Life Safety Compliance
"Chatting with the Chief"

CALIFORNIA ASSOCIATION CAHF OF HEALTH FACILITIES

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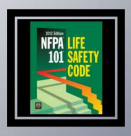
Fire and Life Safety, Inc.
CAHF Life Safety Consultant

Infection Control Measures



1135 Waivers for LSC

Life Safety Code (LSC)
Health Care Facilities Code (HCFC)

- Applicable Editions – **2012**
- Effective – July 5, 2016
- Enforcement – November 1, 2016
- Handbooks- **RECOMMENDED**
  - Code
  - Explanatory Information
  - Illustrations / Charts
  - Examples

4

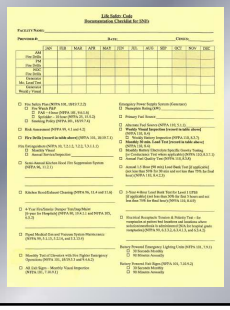
CMS / NFPA Requirements

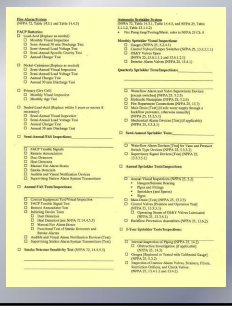
Refer to Chapter 2 of NFPA #101 for Complete Listing

- NFPA 101-2012 (Life Safety Code)
- NFPA 99-2012 (Health Care Facilities Code)
- NFPA 13-2010 (Sprinkler Code)
- NFPA 25-2011 (Insp./Test/Maintenance)
- NFPA 72-2010 (Fire Alarms)
- NFPA 14-2010 (Standpipes & Hose)
- NFPA 96-2010 (Commercial Cooking)
- NFPA 10-2010 (Fire Extinguishers)
- NFPA 80-2010 (Fire Doors)
- NFPA 105-2010 (Smoke Doors)

5

LSC Documentation Checklist





6

Fire Drills- K712

- One drill, per shift, per quarter
- Unpredictable times/dates
- Perform at unique times
  - Examples: 7:14 am, 9:22 pm, 3:19 am
- NO monthly drill requirement
- Sufficient documentation
  - PASS & RACE included
  - Scenario included
  - All participants must sign-in

7

Fire Drills- 1135 Waiver

- Fire Drills: Due to the inadvisability of quarterly fire drills that move and mass staff together, we will instead permit a documented orientation training program related to the current fire plan, which considers current facility conditions. The training will instruct employees, including existing, new or temporary employees, on their current duties, life safety procedures and the fire protection devices in their assigned area.

Refer to: 2012 LSC, sections 18/19.7.1.6

Fire Safety Considerations

- Fire Safety Plan- K711
- Fire Watch P&P- K346/K354
  - Fire Alarm OOS, 4 hours
  - Fire Sprinkler OOS, 10 hours
  - Names and phone numbers
    - Fire Department, non-emergency
    - State Department of Health Services, 24-hour number
- Smoking P&P- K741
- NFPA 99 Risk Assessment P&P
  - Remodeling, renovation, new construction or change-of-use

9

Risk Assessment Process- K901

- Establish an Assessment Team within the facility to review all aspects of facility operations
  - Comprehensive risk assessment process
  - Multiple perspectives on physical plant infrastructure, patient care, and occupant safety
- Familiarize all team members with NFPA 99, Health Care Facilities Code
  - Specifically sections 4.1 on Building Systems Categories and 4.2 on Risk Assessment
- Ensure team members understand the importance of system reliability and the consequences of system failure

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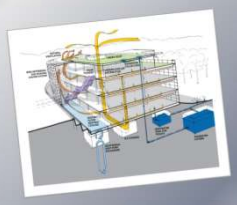
Risk Assessment Categories

1. The assessment goal is to categorize the system or equipment into one of the following categories:
   1. Failure may cause death or serious injury
   2. Failure may cause minor injury
   3. Failure may cause discomfort
   4. Failure will cause no impact on patients or caregivers



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Risk Assessment Tool

- Checkbox fields are provided to illustrate the findings of the risk assessment in accordance with Categories 1 through 4 identified in the code.
- The values associated with each category are listed at the top of these sections of the tool.

