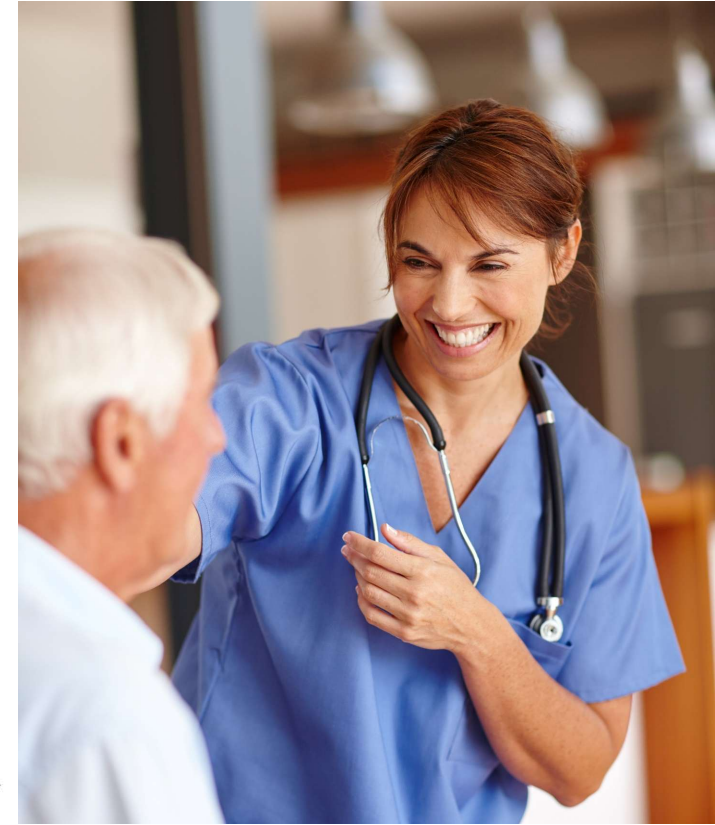




HEALTH CARE
A U T H O R I T Y



THE LIFE SAFETY CODE SURVEY

RHONDA DELMAIN, DISTRICT OPERATIONS BUREAU CHIEF
NFPA CERTIFIED FIRE INSPECTOR

3.19.26

INVESTING FOR TOMORROW, DELIVERING TODAY.

BEFORE WE START...

On behalf of all colleagues at the Health Care Authority, we humbly acknowledge we are on the unceded ancestral lands of the original peoples of the Pueblo, Apache, and Diné past, present, and future.

With gratitude we pay our respects to the land, the people and the communities that contribute to what today is known as the State of New Mexico.



A cloudy morning looking over Santa Cruz Lake
photo by Jessica Gomez



MISSION

We ensure New Mexicans attain their highest level of health by providing whole-person, cost-effective, accessible, and high-quality health care and safety-net services.

VISION

Every New Mexican has access to affordable health care coverage through a coordinated and seamless health care system.

GOALS



LEVERAGE purchasing power and partnerships to create innovative policies and models of comprehensive health care coverage that improve the health and well-being of New Mexicans and the workforce.



BUILD the best team in state government by supporting employees' continuous growth and wellness.



ACHIEVE health equity by addressing poverty, discrimination, and lack of resources, building a New Mexico where everyone thrives.



IMPLEMENT innovative technology and data-driven decision-making to provide unparalleled, convenient access to services and information.



INTRODUCTIONS



- I am a New Mexico transplant. I am a Maryland native, and I die hard Washington Commanders fan.
- My degrees are in Education, Psychology, and Business. I was a teacher and a play therapist before I moved into my regulatory career.

I began my career as a regulator with the State of Missouri utilizing State laws and regulations.

I moved into regulating long term care facilities and became SMQT certified.

I started conducting Life Safety Code surveys, and I became a NFPA Certified Fire Inspector. I have maintained my CFI certification, and I am a member of the Pro Board.

I learned about New Mexico through my volunteer work as a National Disaster Response Volunteer. I am certified in Incident Command, Communications, Flood Recovery, and Fire Recovery, and I worked wildfire recovery in Ruidoso, NM in Spring of 2022.

In August 2023, I moved to New Mexico and began my career with the District Operations Bureau. I have worked on the QA Team and the District 1 Team, and I became the Bureau Chief in August of 2025.

What is Life Safety Code?

- The Life Safety Code (LSC) is NFPA 101. It is a set of regulations developed by the National Fire Protection Association (NFPA).
- It provides the minimum requirements for the design, construction, operation, and maintenance of buildings to protect occupants from fire, smoke, and other hazards.
- It covers a wide variety of occupancy types, to include health care facilities, ambulatory care, residential board and care, and more.
- The Advance Healthcare Surveyors are also known as Life Safety Code surveyors, because their surveys are based on NFPA 101. They also utilize NFPA 99, Health Care Facilities Code.
- NFPA 101 and NFPA 99 form the groundwork of all LSC inspections.
- These two NFPA manuals can refer the LSC surveyor to another 75+ NFPA manuals, which cover topics such as backup emergency power, electrical code, sprinkler installations, fire alarm inspections, and more.





**IS THAT A NEW
REQUIREMENT?**



- ❖ The Authority Having Jurisdiction (AHJ) is a term that is frequently used in the NFPA codes. The AHJ can be Federal (CMS), State (NM Fire Marshal), or local entities (City Fire Dept, Building Inspector, etc.).
- ❖ In order for a Code to be enforced, the AHJ must adopt it. They can adopt an established Code (NFPA, IBC, etc.) or they can write their own code.
- ❖ The edition the AHJ adopts is the version that is enforceable until they adopt a newer edition or a different Code.
- ❖ CMS adopted the NFPA Codes, and the last time they adopted them was on May 4, 2016. The effective date for this adoption was July 6, 2016. Surveying for compliance with this Code began on November 1, 2016 (See S&C: 16-29-LSC)
- ❖ Therefore, the LSC surveyors utilize the 2012 editions of NFPA 101 and NFPA 99. For other NFPA codes, the LSC surveyors cannot utilize any editions after 2012.
- ❖ NFPA codes are reviewed and updated every three to five years.



Quick Code Review: The Purpose and Goal

NFPA 101, 2012 edition:

1.2* Purpose. The purpose of this *Code* is to provide minimum requirements, with due regard to function, for the design, operation, and maintenance of buildings and structures for safety to life from fire. Its provisions will also aid life safety in similar emergencies.

4.1* Goals.

4.1.1* Fire. A goal of this *Code* is to provide an environment for the occupants that is reasonably safe from fire by the following means: (1)*Protection of occupants not intimate with the initial fire development; (2) Improvement of the survivability of occupants intimate with the initial fire development.

4.2 Objectives.

4.2.1 Occupant Protection. A structure shall be designed, constructed, and maintained to protect occupants who are not intimate with the initial fire development for the time needed to evacuate, relocate, or defend in place.

4.5 Fundamental Requirements.

4.5.1 Multiple Safeguards. The design of every building or structure intended for human occupancy shall be such that reliance for safety to life does not depend solely on any single safeguard. An additional safeguard(s) shall be provided for life safety in case any single safeguard is ineffective due to inappropriate human actions or system failure.

4.5.2 Appropriateness of Safeguards. Every building or structure shall be provided with means of egress and other fire and life safety safeguards of the kinds, numbers, locations, and capacities appropriate to the individual building or structure, with due regard to the following: (1) Character of the occupancy, including fire load; (2) Capabilities of the occupants; (3) Number of persons exposed; (4) Fire protection available; (5) Capabilities of response personnel; (6) Height and construction type of the building or structure; (7) Other factors necessary to provide occupants with a reasonable degree of safety.



Quick Code Review: The Authority Having Jurisdiction

NFPA 101, 2012 edition

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the Authority Having Jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.6 Shall. Indicates a mandatory requirement.

3.2.7 Should. Indicates a recommendation or that which is advised but not required.

Chapter 1: Administration

1.6 Enforcement. This Code shall be administered and enforced by the Authority Having Jurisdiction designated by the governing authority.

Chapter 4: General

4.6 General Requirements.

4.6.1 Authority Having Jurisdiction.

4.6.1.1 The Authority Having Jurisdiction shall determine whether the provisions of this Code are met.

4.6.1.2 Any requirements that are essential for the safety of building occupants and that are not specifically provided for by this Code shall be determined by the Authority Having Jurisdiction.

4.6.1.3 Where it is evident that a reasonable degree of safety is provided, any requirement shall be permitted to be modified if, in the judgment of the Authority Having Jurisdiction, its application would be hazardous under normal occupancy conditions.



Quick Code Review: The Facility

NFPA 101, 2012 edition

4.6.12 Maintenance, Inspection, and Testing.

4.6.12.1 Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature is required for compliance with the provisions of this Code, such device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or other feature shall thereafter be **continuously maintained**. Maintenance shall be provided in accordance with applicable NFPA requirements or requirements developed as part of a performance-based design, or as directed by the Authority Having Jurisdiction.

4.6.12.4 Any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature requiring periodic testing, inspection, or operation to ensure its maintenance shall be **tested, inspected, or operated** as specified elsewhere in this Code or as directed by Authority Having Jurisdiction.

4.6.12.5 Maintenance, inspection, and testing shall be performed under the supervision of **a responsible person** who shall ensure that testing, inspection, and maintenance are made at specified intervals in accordance with applicable NFPA standards or as directed by the Authority Having Jurisdiction.

18/19.1.1.3 Total Concept.

18/19.1.1.3.1 All health care facilities shall be **designed, constructed, maintained, and operated to minimize the possibility of a fire emergency** requiring the evacuation of occupants.

18/19.1.1.3.2 Because the safety of health care occupants cannot be ensured adequately by dependence on evacuation of the building, their protection from fire shall be provided by appropriate arrangement of facilities; **adequate, trained staff; and development of operating and maintenance procedures** composed of the following: (1) Design, construction, and compartmentation; (2) Provision for detection, alarm, and extinguishment; (3) Fire prevention procedures and planning, training, and drilling programs for the isolation of fire, transfer of occupants to areas of refuge, or evacuation of the building



AI Assistants

AI assistants know what they have trained on, what they have access to, and what guidelines you give them:

- Access to NFPA codes, the SOM, QSOs, and whatever is on the else is on the internet, which may or may not be accurate.
- You have to give them guidelines, such as letting them know which Code you are using (NFPA, not IBC/IFC) and what edition (2012 or earlier, not current editions.)
- You have to tell them what type of facility you are, what your capacity is, what type of construction your facility is, if you are under chapter 18 or chapter 19.

