The Hidden Compliance Gaps:
What Facility Managers Don’t Know About Their Fire Protection Systems

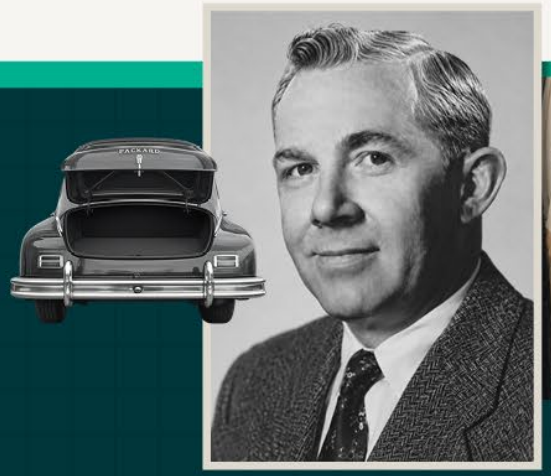
Steve Strader - Business Development: ITM&M

Rick Reynolds – Executive VP

Early Detection. Precise Response. Complete Protection.

1948

Founded by Clark Orr Sr., ORR Corporation began as **ORR Safety**, an industrial safety supplier that steadily grew into a national provider.





1971

ORR Protection was established in 1971 and expanded throughout the Midwest and beyond, earning a reputation for technical expertise and customer service.

1991

In 1991, ORR broadened its capabilities with the launch of the environmentally focused **InspectionLogic** gas detection company and accelerated the growth of **ORR Protection** through strategic acquisitions and geographic expansion.







Today

With more than 75 years of experience, **ORR Protection** delivers integrated fire protection and life safety solutions through a strategic network of locations and highly trained associates.

ORR | Sales & Operations Territory Map



ORR Protection Headquarters
Louisville, KY

WEST REGION
Bryan Wilburn, Regional Vice President

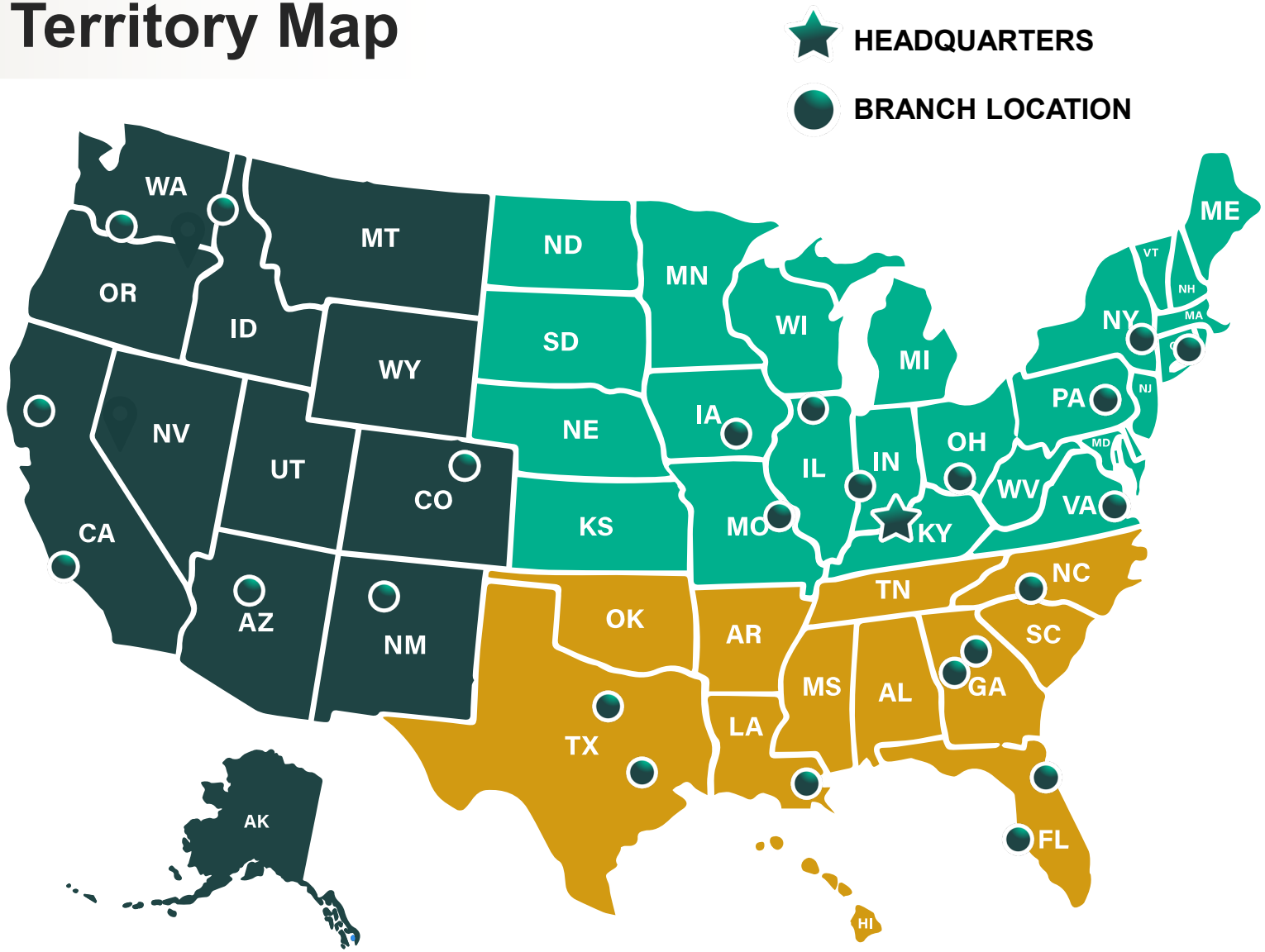
- CO - Denver
- CA - Northern California
- WA - Pacific Northwest
- AZ - Phoenix
- CA - Southern California

SOUTH REGION
Steve Nelson, Regional Vice President

- GA – Canton
- GA – Lithia Springs
- TX - Houston
- FL - Orlando
- FL - Tampa

NORTH REGION
Mike Crovo, Regional Vice President

- IL - Chicago
- OH - Cincinnati
- IN - Indianapolis
- KY - Louisville (HQ)
- VA – Northern Virginia



ORR PROTECTION

Updated August 2026



WHY NFPA CODES AND STANDARDS MATTER

Protecting People, Property, and Communities Through Trusted Knowledge
NFPA develops roughly 300 codes and standards that serve as the foundation for fire, electrical, and life safety across the globe. These documents are not arbitrary; they are the product of a rigorous, transparent, and consensus-driven process grounded in real-world expertise.

Typical Data Center

Category	NFPA Standards
Data Center Specific	**NFPA 75, & NFPA 76**
Fire Alarm & Detection	**NFPA 72**
Fire Extinguisher	**NFPA 10**
Suppression	**NFPA 13, 2001, 12, 750**
Electrical	**NFPA 70, 70B, 70E**
Life Safety	**NFPA 101, NFPA 1**
Energy Storage	**NFPA 855. NFPA 800**
ITM & Commissioning	**NFPA 25, NFPA 10, NFPA 72, NFPA 3, NFPA 4**

BA
- Off
- ASI
- Pre
- Cle
sys

- Off gas detection
- Clean agent suppression system
- Pre-action sprinkler

An Inspection Report Is Not a Compliance Program

A completed inspection documents what was evaluated. It does not establish that every deficiency has been resolved.

Inspection completed

Know the scope, date, limitations, and actual test results.

Deficiencies identified

Separate deficiencies, impairments, recommendations, and items not tested.

Corrective action verified

Assign an owner, track completion, perform required retesting, and retain evidence.

HIDDEN COMPLIANCE GAPS / REAL-WORLD CASE

MEDLINE WAREHOUSE: TRACY, CALIFORNIA

Inspection signed off. Fire protection did not perform as expected.

Fire officials reported sprinkler and private hydrant performance problems during the warehouse fire. KCRA also reported unresolved questions about findings from a May facility inspection.