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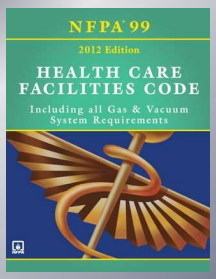
Once Risk Levels Are Identified

Code Sections

Administration
Referenced Publications
Definitions
Fundamentals
Gas and Vacuum Systems
Electrical Systems
Information Technology
Plumbing
Heating, Ventilation and A/C (HVAC)
Electrical Equipment
Gas Equipment
Emergency Management
Security Management
Hyperbaric Facilities
Features of Fire Protection



13

Fire Door Assembly Inspection- K211

- NEW (2012) Fire Door Testing
  - Inspection process
    - Visual – damage/missing parts
    - Operate door fully
    - Inspect hardware and replace defective parts
    - Inspect tin-clad doors for evidence of dry rot
    - No holes or breaks in door
    - Glazing and beds are intact
    - Door undercut is no more than ¾ inch
    - Positive latch secures door
    - No field modifications to door or frame
    - Labels visible and legible

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Qualifications of Inspectors

- No specific qualifications for Fire Door Assembly Inspection individual other than being "knowledgeable."
- Specifically, NFPA 80 states the following:

  "Functional testing of fire doors and window assemblies shall be performed by individuals with knowledge and understanding of the operating components of the type of door being subject to testing."

- CMS stated that SNF maintenance workers generally possess the skills and knowledge needed.

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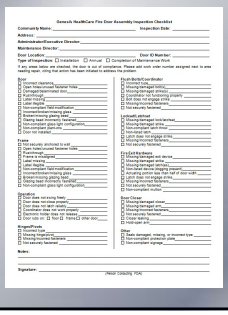
FDAI Checklist

- Clearly itemizes all of the different aspects of the inspection.
- A check mark indicates non-compliance.
- No check marks is considered a compliant Fire Door Assembly.



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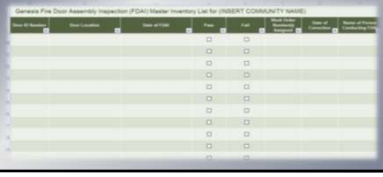
FDAI Master Inventory List

- Name inserted at the top.
- Includes a line for each Fire Door Assembly that is inspected with columns that itemize the following information:
  - Door ID Number
  - Location of Door
  - Date of FDAI
  - Pass
  - Fail
  - Work Order Number(s) Assigned
  - Name of Person Conducting FDAI



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Inspection, Testing and Maintenance (ITM)

Frequency

- NFPA 72-2010, section 3.2.106 defines time for fire alarm system testing and inspection as follows:
  - **Weekly**: 52 times per year, once per calendar week
  - **Monthly**: 12 times per year, once per calendar month
  - **Quarterly**: 4 times per year, with a minimum of 2 months and a maximum of 4 months
  - **Semi-annual**: Twice per year, with a minimum of 4 months, and a maximum of 8 months
  - **Annual**: Once per year, with a minimum of 9 months and a maximum of 15 months

18

Fire Extinguishers- K355

- Monthly Visual
  - Performed by facility staff
  - Typically initial inspection tag
    - Must use consistently if started
  - Can use checklist or spreadsheet
- Annual Service
  - Typically performed by vendor
  - All FEs done at same time
  - 5-year hydrostatic testing

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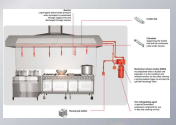
Kitchen Hood Fire Suppression Hood / Exhaust Cleaning- K324

- Suppression System
  - Semi-annual- every 6 months
  - Performed by vendor
  - Properly documented and tagged
- Hood / Exhaust Cleaning
  - Weekly cleaning by staff
    - Surfaces and filters - Documented
  - Annual requirement- professional service
    - Performed by vendor
  - More frequently dependent upon use
  - Properly documented / sticker on hood



