

## Good Morning!

Welcome to another inservice course

Brought to you by  
The New York State Department of State  
Division of Code Enforcement and Administration  
Education Services Unit

## Inspecting Existing Public Assemblies

## Public Assembly

- Occupancy (Fire Code Definition):
  - Use of a building or structure, or a portion..., gathering of persons for purposes such as
    - Civic
    - Social
    - Religious
    - Recreation
    - Food/drink consumption
    - Awaiting transportation



## The Fire Code

- Purpose: 101.3
  - Establish minimum safety requirements in new and existing buildings



## The Fire Code

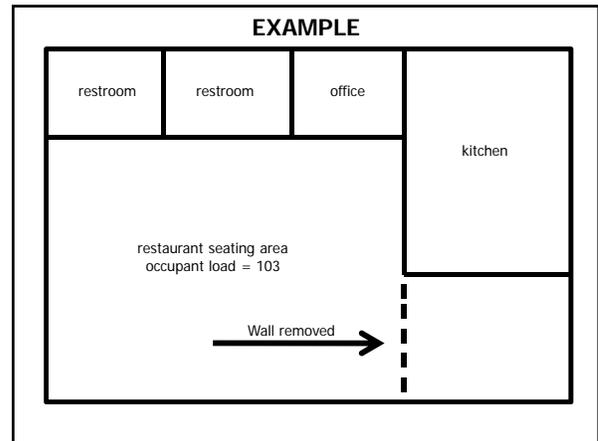
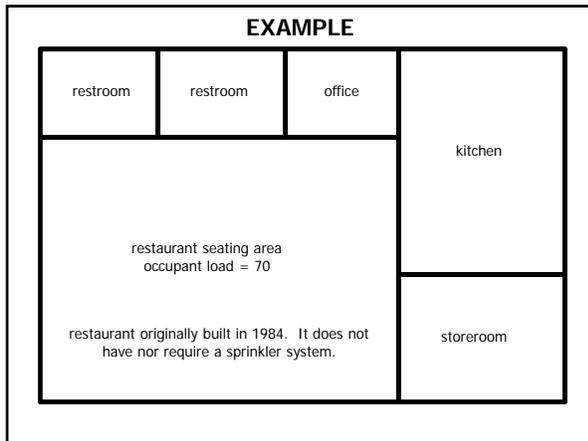
- New construction standards: 102.1.1
  - New buildings
  - Existing buildings not legally in existence.
  - Existing buildings called out by the Fire Code.
- Existing building standards: 102.2
  - New buildings
  - Existing buildings

## EXAMPLE

- 102.1.1 New construction language
  - 903.2.1 An automatic sprinkler system shall be installed throughout buildings and portions thereof used as a Group A ...
- 102.2 Existing building language
  - 903.5 Sprinkler systems shall be tested and maintained ...

## The Fire Code

- Legally in existence: 102.8
  - What does that mean, exactly?
- Does it have a valid certificate of occupancy?
- Has it passed previous fire inspections?
- Does it have an operational permit?



### An unlawful building

- Unlawful structure: 107.4
  - Occupied by more persons than permitted
  - Erected or altered without approval

107.1 – condemned pursuant to the code  
 Title 19 Part 1203.3(f) procedures shall be established for addressing unsafe structures

### The Fire Code

- Maintenance of required systems: 106.1
  - Maintained continuously
    - Fire Code
    - Property Maintenance Code
    - Reference standards
    - State variance
- Maintenance of non-required systems: 106.2
  - Maintained, or
  - Removed

### The Fire Code

- Testing ... testing ...
  - 106.3: If "it" requires periodic testing, "it" gets periodic testing!
- How do I know it was tested?
  - 106.3.1: Records shall be available
- What if it failed the test?
  - 106.3.2: Fix "it" and retest "it"

### Preparing for the inspection

- What needs to be inspected?
  - How many public assemblies are there?
  - When was the last time they were inspected?

## Preparing for the inspection

- Review the files
  - Look at past inspection reports
  - Look for complaints
    - May develop a pattern
  - Review any building permits issued recently
    - Be aware of building modifications
    - None issued? Should be the same building then...

## Preparing for the inspection

- Check the operating permit
  - Do they even have one?
    - Do they need one?
  - Is it still valid?
  - Are there any conditions established?
  - Have there been problems with it in the past?
  - How many permits does the building have?
    - Public assembly holding more than 100?
    - Pyrotechnics?
    - Classified by the municipality as being a hazard?

## Preparing for the inspection

- Review the inspection form
  - What parts of the Fire Code will be needed?
    - LP gas Chapter 38?**
    - Egress Chapter 10?**
    - Hood system Chapter 6?**
    - Fire protection system Chapter 9?**
    - Emergency Plans Chapter 4?**
    - General Precautions Chapter 3?**

Fire Inspection Report: Joes Bar and Grill Date: 12/10/10 By: Ben Dover  
 Operation permit # OP206A

Code Section	Requirements	Pass/Fail	Comments
1029.2	Locks and latches	Pass	
1029.3	Capacity of means of egress	Pass	
1029.4	Posting the occupant load	Fail	missing occupancy posting
1029.5	Overcrowding (see definitions)	Pass	

Second inspection due: 12/20/10 Inspected by:  
 Third inspection due: Inspected by:  
 Date Operation Permit renewed: Renewed by:

## Preparing for the inspection

- Do you have the right reference standards?

**NFPA 10?**  
**NFPA 96?**  
**NFPA 72?**  
**NFPA 25?**

## Conducting the inspection

- Education
- Technical Information
- Research
- Qualifications

## General Precautions Against Fire Fire Code

Chapter 3



## General Precautions Against Fire Fire Code

- 304.1.3 Spaces under seats



## General Precautions Against Fire Fire Code

- 304.3.2
  - Holds more than 40 gallons
    - Needs lid
    - Noncombustible
    - Approved combustible



## General Precautions Against Fire Fire Code

- 304.3.3
  - Holds more than 40.5 gallons
    - Not in the building
    - Not within 5' of
      - Combustible walls
      - Openings
      - Combustible roof eave lines
        - » Unless area is sprinklered



## General Precautions Against Fire Fire Code

- 308.3.2 Open flame decorative devices



## General Precautions Against Fire Fire Code

- 308.3.2 Open flame decorative devices



## General Precautions Against Fire Fire Code

- 308.6.3 - 5 Serving flaming foods



## General Precautions Against Fire Fire Code

- 308.6.3 - 5 Serving flaming foods



## Emergency Plans and Preparedness Fire Code

Chapter 4



See a fire..  
Scream..  
Run...



