THE 2012 EDITION OF THE LIFE SAFETY CODE®

NURSING HOME EDITION

SESSION #4

WELCOME

Moderator: Richard Schieferdecker

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  Poll Question: What is your favorite color?
  
  - Anonymous
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THE 2012 EDITION OF THE LIFE SAFETY CODE®

NURSING HOME EDITION

SESSION #4

RUSSELL PHILLIPS & ASSOCIATES

Fire and Emergency Management for Healthcare Facilities

BUILDING SERVICES / OPERATING FEATURES

HVAC
BUILDING SERVICES / OPERATING FEATURES

- Chapter 43 – Building Rehabilitation
- Chapter 7 – Fire and Smoke Door Inspections
- Building Services
  - Utilities
  - HVAC
- Elevators
  - Trash & Laundry Chutes
- Operating Features
  - Fire Safety Plans
  - Draperies / Curtains
  - Furniture
  - Mattresses
  - Decorations
  - Soiled Linen / Trash Receptacles

CHAPTER 43 BUILDING REHABILITATION

19.1.1.1.3 General. The provisions of Chapter 4, General, shall apply.

4.6.7 Building Rehabilitation.
4.6.7.2 Rehabilitation work on existing buildings shall comply with Chapter 43.
CHAPTER 43 BUILDING REHABILITATION

43 - Building Rehabilitation (New Chapter)

- Facility modifications must comply with new Chapter 43 of 2012 LSC
- Requirements dependent upon category of work as defined:
  - Repair
  - Renovation
  - Modification
  - Reconstruction
  - Change of use / occupancy
  - Addition

HINT: ANY TIME YOU PICK UP A HAMMER
CONSIDER CHAPTER 43 AND CHAPTER 18
“REHABILITATION”

CHAPTER 43 – AN EXAMPLE

43.2.2.1.2 Renovation. The replacement in kind, strengthening, or upgrading of building elements, materials, equipment, or fixtures, that does not result in a reconfiguration of the building spaces within.

- New work shall comply with the requirements of existing buildings.
- New interior finish materials shall meet the requirements for new construction.
- Reconfiguration or extension of any system, or the installation of any additional equipment, shall comply with Section 43.5 (Modifications).
CHAPTER 43 BUILDING REHABILITATION

EXISTING HAZARDOUS AREAS:

19.3.2.1.5 (New & Revised Text)
- Safe-guarded by a fire barrier having a 1-hour fire resistance rating
  OR
- An automatic sprinkler system

19.3.2.1.2 (New & Revised Text)
- Where the sprinkler option of 19.3.2.1 is used, the area shall be separated by smoke-resisting partitions

NEW HAZARDOUS AREAS:

18.3.2.1. (New & Revised Text)
- Rooms or spaces, used for storage of combustible supplies and equipment in quantities deemed hazardous by the Authority Having Jurisdiction.

- 50 – 100 Sq Ft = Sprinkler & Smoke Partition
- >100 Sq Ft = Sprinkler & 1-hour FRR Enclosure

HINT: SO IF YOU HAVE A RESIDENT ROOM AND CHANGE ITS USE TO STORAGE, “NEW” CONSTRUCTION APPLIES, WHAT DOES IT NEED TO BE?
CHAPTER 43 BUILDING REHABILITATION

43 – Building Rehabilitation (New Chapter)

- Facility modifications must comply with new Chapter 43 of 2012 LSC
- Requirements dependent upon category of work as defined:
  - Repair
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43 - Building Rehabilitation (New Chapter) 43.7.1.2(2)

If converting a room to a storage use that exceeds 50ft², the hazardous area requirements for new construction (Ch. 18) shall not apply if:

- In an Existing Health Care Occupancy
- Health Care Occupancy is fully sprinklered
- Room is less than 250 ft²
ANNUAL INSPECTION OF DOOR OPENINGS complying with 7.2.1.15.1 (New Text)

“Where required by” the Occupancy Chapter

**NOT required in Healthcare**

- Doors with panic/fire exit hardware
- Doors in exit enclosures
- Electrically controlled egress doors
- Doors with special locking

ANNUAL INSPECTION OF FIRE AND SMOKE DOOR ASSEMBLIES

ANNUAL INSPECTION OF DOOR OPENINGS

Complying with 7.2.1.15.2 (New Text)

**Applies to ALL Occupancy Chapters**

- Fire-rated doors shall be inspected per NFPA 80
- Smoke doors shall be inspected per NFPA 105
- Annual requirement, but allows a “performance-based program”
NFPA 80 FIRE DOORS

5.2.4 Swinging Doors with Builders Hardware or Fire Door Hardware.

5.2.4.1 Fire door assemblies shall be visually inspected from both sides to assess the overall condition of door assembly.