What AI assistants do not have access to:

- Guidance and trainings from CMS to the States; (we meet with them on a bi-weekly basis)
- Access to our emails with CMS (we can ask questions anytime and they will provide guidance and feedback)
- Results of our resource surveys or our look back surveys (these provide us with additional feedback regarding our cites, processes, and anything we may have missed)
- Access to our enforcement notes

AI assistants will tell you to take precautions when utilizing them:

- For regulations, codes, safety standards, and legal requirements, always confirm details directly from the authoritative source.
- AI can make mistakes or sound confident about incorrect information.
- Do not use AI to replace professional judgment.
- AI is a starting point, not a final word.
- AI assistants are powerful and useful, but they work best when paired with human judgment and critical thinking.

OBJECTIVES



DISCUSS LSC CODES
AND REGULATIONS



TAKE A CLOSER LOOK
AT FREQUENTLY CITED
DEFICIENCIES.



PROVIDE A DIFFERENT
PERSPECTIVE OF THE
LSC TOUR.

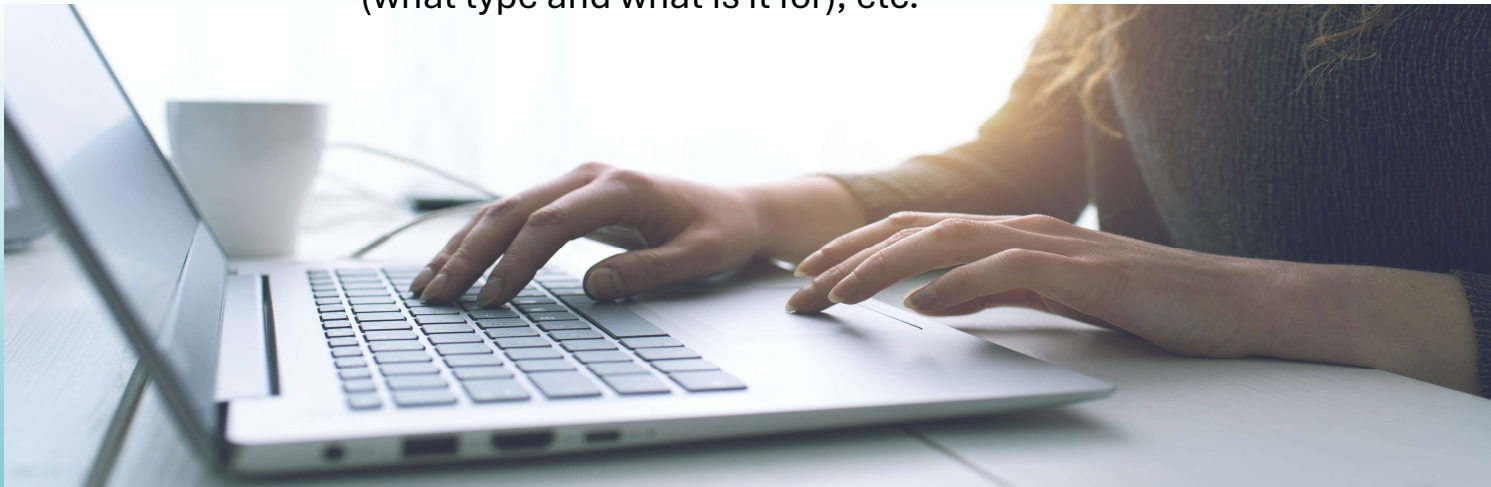


REVIEW OF EIGHT
MAJOR LSC SYSTEMS.



The Offsite Preparation

- We look at the building floor plan, all levels, and the campus layout
- Look at previous Statement of Deficiencies and inspection records (fire alarm, sprinkler, generator, etc.)
- Gather our documents: 2786R or V (depending on facility type) and record review forms
- The things we want to know before we get to your facility: How many smoke zones, type of construction (original building and any additions), occupancy types, sprinkler systems (how many, what type, acceptance date), generator (what type and what is it for), etc.





THE CMS 2786

CMS 2786R – Long Term Care Facilities, 50 pages

CMS 2786V – Intermediate Care Facilities, 41 pages

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR MEDICARE & MEDICAID SERVICE

2012 LIFE SAFETY CODE
Form Approved OMB Exempt

FIRE SAFETY SURVEY REPORT - 2012 LIFE SAFETY CODE HEALTHCARE		1. (A) PROVIDER NUMBER K1	1. (B) MEDICAID I.D. NO. K2
<p>PART I — Life Safety Code, New and Existing PART II — Health Care Facilities Code, New and Existing PART III — Recommendation for Waiver PART IV — Crucial Data Extract OPTIONAL — Chapter 4 – NFPA 101A - Fire Safety Evaluation System for Health Care Occupancies – CMS-2786T</p>			
Identifying information as shown in applicable records. Enter changes, if any, alongside each item, giving date of change.			
2. NAME OF FACILITY K3	2. (A) MULTIPLE CONSTRUCTION (BLDGS) A. BUILDING _____ B. WING _____ C. FLOOR _____ K4	2. (B) ADDRESS OF FACILITY (STREET, CITY, STATE, ZIP CODE) K5	A. <input type="checkbox"/> Fully Sprinklered (All required areas are sprinklered) B. <input type="checkbox"/> Partially Sprinklered (Not all required areas are sprinklered) C. <input type="checkbox"/> None (No sprinkler system) K2180
3. SURVEY FOR <input type="checkbox"/> MEDICARE <input type="checkbox"/> MEDICAID K6	4. DATE OF SURVEY K4	DATE OF PLAN APPROVAL K5	SURVEY UNDER 5. <input type="checkbox"/> 2012 EXISTING 6. <input type="checkbox"/> 2012 NEW K7
5. SURVEY FOR CERTIFICATION OF 1. <input type="checkbox"/> HOSPITAL 2. <input type="checkbox"/> SKILLED/NURSING FACILITY 4. <input type="checkbox"/> ICF/IID UNDER HEALTH CARE 5. <input type="checkbox"/> HOSPICE			
IF "2" OR "5" ABOVE IS MARKED, CHECK APPROPRIATE ITEM(S) BELOW 1. <input type="checkbox"/> ENTIRE FACILITY 2. <input type="checkbox"/> DISTINCT PART OF (SPECIFY) _____			3. <input type="checkbox"/> IF DISTINCT PART OF HOSPITAL, IS HOSPITAL ACCREDITED? a. <input type="checkbox"/> YES b. <input type="checkbox"/> NO
6. BED COMPOSITION a. TOTAL NO. OF BEDS IN THE FACILITY	b. NUMBER OF HOSPITAL BEDS CERTIFIED FOR MEDICARE	c. NUMBER OF SKILLED BEDS CERTIFIED FOR MEDICARE	d. NUMBER OF SKILLED BEDS CERTIFIED FOR MEDICAID e. NUMBER OF NF or ICF/IID BEDS CERTIFIED FOR MEDICAID
7. A. <input type="checkbox"/> THE FACILITY MEETS THE STANDARD, BASED UPON (CHECK ALL APPROPRIATE BOXES) 1. <input type="checkbox"/> COMPLIANCE WITH ALL PROVISIONS 2. <input type="checkbox"/> ACCEPTANCE OF A PLAN OF CORRECTION 3. <input type="checkbox"/> RECOMMENDED WAIVERS 4. <input type="checkbox"/> FSES 5. <input type="checkbox"/> PERFORMANCE BASED DESIGN B. <input type="checkbox"/> THE FACILITY DOES NOT MEET THE STANDARD			
SURVEYOR (Signature) K9	TITLE	OFFICE	DATE
SURVEYOR ID K10	TITLE	OFFICE	DATE
FIRE AUTHORITY OFFICIAL (Signature)	TITLE	OFFICE	DATE
CMS FORMS SHALL BE COMPLETED AND RETAINED AS PART OF THE SURVEY RECORD.			
Form CMS-2786R (07/2016)		Page 1	

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR MEDICARE & MEDICAID SERVICES

2012 LIFE SAFETY CODE
Form approved OMB Exempt

FIRE SAFETY SURVEY REPORT – 2012 LIFE SAFETY CODE Intermediate Care Facilities for Individuals with Intellectual Disabilities SMALL FACILITIES		1. (A) PROVIDER NO. K1	1. (A) MEDICAID I.D. NO. K2
<p>PART I – Instructions for Completing the Form (CMS-2786V) PART II – Existing Resident Board & Care Occupancies Requirements (NFPA 101, Chapter 33) PART III – New Residential Board & Care Occupancies Requirements (NFPA 101, Chapter 32) PART IV – Building Services (New and Existing Facilities) PART V – Operating Features (New and Existing Facilities) PART VI – Crucial Data Extract Optional – Fire Safety Evaluation System for Board and Care Occupancies (CMS-2786Y, NFPA 101A, Chapter 7)</p>			
Identifying information as shown in applicable records. Enter changes, if any, alongside each item, giving date of change.			
2. NAME OF FACILITY K3	2. (A) MULTIPLE CONSTRUCTION (BLDGS) A. BUILDING _____ B. WING _____ C. FLOOR _____ K4	2. (B) ADDRESS OF FACILITY (STREET, CITY, STATE, ZIP CODE) K5	A. <input type="checkbox"/> Fully Sprinklered (All required areas are sprinklered) B. <input type="checkbox"/> Partially Sprinklered (Not all required areas are sprinklered) C. <input type="checkbox"/> None (No sprinkler system) K2180
3. SURVEY FOR <input type="checkbox"/> MEDICARE <input type="checkbox"/> MEDICAID K6	4. DATE OF SURVEY K4	DATE OF PLAN APPROVAL K5	SURVEY UNDER: 5. <input type="checkbox"/> 2012 EXISTING 6. <input type="checkbox"/> 2012 NEW K7
5. SURVEY FOR CERTIFICATION OF: SMALL FACILITY - LEVEL OF EVACUATION DIFFICULTY (Check one) USE FOR EXISTING FACILITIES ONLY 1. <input type="checkbox"/> Prompt 2. <input type="checkbox"/> Slow 3. <input type="checkbox"/> Impractical			
E-SCORE K8	USE FOR EXISTING FACILITIES ONLY E-Score Level of Evacuation Difficulty ≤ 1.5 Prompt > 1.5 ≤ 5.0 Slow > 5.0 Impractical	K9	
6. BED COMPOSITION a. TOTAL NO. OF BEDS IN THE FACILITY	6. A. <input type="checkbox"/> THE FACILITY MEETS, BASED UPON (check all appropriate boxes): 1. <input type="checkbox"/> COMPLIANCE WITH ALL PROVISIONS 2. <input type="checkbox"/> ACCEPTANCE OF A PLAN OF CORRECTION 4. <input type="checkbox"/> FSES 5. <input type="checkbox"/> PERFORMANCE BASED DESIGN B. <input type="checkbox"/> THE FACILITY DOES NOT MEET THE STANDARD		e. NUMBER OF ICF/IID BEDS CERTIFIED FOR MEDICAID
SURVEYOR (Signature) K9	TITLE	OFFICE	DATE
SURVEYOR ID K10	TITLE	OFFICE	DATE
FIRE AUTHORITY OFFICIAL (Signature)	TITLE	OFFICE	DATE
CMS FORMS SHALL BE COMPLETED AND RETAINED AS PART OF THE SURVEY RECORD.			
Form CMS-2786V (07/2016)		Page 1	

