18/19.2.3 & 2.3.4

- Previously restricted items would now be allowed:
  - Wheeled equipment parked in corridor, provided there is 5 feet of clearance (patient lifts & transport equipment)
  - Fixed Furniture – bench seating (limited to 2 feet deep)
  - Fixed seating in the corridors permitted where corridor is at least 8 ft. in width
    - Fixed furniture does not reduce the clear width of the corridor to less than 6 ft.
    - On same side, not more than 50 sq. ft area, 10 feet between benches
- Corridors are protected by a smoke detection system

**Wheeled Items**

- The wheeled equipment does not reduce the clear width of the corridor below 60”
- The wheeled equipment is limited to:
  - Equipment and carts in use.
  - Medical emergency equipment not in use
  - Patient lifts and transport equipment
- The fire safety plan and staff training program addresses the relocation of the wheeled equipment during an emergency.
Cooking Facilities
Chapters 18/19.3.2.5
• Nursing unit kitchen not hazardous & allowed to be opened to the corridor, provided:
  • Only one open kitchen per smoke zone
  • No deep fat fryers
  • Include shut off device for fuel supply
  • Grease baffles installed in exhaust system
  • No solid fuel (i.e. charcoal)
  • Additional cooking area must be in protected room similar to hazardous area

Cooking Facilities
Chapters 18/19.3.2.5
• Nursing unit containing the open kitchen must be separated from all other areas by a smoke barrier.
• Residential hood system can be used
• A manual shut off switch to all cook tops with access to staff only and an automatic shut off not exceeding 120 minutes
• Compliance with NFPA 96 for all inspection, testing and maintenance of the range hood and duct system.
• Smoke detectors in the kitchen located no closer than 20 ft from the cook top or range.

Fireplaces
Chapters 18/19.5.23(2), (3), (4)
• Direct vent gas fireplaces allowed in smoke compartments containing patient sleeping rooms
• Not allowed inside a patient room
• Carbon monoxide monitors are required
• Solid fuel burning fireplaces in areas other than patient sleeping areas, with one hour rated barrier between fireplace and sleeping rooms
• The smoke compartment the fireplace is located must be protected with quick response sprinklers
• The fireplace shall have a sealed glass front with wire mesh panel or screen
**Combustible Decorations**  
Chapters 18/19.7.5 & (7.5.6

- Decorations such as photographs, paintings and other art are attached to the walls, ceilings and non required fire rated doors in accordance with the following:
- Decorations on doors do not interfere with the operation or any required latching of the doors
- Decorations do not exceed 30% of the wall, ceiling or door areas inside any space or room in a smoke compartment that is fully sprinklered

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**S & C Waiver Letter**  
13-58-LSC

- Categorical LSC Waivers
- CMS has identified several areas of the 2000 edition of the LSC and NFPA 99 that may result in unreasonable hardship on a large number of healthcare facilities and for which there are alternative approaches that provide equal level of protection (2012 NFPA 101)

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**Categorical Waivers**

- There are options for facilities to request waivers at the state of annual survey.
- Facility policy and procedures are updated
- Meet all 2012 code requirements
  - Openings in Exit Enclosures
  - Emergency Generators and Standby Power System
  - Doors
  - Suites
  - Clean Waste - Recycling
Openings in Exit Enclosures

- Door opening in stairwell landing to unoccupied mechanical room is now allowed.
- For non fuel fired mechanical equipment
- No storage of combustible items
- Located in sprinklered building
- Reference: Section 7.1.3.2.1(9)(c) of the 2012 edition of NFPA 101

Emergency Generators

- Diesel powered generators have had a requirement per NFPA 110 for an load bank test if monthly load bank tests fell below 30% of load.
- (OLD 2000) 2 hour load bank test of 25% first 30 minutes, 50% next 30 minutes, and 75% for 60 minutes
- (NEW 2012) Now 90 minute test is allowed with 50% for first 30 minutes and 75% for next hour
- Reference: Section 8.4.2.3 of the 2010 edition of NFPA 110