5.2.4.2 As a minimum, the following items shall be verified:

1) No open holes or breaks exist in surfaces of either the door or frame.
2) Glazing, vision light frames, and glazing beads are intact and securely fastened in place, if so equipped.
3) The door, frame, hinges, hardware, and noncombustible threshold are secured, aligned, and in working order with no visible signs of damage.
4) No parts are missing or broken.
5) Door clearances do not exceed clearances listed in 4.8.4 and 6.3.1.7.
ANNUAL INSPECTION OF FIRE AND SMOKE DOOR ASSEMBLIES

6) The self-closing device is operational; that is, the active door completely closes when operated from the full open position.

7) If a coordinator is installed, the inactive leaf closes before the active leaf.

8) Latching hardware operates and secures the door when it is in the closed position.

9) Auxiliary hardware items that interfere or prohibit operation are not installed on the door or frame.

10) No field modifications to the door assembly have been performed that void the label.

11) Gasketing and edge seals, where required, are inspected to verify their presence and integrity.

ANNUAL INSPECTION OF FIRE AND SMOKE DOOR ASSEMBLIES

NFPA 105 SMOKE DOORS
5.2.1 Inspections
• Doors shall be operated to confirm closure.
• Hardware and gaskets shall be inspected annually

+ NFPA 101 requirements:
### ANNUAL INSPECTION OF FIRE AND SMOKE DOOR ASSEMBLIES

#### SMOKE BARRIERS DOORS
Complying with 19.3.7.8

- Doors such as 1 3/4” thick solid-bonded wood-core doors
- Doors constructed that resist fire for 20 min (not required to be labeled)
- Doors must self or automatic close

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#### ANNUAL INSPECTION OF FIRE AND SMOKE DOOR ASSEMBLIES

#### SMOKE BARRIERS DOORS
Complying with 19.3.7.8

- Latching hardware NOT required
- Not required to swing in direction of exit travel
- **Protective plates, unlimited in height shall be permitted**
- Gap between meeting edges / between door and frame <= 1/8”
- Door undercuts <= 3/4”
**ANNUAL INSPECTION OF FIRE AND SMOKE DOOR ASSEMBLIES**

**ANNUAL INSPECTION OF DOOR OPENINGS**

- Must be repaired or replaced without delay
- Written records of inspection/testing shall be signed and kept for AHJs
- Electronic database is acceptable for documenting
- The functional testing of door assemblies is NOT required to be performed by a licensed or certified individual, rather they must demonstrate knowledge and understanding.

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**BUILDING SERVICES / OPERATING FEATURES**

**ANNUAL INSPECTION OF DOOR OPENINGS**
Complying with 7.2.1.15.2 (*New Text*)

**HINT: DON’T FORGET ABOUT LINEN / TRASH INLET & DISCHARGE CHUTE DOORS OR SHAFT ACCESS DOORS IN YOUR ANNUAL INSPECTION DOOR REQUIREMENTS!**
BUILDING SERVICES / OPERATING FEATURES

POWER STRIPS
(Categorical Waiver – Sept. 2014 S&C Letter)

— “Resident rooms in long-term care or other residential facilities that do not use line-operated patient-care-related electrical equipment are not subject to the more restrictive NFPA 99 requirements regarding use of power strips in patient care areas / rooms.

POWER STRIPS

Power Strip Use in Patient Care Areas: The facility is electing to apply the categorical waiver permitting the application of the power strip provisions in the 2012 edition of NFPA 99. This also exempts resident rooms in long-term care facilities from the NFPA 99 power strip provisions when the facility does not utilize line-operated electrical appliances in resident rooms for diagnostic, therapeutic, or monitoring purposes.
POWER STRIPS

<table>
<thead>
<tr>
<th>Underwriters Laboratories (UL) Listing Standard</th>
<th>Phrase / Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL 1363</td>
<td>Relocatable Power Tap (RPT)</td>
</tr>
<tr>
<td>UL 1363A</td>
<td>Special Purpose Relocatable Power Taps (SPRPT)</td>
</tr>
<tr>
<td>UL 60601-1</td>
<td>Medical Electrical Equipment</td>
</tr>
<tr>
<td>UL 1449</td>
<td>Surge Protective Device (SPD)</td>
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<tr>
<td></td>
<td>Transient Voltage Surge Suppressor (TVSS)</td>
</tr>
<tr>
<td>UL 1778</td>
<td>Uninterruptible Power Supply (UPS)</td>
</tr>
</tbody>
</table>