## Emergency Plans and Preparedness Fire Code

- 401.1 Scope
  - Reporting emergencies
  - Coordination
  - Plans and procedures
- 401.2 Approval
  - Safety plans
  - Training



## Emergency Plans and Preparedness Fire Code

- 404.2 Safety and evacuation plan
  - Group A requires it



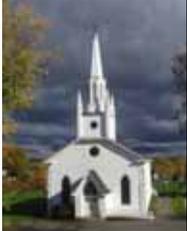
## Emergency Plans and Preparedness Fire Code

- 404.2 Safety and evacuation plan
  - Group A requires it?



## Emergency Plans and Preparedness Fire Code

- Fire Safety Plan
  - Exception
    - Exclusively used for religious worship
      - Occupant load under 2,000



## Emergency Plans and Preparedness Fire Code

- Fire Safety Plan
  - Exception
    - Exclusively used for religious worship
      - Occupant load under 2,000



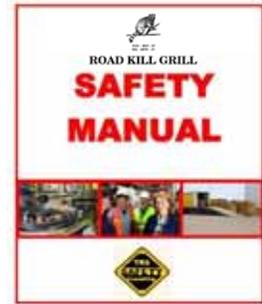
## Emergency Plans and Preparedness Fire Code

- Fire Safety Plan
  - Exception
    - Religious worship under 2,000
- But what about FC 308.3.5?
  - Candles during religious ceremonies
    - “When, in the opinion of the CEO, adequate safeguards...”
      - How do you know they have “adequate safeguards”?



## Emergency Plans and Preparedness Fire Code

- 404.3 Contents
  - Evacuation plans
  - Safety plans
- 404.4
  - Reviewed annually
- 404.5
  - Available



## Emergency Plans and Preparedness Fire Code

- 405 Fire drills



Group or Occupancy	Frequency	Participation
Group A	Quarterly	Employees
Group A <sup>d</sup>	Three annually	All occupants

footnote d: colleges and universities

## Emergency Plans and Preparedness Fire Code

- 406 Employee training



### Emergency Plans and Preparedness Fire Code

- 401.3



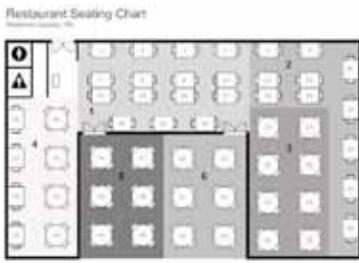
### Emergency Plans and Preparedness Fire Code

- 407.2 MSDS readily available



### Emergency Plans and Preparedness Fire Code

- 408.2 Additional requirements



### Emergency Plans and Preparedness Fire Code

- 408.2 Additional requirements



### Emergency Plans and Preparedness Fire Code

- 408.2 Additional requirements



### Emergency Plans and Preparedness Fire Code

- 408.2 Additional requirements



## Emergency Plans and Preparedness Fire Code

- 408.2 Additional requirements



## Fire Service Features

Chapter 5



## Fire Service Features Chapter 5

- Fire apparatus access road  
– Post 2003



## Fire Service Features Chapter 5

- Pre - 2003
  - Section 1161.2 NYSUFPCB
    - Not accessible from street
      - Provided with access roads or fire lanes
  - Current Fire Code
    - 102.8 Existing structures
    - 106.1 Maintenance of required safeguards
      - Arrangements

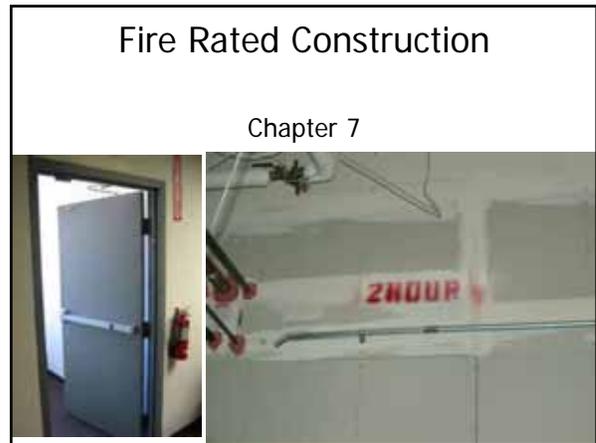
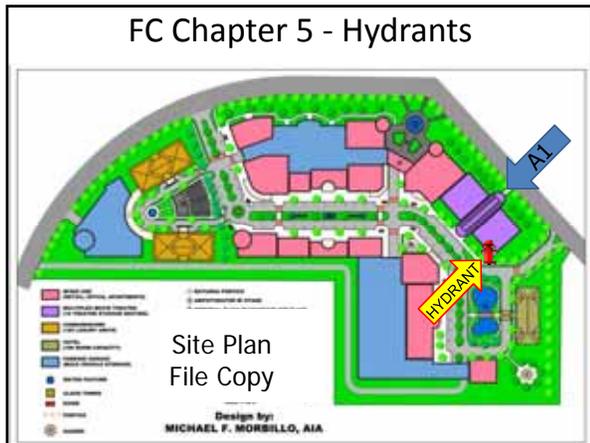
**§ 1161.2 Accessibility.**  
 (a) Premises which are not readily accessible from public roads, and which the fire department or an emergency service may be called upon to protect in case of fire or other emergency, shall be provided with access roads or fire lanes so that all buildings on the premises are accessible to the fire department and emergency service apparatus.  
 (b) Access roads and fire lanes shall be adequately maintained and kept free and clear of obstructions at all times.  
 (c) The designation and maintenance of fire lanes on private property shall be established as specified by the code enforcement official.  
 (d) It shall be a violation of this Part to park motor vehicles on, or otherwise obstruct, any fire lane or emergency access road.

## Fire Service Features Chapter 5



## Fire Service Features Chapter 5





### Fire Resistance Rated Construction

#### Chapter 7

- Required rating shall be maintained
  - Title 9 NYSUFPBC
    - Part 771.4 Fire Separations
      - (i) Enclosure of commercial kitchens
        - » 2 hour rated enclosure

### Decorative Materials

#### Fire Code

#### Chapter 8

### Decorative Materials

#### Fire Code

- 807 Decorative material other than vegetation
  - Flame resistance tested to NFPA 701
    - Or noncombustible
  - Reports available to CEO

### Decorative Materials

#### Fire Code

- 807 Decorative material other than vegetation
  - Furnishings can't block egress

## Fire Protection Systems



Chapter 9

## Maintaining Systems

- What about older stuff?
 




