

# Introduction to Codes and Standards

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- Describe the NFPA standards process
- Identify the different standard development organizations
- Distinguish between model codes, installation standards, product standards, and local amendments



# American National Standards Institute (ANSI)

- Private non-profit organization that administers and coordinates the voluntary standardization and conformity assessment system
- Used in U.S. private sector and internationally
- Consensus documents
  - Those directly and materially affected by the document
  - Balanced committees
  - Public input
  - Continually updated
- Ensures that access to standards process is available to anyone directly or materially affected by standard under development
- Many are cross-referenced in NFPA and OSHA
  - Not the “law”, OSHA makes them the law



# Standards

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- A set of principles, protocols, or procedures that is developed by committees through a consensus process



# Codes

- Legal documents that govern activities at various levels of government
  - e.g. 29 CFR 1910
- Prescriptive – Stipulate in detail the types of materials that can be used and how they must be assembled
- Performance – Describe an acceptable level of performance that an assembly, material, or system must meet without specifically stating how the item is assembled
  - AHJ must develop testing and acceptance criteria
  - Significant expertise is required



# Example

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- Performance:
  - An acceptable level of protection against structural failure under extreme load shall be provided.
- Prescriptive:
  - 1/2" diameter bolts spaced no more than 6 feet on center shall anchor the wood sill of an exterior wall to the foundation.

# Model Codes

- A code that is developed and maintained by a standards organization independent of the jurisdiction responsible for enacting it
  - A local government can choose to adopt a model code as their own
- Contains agreed-upon requirements
- Developed by organizations such as NFPA or ICC
  - When systems are required
  - Where systems are required



# Design, Installation, and Maintenance Standards

- Where the system or product is installed, tested, inspected, maintained, and monitored



# Product Standards

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- Requirements for the performance, construction, and robustness of products





# Oklahoma Codes

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- State adopted ICC codes in 2015
- What is Stillwater's building code?



# Duties and Authority

- Certified inspectors enforce the codes and standards that have been legally adopted by the Authority Having Jurisdiction (AHJ)
- It is an inspector's duty to accomplish the goal of protecting lives and property from uncontrolled fires and other hazards
- Inspectors are given the authority to perform his or her duties based on the laws adopted by the AHJ
  - Authority having jurisdiction
    - Entity that has the legal backing to enforce code
- Authority is granted via legislation at the Federal or State level
- Public Sector inspectors are authorized to issue citations, issue a summons and even arrest individuals in the Private Sector



# Duties and Authority

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- Model fire codes grant the AHJ right of entry as often as necessary to perform an inspection or to execute any duties authorized by the fire code
- Not always a given. Certain protections are afforded a business owner
  - Parts of facility not open to the public require an administrative warrant
- Inspecting is not the same as gathering evidence
  - A search warrant must be issued to gather evidence



# Terms

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- State statutes
  - A written law passed by a legislative body
- City ordinances
  - A piece of legislation enacted by a municipal authority
  - A city or town that has corporate status and local government



# National Fire Protection Association

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- Our mission today is accomplished by advocating scientifically-based consensus codes and standards, research, and education for fire and related safety issues. NFPA's National Fire Codes are developed by technical committees staffed by over 5,000 volunteers, and are adopted and enforced throughout the world. NFPA functions as a nonprofit membership organization with more than 65,000 members from around the globe, all working together to fulfill the Association's mission.



# History of the NFPA

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- 1895: fire sprinkler installations in Boston
  - Many being made. No standard
  - Inconsistencies in operation
  - A few insurance company reps met to resolve the problems
- March 1896: “Report of Committee on Automatic Sprinkler Protection”
  - eventually became NFPA 13
- November 1896
  - National Fire Protection Association was formally born
  - The committee adopted twelve Articles of the Association. Article No. 1: the organization’s formal name.
  - 20 initial members



# History of the NFPA

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- 1903: first international members
- 1904: Membership rules revised. Opened NFPA up to more than just stock fire insurance agencies.
- National Electrical Contractors Association, the American Water Works Association, International Association of Fire Engineers (Fire Chiefs), and the American Institute of Architects, among others, were welcomed in.
- The first individual representing the Federal Government joined, Captain J. S. Sewell of the Corps of Engineers in Washington, DC.



# History of the NFPA

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- 1905: The first actual fire department officers and state fire marshals join NFPA.
- Since then
  - Over a hundred years of diligent work
  - Thousands of contributing members
  - Over 300 codes and standards developed and research, training, outreach, education and advocacy carried out by the NFPA.

<https://blog.koorsen.com/the-history-of-the-nfpa-and-its-first-fire-safety-codes>





# NFPA Standards Process

- Technical Committees
  - Up to 30 members
  - No more than 1/3 per interest category
    - Manufacturer
    - User
    - Installer/Maintainer
    - Consumer
    - Applied Research/Testing Laboratory
    - Insurance
    - Enforcing Authority
    - Laborer
    - Special Expertise
- Standards Process
  - Public input
  - Public comment
  - Technical meeting
  - Standards council



# ASTM International

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- Originally known as the American Society for Testing and Materials
- Consensus-based standards writing and testing organization
- Develops testing processes that other testing organizations use in the development of safety products



# Underwriters Laboratory (UL)

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- Independent, not-for-profit product-safety testing and certification organization
- Products have been tested for intended use and are certified as safe
- Provides third-party testing and certification for in-service equipment



# Navigating Codes

- Ensure you are using the correct version of the code
- Table of Contents
- Index
  - Might need to look at multiple terms
  - Find the right chapter
- Pay attention to the chapter
  - General
  - References
  - Definitions
- PC: Ctrl+F
- Mac: Command+F
  - Make sure you know what section/chapter you are under



# Indications in Text

- For NFPA only
  - \*: Information in Annex A

## REVISION SYMBOLS IDENTIFYING CHANGES FROM THE PREVIOUS EDITION

Text revisions are shaded. A **Δ** before a section number indicates that words within that section were deleted and a **Δ** to the left of a table or figure number indicates a revision to an existing table or figure. When a chapter was heavily revised, the entire chapter is marked throughout with the **Δ** symbol. Where one or more sections were deleted, a • is placed between the remaining sections. Chapters, annexes, sections, figures, and tables that are new are indicated with an **N**.

Note that these indicators are a guide. Rearrangement of sections may not be captured in the markup, but users can view complete revision details in the First and Second Draft Reports located in the archived revision information section of each code at [www.nfpa.org/docinfo](http://www.nfpa.org/docinfo). Any subsequent changes from the NFPA Technical Meeting, Tentative Interim Amendments, and Errata are also located there.



using.

**8.5.1.2.1** On certain dry chemical and dry powder fire extinguishers (cartridge-operated), where the manufacturer recommends that certain internal parts not be removed, those parts shall not be removed.

the hydrostatic test.

**8.5.4.3** The hose shall be completely filled with water before testing.

2018 Edition

Shaded text = Revisions. **Δ** = Text deletions and figure/table revisions. • = Section deletions. **N** = New material.



# Local Amendments

- Codes and standards adopted locally
  - Not automatic
  - Changes
- AHJ has final say