Door Locking Arrangements

- 2000 edition of NFPA 101 only allowed for clinical needs (Psychiatric, Alzheimer, Dementia Units)
- Now will also allow for security risks (such as newborn nursery or pediatric units) and patients needing specialized protective measures for their safety
- Delayed egress locks were limited to one in exit pathway
- Now more than one delayed egress lock allowed
- Reference: Sections 18/19.2.2.2.2 thru 18/19.2.2.2.2 and 18/19.2.2.2.4 of 2012 edition of NFPA 101
Suites

• Past limits on egress routes & sizes
• Now one exit from a suite may exit through another suite
• The other exit may be into an exit stair, exit passageway, or exit door to the exterior.
• Suite size for sleeping rooms increased to 10,000 square feet.
• Reference: 18/19.2.5.6 of the 2012 edition of NFPA 101

Clean Waste & Patient Record Recycling Containers

• Past limit of 32 gallon trash container outside of hazardous storage area and not attended
• 96 gallon size recycling containers now permitted for clean waste or patient records awaiting destruction
• Reference: 18/19.7.5.7.2 of the 2012 edition of NFPA 101

SURVEY PROCESS
State Operations Manual
Appendix I

The Survey Tasks
Task 1 – Offsite Survey Preparation
Task 2 - Entrance Conference/Onsite Preparatory Activities
Task 3 - Orientation Tour
Task 4 - Information Gathering
Task 5 - Information Analysis and Decision Making
Task 6 - Exit Conference

III. Complaint Investigations
IV. Post Survey Revisits

Building Fire and Life Safety

- Alarms
- Sprinklers
- Rated Corridors
- Exit Access
- Number of Required Exits
- Egress Widths
- Occupant Loads
- Elevator Recall
- Fire Rated Doors & Frames
- Staff training
- Smoke Control
- Rated Stairwells
- Fireproofing Requirements
- Electrical Safety
- Construction
- Combustibility
- Fire and Smoke Dampers
- Emergency Power
- Roof Assemblies
- Policies

Survey Prep

- LSC Note book – everything in one place
- Current survey cycle only
  - Archive older records
- Review past surveys and ensure that prior deficiencies are corrected
- Evacuation plans – correct, posted and staff familiar
- Audit vendor record keeping
  - Remind them that we must follow 2000 code (not subsequent ones yet)
  - Complete any recommended repairs or updates
- Ladders available surveyor use?
- Flashlights ready surveyors use?
Prepare For Survey - Notebook

- Facility diagram showing layout, current room designation and exits.
- Copy of any waivers that are in effect.

Emergency Lighting
- Monthly 30 second test
- Annual 90 minute test

Fire Alarm
- All documents from vendor
  - Monthly, Quarterly, semi-annual and Annual testing
  - Batteries every 4 years

Fire Dampers
- Test and lube every 4 years
- 8 years of records

Sprinkler System
- Pressure gauges - weekly (dry)
- Pressure gauges monthly (wet)
- Vendor inspections
  - Quarterly
  - Annual
  - 5yr. internal inspection
  - 5yr. standpipe hydro test

Smoke Detectors
- Test sensitivity when installed
- Test sensitivity one year after installation
- Test sensitivity every two years afterwards
- Keep record for 4 years

Remember to follow up and complete any work vendors recommend

LSC Notebook con’t

- Fire Drills
  - Monthly (one/month, per shift, per quarter)
  - Varied times, days, etc.
- Fire Pump
  - Weekly
  - Monthly
  - Annual
- Flame Retardant Treatments
  - Items that could be reviewed at survey include:
    - Drapes
    - Carpet
    - Privacy curtain
    - Valances
- Generator
  - Weekly
  - Monthly
  - Annual Load (if necessary)

Hood Suppression
- Semi-annual (survey will need to see previous test)

Misc. Items (if necessary)
- Elevator maintenance, state certificate and state inspection
- Boiler certificate (annual)
- Facility Policies
  - Evacuation (K-48)
  - Fire Drill
  - Fire Procedures
  - Fire Watch
  - Smoking
  - Generator use, maintenance and malfunction
  - * Power strips use
  - * Portable space heaters