## Maintaining Fire Protection Systems

- Maintenance requirements start in Chapter 1



## IN THE BEGINNING....

- 106.1 Required systems maintained
  - Fire Code
  - Property Maintenance Code
  - Referenced Standards
- 106.2 Nonrequired systems
  - Maintain
    - Fire Code
    - Reference Standards
  - Or remove



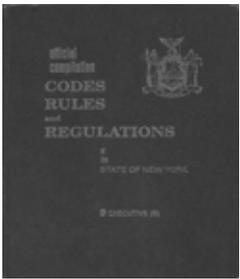
## Maintaining Systems

- 901.4.2 Nonrequired fire protection systems
  - Not required by:
    - Fire Code
    - Building Code
    - Existing Building Code
  - Allowed if it meets:
    - Fire Code
    - Building Code
    - Existing Building Code



## Maintaining Systems

- 901.4 Maintain to original standard

## Maintaining Systems

- Reference Standards

Table 901.6.1

SYSTEM	STANDARD
PORTABLE FIRE EXTINGUISHER	NFPA 10
CARBON DIOXIDE FIRE – EXTINGUISHING SYSTEM	NFPA 12
HALON 1301 FIRE – EXTINGUISHING SYSTEM	NFPA 12A
DRY – CHEMICAL EXTINGUISHING SYSTEMS	NFPA 17
WET – CHEMICAL EXTINGUISHING SYSTEM	NFPA 17A
WATER – BASED FIRE PROTECTION SYSTEMS	NFPA 25
FIRE ALARM SYSTEMS	NFPA 72
WATER – MIST SYSTEMS	NFPA 750
CLEAN – AGENT EXTINGUISHING SYSTEMS	NFPA 2001

## Maintaining Systems

- Reference Standards

SYSTEM	FIRE CODE
PORTABLE FIRE EXTINGUISHER	Section 906
CARBON DIOXIDE FIRE – EXTINGUISHING SYSTEM	Section 904.8
HALON 1301 FIRE – EXTINGUISHING SYSTEM	Section 904.9
DRY – CHEMICAL EXTINGUISHING SYSTEMS	Section 904.6
WET – CHEMICAL EXTINGUISHING SYSTEM	Section 904.5
WATER – BASED FIRE PROTECTION SYSTEMS	Section 903, 904.7, 905
FIRE ALARM SYSTEMS	Section 907
WATER – MIST SYSTEMS	Section 904.12
CLEAN – AGENT EXTINGUISHING SYSTEMS	Section 904.10

## Maintaining Systems

- 901.6 Inspection, testing and maintenance
  - Maintained in operative condition
    - Repair
    - Replace
  - Nonrequired systems
    - Follow 901.6
    - Or removed



## Maintaining Systems

- 901.6.2



## Maintaining Sprinkler Systems



## Maintaining Sprinkler Systems Fire Code

- Sprinkler system
  - 903.5 Testing and maintenance
    - See 901

SYSTEM	STANDARD
PORTABLE FIRE EXTINGUISHER	NFPA 10
CARBON DIOXIDE FIRE – EXTINGUISHING SYSTEM	NFPA 12
HALON 1301 FIRE – EXTINGUISHING SYSTEM	NFPA 12A
DRY – CHEMICAL EXTINGUISHING SYSTEMS	NFPA 17
WET – CHEMICAL EXTINGUISHING SYSTEM	NFPA 17A
WATER – BASED FIRE PROTECTION SYSTEMS	NFPA 25
FIRE ALARM SYSTEMS	NFPA 72
WATER – MIST SYSTEMS	NFPA 750
CLEAN – AGENT EXTINGUISHING SYSTEMS	NFPA 2001

## Maintaining Sprinkler Systems NFPA 25

- 1.1 NFPA 25 establishes requirements for periodic testing, inspection and maintenance for water – based fire protection systems

- Sprinkler
- Standpipe
- Fixed water spray
- Foam water
- Hydrants



## Maintaining Sprinkler Systems NFPA 25

- 4.1.1 Responsibility
  - Property owner is responsible for maintaining the system
    - 4.1.2.3 Can pass on responsibility
    - 4.1.2.4 Act as the "owner"
- 4.1.2 Accessibility
  - Owner or occupant shall provide access



## Maintaining Sprinkler Systems NFPA 25

- 4.1.2.2 The tasks shall be carried out by competent personnel

- Training
- Experience



## Maintaining Sprinkler Systems NFPA 25

- 4.5 Inspection
  - Inspected at intervals specified by NFPA 25
  - More later...
- 4.6 Testing
  - Tested to insure the system functions as installed
  - Tests results compared to original acceptance test



## Maintaining Sprinkler Systems NFPA 25

- 5.1 Sprinklers
    - Covers minimum requirements for routine
      - Inspection
      - Testing
      - Maintenance
- } Table 5.1
- Alarm receiving facility to be notified
    - Before test begins
    - After test is over



## Maintaining Sprinkler Systems NFPA 25

- 5.2 Inspection
  - From the floor level annually
  - Not leaking
  - Free of
    - Corrosion
    - Foreign materials
    - Paint
    - Physical damage
  - Proper orientation
- 5.2.1.1.2 Replace it!



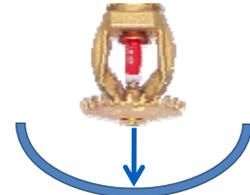
## Maintaining Sprinkler Systems NFPA 25

- 5.2.1.1.6 Sprinkler subject to recall shall be replaced.
- FC 901.9 Recall of fire protection components
  - Component subject to recall replaced
  - AHJ shall be notified in writing

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission (CPSC) and Central Sprinkler announced today the nationwide recall of approximately 8.4 million Omega brand fire sprinklers manufactured since 1982 by Central Sprinkler Corp. and its subsidiary, Central Sprinkler Co., of Lansdale, Pa. CPSC alleges that Omegas are defective and could likely fail in a fire.