This form must be completed at each recertification and retained as part of the survey record.



THE CMS 2786

The form can be downloaded from the CMS Website.

This form breaks the survey down into two parts: NFPA 101 and NFPA 99.

It breaks Part 1, NFPA 101, down into 6 sections

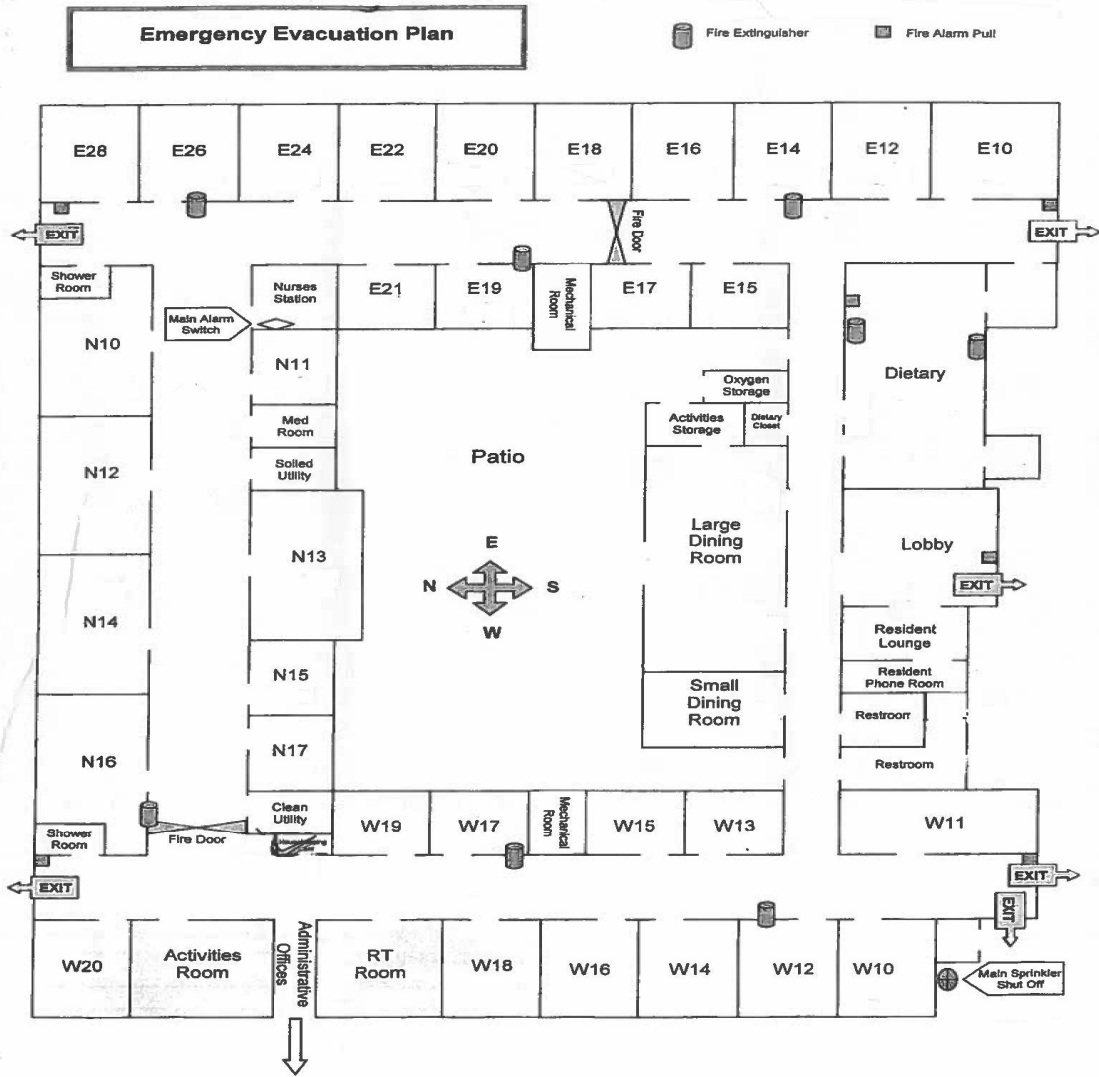
- General Requirements: Repair, renovations, modifications, and reconstruction; occupancies
- Means of Egress: Egress, doors, exits, emergency lighting, exit signs, etc.
- Protection: Hazardous areas, cooking facilities, fire alarms, sprinklers, portable fire extinguishers, smoke barriers, impairments to fire alarm and sprinkler systems (fire watch) etc.
- Special Provisions: High rise buildings
- Reserved section – Nothing is in this section for now.
- Operating features: Evacuation plans, fire drills, smoking, furniture and decorations, doors inspections, space heaters, construction and improvement operations, etc.

Some parts of the form apply to both new and existing facilities, and other parts of the form are divided between new and existing facilities.

- Plan approval dates on or after July 5, 2016 is “New, Chapter 18”; Before July 5, 2016 is “Existing, Chapter 19”
- Major rehabilitation (greater than 50% of the building), adding new construction/additions, CHOW