Remember to follow up and complete any work vendors recommend

LSC ‘Hot Spots’

- Fire stopping
- Door closers
- Fire doors close and latch
- Stairwell storage
- Door jams with no doors
- Delayed egress signs
- Emergency lighting
  - tests
- Obstructed pull stations
- Emergency light needed in generator room
- Pull station blocked
- Smoke Detectors
  - spacing
- 36” from air supply
- Power strips, daisy chains, wrong use
- Sprinkler heads in storage closets
- Storage within 18” of sprinkler
- Electrical Panels
  - Labeling (including spares)
  - Open spaces
- Broken latches
- Fire proofing spray on beam
- Cooking staff knowledge of fire suppression system
So What Are They Finding?

- K-62 Sprinkler system maintenance
- K-29 Hazardous areas
- K-18 Corridor doors
- K-147 Temporary electric
- K-52 Fire panel
- K-38 Emergency egress
- K-144 Generator
- K-56 Sprinkler system installation
- K-50 Fire drills
- K-25 Smoke barrier

DEFICIENCIES

Sprinklers K-62

- Mandatory sprinklers in all existing nursing homes
  - CMS issued “Notice of Final Rule Making” on August 13, 2008 (effective date October 14, 2008)
- A 5 year phase in period (All nursing homes must be sprinklered by August 13, 2013)
- No waivers or use of the FSES
- Buildings with existing waivers for sprinkler deficiencies will not be approved after the 5 year phase in period
- CMS Sunsets smoke detector requirements when new sprinkler system is installed and approved
  - See S & C Letter 09-04 UPDATED November and December
K62: Sprinkler System

- Inspect and maintain sprinkler system in accordance with NFPA 25.
- Maintain a supply of no fewer than 6 extra sprinkle heads in facility with “special wrench”
- Retain maintenance records of the sprinkler system for the preceding 12 months and ensure availability for inspections.
- Monitor facility to ensure that cubicle curtains are installed to prevent interference with the sprinkler system.
- Ensure that the same type of sprinkler head is used throughout each compartment. (Note there are exceptions for special areas such as boiler rooms which may have higher than normal temperatures.)

Sprinkler Color Codes and Ratings

<table>
<thead>
<tr>
<th>Color</th>
<th>Sprinkler Classification</th>
<th>Temperature Rating</th>
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<tbody>
<tr>
<td>Red</td>
<td>Ordinary</td>
<td>135-170</td>
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<tr>
<td>Yellow/Green</td>
<td>Intermediate</td>
<td>175-225</td>
</tr>
<tr>
<td>Blue</td>
<td>High</td>
<td>250-300</td>
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<tr>
<td>Purple</td>
<td>Extra High</td>
<td>325-375</td>
</tr>
<tr>
<td>Black</td>
<td>Ultra High</td>
<td>500-575</td>
</tr>
</tbody>
</table>

Sprinkler Tamper Switch

Sprinkler system must have one or more of these devices to ensure water is always available.
Sprinkler Pressure Gauge

• Record the pressure weekly (dry system)
• Record pressure monthly (wet system)
• Test or replace gauges every 5 years

Hazardous Areas K-29

• Hazardous areas include:
  – Boiler and Fuel-Fired Heater Rooms
  – Laundries greater than 100 square feet
  – Repair Shops and Paint Shops
  – Laboratories if classified as a severe hazard
  – Combustible storage Rooms/Spaces (over 50 square feet)
  – Trash Collection Rooms
  – Soiled Linen Rooms
  – Smoking Rooms
  – Rooms larger than 50 sf. used for storage of combustible supplies and equipment in quantities deemed hazardous by the AHJ
**K029 – HAZARDOUS AREAS**

- **Deficient practices**
  - Door does not have automatic closer
  - The door does not close to the latched position.
  - The door is held open with a wood wedge.
  - The door is not a 45-minute fire-rated door.