RELEVANT STANDARDS / DISCUSSION

NFPA 25 • applicable fire code

ASK YOUR FACILITY TEAM: Can your team verify water supply, fire pump status, storage conditions and closure of deficiencies—not just inspection completion?

READ THE SOURCE ↗ KCRA | June 12, 2026

HIDDEN COMPLIANCE GAPS / REAL-WORLD CASE

BIOLAB | CONYERS, GEORGIA

A protection system became part of the hazard.

SEPTEMBER 2024 FIRE | JULY 2026 FINAL INVESTIGATION

The U.S. Chemical Safety Board linked a sprinkler component failure and water contact with stored chemicals to the fire. Its findings highlighted corrosion and hazardous material storage practices.



RELEVANT STANDARDS / DISCUSSION
NFPA 13 • NFPA 25 • NFPA 400

ASK YOUR FACILITY TEAM: Could the chemicals, storage configuration or environment in your facility undermine the protection system itself?

READ THE SOURCE ↗ U.S. Chemical Safety Board | Final report, July 21, 2026

ORR PROTECTION

HIDDEN COMPLIANCE GAPS / REAL-WORLD CASE

RALEIGH CONVENTION CENTER | NORTH CAROLINA

A failed inspection is not proof that the later fire resulted from those deficiencies.

DECEMBER 2025

WRAL reported earlier alarm and sprinkler inspection failures. City officials said the items were corrected and that sprinklers operated during the subsequent fire.

RELEVANT STANDARDS / DISCUSSION

NFPA 72 • NFPA 25 • corrective action records

ASK YOUR FACILITY TEAM: Can you produce the evidence that a previously identified deficiency was actually corrected and verified?

READ THE SOURCE ↗ WRAL | December 2, 2025



HIDDEN COMPLIANCE GAPS / REAL-WORLD CASE

ST. CHRISTOPHER'S HOSPITAL | PHILADELPHIA

A sprinkler malfunction disrupted critical operations.

MAY 2026

A sprinkler malfunction caused flooding and temporarily closed 11 operating rooms. Some trauma cases were diverted while restoration work proceeded.

RELEVANT STANDARDS / DISCUSSION

NFPA 25 • facility contingency planning

ASK YOUR FACILITY TEAM: Does your response plan address damage or disruption caused by fire protection equipment, as well as actual fire events?



READ THE SOURCE ↗ The Philadelphia Inquirer | May 6, 2026

Four Incidents. Four Management Questions.

Use these cases to evaluate management controls, not to presume that any single deficiency caused an incident.

Medline / Tracy

Were inspection findings, water supply conditions, and system performance independently verified?

BioLab / Conyers

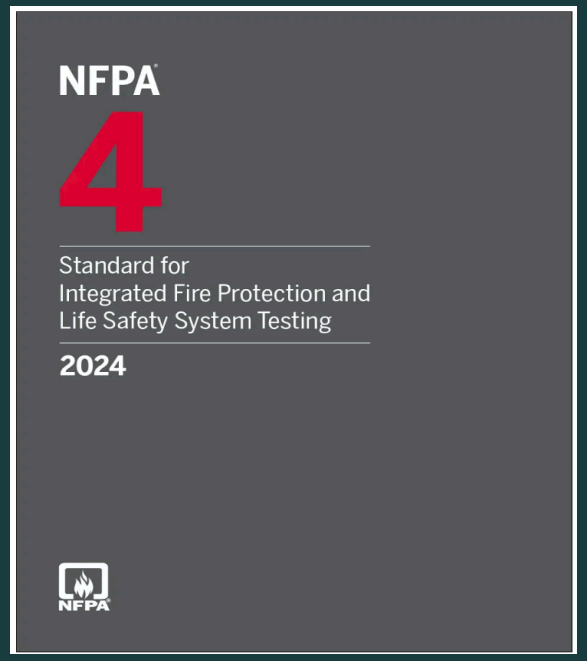
Were protection-system condition and hazardous material compatibility evaluated?

Raleigh Convention Center

Can management demonstrate that identified deficiencies were corrected?

St. Christopher's Hospital

Is there a plan for protection-system failures that interrupt critical operations?



Help Ensure Your Safety Systems Interact, Operate, and Coordinate Together.

It's critical that a building's fire protection and life safety systems are tested for operation and interoperability so that in the event of an emergency, they perform as intended. General requirements, including fundamental principles, integrated system testing team responsibilities and qualifications, and the test plan

- Test methods, including sample issues logs and corrective action reports
- Test frequencies, including separate provisions for an initial integrated systems test, periodic integrated systems testing, and existing system modifications
- Documentation criteria, including the minimum required test documentation, completion documents, record retention and maintenance, and several sample forms that can be used to record integrated testing of fire protection and life safety systems
- Explanatory material and a sample integrated test plan

NFPA 4, Standard for Integrated Fire Protection and Life Safety System Testing

NFPA 4 | Document the System Interactions

A device test is not the same as proving that interconnected life safety systems respond together.

Test plan and sequence

Identify integrated functions, expected outcomes, participants, and test methods.

Results and issues log

Document what was tested, deviations, failures, and assigned corrective actions.

Retest and completion

Record resolution, applicable retesting, final results, and record retention.



Proposed New Classification: Class L / Class T (2026 cycle)

- Class L - Lithium
- Class T – Thermochemical

A proposal for a lithium / battery-based fire class was considered however was rejected in the “first draft.” It remains under watch for possible inclusion in future cycles.

Requirements for Lithium-Ion battery areas—classification of extinguisher types (Class C & D suitability).

Inspection, Maintenance & Recharge



- **7.1.1 Responsibility.**
  - The owner or designated agent or occupant of a property in which fire extinguishers are located shall be responsible for inspection, maintenance, and recharging. *(See **7.1.2**.)*

- **7.1.2.1*** Persons performing maintenance and recharging of extinguishers shall be certified.

- **7.1.3* Replacement Fire Extinguishers.**
  - Fire extinguishers removed from service shall be immediately replaced with extinguishers that are suitable for the type of hazard(s) being protected and shall be of at least equal rating. (IE: like for like)

- **7.1.3.1*** When the removal and replacement of fire extinguishers from installed locations is necessary or desired, the owner or owner's agent shall be notified.

Inspection, Maintenance & Recharge



- **7.2.2 Inspection Procedures.**
  - Periodic inspection or electronic monitoring of fire extinguishers shall include a check of at least the following items:
  - Location in designated place
  - Visibility of the extinguisher or means of indicating the extinguisher location
  - Access to the extinguisher
  - Pressure gauge reading or indicator in the operable range or position
  - Fullness determined by weighing or hefting for self-expelling-type extinguishers, cartridge-operated extinguishers, and pump tanks
  - Condition of tires, wheels, carriage, hose, and nozzle for wheeled extinguishers
  - Indicator for non-rechargeable extinguishers using push-to-test pressure indicators

NFPA 10, Standard for Portable Fire Extinguishers

NFPA 10 | Beyond the Extinguisher Tag

The record should support suitability, availability, inspection, maintenance, and corrective action.