FLOOR PLAN

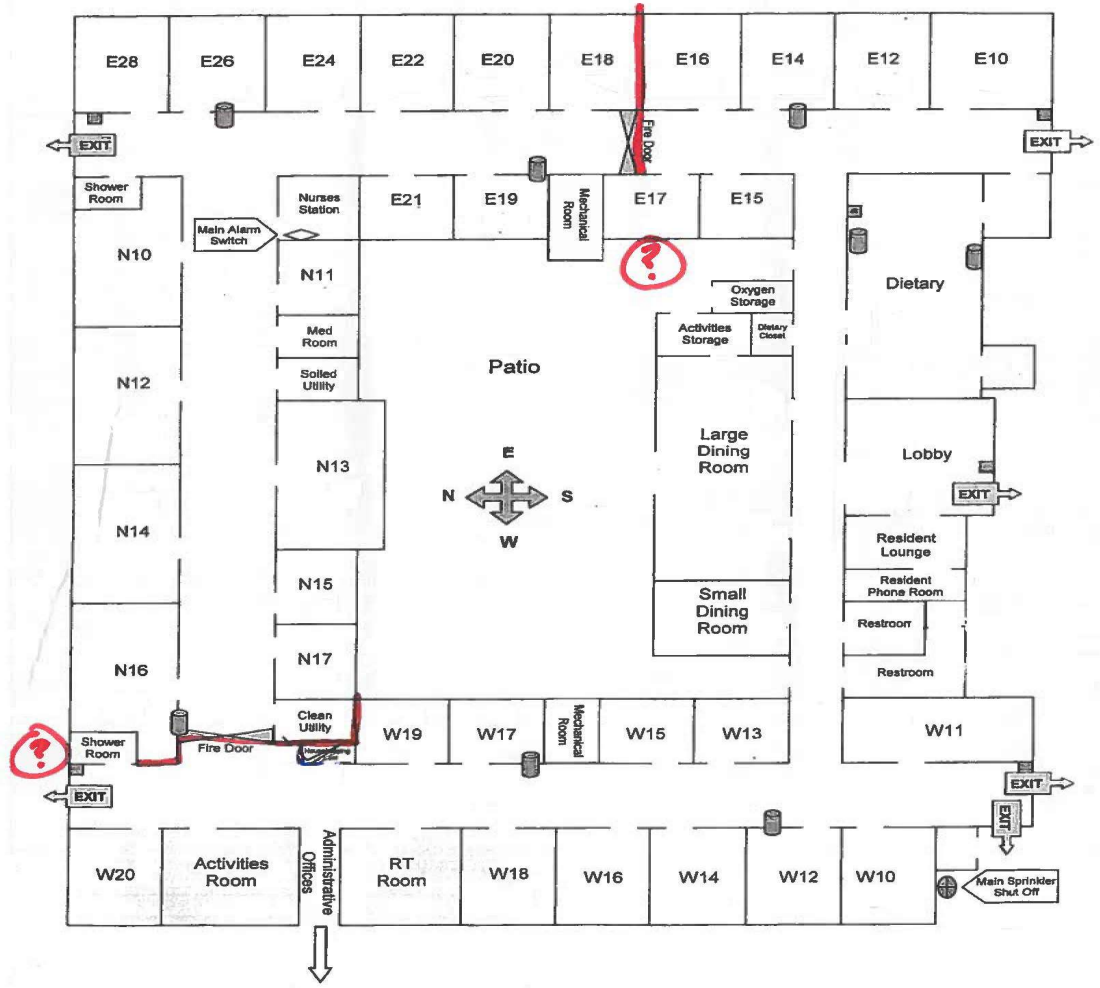




FLOOR PLAN

Emergency Evacuation Plan

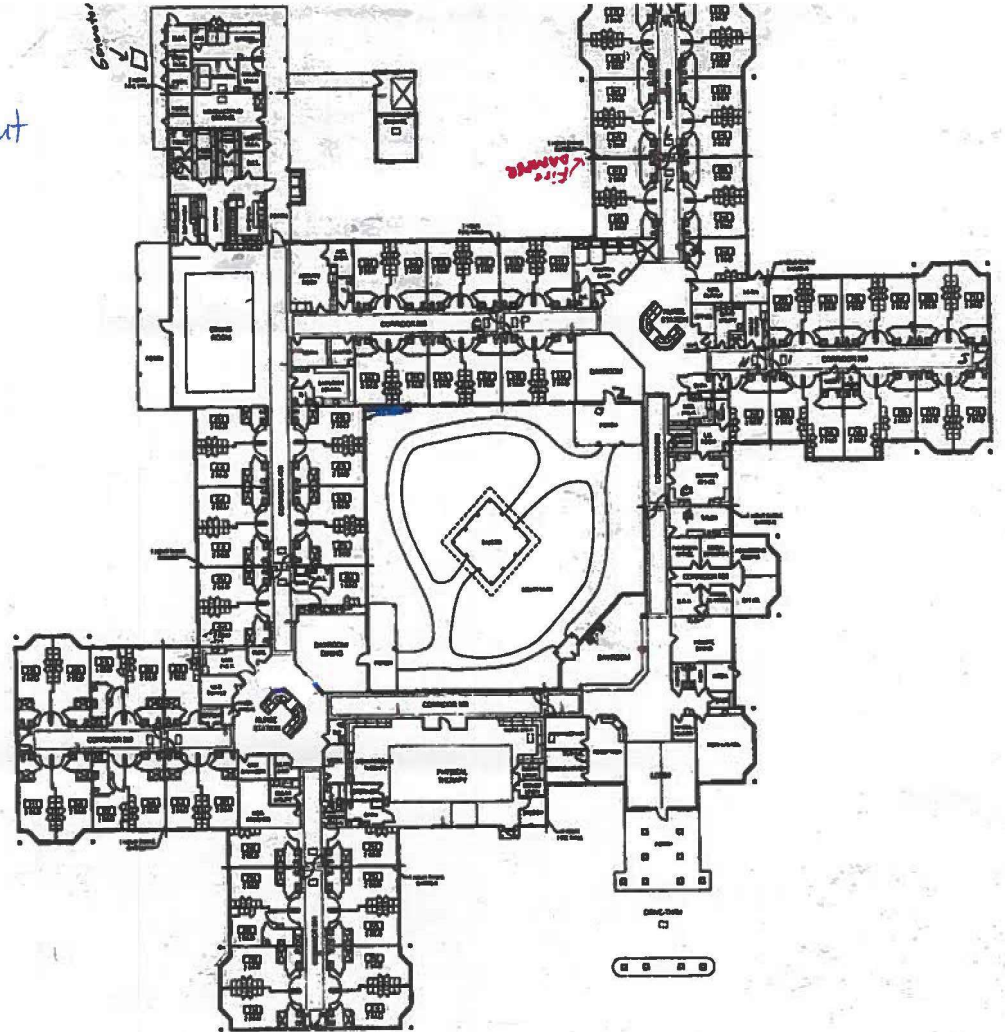
Fire Extinguisher Fire Alarm Pull





FLOOR PLAN

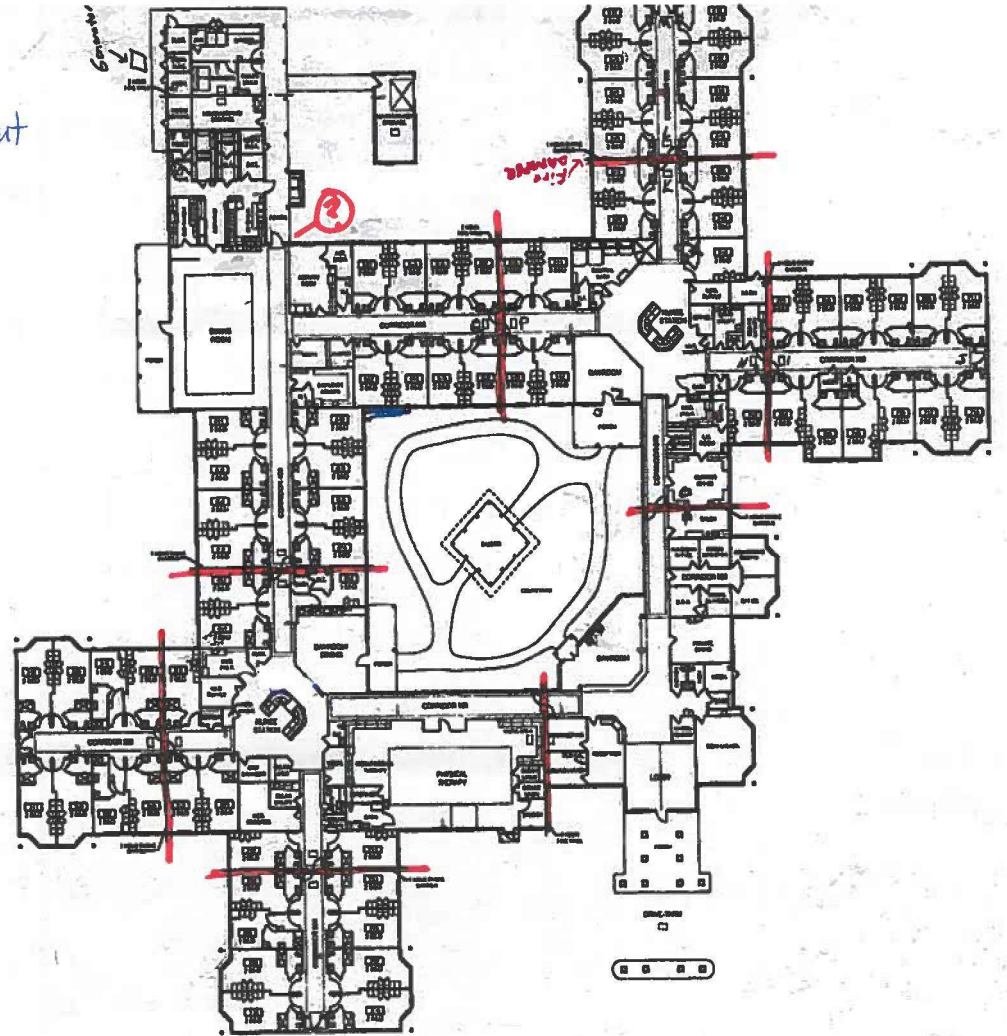
19pc → 2011/12
Fully Sprinkled
+ Attic
Solid Ceilings Throughout





FLOOR PLAN

type 2 ceiling
Fully Sprinkled
+ Attic
Solid Ceilings Throughout





SMOKE BARRIERS

3.3.31.2* Smoke Barrier. A continuous membrane, or a membrane with discontinuities created by protected openings, where such membrane is designed and constructed to restrict the movement of smoke.

At least two smoke zones per facility.

- Existing: At least two smoke compartments on every sleeping floor with a 30 or more patient bed capacity. NFPA 101, 19.3.7.1
- New: At least two smoke compartments on every floor used by inpatients for sleeping or treatment, **and** on every floor with an occupant load of 50 or more persons, regardless of use. NFPA 101, 18.3.7.1 (1-2)

Smoke zone does not measure any greater than 22,500 sq ft. NFPA 101, 18.3.7.1 (3), 19.3.7.1 (1)

No more than 200' from furthest point to the smoke barrier wall and doors. NFPA 101, 18.3.7.1 (4); 19.3.7.1

Extend from outside wall to outside wall, floor to roof deck. NFPA 101, 8.3.1.2, 8.5.2

Space shall be provided on each side of smoke barriers to adequately accommodate the total number of occupants in adjoining compartments. NFPA 101, 18.3.7.5



SMOKE BARRIERS AND DOORS

Constructed to a ½ hour fire resistance rating (existing)/1 hour fire resistance rating (new). NFPA 101, 18/19.3.7.3, 8.5.

Smoke dampers are not required in duct penetrations of fully ducted HVAC systems. NFPA 101, 18.3.7.3, 8.5.5

Penetrations in smoke barrier walls should be sealed with a material equivalent to the barrier wall. NFPA 101, 8.5.

Doors in smoke barriers are 1¾-inch thick solid bonded wood-core doors or of construction that resists fire for 20 minutes. NFPA 101, 18.3.7.6, 19.3.7.6

Existing: Doors are self-closing or automatic-closing. Doors are not required to swing in the direction of egress travel. Positive latching is not required. NFPA 101, 19.3.7.8, 8.5.4.4

New: Doors are self-closing and must have rabbets, bevels, or astragals at the meeting edge. Swinging doors shall be arranged so that each door swings in an opposite direction. Positive latching is not required. NFPA 101, 18.3.7.8, 8.5.4.4.6



SMOKE BARRIER DOORS

The doors shall close the opening, leaving only the minimum clearance necessary for proper operation. NFPA 101, 8.5.4.1

The clearance under the bottom of the door shall be a maximum of $\frac{3}{4}$ ". NFPA 101, 18.3.7.6 (6), 8.5.4.1

The doors cannot have grilles or louvers. NFPA 101, 8.5.4.1

Doors can have protective plates. NFPA 101, 18.7.6 (1), 19.3.7.6.1

Doors can have vision panels. NFPA 101, 18.3.7.9-10, 19.3.7.6.2

Minimum clear width for swinging doors: 32" (existing), 41 $\frac{1}{2}$ " (new) NFPA 101, 18.3.7.6 (4-5), 19.3.7.9

Center mullions are not allowed (new). NFPA 101, 18.3.7.8 (5)



Things To Know and Most Frequently Cited

Any opening in your smoke barrier wall – doors, window, penetrations, etc – must provide the same protection as the barrier wall per the code requirements.

Smoke barrier doors must be inspected annually.

The inspections must be conducted by an individual who is trained to do the inspection.

