



# Columbia Region Healthcare Engineers Association

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An aerial night-time photograph of a fire scene. In the foreground, a yellow building with a flat roof is visible. A fire truck's aerial ladder is extended from the right side of the frame towards the building's roof. The roof appears to be on fire, with smoke and light visible. To the right, a multi-lane highway with green overhead signs is visible. The background shows a brick building and trees.

**PRESENTATION ON  
FIRE LIFE SAFETY  
AND  
APPLICATION OF BUILDING CODES**

# WHY UPDATE YOUR FLS DOCUMENTS?

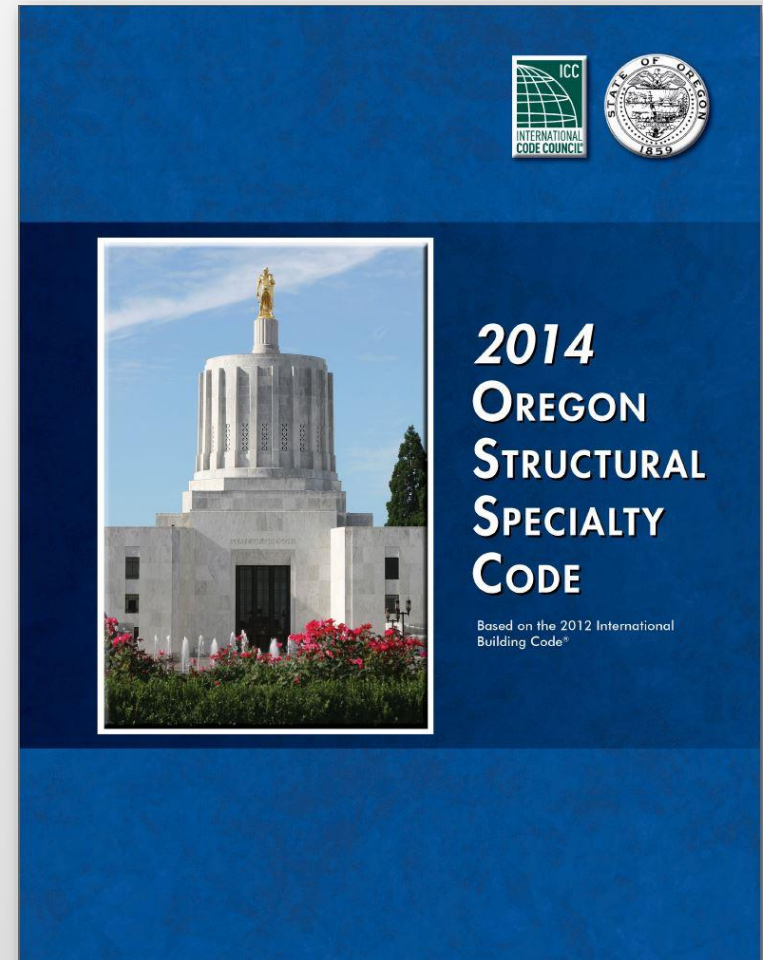
- Building Codes have changed to the benefit of Building Owners and Operators (Facility Managers)
- Many Healthcare Systems Administrators don't understand FLS documentation or the codes that impact facility operations
- Healthcare Systems have outdated FLS documentation for their existing facilities, using old code and old methods for maintaining their facilities