Inventory and placement

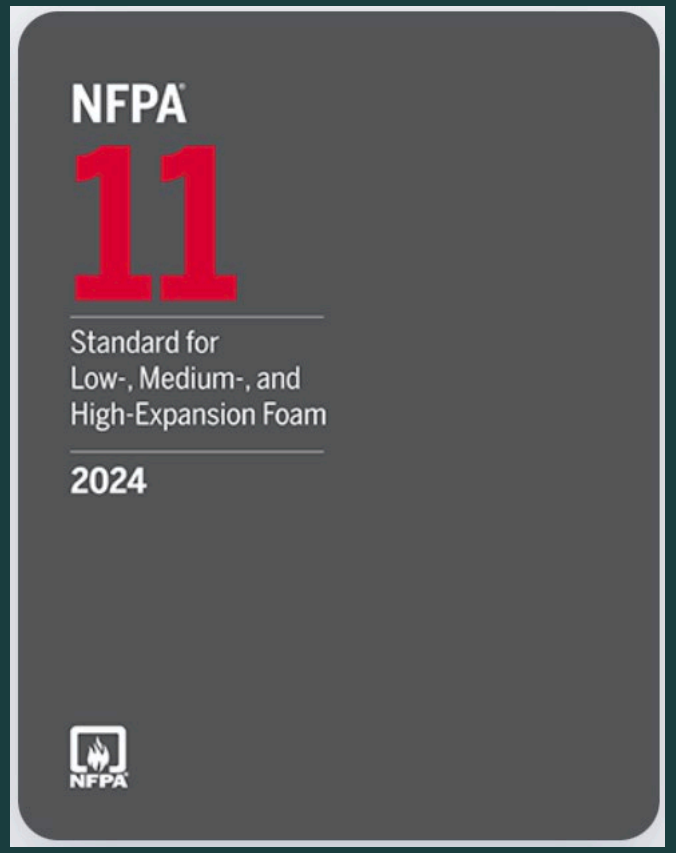
Verify extinguisher type, hazard suitability, location, visibility, and access.

Inspection and service history

Retain applicable inspection, maintenance, recharge, examination, and test evidence.

Out-of-service control

Document removal, suitable replacement, service, and return to use.



Inspection, Testing, and Maintenance

13.1 General

- A foam system shall be inspected, tested, and maintained by the property owner or their authorized representative in accordance with NFPA 25 to ensure the system continues to provide a reasonable degree of protection for life and property from fire.

NFPA 11 Standard for Low-, Medium-, and High-Expansion Foam

Global Partners

GREENSCREEN FOR SAFER CHEMICALS

Global brands & Local business

Industry group participation

PERF

NFPA

FFFC Fire Fighting Foam Coalition

RED ALERT® emergency response



Performance standards

UL

Engineered products, services & solutions

FEDERAL AVIATION ADMINISTRATION

Environmental stewardship

NAVSEA NAVAL SEA SYSTEMS COMMAND

Worldwide production facilities

LASTFIRE Large Atmospheric Storage Tank Fires

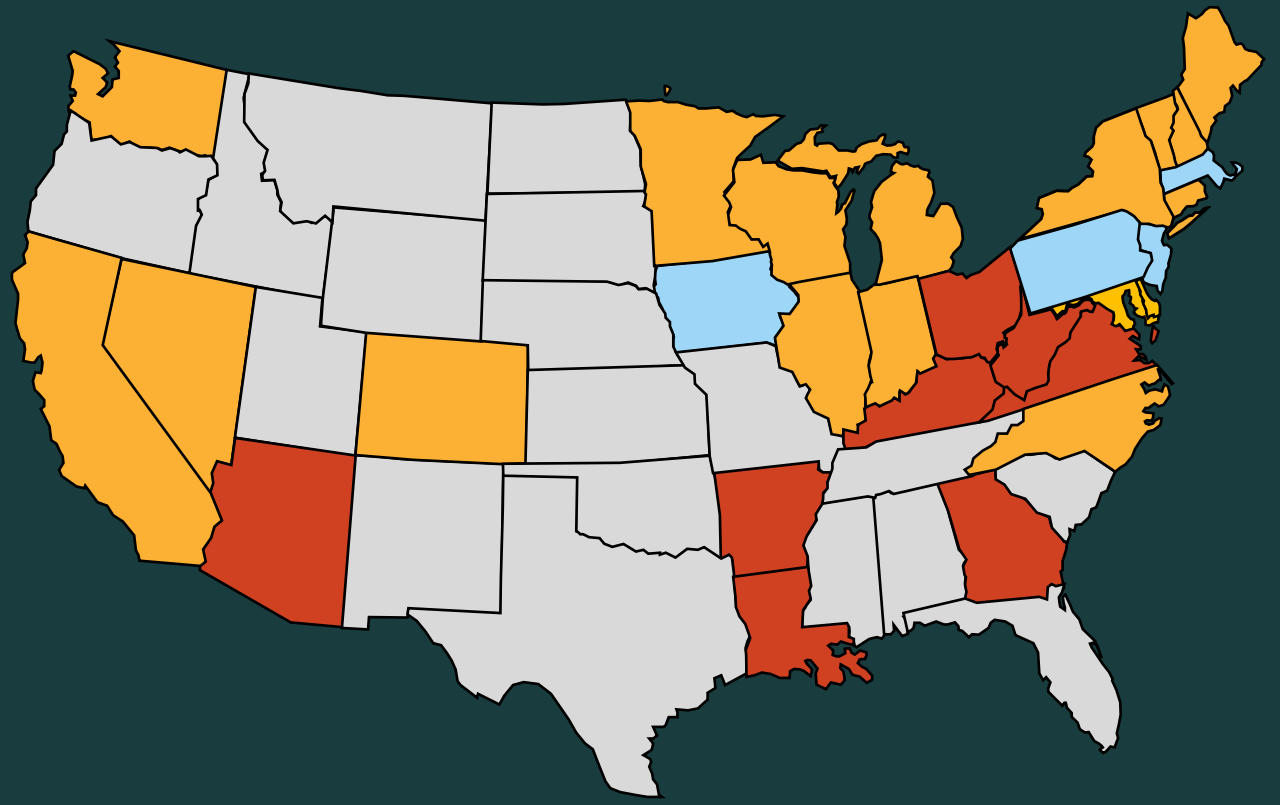
US Government research grants

R&D facilities across multiple time-zones

SERDP DOD • EPA • DOE

Proposed PFAS Firefighting Foam Regulations by State

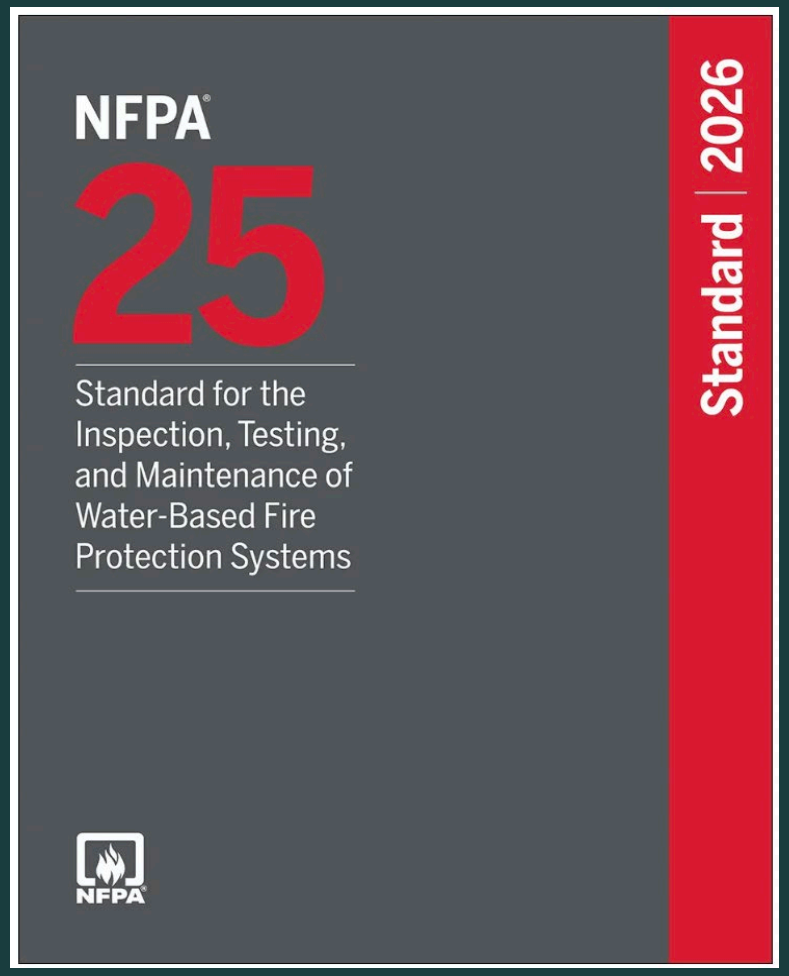






AFFF Regulations:

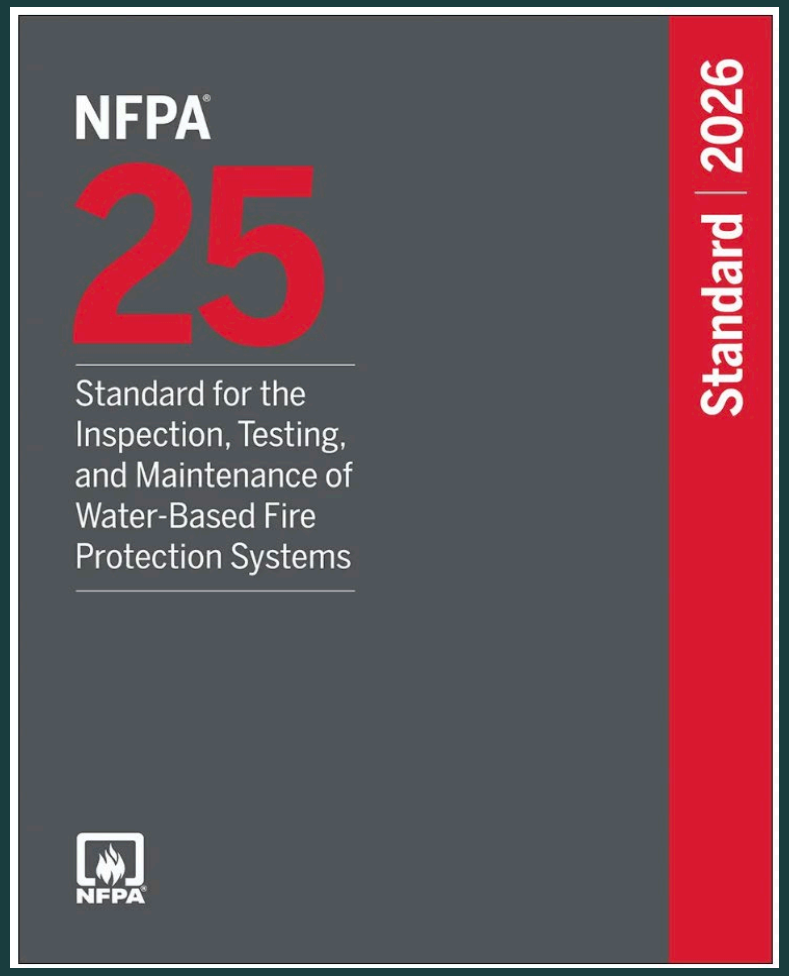
- **Use or Discharge Requirements, Such as Training or Testing Requirements.**
- **Notification or Reporting Process**
- **Proposed**
- **Multiple Categories**
- **No Regulations as of Feb - 2024**



The 2026 edition features several important updates. These include:

- New requirement for sprinklers that have been installed in dwelling units for over 50 years to be replaced with new fast-response sprinklers or meet a thermal sensitivity test
- Modifications to permissible antifreeze mixtures
- New ITM requirements in Chapter 13
- New guidelines on when sprinklers that have been exposed to a fire should be replaced

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

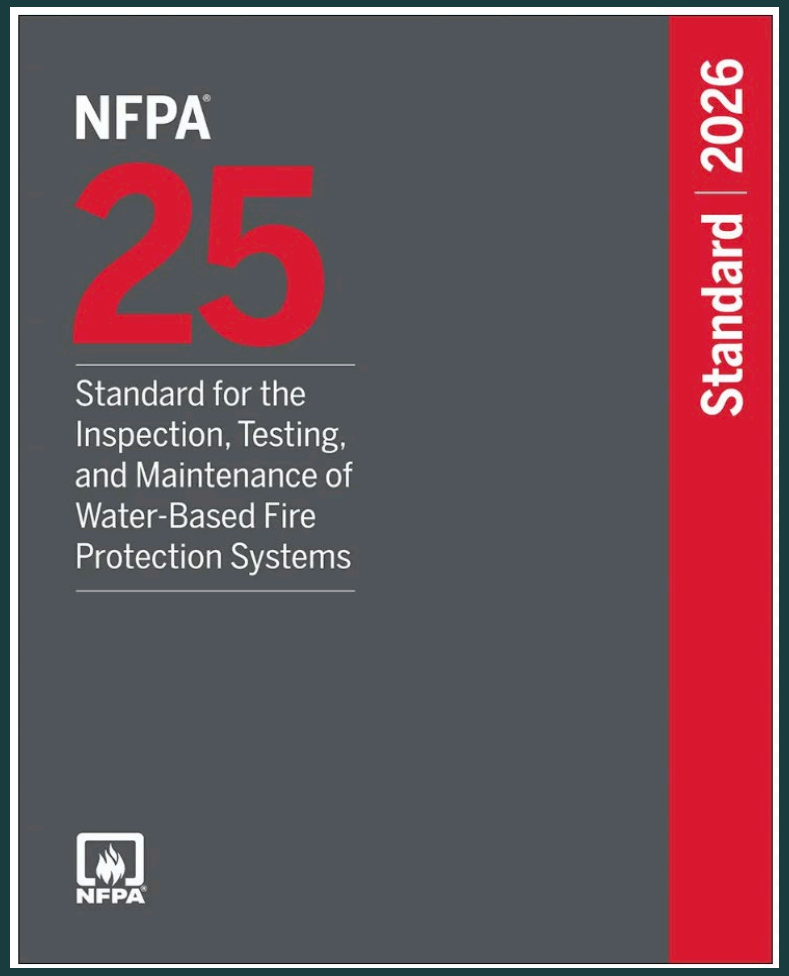


- **<u>5.2*</u> Inspection (Sprinkler)**

- **Table 5.1.1.2 Summary of Sprinkler System Inspection, Testing, and Maintenance**

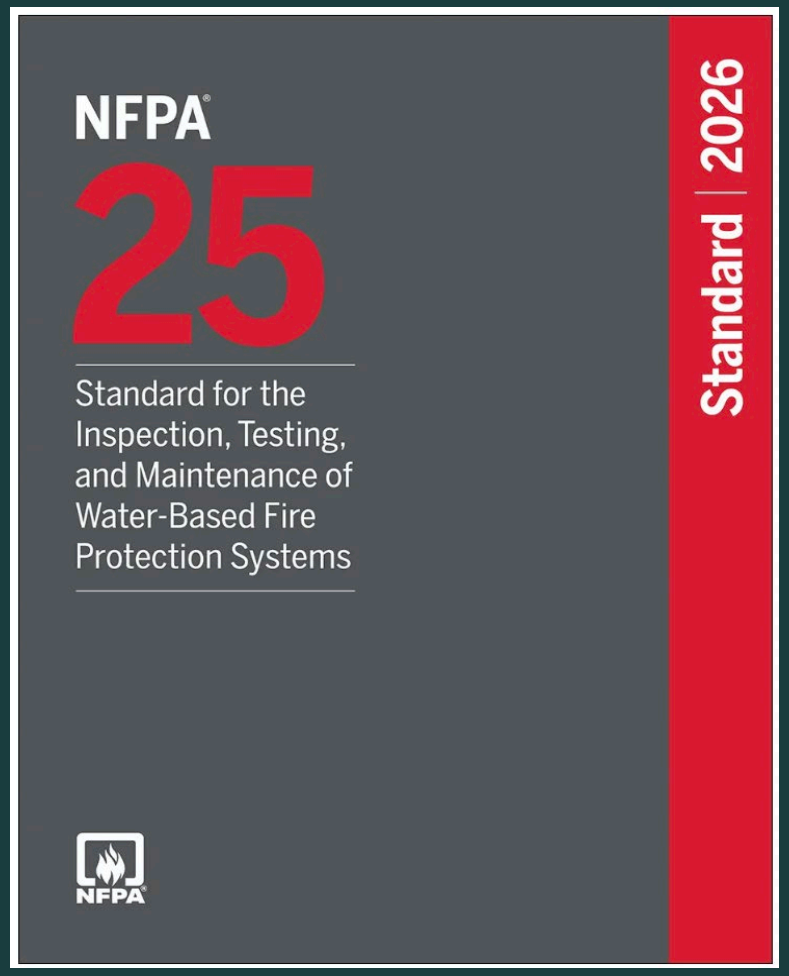
- **<u>5.2.1.1*</u>**
  - Sprinklers shall be inspected from the floor level annually.
- **<u>5.2.1.1.1*</u>**
- Any sprinkler that shows signs of any of the following shall be replaced:
  - Leakage
  - Corrosion detrimental to sprinkler performance
  - Physical damage
  - Loss of fluid in the glass bulb heat-responsive element
  - Loading detrimental to sprinkler performance
  - Paint, other than that applied by the sprinkler manufacturer, detrimental to sprinkler performance