20

Fire / Smoke Dampers- K521

- Tested one year after installation
- Tested every 4 years in SNFs
- Qualified person- typically vendor
- Comprehensive testing process
  - Full unobstructed access verified
  - Fusible link tested to ensure full closure
  - Fusible line replaced if damaged or painted
  - Damper exercised and inspected for obstructions

21

Elevators- K531

- Elevators with Firefighter Emergency Ops
  - Emergency Recall (Phase 1), monthly test
  - Firefighter Controls (Phase 2), monthly test

Exit Signs- K293

- All exit signs, monthly visual inspection
- Battery powered exit signs
  - 30-second monthly battery test
  - 90-minute annual battery test

Emergency Lights- K281

- Battery-powered emergency lighting units
  - 30-second monthly battery test
  - 90-minute annual battery test

22

Generator (EPPS)- K918

- Emergency Power Supply System
  - Weekly visual inspection, documented
  - Monthly 30-minute load test
    - Record trip time: <10 seconds transfer
  - Monthly Battery Test
    - Electrolyte Specific Gravity Test: hydrometer
    - Conductance Test: meter that measures siemens
  - Annual Inspection, Testing & Maintenance
    - 1.5 Hour Load Bank Test
    - Fuel Quality Test
  - 3 Year 4-Hour Load Bank Test
    - Level I EPSS

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Electrical Receptacle Test- K914

- Annual Requirement: Tension & Polarity
- Pass/Fail Documented
  - The physical integrity of each receptacle shall be confirmed by visual inspection.
  - The continuity of each ground circuit in each electrical receptacle shall be confirmed.
  - Correct polarity of the hot and neutral connections in each electrical receptacle shall be confirmed.
  - The retention force of the grounding blade of each receptacle (except locking-type receptacles) shall be not less than 4-oz (115 g).
- All "Failed" devices must be repaired and re-tested.
- **Hospital-grade receptacles** must be tested after initial installation, replacement, or servicing of the device.

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Patient Care-Related Electrical Equipment- K921 (PCREE)

- Testing & Maintenance Requirements
  - Physical Integrity
  - Resistance
  - Leakage Current
  - Touch Current

25

Patient Care-Related Electrical Equipment (PCREE)

- Testing Intervals established by facility's P&P (in accordance with manufacturer's guidelines)
  - Before equipment put into service
  - After repair and/or modification
  - Properly documented
  - Instructions and maintenance manuals available

- Several electrical appliances working together = complete system
- Personnel responsible for the testing, maintenance and use of electrical appliances receive continuous training

26

Fire Alarm Systems (FAS)- K345

- Semi-Annual FAS Inspections
  - FACP Trouble Signal
  - Remote Annunciators
  - Duct, Heat and Smoke Detectors
  - Manual Pull Stations
  - Audible / Visual Notification Devices
  - Supervising Station Alarm System Transmitters

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Fire Alarm Systems (FAS)

- Annual FAS Tests / Inspections
  - Control Equipment Test / Visual Inspection
  - FACP Trouble Signal Test
  - Remote Annunciator Test
  - Initiating Devices Tests
    - Duct Detectors
    - Heat Detectors
    - Manual Pull Stations
    - Functional Test of Smoke Detectors and Smoke Alarms
  - Audible / Visual Alarm Notification Devices Test
  - Supervising Station Alarm System Transmitters Test

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Fire Alarm Systems (FAS)

- Smoke Detector Sensitivity Test
  - Smoke detector sensitivity must be checked within one year after installation, then checked every alternate year thereafter. After the second test, if test results indicate that the device remains within its listed and marked sensitivity range, the length of time between tests is permitted to be extended to a maximum of 5 years.
  - Addressable FAS: Documentation required confirming that the system performs its own sensitivity testing per NFPA 72 requirements.
- FACP Batteries - Specific Testing Requirements Per Type
  - Annual Charger & Annual 30 min. Discharge Test
  - Lead Acid (replace as needed)
  - Nickel Cadmium (replace as needed)
  - Primary (dry cell)
  - Sealed Lead Acid (replace within 5 years)