## Maintaining Sprinkler Systems NFPA 25

- 5.2.1.2 Minimum clearances maintained
  - NFPA 13
    - 18" minimum clearance
  - Stock, furnishings, equipment closer
    - Shall be corrected



## Maintaining Sprinkler Systems NFPA 25

- 5.2.1.3 Spare sprinkler heads
  - Proper number and type
  - Wrench for each type



## Maintaining Sprinkler Systems NFPA 25

- 5.2.2 Pipes and Fittings
  - Inspected annually from the floor
  - Free of damage, leaks and corrosion
  - Not subject to external loads
    - Don't hang things from them
  - In concealed areas
    - Not subject to inspection



## Maintaining Sprinkler Systems NFPA 25

- 5.2.4.2 Gauges
  - Wet pipe sprinkler systems
    - Inspected monthly
      - Good condition
      - Normal water supply
  - Dry pipe sprinkler systems
    - Inspected weekly
      - Normal water and air pressure



## Maintaining Sprinkler Systems NFPA 25

- 5.2.6 Alarm Devices
  - Inspected quarterly for damage
- 5.2.7 Hydraulic Nameplate
  - Inspected quarterly
    - Attached to riser
    - Legible



## Maintaining Sprinkler Systems NFPA 25

- 5.3 Testing

- Sprinklers in service

- >50 years
      - Replace or test
      - Repeat every 10 years
    - Prior to 1920
      - Replace

- Gauges

- Replace every 5 years or calibrate



## Maintaining Sprinkler Systems NFPA 25

- 5.3.3 Alarm Devices

- Mechanical waterflow devices
    - Tested quarterly
  - Vane-type and pressure switch
    - Tested semiannually



## Maintaining Sprinkler Systems NFPA 25

- 5.4 Maintenance

- Only new, listed sprinklers shall be used as replacements

- Maintain a supply of replacements

- Never < 6
    - Have proper characteristics
      - Orifice size
      - Style
      - Temperature rating
      - Deflector type
    - Don't forget the wrench



## Maintaining Sprinkler Systems NFPA 25

- 5.4.1.9 Sprinklers protecting commercial cooking equipment and vent systems

- Replace annually

- Unless inspected and found to be free of grease build up



## Maintaining Sprinkler Systems NFPA 25

- 13.1 Minimum requirements for

- Valves
  - Valve components
  - Trim



- 13.2.1 Property owner to have manufactures information on testing

- 13.2.2 Notification

- AHJ shall be notified prior to testing or maintenance of valves and associated alarms

## Maintaining Sprinkler Systems NFPA 25

- 13.3.1.3 Open valves

- Locked, or
  - Electronically supervised



## Maintaining Sprinkler Systems NFPA 25

- 13.3.2 Inspections
  - All valves inspected weekly
    - Locked or electronically supervised
      - Monthly
  - Verify
    - Open or closed
    - Sealed, locked or electronically supervised
    - Accessible
    - Wrench provided
    - Free of leaks
    - Identified



## Maintaining Fire Department Connection NFPA 25

- Fire Code 912.6
  - Inspected, tested and maintained per NFPA 25
- 13.7 Fire Department Connections
  - Inspected quarterly
    - Visible and accessible
      - FC 912.2.2.
    - Not damaged
    - Plugs/caps in place
    - Identification signs in place
    - Check valve not leaking



## Maintaining Fire Department Connection NFPA 25

- 13.7.2 Missing plug or cap
  - Inspect interior of connection for obstructions
  - Verify clapper is operational



## System Impairments NFPA 25

- 4.1.3 System shutdown
  - Owner/occupant notifies
    - AHJ
    - FD
    - Alarm receiving facility
  - Notification includes
    - Purpose of shutdown
    - Components involved
    - Estimated time of shutdown
  - Notify same when system restored



## System Impairments NFPA 25

- 15.2 Impairment Coordinator
  - Owner or owner's agent
- 15.3 Tag used to indicate out of service
  - Each fire department connection
  - Control valve
  - Anywhere AHJ specifies



## Maintaining Hydrants NFPA 25

Table 7.1 Summary of Private Fire Service Main Inspection, Testing, and Maintenance

Item	Frequency	Reference
<b>Inspection</b>		
Hose houses	Quarterly	7.2.2.7
Hydrants (dry barrel and wall)	Annually and after each operation	7.2.2.4
Monitor nozzles	Semiannually	7.2.2.6
Hydrants (wet barrel)	Annually and after each operation	7.2.2.5
Mainline strainers	Annually and after each significant flow	7.2.2.5
Piping (exposed)	Annually	7.2.2.1
Piping (underground)	See 7.2.2.2	7.2.2.2
<b>Test</b>		
Monitor nozzles	Flow, annually (range and operation)	7.3.3
Hydrants	Flow, annually	7.3.2
Piping (exposed and underground) (flow test)	5 years	7.3.1
<b>Maintenance</b>		
Mainline strainers	Annually and after each operation	7.2.2.3
Hose houses	Annually	7.2.2.7
Hydrants	Annually	7.4.2
Monitor nozzles	Annually	7.4.3

## Maintaining Fire Alarm Systems



## Maintaining Fire Alarm Systems Fire Code

- Fire alarm system
  - 907.20 Inspection, testing and maintenance
    - See NFPA 72

SYSTEM	STANDARD
PORTABLE FIRE EXTINGUISHER	NFPA 10
CARBON DIOXIDE FIRE – EXTINGUISHING SYSTEM	NFPA 12
HALON 1301 FIRE – EXTINGUISHING SYSTEM	NFPA 12A
DRY – CHEMICAL EXTINGUISHING SYSTEMS	NFPA 17
WET – CHEMICAL EXTINGUISHING SYSTEM	NFPA 17A
WATER – BASED FIRE PROTECTION SYSTEMS	NFPA 25
<b>FIRE ALARM SYSTEMS</b>	<b>NFPA 72</b>
WATER – MIST SYSTEMS	NFPA 750
CLEAN – AGENT EXTINGUISHING SYSTEMS	NFPA 2001

## Maintaining Fire Alarm Systems Fire Code

- Fire alarm system
- 907.20 Inspection, testing and maintenance
  - In accordance with 907.20 and NFPA 72-07
- Maintenance – if required by code –
  - Continuously maintained to NFPA 72;
  - Or as directed by Code Enforcement Official
- Testing – per schedule in NFPA 72 or more frequently if required by CEO