The inspections must be documented and available for review.

The Code does not specify how often you need to inspect smoke barrier walls.

It is the facility's responsibility to develop policies and procedures to inspect and maintain all life safety code systems and ensure they are in good condition.

These inspections should be documented and available upon request by the AHJ.

Recommendation: No less than anytime there is work which may affect the barrier wall and seasonal (quarterly).

Most frequently cited:

Smoke walls: Unsealed space around smoke wall penetrations; penetrations sealed with substance which was not approved for fire rated construction; dampers not functioning when the fire alarm was activated

Smoke doors: Did not release with the fire alarm, did not fully closed when released, spaces between doors or at bottom of the door greater than Code allowances; vision panels do not meet Code requirements.



MEANS OF EGRESS





MEANS OF EGRESS

Means of Egress Reliability: Means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in the case of emergency. NFPA 101, 7.1.10

Furnishings, decorations, or other objects cannot obstruct exits, access to exits, or visibility of exits, and the means of egress cannot be divided into sections by railings, barriers, or gates. . NFPA 101, 7.1.10.2.1-2

Every part of each story should have at least two accessible exits, which are remote from each other. Each smoke compartment shall likewise be provided with two distinct egress paths to exits that do not require the entry into the same adjacent smoke compartment. NFPA 101, 18.2.4, 18.2.5.1, 19.2.4, 19.2.5, 7.4

The means of egress should not pass through kitchens, storerooms, restrooms, workrooms, closets, bedrooms or similar spaces, or other rooms or spaces subject to locking, unless it is specifically permitted by Chapter 18/19. NFPA 101, 7.5.2.1

The travel distance between any point in a room and the exit shall not exceed 200 ft (61 m). NFPA 101, 18.2.6, 19.2.6, 7.6.1

The means of egress shall terminate directly at a public way or at an exterior exit discharge, and the path to the public way shall be obvious and clear. NFPA 101, 7.7.1, 7.7.3.2



MEANS OF EGRESS

Changes in elevation: abrupt changes in elevation of walking surfaces shall not exceed $\frac{1}{4}$ in. Changes in elevation between $\frac{1}{4}$ " to $\frac{1}{2}$ " shall be beveled with a slope of 1 in 2. Changes in elevation exceeding $\frac{1}{2}$ " shall be considered a change in level and will require a ramp or stair. NFPA 101, 7.1.6.2, 7.1.7

Walking surfaces shall be nominally level, shall not exceed 1 in 20 (5% slope), and the slope perpendicular to the direction of travel shall not exceed 1 in 48 (2.08% side to side tilt). NFPA 101, 7.1.6.3

Walking surfaces shall be slip resistance under foreseeable conditions. NFPA 101 7.1.6.4

Corridors serving as an exit access shall be at least 4 ft wide (existing)/8 ft wide (new) and maintained to provide convenient removal of non-ambulatory residents. NFPA 101, 18.2.3.4, 19.2.3.4

Aisles, corridors, and ramps in adjunct areas not intended for the housing, treatment, or use by residents shall not be less than 44 in in clear and unobstructed width. NFPA 101, 18.2.3.4 (1), 19.2.3.4 (1)

Where the corridor is at least 6 ft wide, non-continuous projections not less than 38 in above the floor (existing) / above the handrail (new) are permitted. They can not project more than 6 in from the corridor wall. NFPA 101, 18.2.3.4 (2)m 19.2.3.4 (2)



MEANS OF EGRESS

If the corridor measures at least 8 ft, then fixed furniture is allowed provided **all of the following** conditions are met: NFPA 101, 19.2.3.4 (5)

- (a) The fixed furniture is securely attached to the floor or to the wall.
- (b) The fixed furniture does not reduce the clear unobstructed corridor width to less than 6 ft (1830 mm), except as permitted by 18.2.3.4(2), 19.2.3.4(2).
- (c) The fixed furniture is located only on one side of the corridor.
- (d) The fixed furniture is grouped such that each grouping does not exceed an area of 50 ft² (4.6 m²).
- (e) The fixed furniture groupings are separated from each other by a distance of at least 10 ft (3050 mm).
- (f)*The fixed furniture is located so as to not obstruct access to building service and fire protection equipment.
- (g) Corridors throughout the smoke compartment are protected by an electrically supervised automatic smoke detection, **and (existing) / or (new)** the fixed furniture spaces are arranged and located to allow direct supervision by the facility staff from a nurses' station or similar space.
- (h) NEW: The smoke compartment is protected throughout by an approved, supervised automatic sprinkler system.

Wheeled equipment and carts in use can be in the corridor, but cannot reduce the clear and unobstructed corridor width to less than 60 in. Staff must practice the removal of these items during fire drills. These equipment includes food service carts, housekeeping carts, and medication/treatment carts. NFPA 101, 18.2.3.4 , A.18.2.3.4 (4)(c), 19.2.3.4 (4), A.19.2.3.4 (4)(c).

Isolation carts for residents with active infections and unattended wheeled crash carts are allowed to be in the corridors. NFPA 101, A.18.2.3.4 (4)(c), A.19.2.3.4 (4)(c).



Things To Know and Most Frequently Cited

There is a lot of information in the Code regarding means of egress, and it is covered in NFPA 101, 18.2, 19.2, and Chapter 7

It covers topics like sleeping and non-sleeping suites, horizontal exits, stairs, smokeproof enclosures, areas of refuge, ramps, exit passageways, exit capacity, and dead ends.

These chapters also have multiple variations/conditions and referrals to the Appendix.

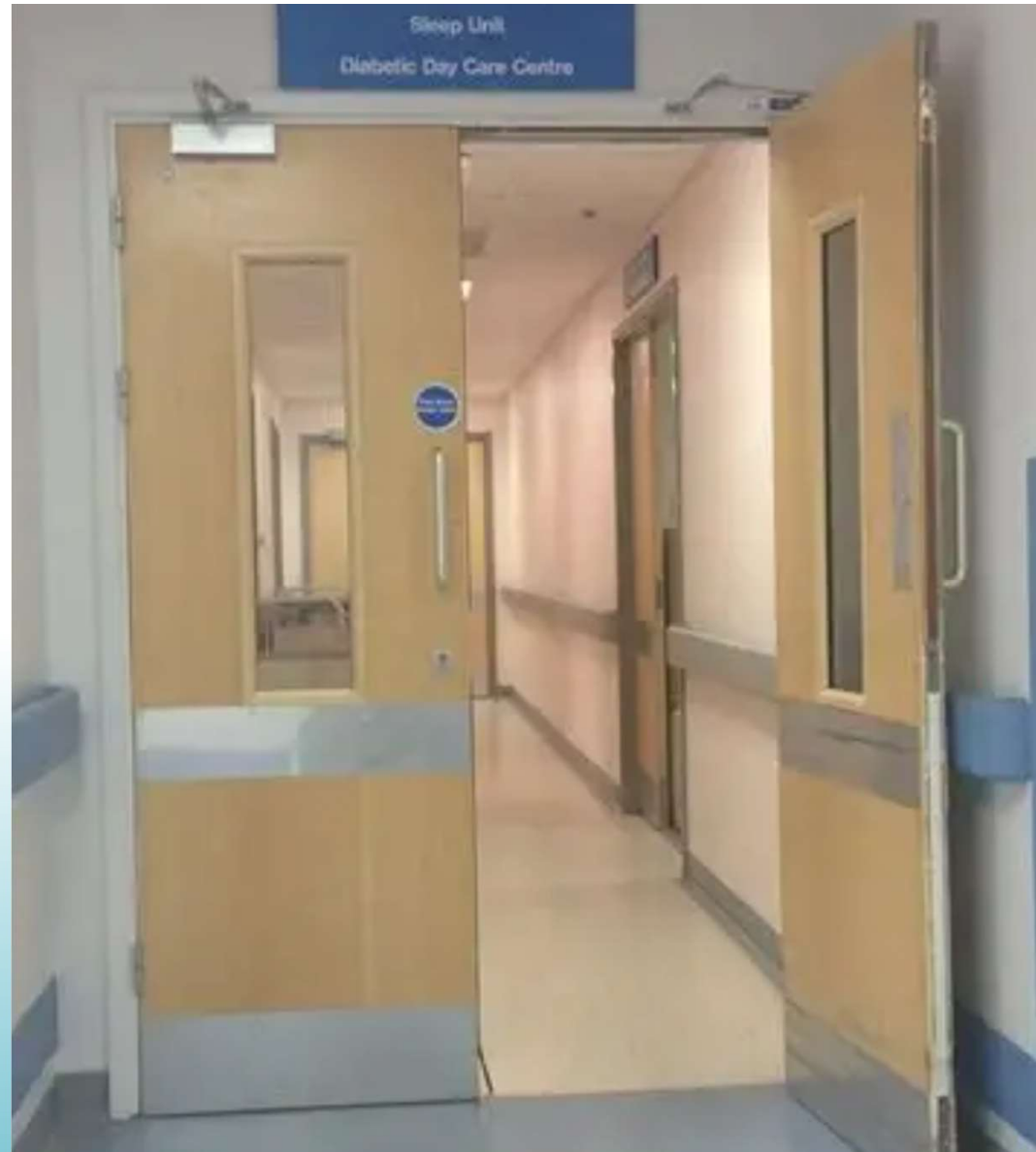
The Code does not specify how often you need to inspect means of egress.

It is the facility's responsibility to develop policies and procedures to inspect and maintain all life safety code systems and ensure they are in good condition.

These inspections should be documented and available upon request by the AHJ.

Most frequently cited: Means of egress not free and clear at all times; means of egress divided/blocked with a gate, temporary wall or partition; failure to have two means of egress from any location/floor; openings into means of egress corridor not fire rated/able to resist the passage of smoke (window opening); areas opened to the corridor which do not have smoke detector; changes in elevation in means of egress greater than Code allowance; uneven exit discharge to the public way

FACILITY DOORS





FACILITY DOORS

Types of Facility Doors: Smoke doors, egress doors, corridor doors, doors with self-closing devices, horizontal doors, doors to hazardous areas, Dutch doors.