**K 18 Corridor Doors**

- Corridor doors must have at least a 20min FRR in an area that is not fully sprinklered.
  - 1.75in solid core wood door
  - Door frames must also be FRR or metal (labeled door)
- Corridor doors must resist the passage of smoke.
  - CMS S&C Memo 07-10
    - Fully sprinklered—No more than .5in gap between the door jamb and face of door
- Door jamb acts as an astragal, so the door cannot sag below the jamb
- **Common deficiencies with corridor doors**
  - Doors held open by devices that do not release with a push or pull of the door.
  - Kick-stop, wedge, furniture, etc.
  - Doors do not latch or lack a latching device.

**Fire Doors must latch when closed**

With the Fire Door closed, the Fire door must remain closed when you try to pull the door open.

**Beware** of items such as paper or tape placed in the mortise plate hole so the door latch will not engage the frame.

We have found mortise plates removed and placed upside down so the door would not latch, usually found around construction sites.
Magnetic Locks or Delayed Egress Locks

- Doors release appropriately
- No more than one delayed egress locked door in the path of travel
- Doors with magnetic locking devices without the delayed egress function shall unlock upon activation of the complete fire alarm system
- Doors may not reactivate if the fire alarm system is placed in silent mode and should not relock without the system being reset
- Check systems after performance of maintenance to assure systems are returned to working order
- Notify the local or state fire marshal and obtain any required permits before any changes are made to the system

K 147 Electrical

- Power Strips - inspect and to ensure that power strips has surge protection
- Power strips cannot be used for the following:
  - Medical equipment including suction machine, tube feeding pump, concentrator, low-air loss mattress, hospital bed, ventilator
  - Hair dryer
  - Refrigerator
  - Microwave
  - Air conditioner
- Equipment such as televisions, DVD players, and clocks, may be plugged into a power strip with surge protection.
- Power strips are not allowed to be plugged into another power strip and extension cords cannot be plugged into them
- Power strips should not be permanently attached to the wall

Good Fix for Power Strips
Fire Alarm Systems

- IBC references NFPA 72 for installation and maintenance
- NFPA 72 – National Fire Alarm Code
- Basic Components
  - Panel
  - Detection
  - Manual Alarm
  - Notification
  - Off-Premises Connection for Supervision

K-52 Fire Alarm System

- Health care occupancies must be protected with a fire alarm system
- Tested monthly
- Serviced annually
- Fire Alarm System
  - Testing:
    - May be done with fire drill
    - Silent night drill – done separately
    - Automatically transmit signal to local fire dept.
- Common Deficiencies:
  - Fire alarm circuit breaker not locked nor identified/dedicated
  - No automatic transmission to fire dept.
  - Fire alarm system not serviced annually

Manual Pull Stations

- Manual pull devices will be located on the wall
- Activated by pulling on a handle
- Sends signal to building’s fire alarm system which places the building into alarm
Common Fire Detection

• Smoke Detector
  • Ionization
  • Photoelectric

• Heat Detectors
  • Fixed Temperature
  • Rate-of-Rise

Fire Alarm System Interfaces

• Heating Ventilation and Air Conditioning
  – Duct detectors
  – HV/AC shut-down

• Sprinkler water flow alarms

• Magnetic lock release mechanisms

• Door unlocking devices

• Elevator recall

K-54 Smoke Detectors

• Visual inspection frequencies and specific testing and maintenance frequencies for smoke detection systems are dictated by the prescriptive requirements of NFPA 72, National Fire Alarm Code (Chapter 10-Inspection, Testing and Maintenance Tables 10.3.1, 10.4.2.2 and 10.4.3)

• Smoke detector functional testing and servicing done with annual fire alarm system service
K 54 Smoke Detectors

• Common Deficiencies:
  – Smoke detector functional testing and servicing done with annual fire alarm system service.
  – Smoke detector sensitivity testing must be done within the first year after installation and every alternate year thereafter Photoelectric smoke detector or rate-of-rise heat detector not located at fire alarm panel/dialer
  – Duct smoke detectors not tested
  – Same number of detectors not tested
  – Detectors not replaced/recalibrated