## Maintaining Fire Alarm Systems Fire Code

- 907.20.3 Detector sensitivity
  - Test 1 year after installation
  - Every alternative year thereafter
  - After second test
    - Calibration remains consistent – test every 5 years
      - Maintain “false alarm” records
      - Increase in “false alarms” over previous year – calibrate
  - Don't test with any device that
    - Introduces unmeasured amounts of smoke or other aerosol



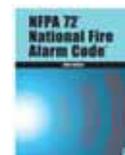
## Maintaining Fire Alarm Systems Fire Code

- 907.20.5 Maintenance, inspection, testing
  - Building owner responsible
  - Service personnel qualified
    - See NFPA 72
  - Written record provided



## Maintaining Fire Alarm Systems NFPA 72

- NFPA 72 – National Fire Alarm Code
  - Chapter 10: The inspection, testing and maintenance shall comply with this Chapter
  - Applies to both new and existing systems



## Maintaining Fire Alarm Systems NFPA 72

- 10.2.1.1 Performance verification
  - Fire alarm system shall have:
    - Inspection
    - Testing
    - Maintenance
  - Meet the requirements of NFPA 72
  - Conform to manufacturer's instructions
  - Verify correct operation



## Maintaining Fire Alarm Systems NFPA 72

- 10.2.2 Responsibilities
  - Property owner or delegate
  - Delegation of responsibility in writing
    - Copy to AHJ



## Maintaining Fire Alarm Systems NFPA 72

- 10.2.2.5 Service personnel qualifications
  - Factory trained and certified
  - Certified by a nationally recognized organization
  - Registered, licensed, certified by state
  - Employed and qualified by an organization listed by a nationally recognized testing lab



## Maintaining Fire Alarm Systems Article 6D NYS General Business Law

- **§69-m. License required**
  - On and after October 1, 1992
    - No person shall engage in the business of installing, servicing or maintaining security or fire alarm unless he is licensed
    - Nothing herein shall prohibit a person licensed from employing individuals to assist in the installation, servicing or maintaining of security or fire alarm systems, provided such licensee issues identification cards to each unlicensed individual.



## Maintaining Fire Alarm Systems Article 6D NYS General Business Law

- **69-pp. Licensed master electrician waiver**
  - Licensed master electrician who engages in the business of installing, servicing or maintaining security or fire alarm systems within such municipality shall be waived from the provisions of this article upon registration with the Secretary of State



## Maintaining Fire Alarm Systems Article 6D NYS General Business Law

- **§69-q. Licenses; display; renewal; duplicates**
  - All licenses shall be for a period of two years
  - Employees shall not be required to be licensed provided that the non-licensed employee have an identification card in his possession



## Maintaining Fire Alarm Systems NFPA 72

- 10.4.4 Testing frequency
  - See Table 10.4.4
  - Weekly automatic testing by remotely monitored fire alarm control unit
    - Extend testing to annual
  - Detector sensitivity tested within 1 year of installation
    - Clean or replace if out-of-range



## Maintaining Fire Alarm Systems NFPA 72

- Example of Table 10.4.4

Device	Frequency
Duct detectors	Annually
Electromechanical releasing devices	Annually
Fire extinguishing/suppression system switches	Annually
Fire – gas and other detectors	Annually
Fire alarm box	Annually
Smoke detector functional test	Annually
Audible devices	Annually
Visible devices	Annually

## Maintaining Fire Alarm Systems NFPA 72

- 10.6.2.3 A record shall be kept that includes the following information found in Figure 10.6.2.3:

## Maintaining Fire Alarm Systems NFPA 72

- 10.6.3 Supervisory station records
  - Records pertaining to signals received
    - Maintenance
    - Inspection
    - Testing
  - Kept for 12 months
  - Copy provided to AHJ upon request



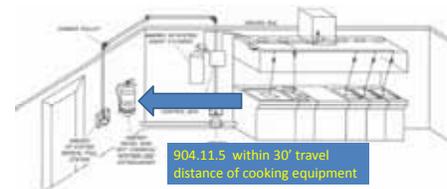
## Maintaining Fire Extinguishers Fire Code

- 906.1 Where required
  - In new and existing Group A
  - Within 30' of commercial cooking equipment
- 906.2 General requirements
  - Installed and maintained to 906 and NFPA 10-07



## Maintaining Fire Extinguishers Fire Code

- 906.4 Cooking grease fires
  - Compatible with automatic extinguishing agent
  - See 904.11.5





## Maintaining Fire Extinguishers NFPA 10

- 7.3.2 Maintenance procedures
  - Thorough exam of basic elements
  - Components of electronic monitoring system
    - If provided
  - Follow procedures detailed in service manual
    - Check all mechanical parts
    - Check the extinguishing agent
    - Expelling means of all extinguishers
    - Physical appearance



## Maintaining Fire Extinguishers NFPA 10

- 7.3.2.2 Seals or tamper indicators
  - Tamper seal is removed during maintenance
    - Operate pin or locking device
  - Once maintenance is finished, install new seal



## Maintaining Fire Extinguishers NFPA 10

- 7.3.3 Maintenance record keeping
  - Each extinguisher has tag indicating
    - Month/year maintenance was completed
    - Person performing the work
    - Name of the agency



## Maintaining Fire Extinguishers NFPA 10

- Chapter 8 Hydrostatic testing
  - Completed by trained service technician
  - Test intervals to follow Table 8.3.1

Table 8.3.1 Hydrostatic Test Interval for Extinguishers

Extinguisher Type	Test Interval (years)
Stored-pressure water, water mist, loaded stream, and/or mist/foam	5
Wet agent	5
AFFF (aqueous film-forming foam)	5
FFFP (film-forming fluoroprotein foam)	5
Dry chemical with stainless steel shells	5
Carbon dioxide	5
Wet chemical	5
Dry chemical, stored-pressure, with mild steel shells, brass shells, or aluminum shells	12
Dry chemical, cartridge- or cylinder-operated, with mild steel shells	12
Halogenated agents	12
Dry powder, stored-pressure, cartridge- or cylinder-operated, with mild steel shells	12

## Maintaining Hood Systems



## Maintaining Hood Systems Fire Code

- 609.4 Commercial kitchen exhaust hoods shall be inspected and maintained
  - NFPA 96 - 08