Types of Egress Doors: Clinical needs and security threats, special needs locking arrangements, delayed egress locking arrangements, access controlled locking arrangements, elevator lobby exit access NFPA 101, 18.2.2.2, 19.2.2.2.

Door leaves shall be arranged to be opened readily from the egress side whenever the building is occupied. NFPA 101, 7.2.1.5.1

Exit access doors and exit doors must be the swinging type and at least 32 inches (existing)/ 41.5 in (new) in clear width. There are exceptions to this requirements. NFPA 101, 18.2.3.6, 18.2.3.7, 19.2.3.6, 19.2.3.7

Doors must open to the full width of the door. NFPA 101, 7.2.1.4.1

A latch or other fastening device on a door must have an obvious method of operation that can be readily operated under all lighting conditions. The device must be at least 34 in above the floor (existing)/ 48 in above the finished floor (new) NFPA 101, 7.2.1.5.10, 7.2.1.5.10.1

The releasing mechanism shall open the door with not more than one releasing operation. NFPA 101, 7.2.1.5.10.2



FACILITY DOORS

Doors within a required means of egress shall not be equipped with a latch or lock that requires the use of a tool or key from the egress side. NFPA 101, 18.2.2.2.2.4-5, A.18.2.2.2.5.1, 19.2.2.2.2.4-5, A. 19.2.2.2.5.1 7.2.1.5.3, 7.2.1.6

- There are exceptions: Special locking arrangements are made for clinical needs, security threats, special needs, delayed egress locks, access control and elevator lobby exit.
- Clinical needs of residents include psychiatric units, Alzheimer units, and dementia units.
- Security threats include forensic units and detention units are examples of security threat.
- Special needs includes pediatric units, maternity units, and emergency departments are examples of special needs.

Door locking arrangements shall be permitted where the clinical needs of patients require specialized security measures, provided staff can readily unlock doors at all times. NFPA 101, 18.2.2.2.5.1, 18.2.2.2.6, 19.2.2.2.5.1, 19.2.2.2.6

- These doors must have a provision for the rapid removal of occupants by either a remote control of locks, staff carry the keys with them at all times, or another reliable means available to staff at all times.
- There is only one locking device on the door.

None of the special locking arrangements are intended to allow credentialed egress, request to exit, or similar provisions, where an occupant cannot leave the building. It is understood facilities want to keep track of their residents; however, free egress needs to be available at all times. Another option is for facilities to use delayed egress locking systems. NFPA 101, A.7.2.1.6



FACILITY DOORS

Delayed egress doors are a type of special locking arrangement door. Approved and listed delayed egress systems can be installed on doors assemblies serving low and ordinary hazard content buildings protected by a sprinkler system or a fire alarm system. NFPA 101, 7.2.1.6

The doors must unlock with the activation of the sprinkler system and fire alarm system or loss of power to the locking device. NFPA 101, 7.2.1.6.1.1 (1-2)

An irreversible process shall release the lock in the direction of egress within 15 seconds when force is applied to the panic bar. The force shall not be required to be applied continuously for more than 3 seconds. NFPA 101, 7.2.1.6.1.1 (3)

The initiation of the unlocking process shall activate an audible signal in the vicinity of the door. NFPA 101, 7.2.1.6.1.1 (3)

A readily visible, durable sign on contrasting background shall be located on the door leaf, and shall read, "Push until alarm sounds. Door can be opened in 15 seconds." NFPA 101, 7.2.1.6.1.1 (4)

The letters must not be less than 1 in high and 1/8 in width.

Relocking the door must be by manual means only. NFPA 101, 7.2.1.6.1.1 (3)



FACILITY DOORS

Access controlled locks are permitted in the means of egress with all the following conditions. NFPA 101, 7.2.1.6.2

A sensor shall be provided on the egress side and arranged to unlock the door leaf in the direction of egress upon detection of an approaching occupant. NFPA 101, 7.2.1.6.2 (1)

Door leaves shall automatically unlock in the direction of egress upon loss of power to the sensor or system that locks the door. NFPA 101, 7.2.1.6.2 (2)

Door locks shall unlock in the direction egress from a manual release device which is readily accessible and clearly identified by a sign that states, "Push to exit." NFPA 101, 7.2.1.6.2 (3)

The door must remain unlocked for not less than 30 seconds.

Activation of the sprinkler system or the fire alarm system unlocks the door, and the door remains unlocked until the sprinkler or fire alarm system is reset. NFPA 101, 7.2.1.6.2 (4-6)



FACILITY DOORS

Any door in the exit passageway, stairway enclosure, horizontal exit, smoke barrier, or hazardous area enclosure must have a self-closing device, and they cannot be secured in the open position at any time. They shall have a self-closing or automatic closing device. NFPA 101, 7.2.1.8.1

Self-closing or automatic closing doors can be held open with a device which is designed to release the door upon loss of power to the device or by activation of the sprinkler system or fire alarm system. These doors can be held open only by an automatic releasing device that is activated by the sprinkler system and the fire alarm system. NFPA 101, 18.2.2.2.7, 19.2.2.2.7, 7.2.1.8.2

Corridor doors shall be constructed to resist the passage of smoke. NFPA 101, 18.3.6.3.1, 19.3.6.3.1

Corridor doors cannot have transfer grilles or louvers. NFPA 101, 18.3.6.4.1, 19.3.6.4.1

The doors must have a means for keeping the door closed that is acceptable to the AHJ and is capable of keeping the door fully closed in a force of 5 lbf is applied to the latch edge of the door. NFPA 101, 18.3.6.3.7, 19.3.6.3.5

The clearance between the bottom of the corridor door and the floor covering shall not exceed 1 in. NFPA 101, 18.3.6.3.1, 19.3.6.3.1

Corridor doors utilizing an inactive leaf shall have automatic flush bolts on the inactive leaf to provide positive latching. NFPA 101, 18.3.6.3.8



FACILITY DOORS

Dutch doors are permitted with the following conditions: NFPA 101, 18.3.6.3.13, 19.3.6.3.13

- The upper leaf and the lower leaf are equipped with a latching device.
- The meeting edges of the upper and lower leaves are equipped with an astragal, rabbet, or bevel.
- Protecting hazardous areas, the doors must comply with NFPA 80 requirements.

Windows, that because of their physical configuration or design and the materials used in their construction, have the potential to be mistaken for door openings shall be made inaccessible to the occupants by barriers or railings. NFPA 101, 7.2.1.1.2

Furnishings, decorations, or other objects shall not obstruct visibility of or access to exits. NFPA 101, 7.1.10.2.1, 7.5.2.2

Mirrors shall not be placed on exit door leaves. Mirrors shall not be placed in or adjacent to any exit in such a manner as to confuse the direction of egress. NFPA 101, 7.1.10.2.3



Things To Know and Most Frequently Cited

All facility doors are required to be inspected annually. These inspections should be documented and available for review upon request by the AHJ.

There is a lot of information in the Code regarding facility doors, and it is covered in NFPA 101, 18.2, 19.2, and Chapter 7

Most frequently cited: Delayed egress door signage not contrasting; delayed egress door not releasing with FA; delayed egress door alarm not audible at door; delayed egress door signage not on contrasting background; delayed egress signage not on the door panel; delayed egress greater than 15 seconds without a variance; delayed egress door did not have any signage; delayed egress signage was not on the door panel/each door panel; egress door code not available for free egress without staff intervention; doors not opening to a full width of the door; doors with self-closing devices propped open with something that did not release the door with the fire alarm (wedge, trash can, chair, etc.); self-closing device was broken and did not function; the self-closing device had a manual locking device which did not release the door when the fire alarm was activated; magnetic door holding device did not release with fire alarm activation; self-closing door did not latch when actuated; corridor door did not latch when closed; corridor door required excessive force to close; corridor door did not resist the passage of smoke; corridor door could not close and latch due to an obstruction; double doors in the corridor in which one panel required manual latching; top panel of Dutch door did not have a latching device; Dutch door did not have an astragal or bevel between the upper and lower panels; missing door inspection paperwork for all door types; door inspection paperwork was missing information to include the location of the door/not itemized, the criteria, the three part date of inspection, the results of the inspection, the inspectors name.



EMERGENCY LIGHTS





EMERGENCY LIGHTING

Illumination of means of egress shall be provided for every building and structure. NFPA 101, 7.8.1.1

This includes designated stairs, aisles, corridors, ramps, escalators, and passageways leading to an exit.
This includes designated stairs, aisles, corridors, ramps, escalators, walkways, and exit passageways leading to a public way.

The illumination of the means of egress shall be continuous. NFPA 101, 7.8.1.2

The emergency lighting shall be arranged to provide illumination automatically without manual intervention and shall be provided for a minimum of 1 ½ hrs in the event of failure of normal lighting. NFPA 101, 8.9.2.1, 7.9.2.3, 7.9.2.7

The Code is specific on how much light must be provided. NFPA 101, 8.9.2.1

Emergency lighting should consist of no less than two bulbs at each device. NFPA 101, 7.8.1.4

If the emergency lights switch from one energy source to another, the delay shall not be more than 10 seconds. NFPA 101, 7.9.1.3



EMERGENCY LIGHTING

Automatic, motion sensor-type lighting switches shall be permitted within the means of egress, with conditions. NFPA 101, 7.8.1.2.2

Energy-saving sensors, switches, timers, or controllers shall be approved and shall not compromise the continuity of illumination of the means of egress. NFPA 101, 7.8.1.2.3

Battery operated emergency lights shall use reliable, rechargeable batteries, approved for the intended use, and in compliance with NFPA 70, National Electrical Code. NFPA 101, 7.9.2.6



Things To Know and Most Frequently Cited

Emergency lights connected to the emergency generator must be inspected weekly and tested annually for 1.5 hrs as part of the emergency generator program, and documentation of the inspection and test must be available for review upon request by the AHJ. NFPA 101, 7.9.2.4; NFPA 110, NFPA 111

Battery powered emergency lights must be tested for not less than 30 seconds monthly and 1.5 hrs annually. Documentation of the inspection and test must be available for review upon request by the AHJ. NFPA 101, 7.9.3.1

Most frequently cited: Emergency light inspection and testing documentation not available for review; Emergency light inspection and testing documentation missing information (location of device, not itemized, day/month/year of inspection, start/stop time of test); No 90 minute test for emergency lights connected to the emergency generator; Emergency lights not present for outside path of egress to the public way; egress lights did not have two bulbs; means of egress lights for outside areas not battery or generator backup.