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems



- Inspection Tables
  - Table 5.1.1.2 Summary of Sprinkler System Inspection
  - Table 6.1.1.2 Summary of Standpipe and Hose Systems Inspection, Testing, and Maintenance
  - Table 7.1.1.2 Summary of Private Fire Service Main Inspection, Testing, and Maintenance
  - Table 8.1.1.2 Summary of Fire Pump Inspection, Testing, and Maintenance
  - Table 9.1.1.2 Summary of Water Storage Tank Inspection, Testing, and Maintenance

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems



- Inspection Tables
  - Table 10.1.1.2 Summary of Water Spray Fixed System Inspection, Testing, and Maintenance
  - Table 11.1.1.2 Summary of Low-, Medium-, and High-Expansion Foam and Foam-Water Sprinkler System Inspection, Testing, and Maintenance
  - Table 12.1.1.2 Summary of Water Mist System Inspection, Testing, and Maintenance
  - Table 13.1.1.2 Summary of Valves, Valve Components, and Trim Inspection, Testing, and Maintenance

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

NFPA 25 | Follow the Deficiency to Closure

A sprinkler report is useful only when its findings lead to documented decisions and action.

Know the system inventory

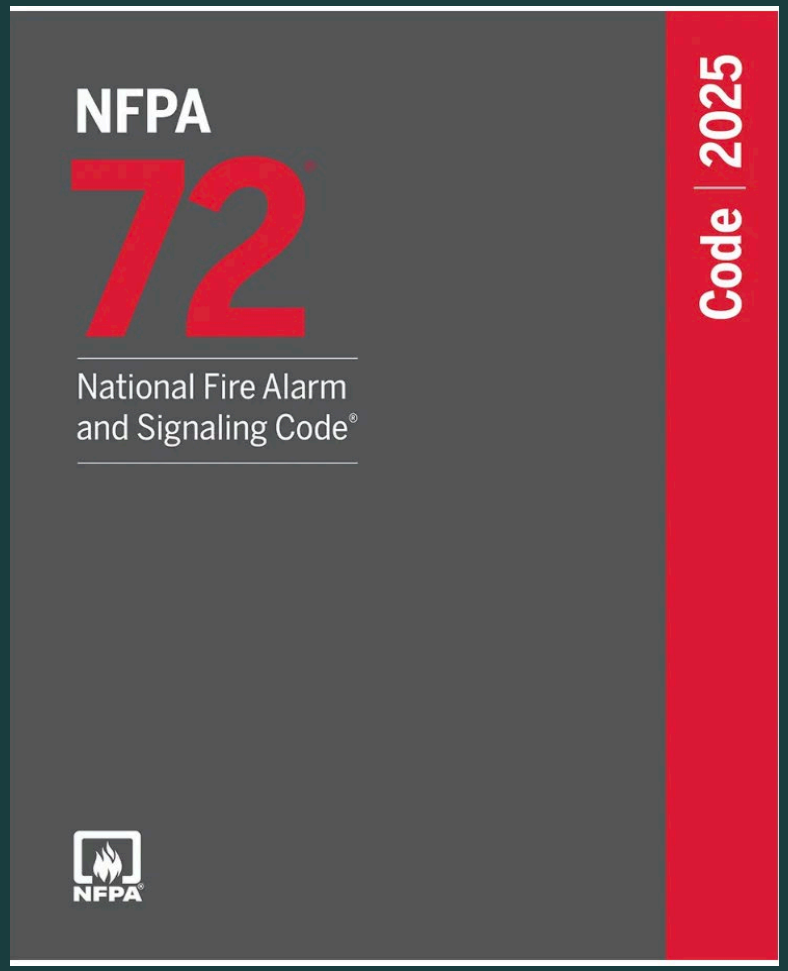
Track valves, sprinklers, fire pumps, water supplies, and required ITM activities.

Distinguish findings

Document deficiencies, impairments, notifications, and required interim measures.

Close the loop

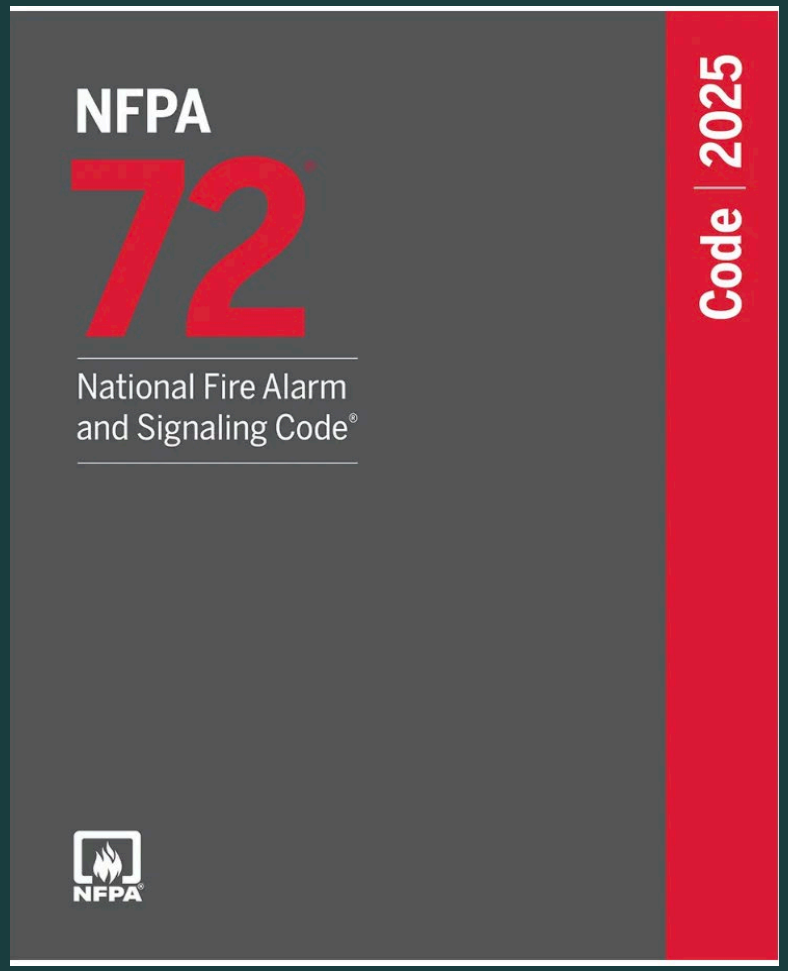
Record repairs, responsible parties, restoration, and verification or retesting as applicable.