Exits K 38

• Exits must terminate directly at a public way or at an exterior exit discharge (that must then provide access to public way.
• Exit discharge must be usable at all times
• Emergency illumination shall be provided for not less than 1 ½ hours in the event of failure of normal lighting.
• Exit doors or exit access doors cannot be painted/disguised in a manner that obscures their use as a door
• A door that contains a window and has a compliant exit sign above the door can be painted if a cognitively aware individual can still tell it’s an exit door

K 38 & K 39 Exit

• Exit signs are served by emergency lighting
  – There should be either two exits signs or one sign with two bulbs
  – High contrast
• Check the operation of the doors leading to the exits. They should fully close once released from the magnet hold opens.
• Electronic devices on doors shall deactivate when the Alarm System is activated.
• Test EXIT panic hardware (15 or 30 second delay) for accuracy.
**K 39 Exits**

- Corridors
  - Don’t ‘park’ utility carts, medication carts, wheelchairs and lifts in corridor more than 30 minutes (impedes evacuation)
  - Don’t place furniture, plants or tables in halls

---

**K 144 Generator**

- Type I and Type II EES (essential electrical system) must use a Level I generator in accordance with NFPA 110
- Level I generators must be inspected weekly and tested under load monthly
- Weekly inspections including visual inspection
  - Specified by manufacturer or can use NFPA 110 Appendix as guide

---

**K 144 Generator**

- Monthly testing under load
  - Run at a minimum of 30% of name plate rating
  - If run at less than 30% must have annual load bank test
  - Load that maintains the exhaust temperature as recommended by manufacturer
  - Ensure that the startup and or cool down times are not included in the 30 minute load test.
  - Ensure that electrical power is transferred within 10 seconds of interruption when using a generator
**K 144 Generator**
- Enunciator panel is located in an attended area
- Natural gas generators need proof that fuel source is reliable (F146)
  - Letter from fuel supplier confirming reasonable reliability
- Emergency generator sets are required to have a minimum of a 90 minute fuel supply.
- Facility must have a contingency plan and a written agreement for the re-supplying of fuel in an emergency situation.

**K50: Fire Drills**
- Fire drills are held at unexpected time under varying conditions, at least quarterly on each shift.
- Responsibility for planning and conducting drills is assigned only to competent persons who are qualified to exercise leadership.
- Where drills are conducted between 9 PM and 6 AM a coded announcement may be used instead of audible alarms.

**K50 Compliance**
- Review facility records for the preceding 12 months (quarterly) to determine frequency and staff participation by staff and disposition of problems discovered during the drills.
  - One drill per shift per quarter.
  - Differing time of drills on each shift.
  - Differing days of the week including weekends.
  - All departments are involved.
  - Documented observations of staff response.
  - Equipment functioning, doors released, alarms sounding, etc.
  - Residents do not need to be moved during the drill.
  - Transmission to fire station
Smoke Barrier

- Required for stories used for sleeping rooms of more than 30 patients for existing construction
- For new construction, smoke barrier is required for any floor with patients
- Fire resistance rating not less than ½ hour for existing construction and 1 hour for new construction.

Smoke Barrier K25

- Unsealed holes in electrical conduit, metal pipe, PVC pipe, and low-voltage wiring penetrations
- Suspended ceiling systems not one-hour fire resistive rated assemblies and/or missing
- Unprotected ventilation grills
- Recessed light fixtures and speakers not protected with UL fire rated enclosures

Other LSC Concerns
K12 Construction Type

- Defined by NFPA 220
- 5 types
- Non-Combustible (protected or unprotected)
- Combustible (protected or unprotected) ranging from concrete – metal – wood
- Addresses three basic elements:
  - Exterior walls, columns, beams
  - Floor assemblies
  - Roof/Ceiling assemblies

**Construction Types**

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<th>Fire Resistance Rating</th>
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**Noncombustible**

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**Combustible**

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**NFPA Tables 18/19.1.6.2**

Table 18.4.2 Construction Type Limitations

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Note: X = Required, Y = Optional, NF = Not permitted
Beware of wood 2x4s in a type I or II building. Partitions cannot be made from combustible or limited combustible materials. Fire Treated Wood has heat release that is double the maximum permitted release.