EXIT SIGNAGE





EXIT SIGNAGE

Exits shall be marked by an approved sign that is readily visible from any direction. This does not apply to main exterior exit doors that are obviously and clearly identifiable as exits. NFPA 101, 7.10.1.2.1

The sign shall be in plainly legible letter and shall read: EXIT. NFPA 101, 7.10.3.1

The Code provides specific guidelines for the height, width, and spacing of the letters. NFPA 101, 7.10.6.1.1, 7.10.7.1

When the continuation of the path of egress is not obvious, directional exit signs are required. NFPA 101, 7.10.1.2.2, 7.10.1.5.1, 7.10.2.1

The Code provides specific guidelines for the placement and visibility of the directional indicator. NFPA 101, 7.10.6.2.1

Every sign shall be located and of such size, distinctive color, and design that it is readily visible and shall provide contrast with decorations, interior finish, or other signs. NFPA 101, 7.10.1.8

No decorations, furnishings, or equipment that impairs visibility of a sign shall be permitted.

No brightly illuminated sign, display, or object in or near the line of vision of the required exit sign that could detract attention from the exit sign shall be permitted.



EXIT SIGNAGE

The exit signs must be continuously illuminated, either externally or internally and legible in both the normal and the emergency lighting mode. NFPA 101 7.10.5.1, 7.10.5.2

The exit signs must be illuminated by the facility's emergency lighting, and the duration of the emergency lighting shall be for 1.5 hours in the event of failure of normal lighting. NFPA 101, 7.10.4, 7.9.2.1

Any door, passage, or stairway that is neither an exit nor a way of exit access and that is located or arranged so that it is likely to be mistaken for an exit shall be identified by a sign that reads as follows: NO EXIT. NFPA 101, 7.10.8.3.1

The Code provides specific guidelines about the height and width of the letters **and** the placement of the words. NFPA 101, 7.10.8.3.2



Things To Know and Most Frequently Cited

Exit signs shall be visually inspected for operation of the illumination sources at intervals not to exceed 30 days or shall be periodically monitored in accordance with the requirements for emergency lighting. NFPA 101, 7.10.9.1

Exit signs connected to, or provided with, a battery-operated emergency illumination source shall be tested and maintained in accordance with the requirements for emergency lighting. NFPA 101, 7.10.9.2

Most frequently cited: Exit signs not continuously internally or externally lit; exit signs not visible in all directions of the means of egress; exit signs not visible in the means of egress when the exit is not obvious.

SPRINKLER SYSTEM





SPRINKLER SYSTEM

A sprinkler must be installed in all areas of the building, except where specific sections of this standard permit the omission of sprinklers. NFPA 13, 4.1, 8.1(4)

Sprinklers must be installed in all locations and must be positioned and located to provide satisfactory performance with respect to activation time and distribution. NFPA 13, 8.1, A.8.1.1

This applies to all parts of the finished structure, to include closets.

This does not apply to portable furniture, even if it is secured to the finish structure.

Walk-freezers, refrigerators, bank vaults, and similar structures are required to have sprinkler heads installed.

Elevator hoistways and machine rooms are required to have a sidewall spray sprinkler installed no more than 2 ft above the pit floor, ideally on the door side. NFPA 13, 8.15.5, A.8.15.5.1

Exterior Roofs, Canopies, Porte-Cocheres, Balconies, Decks, or Similar Projections which measure greater than 2 ft wide (deep) and made of combustible construction shall have a sprinkler installed. NFPA 13, 8.15.7, 8.15.7.5

Standard pendent and upright spray sprinklers shall be installed a minimum of 4 in. from the wall. NFPA 13, 8.5.3.3 , 8.6.3.3



SPRINKLER SYSTEM

Hydraulic Design Information Sign shall be legible, constructed of weatherproof metal or rigid plastic, and securely attached to the sprinkler riser with durable wire, chain, or the equivalent. The Code is specific about the information which must be included on the sign. The HDIS shall be inspected quarterly. NFPA 13, 24.5, NFPA 25, 5.2.6

An Information sign shall be legible and securely attached to each system control valve, antifreeze loop, and auxiliary system control valve with durable wire, chain, or the equivalent. The IS shall be inspected annually. NFPA 25, 5.2.8

Sprinkler heads shall be in good condition and shall not show signs of leakage; shall be free of corrosion, foreign materials, paint, and physical damage. They shall have an escutcheon plate in place and shall be installed in the correct orientation (e.g., upright, pendent, or sidewall) NFPA 101, 8.3.5.1, NFPA 25, 5.2.1.1.1

Any sprinkler that shows signs of leakage, corrosion, physical damage, loss of fluid in the bulb, loading, or paint shall be replaced. NFPA 25, -5.2.1.1.2



SPRINKLER SYSTEM

Standard spray sprinklers shall have a minimum clearance of 18 inches. NFPA 25, 5.2.1.2, A.5.2.1.2, NFPA 13
Objects against walls are permitted to ignore the minimum spacing rules as long as the sprinkler is not directly above the object.
If obstructions that might cause a concern are present, the owner is advised to have an engineering evaluation performed.

If a quick response sprinkler is installed in a smoke compartment, then all sprinklers in that smoke compartment shall be quick response. NFPA 13, 8.3.3.2, 8.3.3.4

Backflow devices shall be installed on each supply line (domestic, fire, irrigation), if more than one, and shall be inspected monthly and tested annually. NFPA 13, 8.16.1.1.3, 8.17.4.6, NFPA 25, Table 13.1.1.2

Fire Department Connections shall be visible and recognizable from the street or nearest point of fire department apparatus accessibility. It shall have a permanently marked sign constructed of weather resistant metal or rigid plastic materials. The FDC shall have a 36 in clearance and shall be inspected quarterly. NFPA 14, 4.8, 6.3.8, 6.4; NFPA 25, 13.7.1; NFPA 1 13.1.3, 13.1.4



Things To Know and Most Frequently Cited

NFPA 25, Table 5.1.1.2 and Table 13.1 list inspection and testing frequencies for sprinkler systems.

Sprinkler system records shall be maintained by the property owner. NFPA 25, 4.3.3

All required documentation regarding the designs of the sprinkler system and the procedures for maintenance, inspection, and testing shall be maintained at an approved, secured location for the life of the fire protection system. NFPA 101, 9.7.7; NFPA 25 4.3.4

Most frequently cited: Broken or missing ceiling tiles; missing escutcheon plate; escutcheon plates not tight to the ceiling; gaps and spaces around sprinkler head escutcheon plates; sprinkler head installed within 4 inches of wall; egress door overhangs greater than 48 inches and combustibles present; missing or incomplete inspection records; no annual inspection and test of the backflow; backflow not installed between supply lines; no full trip every three years on dry sprinkler systems; no five year internal pipe, gauge calibration/replacement, or check valve test; no sprinkler head testing per Code requirements (50 wet, 20 QR, 10 dry); Hydraulic Design Information Sign not present on riser; FDC not visible from road/no signage; items within 36 inches of the FDC; quarterly FDC inspection documentation does not address the 8 point inspection; quick response sprinkler heads in same smoke compartment as standard sprinkler heads; 18 inch clearance under sprinkler heads not maintained; loaded, corroded, or painted sprinkler heads



FIRE ALARM SYSTEM



FIRE ALARM SYSTEM

Fire alarms must be initiated by manual means, the sprinkler system, and detection device or systems. 18.3.4.2.1, 19.3.4.2.1

A complete fire alarm system includes functions for initiation, notification, and control. NFPA 101, 9.6.1.7

Actuation of the fire alarm system shall be initiated by manual fire alarm initiation, automatic detection, or extinguishing system operation. NFPA 101, 9.6.2.1

Manual fire alarm box (pull station) must be red in color, mounted on a background of contrasting color, and securely attached to the wall between 42 in and 48 in above floor level. They must be located within 5 ft of exit doors, and on both sides of grouped openings over 40 ft wide. NFPA 101, 9.6.2.3, 9.6.2.4; NFPA 72, 17.14

Manual pull stations must be located on all floors and in any part of the building so that the horizontal distance of travel does not exceed 200 ft between them. NFPA 101, 9.6.2.5; NFPA 72, 17.14.8

Manual pull stations shall be conspicuous, accessible, and unobstructed. NFPA 101, 9.6.2.7; NFPA 72, 17.14.5



FIRE ALARM SYSTEM

Waterflow alarm devices shall initiate the fire alarm when the flow of water is equal to or greater than that from a single automatic sprinkler. NFPA 101 9.6.2.8, NFPA 72, 17.12

Audible notification appliances are required, and visual notification appliances are required in areas where there are hearing impaired occupants. NFPA 101 9.6.3, 18.3.4.3 through 18.3.4.3.3, 19.3.4.3, 19.3.4.3.1, 19.3.4.3.2, 9.6.4

The Code has specific guidelines for the audible and visible signals. NFPA 101 9.6.3.7; NFPA 72, 18.4, 18.5, 18.6

The audible alarm must be distinctive from audible signals used for other purposes. NFPA 101 9.6.3.8, NFPA 72, 10.7, 10.9

Visible notification appliances shall be mounted between 80 in and 96 in above the finished floor. NFPA 72 18.5.4

In areas where the ceiling will not allow 80-96 in installation height, the appliance must be mounted within 6 in of the ceiling. NFPA 72 18.5.4.2

The Code specifies how many notification appliances should be in a room. NFPA 72, 18.5.4.3.1



FIRE ALARM SYSTEM

A means for turning off an activated fire alarm must be available. The means to turn off the system can be key operated, located within a locked box, or arranged to provide similar protection from unauthorized use. NFPA 72, 10.10.1-3

When the fire alarm is activated, the following functions must occur: door hold-open devices release, stairwell or elevator shaft pressurization, smoke management or smoke control systems activate, doors unlock, elevator recall and shutdown, HVAC shutdown. NFPA 101, 9.6.5.2

Fire alarms connected by the generator shall be in compliance with NFPA 72 10.5.10, NFPA 110, NFPA 111