NFPA 72, National Fire Alarm and Signaling Code

The 2025 edition features several revisions and additions to the standard, including:

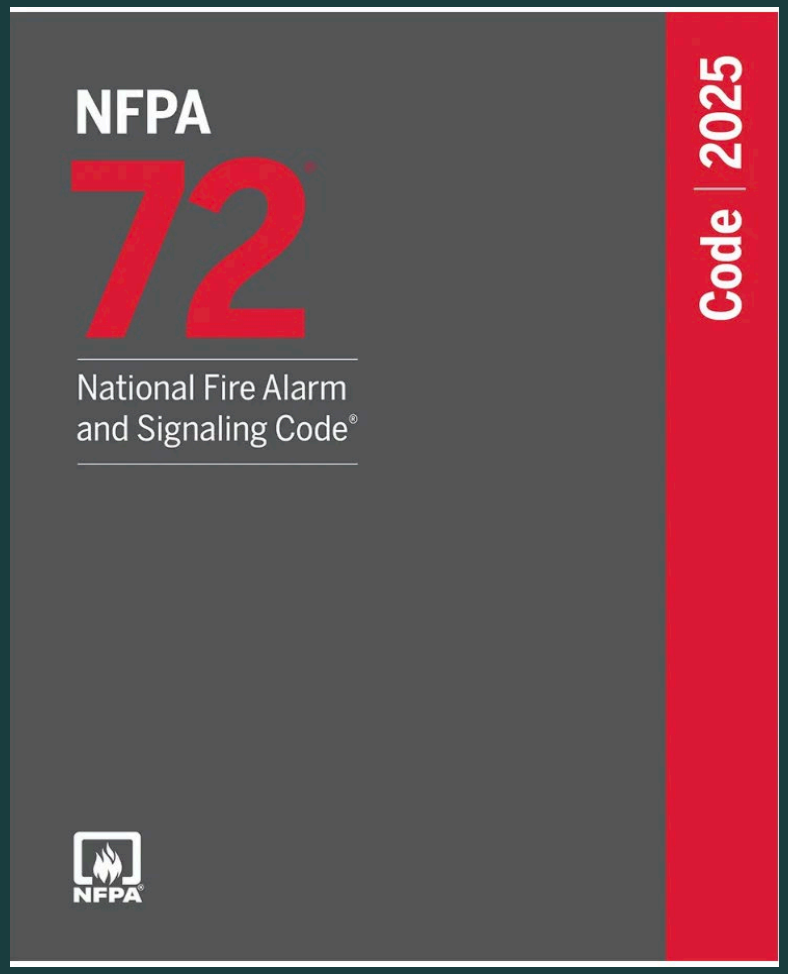
- Expanded requirements in Chapter 11 for the protection of fire alarm and signaling systems from cyber attacks
- New requirements for acoustic leak detectors and thermal image fire detectors in Chapter 17
- Clarification on the spacing of smoke detectors to be unchanged on ceilings up to 40 ft (12.2 m) in height, after which performance-based design spacing must be used
- Addition of a new notification mode, permitting a restricted mode audible operation (RAMO) notification zone to apply private mode audible levels
- Detailed instructions for the calculations of voltage drop in notification appliance circuits to standardize the calculation procedure in Chapters 18 and 24
- Revisions in Chapter 29 to direct the user to NFPA 715, *Standard for the Installation of Fuel Gases Detection and Warning Equipment,* for fuel gas detection



- **14.2.3 Responsibilities.**
  - **14.2.3.1***
    - The property or building or system owner or the owner's designated representative shall be responsible for inspection, testing, and maintenance of the system and for alterations or additions to this system.
  - **14.2.3.2**
    - Where the property owner is not the occupant, the property owner shall be permitted to delegate the authority and responsibility for inspecting, testing, and maintaining the fire protection systems to the occupant, management firm, or managing individual through specific provisions in the lease, written use agreement, or management contract.

NFPA 72, National Fire Alarm and Signaling Code

Records

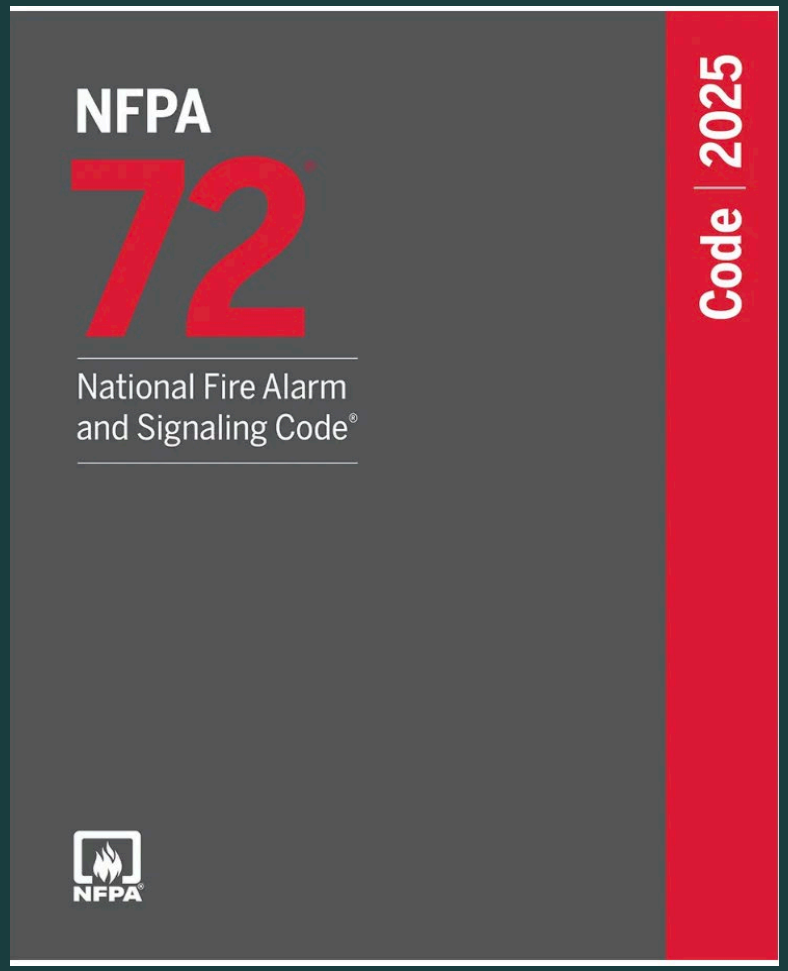


NFPA 72, National Fire Alarm and Signaling Code

- **14.6.1* Permanent Records**
  - **14.6.1.1*** A set of reproducible as-built installation drawings, operation and maintenance manuals, and a written sequence of operation shall be provided to the building owner or the owner's designated representative.

- **14.6.2 Maintenance, Inspection, and Testing Records.**
  - **14.6.2.1** The system owner shall be responsible for retaining maintenance, inspection, and testing records until the next test and for 1 year thereafter.

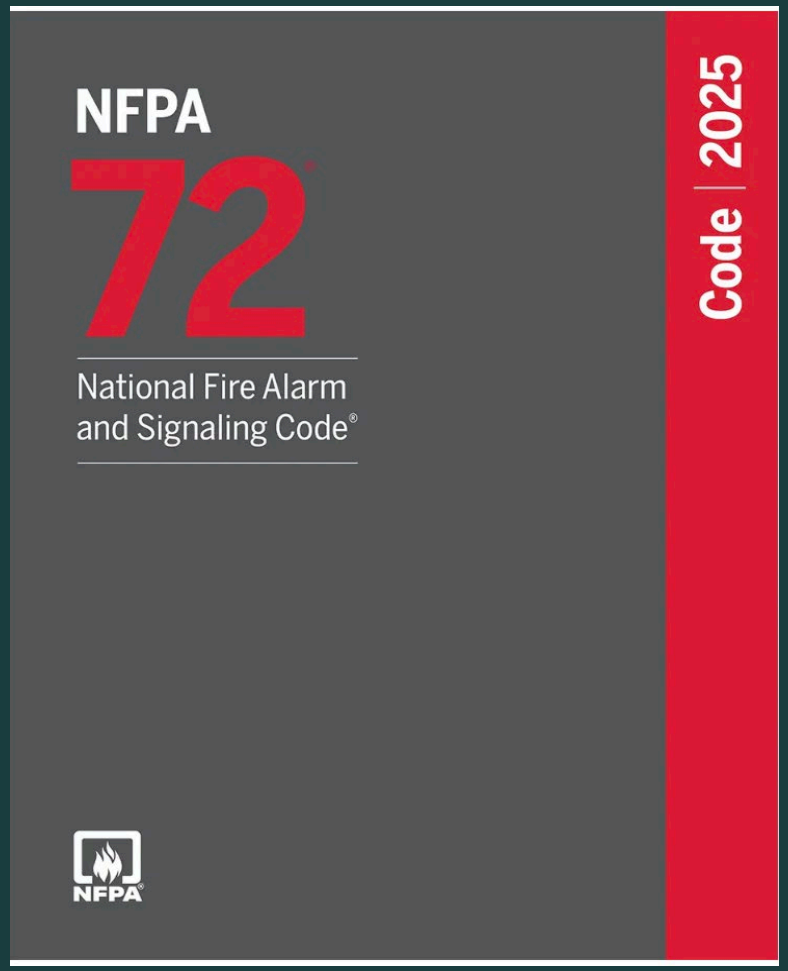
- **14.6.3 Supervising Station Records.**
  - For supervising station alarm systems, records pertaining to signals received at the supervising station that result from maintenance, inspection, and testing shall be maintained for not less than 12 months.