### K11 – Fire Barriers

- Fire barriers are the fire resistance rated (FRR) at least 2hr. Walls that separate the nursing home from a nonconforming building.
- The wall will be inspected for proper construction and to ensure that all penetrations are properly fire stopped.
- All doors in the fire barrier will also be inspected.
- Doors must have labels to show they are at least 90min FRR.
- Doors must self-close and latch into the frame.
- If double doors, there must be an astragal at the meeting edge of doors.
- Hold open devices must release upon activation of the fire alarm system.

### K11 – Fire Barriers Con’t.

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- Hold open devices must release upon activation of the fire alarm system.
K17 – Corridor Walls

- There are eight exceptions for existing health care for spaces that are allowed to be open to the corridor:
  - Space is used for patient treatment (Therapy Rooms)
  - Space does not have 24hr supervision
  - Space is used for storage that is deemed hazardous
- Kitchen to dining room pass through windows are acceptable if the dining room is separated from the corridor by acceptable walls.
- These pass through windows may not be acceptable if the dining room is open to the exit access corridor.
  - Space open to the corridor exceptions cannot be applied to the Kitchen.
  - To keep the pass through, the opening must be protected in a manner that would automatically close the opening upon the local detection of smoke or activation of the fire alarm system.

Alcohol-based Hand Rub Solutions

- Dispensers cannot be installed over or directly adjacent to an ignition source.
- Dispensers installed over carpet are permitted only in sprinklered smoke compartments.

K 69 Kitchen Fire Suppression

- NFPA 96 requires an inspection and servicing of the fire-extinguishing system be made at least every 6 months by properly trained and qualified persons.
K 69 Kitchen
Fire Suppression

- Kitchens must be equipped with a K-
  extinguisher and an operational sign for the
  portable fire extinguisher mounted by the K-
  extinguisher.
- The automatic fire-extinguishing system
  installed over the commercial cooking
  equipment must be in compliance with UL 300,
  Standard for Fire Testing of Fire Extinguishing
  Systems for Protection of Restaurant Cooking
  Areas, or other equivalent standards.

K46 –Emergency Illumination

- All portions of the means of egress must have
  emergency illumination that:
  - Cannot be controlled by manual switches
  - Motion sensors are permitted if they are
    equipped with fail-safe ON
  - Provides required illumination for 90min
- Battery-operated emergency lights must be
  tested:
  - Monthly for 30sec
  - Annually for 90min

K48 –Written Fire Safety Plan

- Facilities must have a written fire safety plan
  that contains the following requirements:
  1. Use of alarms
  2. Transmission of alarm to fire department
  3. Response to alarms
  4. Isolation of fire
  5. Evacuation of immediate area
  6. Evacuation of smoke compartment
  7. Preparation of floor and building for evacuation
  8. Extinguishment of fire
K48 –Written Fire Safety Plan

- Fire plans should be tailored to the individual facility
- They should not be a template or include information that is not relevant to the facility
- Inclusion of RACE (Rescue, Alarm, Contain, Evacuate/Extinguish) is acceptable, but it does not meet the requirements of the LSC without more detail
- Plans should not have different instructions based on staff determining if the fire is small or large

K64 –Fire Extinguishers

- Portable fire extinguishers must be installed, tested, and maintained in accordance with NFPA 10, Standard for Portable Fire Extinguishers
- Installation
  - Between 4in and 5ft (No higher than 3.5ft if more than 40lb)
- Maximum travel distance to Extinguisher
  - Class A (Combustible materials) ~75ft
  - Class C (Live electrical equipment) ~75ft
  - Class K (Kitchen fires) ~30ft
- Inspections approximately every 30 days
  - Conducted in accordance with NFPA 10 Section 4-3.2
- Documentation of monthly check for each extinguisher