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Automatic Sprinkler Systems- K353

- Monthly Visual Inspections
  - Gauges
  - Control Valves/Tamper Switches
  - OS&Y Valves-Open
  - Exterior Alarm Valves
- Quarterly Tests/Inspections
  - Water Flow Alarm & Valve Supervisory Devices
  - Hydraulic Nameplate (NFPA 25)
  - Fire Department Connection
  - Main Drain Test
  - Mechanical Alarm Device

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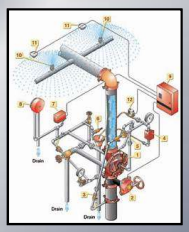
Automatic Sprinkler Systems

- Semi-Annual Sprinkler Tests
  - Water Flow Alarm Devices
    - Vane & Pressure Switch Type Devices
  - Supervisory Sprinkler Devices
- Annual Tests/Inspections
  - Annual Visual Inspections
    - Hangers/Seismic Bracing
    - Pipes and Fittings
    - Sprinklers and spares
    - Signs
  - Main Drain Test
  - Control Valves (Positions and Operations)
    - Operating Stems of OS&Y Valves- Lubricated
  - Backflow Prevention Assemblies



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Automatic Sprinkler Systems

- 5 Year Sprinkler Tests / Inspection
  - Internal Inspection of Piping
    - Obstruction Investigation
  - Gauges
    - Replaced (most common)
    - Tested with Calibrated Gauge
  - Inspection of Interior Devices
    - Alarm Valves
    - Strainers
    - Filters
    - Restriction Orifices
    - Check Valves

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Fire Pumps

- Monthly Churn Test (No Flow)
  - Run pump for a minimum of 10 minutes.
  - Record the system suction and discharge pressure gauge reading.
  - Check the pump packing glands for slight discharge.
  - Adjust glands nuts if necessary.
  - Check for unusual noise or vibration.
  - Check packing boxes, bearings or pump casing for overheating.
  - Record the pump starting pressure.
- Annual Flow Tests
  - NFPA 25-Typically conducted by vendor.
  - The fire pump flow test is required by NFPA 25 to be conducted once a year in order to measure the pump's flow and pressure.

33

Emergency Power Supply System- K918

- Generator
  - Nameplate Rating
  - Primary Fuel Source
  - Alternate Fuel Source
  - Weekly Visual Inspection
  - Monthly 30 Minute Load Test
    - Record Transfer time- < 10 seconds
  - Monthly Battery Test
    - Electrolyte Specific Gravity Testing (Hydrometer)
    - Conductance Test (Special Meter)
  - Annual Fuel Quality Test
  - Annual 90 Minute Load Bank Test
  - 3-Year 4-Hour Load Bank Test for Level I EPSS




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1135 Waiver for ITM

- CMS is temporarily modifying these requirements to the extent necessary to permit these facilities to adjust scheduled inspection, testing and maintenance (ITM) frequencies and activities for facility and medical equipment.

- CMS is temporarily modifying these provisions to the extent necessary to permit these facilities to adjust scheduled ITM frequencies and activities required by the LSC and HCFC. The following LSC and HCFC ITM are considered critical **are not** included in this waiver:
  - Sprinkler system monthly electric motor-driven and weekly diesel engine-driven fire pump testing.
  - Portable fire extinguisher monthly inspection.
  - Elevators with firefighters' emergency operations monthly testing.
  - Emergency generator 30 continuous minute monthly testing and associated transfer switch monthly testing.
  - Means of egress daily inspection in areas that have undergone construction, repair, alterations or additions to ensure its ability to be used instantly in case of emergency.