**NOW** is the time for change!



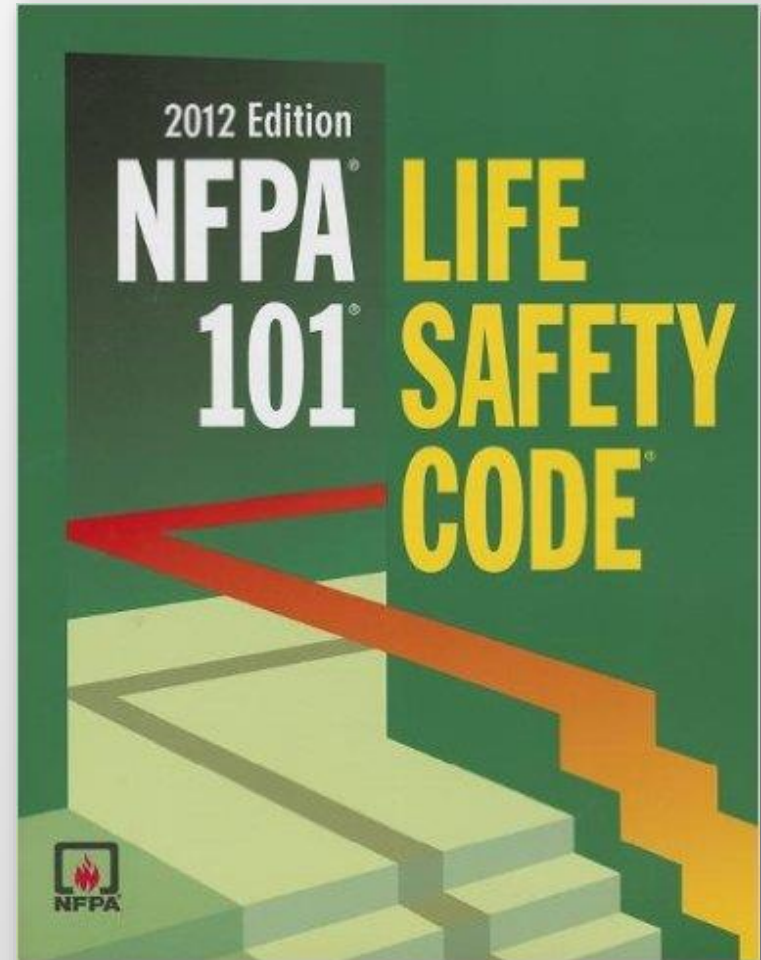
# WHAT ARE THE CODES?

- 2014 Oregon Structural Specialty Code (based on the 2012 International Building Code). This includes:
  - Institutional Occupancy - Hospitals (I.2)
  - Ambulatory Care Facilities (B-ACF)
  - Business Occupancy (B)



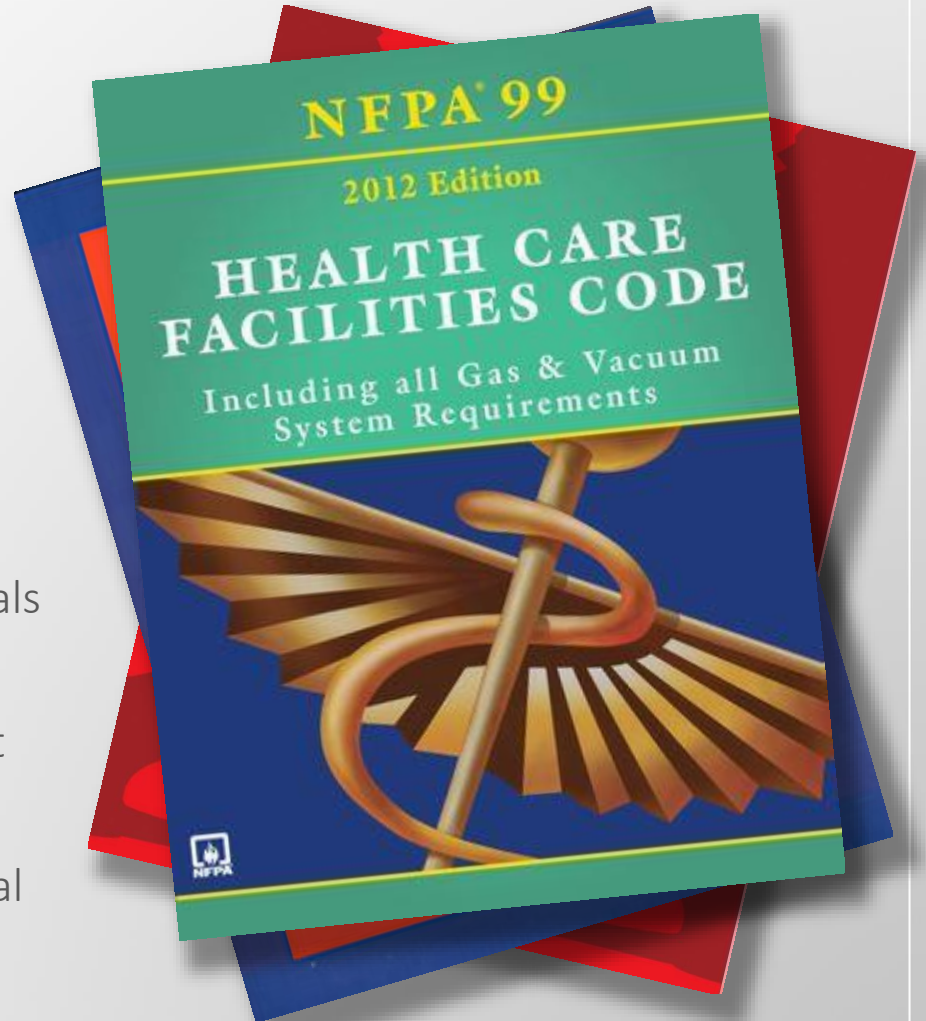
# WHAT ARE THE CODES?