S & C: 13-22-NH

Short Form Survey

- Reduce survey costs (sequestration) and solely at the option of the States (Ohio began 4/1/14)
- To be eligible for the short form process a facility must:
  - Be fully sprinklered
  - Have no significant waivers
  - Not certified by the use of the Fire Safety Evaluation System (FSES)
- Have not been cited in the past 2 years for:
  - K062 Sprinkler Maintenance
  - K054 Smoke Detector Maintenance
  - K050 Fire Drills
  - K104 Smoke Barriers
  - K051 Fire Alarm
Surveyors will Only Look @

- K038-Exit access
- K039-Exit corridor width
- K047-Exit sign operational
- K50-Fire drills
- K052-Fire alarm system properly maintained
- K062-Sprinkler system properly maintained
- K072-Means of egress unobstructed by furnishings & decorations
- K144-Emergency generator properly maintained
- K211 Alcohol based hand rubs properly used

LSC Survey is Over and...

- Three options for non-compliance:
  - Correct the alleged deficiency
  - Fire Safety Evaluation System (FSES)
  - Waiver (temporary or Annual)
- Path you choose will depend on cost feasibility and the CMS Regional Office.

Fire Safety Evaluation System

- FSES provides alternative approaches to life safety based on the 2000 Life Safety Code. It is intended to be used with the Life Safety Code, not as a substitute
- Section 1.5 of the Life Safety Code permits alternative compliance with the Code under equivalency concepts where such equivalency is approved by the authority having jurisdiction
- Normally ODH and CMS accept the FSES
FSES Life Safety Factors

- FSES Equivalency methodology outlines THE major factors/parameters for life safety.
- Patient mobility/ density/ location/staff ratio
- Building safety parameters
  - Construction
  - Room Interior finish
  - Corridor interior finish
  - Corridor walls
  - Corridor doors
  - Smoke zone dimensions
  - Vertical openings
  - Hazardous areas
  - Smoke control/ barriers
  - Emergency movement routes
  - Manual fire alarm FD connection
  - Smoke detection and alarm
  - Automatic sprinklers – coverage/QR
- Fire Safety Requirements
  - Exit signs
  - Emergency lighting
  - Evacuation plan/ drills
  - Furnishings combustibility
  - HVAC comply 90A
  - Fire extinguishers comply NFPA

Waivers

- **Annual**
  - Must reapply for a waiver after the next survey or after a change
  - Does not require corrective action
- **Temporary**
  - Time limited (extended plan or correction date)
  - Stays penalties while corrective action is being completed
  - Interim measures
  - Watch your expiration date

Temporary Waivers

- **Interim measures during the additional**
  - time for correction above and beyond existing requirements of LSC
- Tailored to the LSC deficiency
- Facility must do the interim measures and document Interim Life Safety measures that will put into place
- Develop a phased construction plan for
- correction of deficiency?
- Multi-year plan if reasonable and required
Annual Waivers

• The provider must demonstrate that:
  • The waiver would not adversely affect patient and staff health and safety; and it would impose an unreasonable hardship on the facility to meet a specific LSC requirement.
  • CMS looks for facility to implement measures above and beyond requirements – equalivancies

Conclusion

• Codes drive facility fire and life safety requirements
• Know what codes apply to your operation
• All codes are MINIMUM requirements
• Who is your AHJ?
  – Many things can be left up to this individual’s interpretation
• Maintain systems in accordance with code requirements and manufacturer’s recommendations

WARNING!!

If you receive a deficiency for a condition in your facility that has existed for many years and it will cost more than a few bucks to correct, you should challenge the deficiency and/or at least seek assistance
Kenneth Daily, LNHA

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- Consulting and education firm focusing on quality improvement, survey compliance, disaster preparation and facility management.
- Chair of OHCA Disaster/ Life Safety Code Committee
- Member of AHCA Life Safety Code Committee