BUILDING SERVICES / OPERATING FEATURES

DIRECT VENT FIREPLACES
Section 19.5.2.3(2) *(New Text)*
Allows direct-vent fireplaces to be installed in smoke compartments containing patient sleeping if the following items are met:

- Installed per 9.2.2 (related installation standards)
- Fireplace not installed inside patient sleeping room
- Smoke compartment sprinklered with quick-response or residential sprinklers
- Fireplace has a sealed glass front with wire mesh panel/screen
DIRECT VENT FIREPLACES
Section 19.5.2.3(2) (New Text)
Allows direct-vent fireplaces to be installed in smoke compartments containing patient sleeping if the following items are met:

- Fireplace controls are locked or in a restricted location
- Electrically supervised carbon monoxide detection per Section 9.8 is provided in room where fireplace is located

Section 9.8 references NFPA 720, Standard for Installation of Carbon Monoxide Detection & Warning Equipment

HINT: 2000 LSC ONLY ALLOWED IN SMOKE COMPARTMENTS WITHOUT PATIENT SLEEPING!

SOLID FUEL-BURNING FIREPLACES
Section 19.5.2.3(3) (New Text)
Allows solid fuel-burning fireplaces to be installed in areas other than patient sleeping areas if the following items are met:

- Area with fireplace is separated from patient sleeping areas by 1-hour construction
- Fireplace meets 9.2.2 (NFPA 91, 211, 31, 54, 70)
- Fireplace has enclosure guaranteed against breakage up to 650F and is made of heat-tempered glass or other approved material
SOLID FUEL-BURNING FIREPLACES

Section 19.5.2.3(3) (New Text)

Allows solid fuel-burning fireplaces to be installed in areas other than patient sleeping areas if the following items are met:

- Electrically supervised carbon monoxide detection per Section 9.8 is provided in room where fireplace is located
- The fireplace enclosure required per 19.5.2.3(3)(c) shall be required to be locked if the AHJ feels that special hazards are present

Section 9.8 references NFPA 720, Standard for Installation of Carbon Monoxide Detection & Warning Equipment

TRASH / LINEN CHUTES

Section 19.5.4.5 (New Text)

Existing linen chutes shall be permitted to discharge into the same room as trash chutes if the room is sprinklered with:

- Standard Response Sprinkler Heads or
- Domestic Sprinkler Heads (if less than 6 heads in room, 0.15 gpm/ft², & shut-off valve provided) per 9.7.1.2

Hint: 2000 LSC did not allow trash & linen chutes to discharge in the same room!
EVACUATION & RELOCATION PLAN & FIRE DRILLS

Section 19.7.1 (Nothing New Here)

- Need to have a plan and available to all staff
- Requires “periodic instruction” (aka “annually “ by most AHJs)
- Fire Drill must include transmission of fire alarm
- Bedridden patients not required to be moved
- Quarterly each shift
- 9:00 pm – 6:00 am a “coded announcement” is permitted instead of audible alarms

**HINT: MANY AHJs INCLUDING CMS ARE INTERPRETING THIS TO MEAN THAT THE VISUAL ALARMS STILL NEED TO BE ACTIVATED DURING THESE TIMES!**

PROCEDURE IN CASE OF FIRE

FIRE SAFETY PLAN 19.7.2.2 *(New Text)*

- Use of alarms
- Transmission of alarms to Fire Department
- Emergency phone call to Fire Department
- Response to alarms
- Isolation of fire
- Evacuation of the immediate area
- Evacuation of smoke compartment
- Preparation of floors and building for evacuations
- Extinguishment of fire
BUILDING SERVICES / OPERATING FEATURES

NORMALLY UNOCCUPIED BUILDING SERVICE AREAS
(New Section to Chapter 7 / Definition 3.3.21.6)

Areas used for routing ducts, pipes, conduits, and similar services, but not visited routinely for storage, maintenance or inspection.
- Attics
- Crawl Spaces
- Chases
- Interstitial Areas
- Maintenance

BUILDING SERVICES / OPERATING FEATURES

NORMALLY UNOCCUPIED BUILDING SERVICE AREAS
(New Text 7.13.2.1 - 7.13.5.2)

- If over certain square footage, requires specific exiting requirements and means of egress requirements
- These requirements are, however, more lenient than typical requirements in Chapter 7
BUILDING SERVICES / OPERATING FEATURES

BUILDING SERVICE AREAS
(Section 19.5)

This small section of the LSC generally specifies other codes and standards that you must comply with (referred to as “required references”).