- 2012 NFPA 101 Life Safety Code (Effective July 5, 2016)
  - All existing Hospital facilities and design projects that have been submitted to OHA prior to July 5, 2016 fall under **2012 NFPA 101 Chapter 19, Existing Health Care Occupancies**
  - Hospital
    - Chapter 18 - New Health Care Occupancies
    - Chapter 19 - Existing Health Care Occupancies
  - Ambulatory Health Centers
    - Chapter 20 - New Ambulatory Health Care Occupancies
    - Chapter 21 – Existing Ambulatory Health Care Occupancies
  - Business Occupancy
    - Chapter 38 – New Business Occupancies
    - Chapter 39 – Existing Business Occupancies



# WHAT ARE THE CODES?

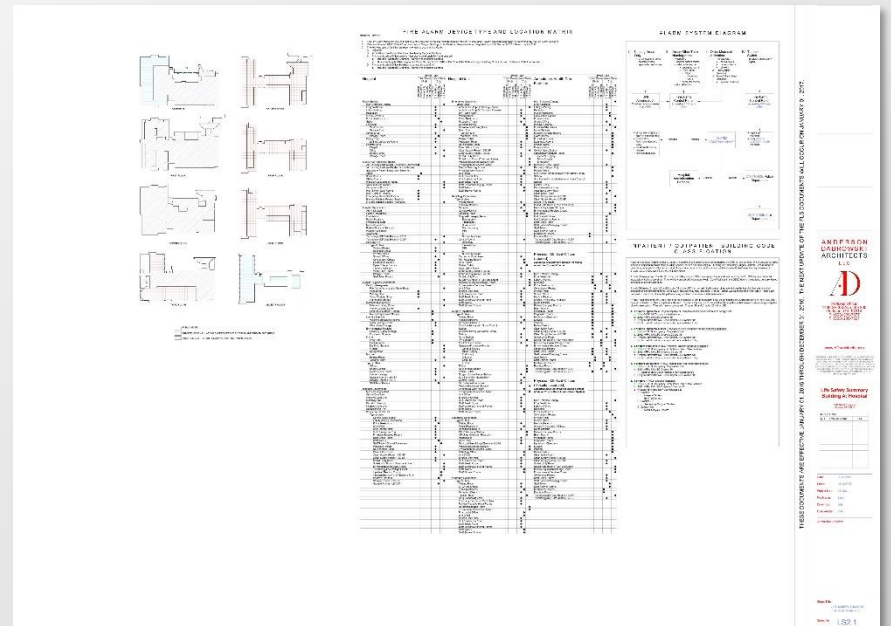
- 2010 NFPA 13 Standard for the Installation of Sprinkler Systems
- 2010 NFPA 72 National Fire Alarm and Signaling Code
- 2012 NFPA 99 Health Care Facilities Code
- Oregon Administrative Rules
  - 333-535-0000 New Construction and Alterations of Existing Hospitals
  - 333-535-0086 Hospital Licensed Physician's Offices and Outpatient Clinics
  - 333-076-0001 Ambulatory Surgical Centers ASC



# FLS DOCUMENTS

What should be included in your Fire Life Safety Documentation?