Tables in Chapter 14 — Inspection, Testing, and Maintenance

- Table 14.3.1 Visual Inspection
- Table 14.4.3.2 Testing

NFPA 72, National Fire Alarm and Signaling Code



- **14.4.2* Reacceptance Testing.**
- **14.4.2.5**
  - Changes to the system executive software shall require a 10 percent functional test of the system, including a test of at least one device on each input and output circuit to verify critical system functions such as notification appliances, control functions, and off-premises reporting.
- **14.4.2.6**
  - Where changes are made to system executive software or site-specific software for control equipment or transmitting equipment from a remote location not on the protected premises, such changes shall not be made without an individual, meeting the qualifications of **10.5.3.2**, **10.5.3.3**, or **10.5.3.5**, being at the protected premises to verify that testing is accomplished in accordance with **14.4.2**.

NFPA 72, National Fire Alarm and Signaling Code

NFPA 72 | Make the Records Actionable

Inspection and testing records should be connected to the actual system configuration and changes.

Baseline documentation

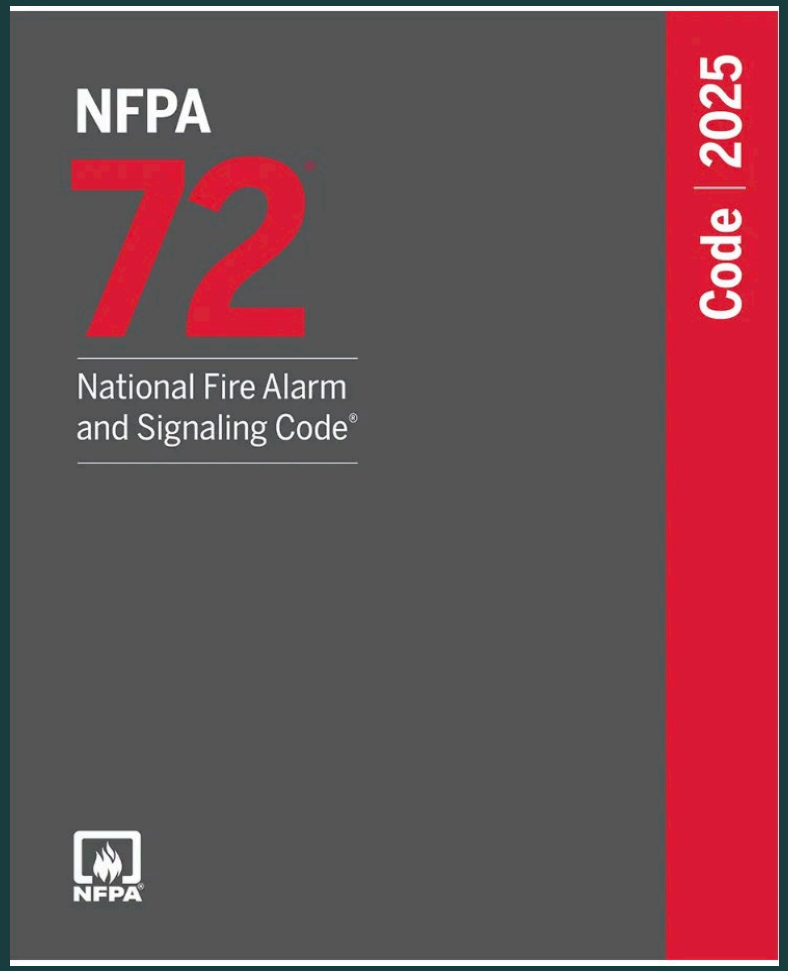
Maintain applicable drawings, records of completion, device information, and system descriptions.

ITM and changes

Track test results, trouble and supervisory conditions, disabled points, and reacceptance testing.

Monitoring and response

Verify who receives signals, who acts, how conditions are escalated, and how restoration is recorded.



NFPA 72, National Fire Alarm and Signaling Code

Emergency Communications System - BDA

- BDA, or Bi-Directional Amplifier system, is a code-required life-safety system that keeps radio communication working for first responders inside a building.
  It captures outside emergency radio signal, boosts it, and distributes it through antennas inside Emergency Responders can talk to each other and dispatch.

- **NFPA 72 and NFPA 1225** require these systems to be supervised just like a fire alarm — if power is lost, or an antenna fails, it must report a trouble at the fire panel.

Code	Section	Focus
NFPA 72 (2022)	24.11	Monitoring & Annunciation
NFPA 1225 (2022)	Ch. 18	Design, Installation, Testing
IFC 510 (2021)	510	AHJ Requirement & Performance Testing



The 2024 edition includes:

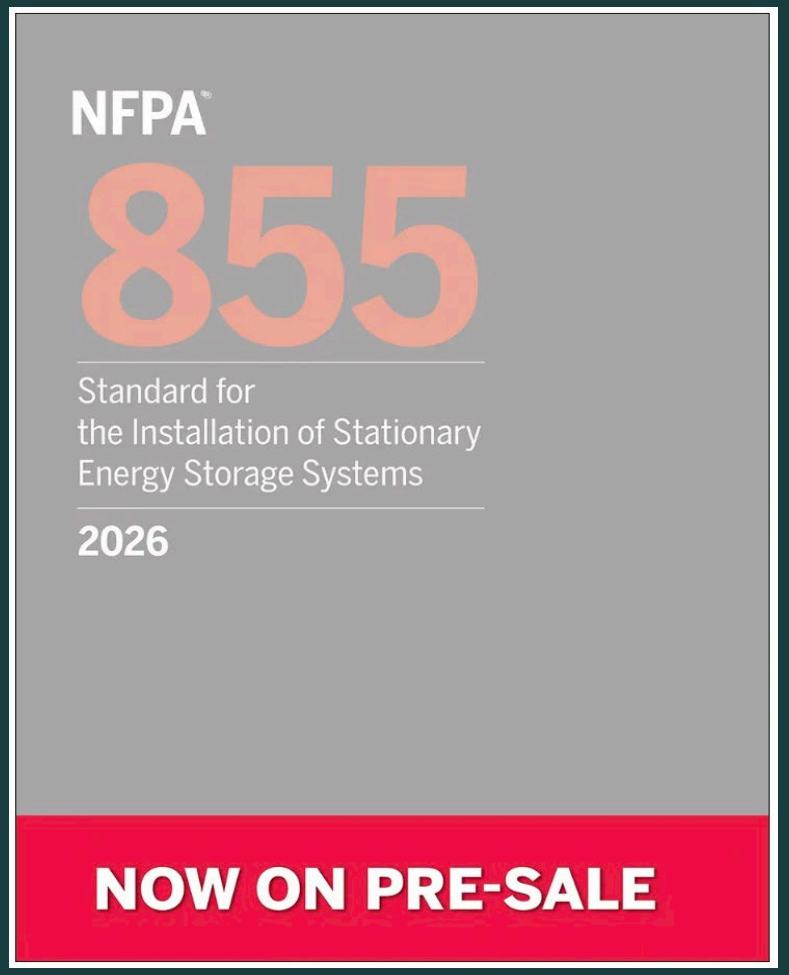
- Added requirements for ITE immersion cooling equipment
- Removal of all lithium-ion battery requirements in favor of coverage in NFPA 855, *Standard for the Installation of Stationary Energy Storage Systems*
- Added requirements for off-gas detection systems
- New Annex F based on optional tests included in NFPA 76, *Standard for the Fire Protection of Telecommunications Facilities*