## Maintaining Hood Systems NFPA 96

- Chapter 11 Use and Maintenance
  - Exhaust system shall be “ON” when cooking equipment is “ON”
  - System shall not be operated if filters are removed
  - Instructions for manually activating fire suppression shall be posted
    - Reviewed with management and employees
  - Cooking equipment can't be used if the fire suppression system is impaired



## Maintaining Hood Systems NFPA 96

- 11.4 Checking for grease build up
  - Entire system
  - Qualified individual(s)
    - Acceptable to AHJ

Table 11.4 Schedule of Inspection for Grease Buildup

Type or Volume of Cooking	Inspection Frequency
Systems serving solid fuel cooking operations	Monthly
Systems serving high-volume cooking operations, such as 24-hour cooking, charbroiling, or wok cooking	Quarterly
Systems serving moderate-volume cooking operations	Semiannually
Systems serving low-volume cooking operations, such as churches, day camps, seasonal businesses, or senior centers	Annually

## Maintaining Hood Systems NFPA 96

- 11.6 Cleaning the exhaust system
  - If contaminated, cleaned by qualified individual(s)
    - Acceptable to AHJ
  - Fire suppression shall not be turned “off”
    - Exception – Qualified service technician
  - Access panel removed
    - Service tag affixed near panel door
      - Name of company
      - Date of cleaning/inspection



## Maintaining Hood Systems NFPA 96

- 11.6 continued...
  - Exhaust cleaning company
    - Certificate shall be maintained on site
      - Name of company
      - Name of person that did work
      - Date of cleaning/inspection
  - Provide written report at conclusion
    - Specify areas inaccessible or not cleaned
    - Submit copy to AHJ if required



## Maintaining Hood Systems NFPA 96

- 11.7 Cooking equipment maintenance
  - Inspection and maintenance of the cooking appliances shall be done annually
  - Equipment that collects grease
    - Below the surface
    - Behind the equipment
    - In the flue gas exhaust
      - Cleaned by qualified individual
      - Acceptable to AHJ



## Maintaining Hood Systems NFPA 96

- 12.1 Cooking equipment safety requirements
  - Cooking appliances requiring protection shall not
    - Be moved
    - Modified
    - Rearranged
  - Without prior re-evaluation of fire suppression system



## Maintaining Hood Systems Fire Code

- 901.4 ...required systems shall be extended, altered or augmented as necessary...



## Means of Egress



## Fire Code Chapter 10

- How do you know what is “new building” and what is “existing building” language?
- Check 1001.1 **General**



## Fire Code Chapter 10

- 1001.1 **General** ...

- Sections 1003 through 1026
- New construction



- Sections 1028 and 1029
- Existing buildings



## Fire Code Chapter 10

- How do Sections 1028 and 1029 affect existing means of egress?
  - 1028.1: Means of egress shall be maintained
  - 1029.1: Means of egress in existing buildings shall conform



## Fire Code Chapter 10

- 1028.2 **Reliability**

- Exit access, exit, exit discharge
  - Continuously maintained
  - Full instant use
    - When the space is occupied



## Fire Code Chapter 10

- 1028.2 ... when the area ... is occupied ...



## Fire Code Chapter 10

- 1028.3 Obstructions
  - Free of things that prevent use



## Fire Code Chapter 10

- 1028.4 Exit Signs
  - See 1011 (new construction)



## Fire Code Chapter 10

- 1028.5 Furnishings and Decorations



## Fire Code Chapter 10

- 1029.2 Locks and Latches
  - Readily operable
    - No key, tool, special knowledge



## Fire Code Chapter 10

- 1029.3 Capacity of means of egress
  - Occupant load can't exceed the capacity of egress
  - Use 1004.1 to calculate occupant load
  - Use the following to calculate egress capacity
    - 1005.1
    - 1019.1
    - 1025.6



## Fire Code Chapter 10

- How do you know the occupant load?
  - Check the file

### EXITING TAG

1,231 SF		
82	15 net	A2
<small># of Occupants</small>	<small>Load Factor</small>	<small>Occupancy Type</small>

## Fire Code

### Capacity of Means of Egress

- 1029.3 Capacity of means of egress
  - Occupant load shall not exceed capacity of means of egress
  - Capacity of the means of egress shall be calculated using
    - 1005.1 – we did this = 500 people
    - 1019.1 – we did this = 426 people
    - 1025.6 – we haven't done this yet

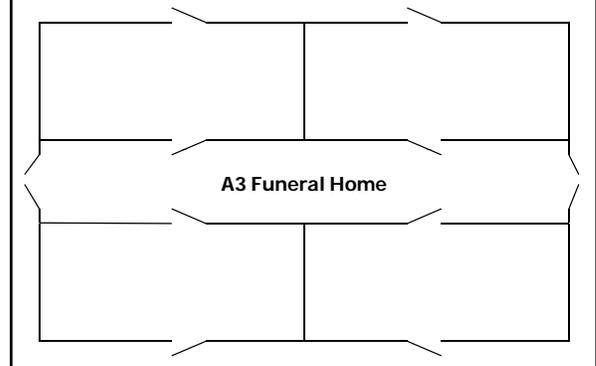
## Fire Code Chapter 10

- 1025.6
  - Width of means of egress for assembly
    - Aisles
    - Other means of egress