- NFPA 101 provides little information per 4.8.2 (Plan Requirements) or 18.7.2.2 (Fire Safety Plan) on what should be included. Below are some items that should be included:
  - Site Plan
  - Building Information Sheet
  - Fire Alarm Diagram
  - Fire Alarm Matrix and Public / Private Fire Alarm Mode Diagrams



# FLS DOCUMENTS

What should be included in your Fire Life Safety Documentation?

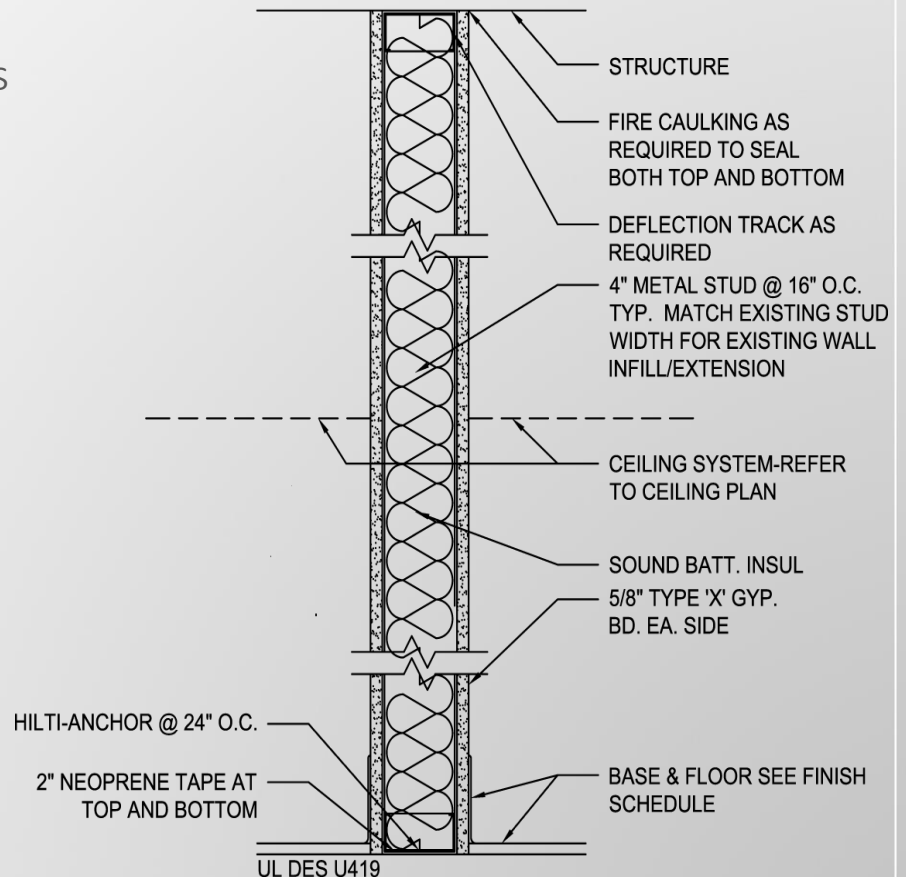
- Floor Plans which include the following:
  - Plan Legend
  - Construction Type Diagram
  - Occupancy Type Diagram
  - HVAC / AHU Zones Diagram
  - Smoke Compartments Location Diagram
  - Suite Location Diagram
  - Occupancy Load Calculation
  - Exit Occupancy Capacity





# HOSPITAL WALL TYPES

- Code is very clear on what we call our walls in Hospitals, but sometimes those walls are called something else.
- Here are the “6” Basic Walls Categories that are the **ONLY** wall names that should be used in a Hospital, ASC, or Medical Office FLS Documents EVER:
  - Fire Walls (2 and 3 hour)
  - Fire Barriers (1 and 2 hour)
  - Fire Partitions (1 hour)
  - Smoke Barrier Walls (1 hour)
  - Smoke Partition Walls (Non-Rated, Non-Combustible)
  - General Walls (Non-Rated, Non-Combustible)



# DOCUMENT UPDATES

Where do we start to update our current FLS documents?