Alcohol Based Hand Rub (ABHR)- K325

- Corridor is at least 6 ft. wide (8 ft. in health care)
- Maximum individual dispenser capacity-0.32 gal. of fluid
  - 0.53 gal. in suites
- Maximum Level 1 aerosol dispensers-18 oz.
- Minimum of 4 ft. horizontal spacing.
- Maximum of 10 gal. aggregate limit in smoke compartment.
  - Excluding one (1) dispenser per room
- Storage of more than 5 gallons of ABHR solution in a smoke compartment requires flammable liquids locker (NFPA 30).
- Dispensers cannot be within 1 inch of an ignition source.
- Fire sprinklers required if dispenser installed over carpeting.
- ABHR solution does not exceed 95% concentration.
- Dispenser protected against inappropriate access.

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ABHR- 1135 Waiver

Alcohol-based Hand-Rub (ABHR) Dispensers: We are waiving the prescriptive requirements for the placement of alcohol based hand rub (ABHR) dispensers for use by staff and others due to the need for the increased use of ABHR in infection control. However, ABHRs contain ethyl alcohol, which is considered a flammable liquid, and there are restrictions on the storage and location of the containers. This includes restricting access by certain patient/resident population to prevent accidental ingestion. Due to the increased fire risk for bulk containers (over five gallons) those will still need to be stored in a protected hazardous materials area.

Refer to: 2012 LSC, sections 18/19.3.2.6. In addition, facilities should continue to protect ABHR dispensers against inappropriate use as required by 42 CFR §482.41(b)(7) for hospitals; §485.623(c)(5) for CAHs; §418.110(d)(4) for inpatient hospice; §483.470(j)(5)(ii) for ICF/IIDs and §483.90(a)(4) for SNF/NFs.

If you haven't figured it out by now LSC Compliance = PAPERWORK

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Mission:

Safe and Compliant Environment of Care

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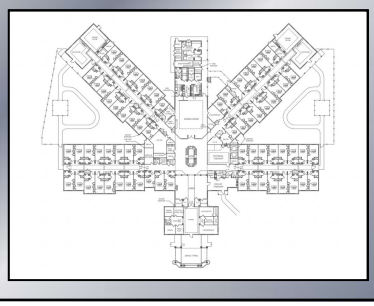
Code Interpretations

- Regulators
- Responders
- Architects
- Engineers
- Vendors
- Consultants
- Ownership/Management

FRUSTRATION!!

40

Let's Take a Quick Facility Tour



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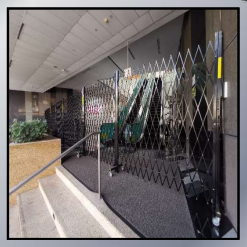
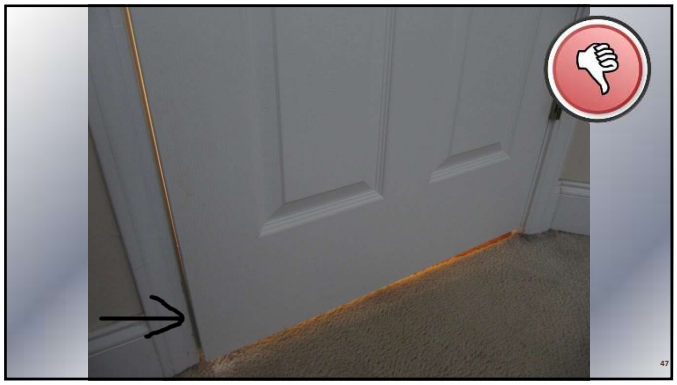
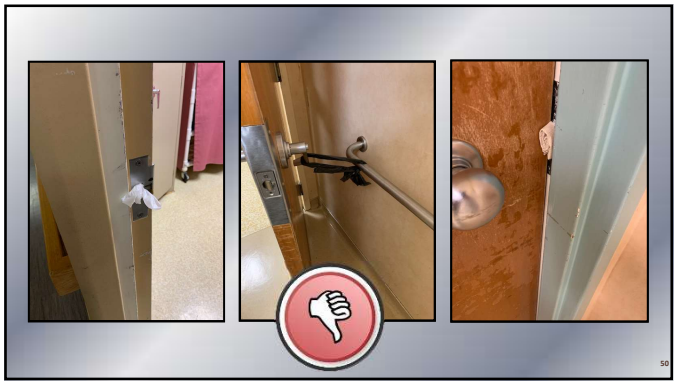
Means of Egress