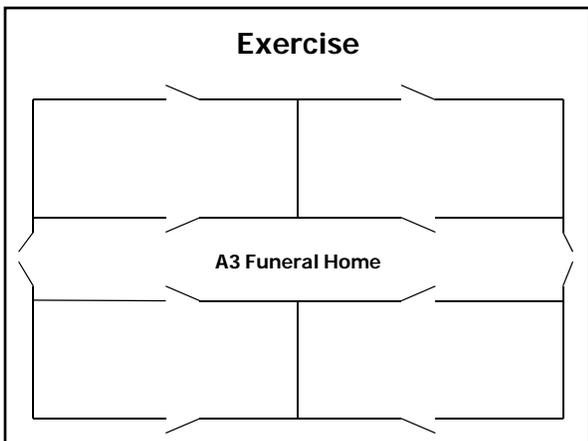
Smoke protected v. Not smoke protected



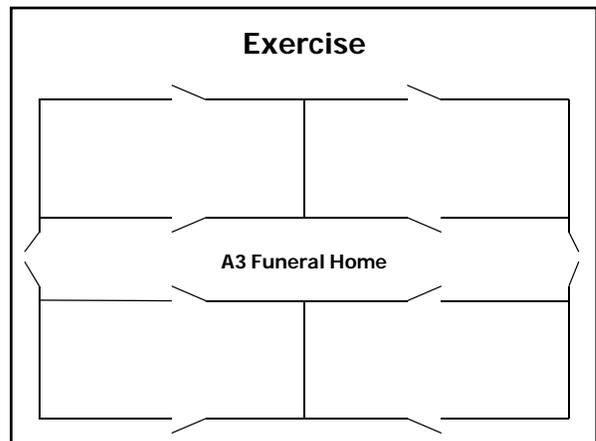
### Exercise

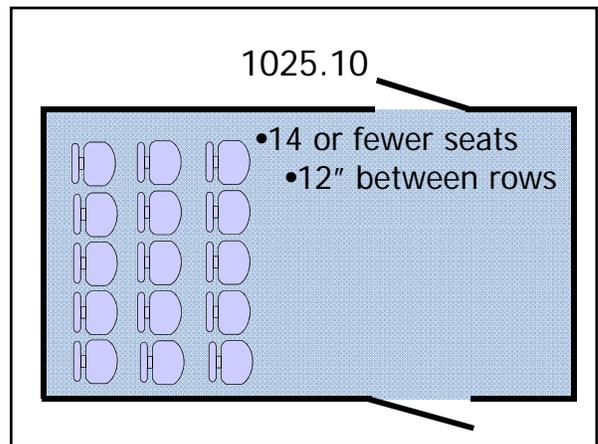
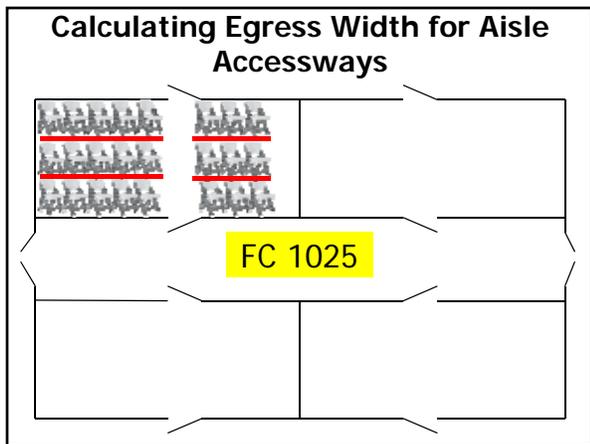
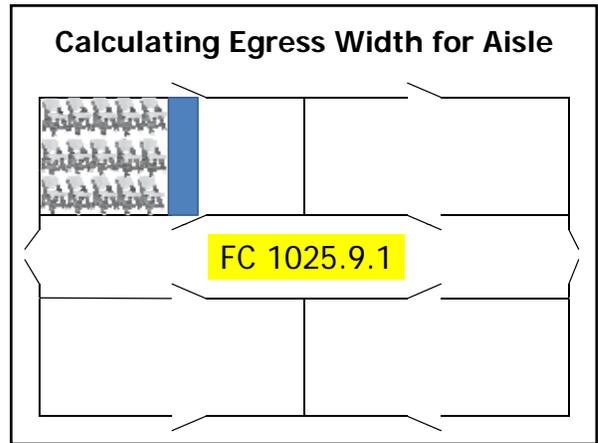
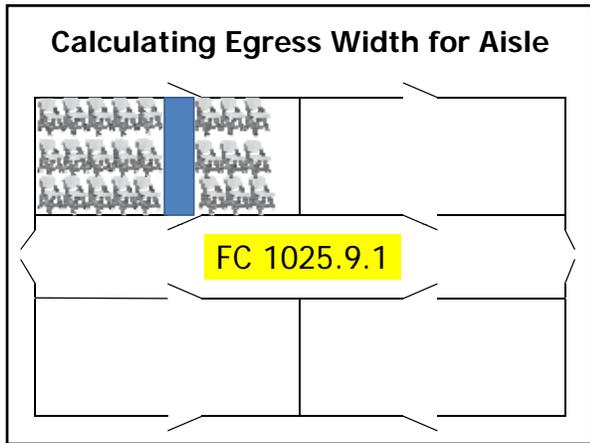
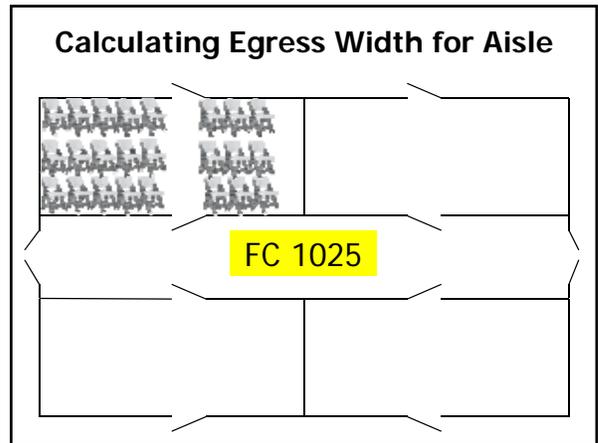
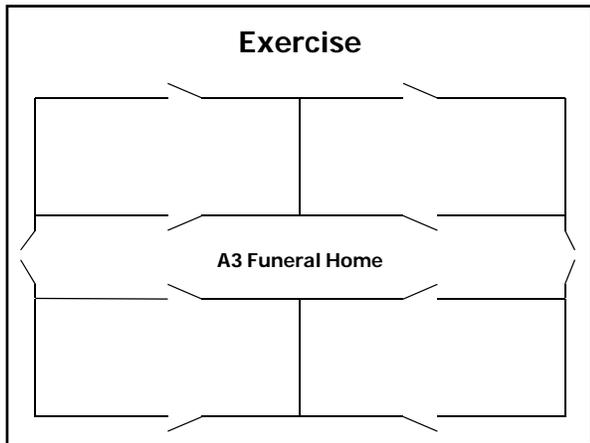