- Fire Sprinkler System first, so let's check code requirements:
  - 2014 OSSC Section 903.3.2 Quick Response Sprinkler System
    - 1. Throughout all spaces within a smoke compartment containing care recipient sleeping units
    - 4. Light hazard occupancies as defined in NFPA 13.
  - 2010 NFPA 13 Section 5.2\*- Light Hazard Occupancies. Light hazard occupancies shall be defined as occupancies or portions of other occupancies where the quantity and / or combustibility of contents is low and fires with relatively low rates of heat release are expected.
  - 2010 NFPA 13 Appendix Section A5.2 lists "Hospitals" and "Office" in the expanded definition of "Light Hazard Occupancies".

**REFER TO 2011 NFPA 25 SECTION 5.3 TO SEE IF YOUR  
SPRINKLER HEADS NEED REPLACEMENT**



# DOCUMENT UPDATES

Where do we start to update our current FLS documents?

- What is the benefit?
  - One Hour Rated Corridor Walls (Fire Partition) can be reduced to Non Rated Corridor Walls (Smoke Partition)
- What does this mean?
  - Corridor Walls make up the 2<sup>nd</sup> largest number of walls in Hospital systems:
    - Smoke Partition Walls only require 1 layer of gypsum board to extent to structure above
    - No fire/smoke damper requirement, wall must resist the passage of smoke
    - Doors require 1 ¾" solid wood core construction but still require closer and latch (Non-rated per 2012 NFPA 101, Chapter 19)



# DOCUMENT UPDATES

## Where do we start to update our current FLS documents?

- What does this mean?
  - Hazard Rooms – 2014 OSSC and 2012 NFPA 101
    - 2014 OSSC – Table 509
      - Waste and linen collection rooms located in either Group I-2 occupancies or ambulatory care facilities – 1 Hour Rated Fire Barrier
    - 2014 OSSC – Table 717.3.2.1
      - Minimum damper rating is 1.5 hours
    - 2014 OSSC – 717.5.2 Fire Barriers
      - Exception 3: Such walls are penetrated by ducted HVAC systems, have a required *fire-resistance rating* of 1 hour or less, are in areas other than Group H and are in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2. For the purposes of this exception, a ducted HVAC system shall be a duct system for conveying supply, return or exhaust air as part of the structure's HVAC system. Such a duct system shall be constructed of sheet steel not less than No. 26 gage thickness and shall be continuous from the air-handling appliance or equipment to the air outlet and inlet terminals

# DOCUMENT UPDATES

Where do we start to update our current FLS documents?

- What does this mean?
  - Hazard Rooms – 2014 OSSC and 2012 NFPA 101
    - 2012 NFPA 101 – Chapter 18, New Health Care Occupancies
      - Soiled Linen > 64 gallons – 1 Hour Rated Fire Barrier
      - Trash Volume > 64 gallons – 1 Hour Rated Fire Barrier
      - Storage Rooms > 50 sf < 100 sf – No rating with door closing device
      - Storage Rooms > 100 sf – 1 Hour Rated Fire Barrier
    - 2012 NFPA 101, Chapter 19, Existing Health Care Occupancies
      - Soiled Linen > 64 gallons – [ 1 Hour Rated Fire Barrier OR ]
      - Trash Volume > 64 gallons – [ automatic sprinklers with smoke ]
      - Storage Room > 50 sf – [ partition and self closing door ]

# DOCUMENT UPDATES

Where do we start to update our current FLS documents?

- Fire Caulking of required Walls
  - Expensive
  - Documented
  - What about non-rated, non-combustible wall locations
    - These are the walls that make up the majority of all walls in Hospitals
    - What's required versus what is needed
      - Fire Caulking (\$\$) versus Acoustical Caulking (\$)



# POLICY

What will be your policies and how will you effectively communicate them to those who work within your facility?

Your Fire Life Safety Documents are your road map for all those who work within your facility.

Make it easy, intuitive and understandable.



**DON'T LET THIS HAPPEN TO YOU**

A photograph showing a large industrial building with thick black smoke rising from its roof. The scene is viewed from a road with a white guardrail in the foreground. The sky is blue with scattered white clouds. The overall tone is serious and cautionary.

**THANK YOU**  
QUESTIONS?