NFPA 75, Standard for the Fire Protection of Information Technology Equipment



Inspection, Test, Maintenance

- Based on the system type or solution offered

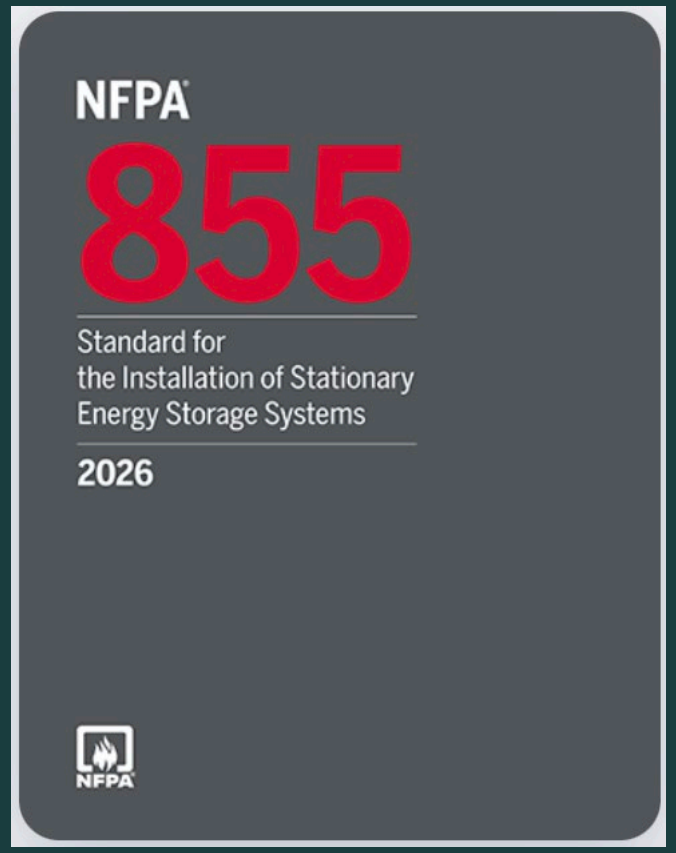


The 2026 edition has been significantly revised, featuring several updates:

•General requirements applicable to all ESS have been consolidated into Chapter 4, while requirements for individual ESS technologies are contained in specific chapters.

- Additional battery types have been added.
- Various battery exclusions have been refined for all types of lead-acid, aqueous nickel-based, and aqueous metal-air batteries.
- New requirements have been added for an emergency response plan, EV charging systems that have energy storage, Chapter 16 for flow batteries, and Chapter 17 for ESSs on barges.
- Annex Section G.8 regarding NFPA 69 evaluations of lithium-ion ESSs has been revised to provide engineering design and risk mitigation considerations to aid in evaluating the consequences of an explosion event.

NFPA 855, Standard for the Installation of Stationary Energy Storage Systems



1.3* Application.

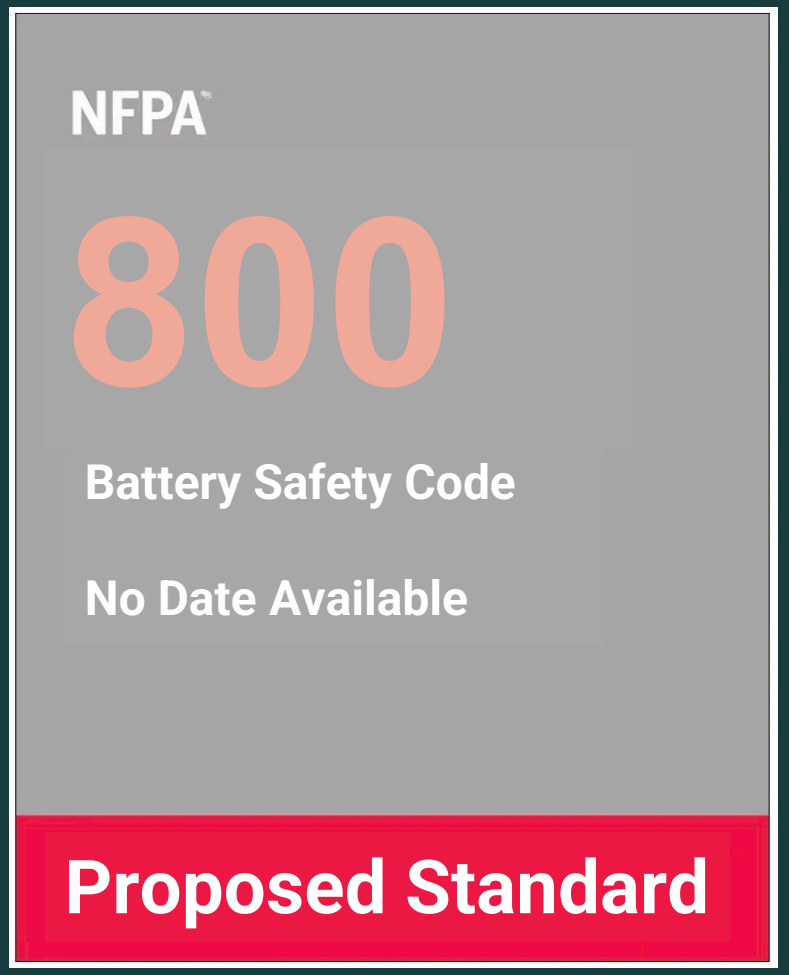
This standard shall apply to ESS installations exceeding the values shown in Table 1.3 and the storage of lithium metal or lithium-ion batteries.

- Table 1.3 Threshold Levels per Each Fire Area or Outdoor Installation

ESS Type	kWh	MJ
Lead-acid, all types	70	252
Lithium-ion, all types	20	72

1.4.2*

In those cases where the authority having jurisdiction (AHJ) determines that an existing situation presents an unacceptable degree of risk, the AHJ shall be permitted to apply retroactively any portions of this standard deemed appropriate.



NFPA 800, Standard Battery Safety Code

NFPA 800
Battery Safety Code
NFPA 800 is in the early developmental stages prior to beginning full public review and initial revision cycle.

Purpose:
NFPA 800 is being developed as a new **Battery Safety Code** by the National Fire Protection Association (NFPA).
Its goal is to provide a unified, comprehensive standard addressing fire, explosion, electrical, and chemical hazards across the entire battery lifecycle from manufacturing through end-of-life.
This code is designed to complement and close the gaps left by existing standards (such as NFPA 855, UL, and IEC standards) rather than replace them.

A PRACTICAL MANAGEMENT PROCESS

ORR PROTECTION

From Inspection to Verified Readiness

Use a single accountable workflow across NFPA 4, 10, 25, and 72.

1 Identify and document

Capture test results, open deficiencies, impairments, and system changes.

2 Assign and prioritize

Identify owner, severity, required notifications, interim protection, and target date.

3 Correct and verify

Complete work, perform required retesting, update records, and formally close findings.

Healthcare’s Lesson for Every Facility

Identify the deficiency. Manage the risk. Verify the correction.

01

IDENTIFY

Inspection, testing, or system observation

02

ASSESS

Determine exposure and operational impact

03

MITIGATE

Apply appropriate interim protection

04

CORRECT

Assign ownership and complete repairs

05

VERIFY

Retest as required; document closure

NFPA 99 • NFPA 101 • NFPA 4 • NFPA 10 • NFPA 25 • NFPA 72

Compliance is the minimum expectation. Readiness is the responsibility.

Healthcare is an illustrative management model; specific requirements depend on the adopted codes, AHJ, and accreditation program.

ORR PROTECTION

Thank You.

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