Means of Egress

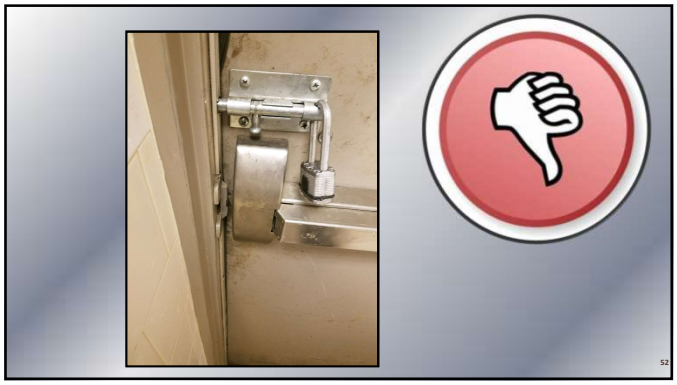


Protectives (aka doors)



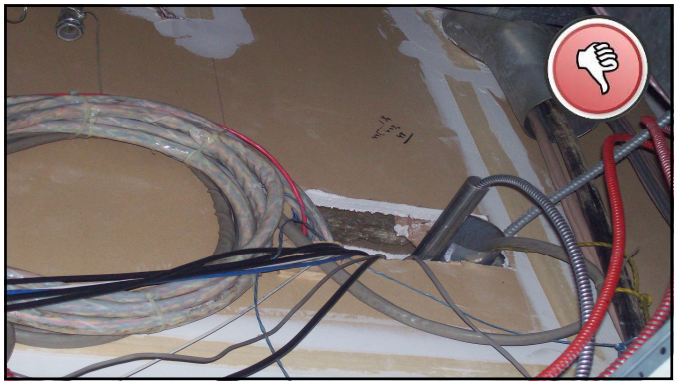



EXIT



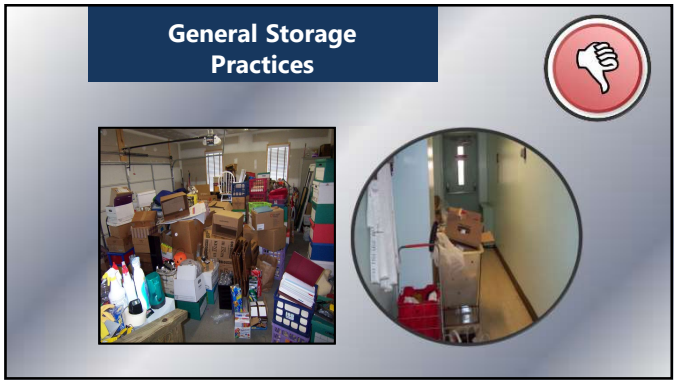
What's the Problem?

Compartmentalization- Penetrations



Compartmentalization- Proper Fire Stopping

General Storage Practices




MONOGRAM
MONOGRAM
MONOGRAM


DO NOT STORE ANYTHING
ABOVE THIS LINE

Alcohol Based Hand Rub (ABHR)