The Code is very specific about smoke detector installation. Smoke detectors must also be installed in spaces open to corridors and in areas that are not continuously occupied. NFPA 101, 18.3.4.5.3, 19.3.4.5.2; 9.6.1.8.1

Smoke detectors shall be located on the ceiling. If on a sidewall, then they shall be mounted 12 in down from the ceiling to the top of the detector. NFPA 72, 17.7.3.2.1, 17.7.3.2.3.1

Smoke detectors should not be located within 36 in of an air supply diffuser or return air opening. NFPA 72, 17.7.4.1



FIRE ALARM SYSTEM

The fire alarm system must notify the local fire department of the fire or other emergency. NFPA 101, 9.6.4

A system trouble signal and supervisory signal shall be annunciated at the control center by means of audible and visible indicators, and this must be in a location where the signal is likely to be heard. NFPA 101, 9.6.7.5, 9.6.7.6; NFPA 72, 10.12.5

The fire alarm must be powered by at least two independent and reliable power supplies, a primary and a secondary. 18.3.4.4, 19.3.4.4, 9.6.1, 9.6.5; NFPA 72, 10.5.3

The Code is very specific about the power supplies, how they are marked and their sources.
NFPA 72, 10.5.5, 10.5.6

Fire alarm batteries shall be marked with the month and year of manufacture. NFPA 72 10.5.9.1.1, 10.5.9.1.2



Things To Know and Most Frequently Cited

Table 14.3.1 Visual inspection requirements

Table 14.4.2.2 Testing Methods

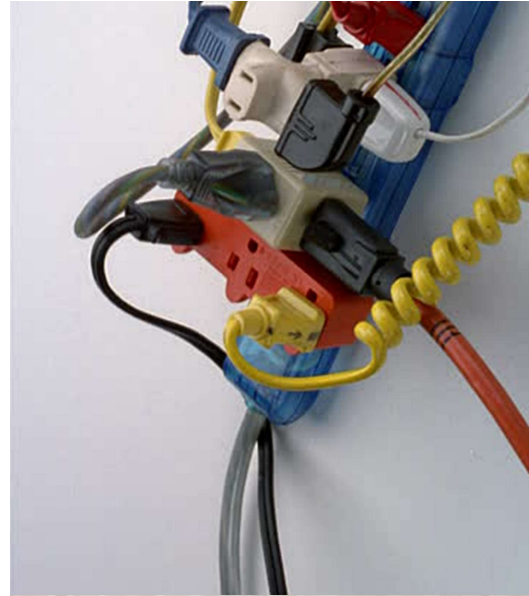
Table 14.4.5 Testing requirement

NFPA 72, 10.4.3 Inspection, Testing, and Maintenance Personnel Qualifications

NFPA 72, 14.6.2 inspection, testing, and maintenance documentation requirements (includes the name and signature of the inspector and the facility representative)

Most frequently cited: Certification of Fire Alarm (FA) inspectors; unlocked fire alarm control panels/annunciator panels; key in fire alarm control panels/ annunciator panels or key accessible; missing inspection and testing records; incomplete inspection and testing records, no semi-annual inspection, no signature of facility representative, wrong facility address, no documentation of visual/functional test of equipment, report not itemized/missing device location, no pass/fail; no smoke detector sensitivity test; frequency of report not stated on record; blocked pull station; pull station not visible; smoke detectors covered in a construction zone after hours; notification appliances not secured to the wall; trouble signal did not have an audible signal at annunciator panel

ELECTRICAL SYSTEM





ELECTRICAL SYSTEMS

Electrical equipment must be listed and in good condition. NFPA 70, Article 100, 110.3, 110.12, 410.1-6

Electrical panels must be locked or protected to prevent unauthorized access and have clear working space to permit safe operation and maintenance of the equipment. The working space must measure 3 ft from the front of the panel, and it shall be clear and extend from the grade, floor, or platform to 6.5 ft high or the height of the equipment, whichever is greater. NFPA 70, 110.26, 110.27

Exposed electrical wires must be protected, and junction boxes must have covers. NFPA 70, 314.25, 314.28, 406.5

All outlets must have a faceplate which is securely attached and covers the opening. NFPA 70, 406.5, 406.6

GFCI outlets must be installed if the outlet is within 6 ft of the outside edge of a sink or water source. NFPA 70, 210.8

Spliced cords are not allowed. NFPA 70, 400.9

A certified electrician must perform or certify repairs to electrical equipment and appliances. NFPA 70, 90.7, 110.3



ELECTRICAL SYSTEMS

Each resident room must have a minimum of 8 receptacles (4 outlets). NFPA 99, 6.3.2.2.6.2; NFPA 70, 517.18 (B)

Receptacles not listed as hospital grade, and located in resident rooms, must be tested annually. The testing must include an evaluation of the physical integrity, the continuity of the grounding circuit, correct polarity of the hot and neutral connections, and the retention force is 4 oz or greater.

- If an outlet fails inspection and must be replaced, then it must be replaced with a hospital grade outlet.
NFPA 99, 6.3.3.2, 6.3.4.1.3; NFPA 70, 517.18

Hospital grade receptacles located in resident rooms must be tested after initial installation, after replacement, and after servicing of the device. Additional testing of receptacles shall be performed at intervals defined by documented performance data. NFPA 99, 6.3.4.1.1, 6.3.4.1.1

The testing must be documented and maintained for review upon request by the AHJ. NFPA 99, 6.3.4.2.1



ELECTRICAL SYSTEMS

The generator stop button must be remote from the generator, labeled, and protected. NFPA 110, 5.6.5.6, A.5.6.5.6, 5.6.5.6.1

Generator equipment locations shall be provided with battery powered emergency lighting. NFPA 110, 7.3

A remote annunciator for the generator, that is storage battery powered, shall be provided outside the generating room, in a location readily observed at a regular workstation. It must have an audible alarm. NFPA 99, 6.4.1.1.17; NFPA 110, 5.6.6

The remote annunciator must be hard wired to indicate alarm conditions of the emergency generator or alternate power source. NFPA 99, 6.4.1.1.17

Electrical receptacles supplied from the life safety and critical branches shall have a distinctive color or marking so they are readily identifiable. NFPA 99, 6.4.2.2.6.2

The facility shall have two sets of instruction manuals for all major components of the EPSS. One at the generator and one in a separate location. NFPA 110, 8.2.1 (1-5); 8.2.2



ELECTRICAL SYSTEMS

Extension cords, surge protectors, and plug extenders cannot be used as a substitute for fixed wiring. NFPA 99, 10.2.4.1; NFPA 70, 400.8 (1), NFPA 1, 11.1.5.2, 11.1.7.6

Extension cords and surge protectors can be used for temporary power and lighting installations during the period of construction, remodeling, maintenance, repair, demolition, or similar activities. They can also be used for up to 90 days for holiday decorative lighting or similar. When extension cords and surge protectors are used, they shall be listed and suitable for the application. NFPA 99, 10.2.3.1.1; NFPA 70, 590.3, NFPA 1, 11.1.8.4

Extensions cords and surge protectors shall not run behind or through holes in the wall, ceiling, or floors. They shall not run through doorways, windows, or similar openings. They shall not be in a location subject to physical damage. NFPA 70, 400.8.

Extension cords and surge protectors shall be directly connected to an electrical receptacle (no daisy chains). NFPA 1, 11.1.6

Extension cords, surge protectors, and cords to electrical equipment should not be subject to strain or tension, and equipment and appliances shall have a strain relief provided where the cord attaches to the equipment/appliance. NFPA 99, 10.2.3.5; NFPA 70, 400.10

Patient care related electrical equipment shall be plugged directly into the wall or it can be plugged into a special purpose relocatable power tap attached to a rack, table, pedestal, or cart with conditions. NFPA 99, 10.2.3.6



Things To Know

The generator or other alternate power source and associated equipment must provide service to the facility's critical and life safety branches within 10 seconds. NFPA 99, 6.4.4.1.1; 6.5.4.1.1.1; NFPA 110, Table 4.1

Transfer switches must be inspected quarterly and have one major 4 point maintenance annually. NFPA 110, 3.3.9, 8.3.5, A.8.3.5

Generators must be inspected weekly, exercised under load 30 minutes monthly, be serviced annually, exercised under load 90 minutes annually (diesel), and exercised once every 36 months for 4 continuous hours. NFPA 110, 8.3, 8.4.1, 8.4.2, 8.4.2.3, 8.4.2.4, 8.4.9

- An annual fuel test is required for diesel generators.
- There is an exception for the annual 90 minute load bank for diesel powered generators.

Generator batteries must be inspected weekly, and lead acid batteries must be tested monthly. Defective batteries shall be replaced immediately. NFPA 110, 8.3.7.1-2

Main and feed circuit breakers must be inspected annually and periodically tested under simulated overload trip conditions. NFPA 99, 6.4.4.1.2.1

Written records of the inspections must be maintained and available for review upon request. NFPA 99, 6.4.4.2; NFPA 110, 8.3.4



Most Frequently Cited

General electrical: Junction boxes without covers; exposed wires without wire nuts/caps; outlets in non-resident care areas with cracked or missing faceplate; outlet faceplates not secured to wall; electrical panels not locked; items within 3 ft of the front of the electrical panels; spliced electrical cords; repaired power cords not completed or certified by a certified electrician; electrical devices not listed

Resident room receptacles: Missing or incomplete inspection and testing – location of device/not itemized, day/month/year of inspection, tension not numerically documented, inspector not documented; Receptacles which failed the inspection were not replaced with a hospital grade receptacle

Generator: Missing or incomplete inspection and testing records – no monthly load banks, no annual load banks, no 4hr/3yr load bank, no main and circuit breaker inspections, no transfer switch inspection; transfer switch inspection not per Code requirements, no diesel fuel test, missing weekly visual inspections; emergency shut off not remote from the housing unit; emergency shut off not protected or labeled; no emergency light at the generator; trouble signal at the annunciator panel without documentation of a facility investigation/follow-up

Extension cords, plug extenders, surge protectors: Appliances and medical equipment plugged into a surge protector; extension cords in use and not temporary; daisy chains; surge protectors hanging by cord of SP or of device; plug extender in use