– Utilities (gas and electric) [9.1, & 19.5.1]
  NFPA 54, National Fuel Gas Code, or NFPA 58, Liquefied Petroleum Gas Code
  NFPA 70, National Electrical Code
  NFPA 110, Standard for Emergency and Standby Power Systems

– HVAC systems [9.2, & 19.5.2]
  NFPA 90A, Standard for the Installation of Air-Conditioning and Ventilating Systems
BUILDING SERVICES / OPERATING FEATURES

BUILDING SERVICE AREAS
(Section 19.5)

– Elevators, escalators and conveyors [9.4 & 19.5.3]
  ASME/ANSI A17.3, Safety Code for Existing Elevators and Escalators

– Waste and linen chute systems [9.5, & 19.5.4]
  NFPA 82, Standard on Incinerators and Waste and Linen Handling Systems
  and Equipment

BUILDING SERVICES / OPERATING FEATURES

DRAPERIES / CURTAINS
Section 19.7.5.1 (New Text)

- Draperies/curtains at windows in patient sleeping rooms in fully sprinklered smoke compartments do not need to comply with 10.3.1 (NFPA 701)

- Draperies/curtains in other rooms or areas do not need to comply with 10.3.1 (NFPA 701) when the following is met:
  - Size of individual drapery/curtain does not exceed 48 ft²
  - Total area of drapery/curtain per room or area does not exceed 20% of the aggregate area of the wall on which they are located
  - Smoke compartment is fully sprinklered
COMBUSTIBLE DECORATIONS
Section 19.7.5.6 (New Text)
Combustible decorations shall be prohibited unless one of the following is met:

- They are flame-retardant or are treated with an approved fire-retardant coating that is listed & labeled for application to the material to which it is applied
- Decorations meet NFPA 701, Standard Methods of Fire Tests for Flame Propagation of Textiles & Films
- Decorations exhibit a heat release rate not exceeding 100 kW when tested per NFPA 289

COMBUSTIBLE DECORATIONS
Section 19.7.5.6 (New Text)
Combustible decorations shall be prohibited unless one of the following is met:

- Decorations such as pictures, paintings, other art are attached directly to walls, ceilings, and non-fire-rated doors in accordance with the following
  - Decorations on non-fire-rated doors do not interfere with door latching (if required) and do not exceed the area limitations below
  - Decorations do not exceed 20% of wall, ceiling, & door areas inside any room or space of a smoke compartment that is not fully sprinklered
  - Decorations do not exceed 30% of wall, ceiling, & door areas inside any room or space of a smoke compartment that is fully sprinklered
  - Decorations do not exceed 50% of wall, ceiling, & door areas inside patient sleeping rooms having a capacity not exceeding 4 persons in a smoke compartment that is fully sprinklered
BUILDING SERVICES / OPERATING FEATURES

COMBUSTIBLE DECORATIONS
Annex Note to Section 19.7.5.6(4) (New Text)

The % of decorations shall be measured against the area of any wall or ceiling, not the aggregate total of walls, ceilings, & doors

The door is considered part of the wall

Decorations must be located so they do not interfere with the operation of smoke detectors, sprinklers, or other Life Safety equipment
SOILED LINEN / TRASH RECEPTACLES

Section 19.7.5.7.2 (New Text)

Containers used solely for recycling clean waste or for patient records awaiting destruction shall be permitted to be excluded from the “32 gallon” rule if:

- Container does not exceed 96 gal
- Containers exceeding 96 gal are placed in haz areas
- Container size shall not be limited in haz areas
- Containers are labeled/listed as meeting FM Approval Standard 6921, Containers for Combustible Waste; however, the testing/labeling/listing is not limited to FM Approvals (any lab can perform the tests)

SOILED LINEN / TRASH RECEPTACLES

Annex Note to Section 19.7.5.7.2 (New Text)

Explain that the provision applies to recycling of bottles, cans, paper, and similar clean items that do not contain grease, oil, flammable liquids, or significant plastic materials

FM Approval Standard 6921 ensures that the fire will not spread outside of the container
SOILED LINEN / TRASH RECEPTACLES

Section 19.7.5.7.3 (New Text)

States that the provisions of 10.3.9 applicable to containers for rubbish, waste, or linen shall not apply

10.3.9 Requires containers greater than 20 gal capacity shall:
- Be provided with lids
- Lids shall be made of noncombustible materials or meet ASTM E 1354 or NFPA 271
- Metal containers must be listed per ANSI/UL 1315 and have noncombustible lids

QUESTIONS
Next Session

Survey and Compliance Strategies

THANK YOU

Dave Hood  
President

Nick Gabriele  
Vice President