CLEARANCE !!
64


CAUTION
OXIDIZING GAS(ES)
STORED WITHIN
NO SMOKING
OXYGEN
STORAGE
No Smoking
No Open Flame
FULL
EMPTY
66


2-NW62506


NEW

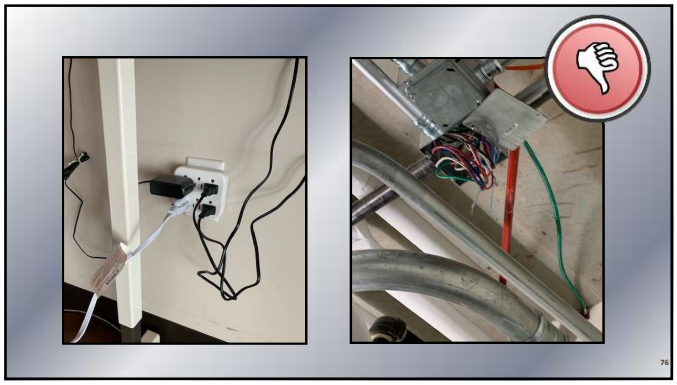
Proper Signage

73

74

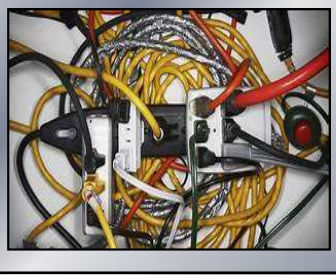


75



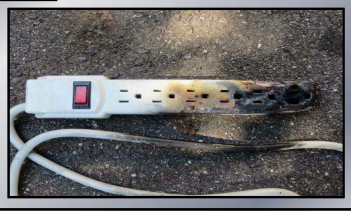

Coca-Cola

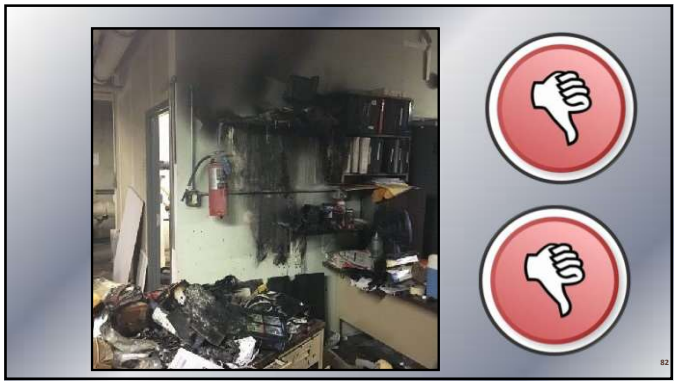
Extension Cords



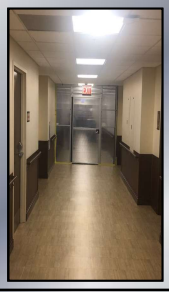
Approved Power Strips

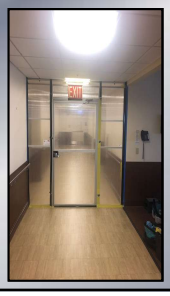
UL 1363 or UL 1363A

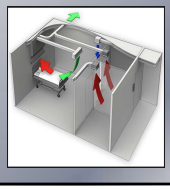




Isolation Measures



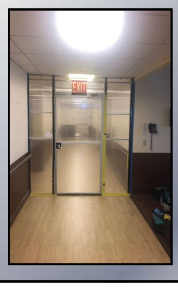




Temporary Construction-1135

Temporary Construction: CMS is waiving requirements that would otherwise not permit temporary walls and barriers between patients.

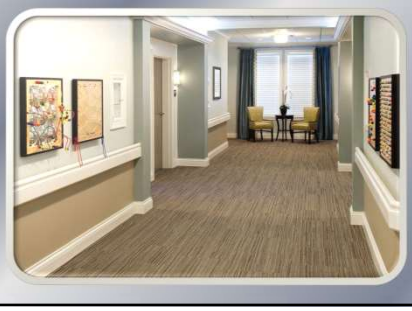
Refer to: 2012 LSC, sections 18/19.3.3.2.

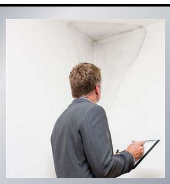


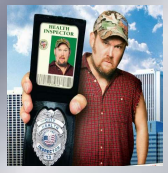
Alternate Life Safety Measures

ILSM rounds can be made a daily or weekly PM and turned on and off as needed based on the ILSM Assessment

Compliance







SURVEY SUCCESS !

OPEN FORUM
Q & A

THANK YOU!

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