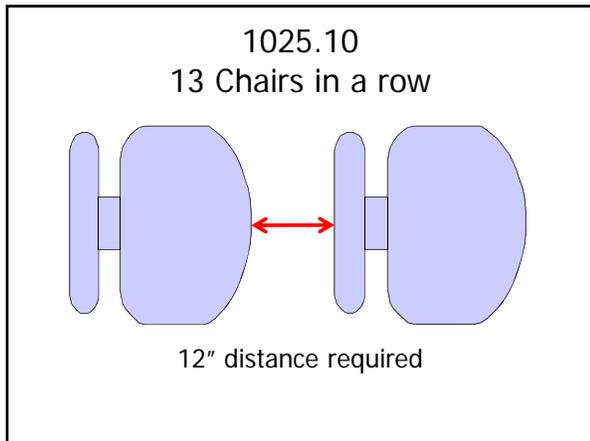
### Exercise



### Exercise

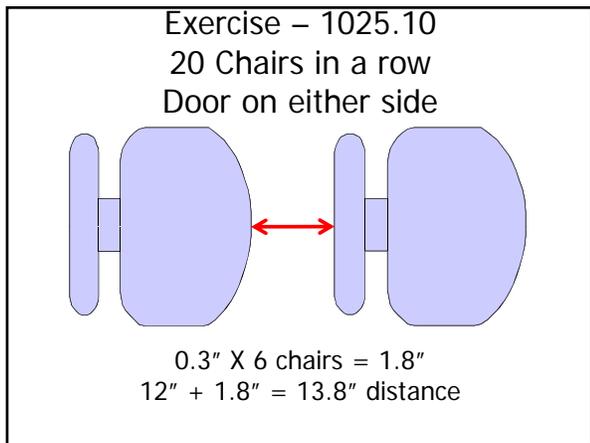






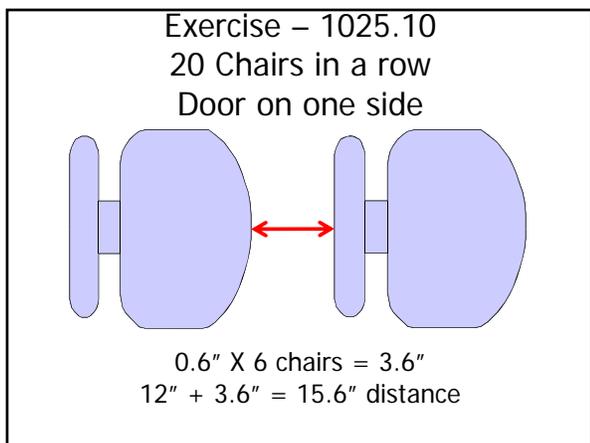
1025.10

- More than 14 seats
- Door on either end
  - 12" + .3" for seats over 14
  - Clear width not to exceed 22 inches
  - Not more than 100 seats in row



1025.10

- More than 14 seats
- Door on one end
  - 12" + .6" for seats over 14
  - Clear width not to exceed 22"



## Calculating the Occupant Load

5 feet along back A2 Booth



## Fire Code Chapter 10

Not Smoke Protected

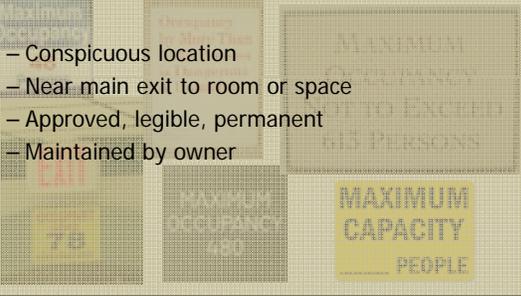
1025.6.1(4) Aisle Width?



## Fire Code Chapter 10

- 1029.4 Posting of occupant load

- Conspicuous location
- Near main exit to room or space
- Approved, legible, permanent
- Maintained by owner



## Fire Code Chapter 10

- 1029.4 Where does posting go in this example?

MAXIMUM  
CAPACITY  
48 PEOPLE



## Fire Code Chapter 10

- 1029.4 Where does posting go in this example?



## Fire Code Chapter 10

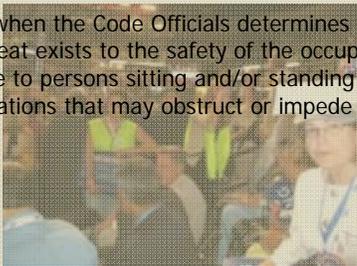
- Not over occupant load....



## Fire Code Chapter 10

- 1029.5 Overcrowding

".....when the Code Officials determines that a threat exists to the safety of the occupants due to persons sitting and/or standing in locations that may obstruct or impede use of...



## Fire Code Chapter 10

- Whose responsible?



## Fire Code Chapter 10

- 1029.7 Exit signs

– What the difference between 1029.7 and 1028.4?



## Fire Code Chapter 10



## Fire Code Chapter 10



1029.9

## Fire Code Chapter 10

- 604.4 – Maintenance for emergency power system:
  - NFPA 110 - 05: Standard for Emergency and Standby Power Systems
  - NFPA 111 - 05: Standard on Stored Electrical Energy Emergency and Standby Power Systems



## Fire Code Chapter 10

- 604.4 – Maintenance for emergency lighting
  - Activation test monthly
  - Power test annually
    - 90 minute duration



Light Location	Test Date	Pass / Fail	Tested By
By front door	12/15/10	Pass	Ben Dover
Near restrooms	12/15/10	Pass	Noah Buddy
In kitchen	12/15/10	Pass	P. U. Gass
Back door	12/15/10	Pass	I. C. Ewe

## Fire Code Chapter 10

- 1029.11 Aisles



## Lesson Five

### Emergency Response, Complaints, Inspections, And Enforcement

Fire and Safety Inspections  
in Assembly Occupancies

### Topics

- Emergency Response
  - Who, When, Why?
- Procedures for Emergency Response
  - How are you contacted?
- Unsafe, Unlawful Buildings-
  - What are they?
- Inspection
  - What can you see?
  - Documentation
- Enforcement

## Can you use the Property Maintenance Code for commercial buildings?

PM 101.2 Scope –  
Shall apply to all existing  
residential and non-  
residential structures and  
existing premises

The 10 deadliest public assembly and nightclub fires  
in U.S. history:

Source NFPA

	Death toll
1. Iroquois Theater, Chicago, IL; Dec. 30, 1903	602 killed
2. Coconut Grove, Boston, MA; Nov. 28, 1942	492 killed
3. Conway's Theater, Brooklyn, NY; Dec. 5, 1876	285 killed
4. Rhythm Club dance hall, Natchez, MS; April 23, 1940	207 killed
5. Rhodes Opera House, Boyertown, PA; Jan. 12, 1908	170 killed
6. Ringling Brothers and Barnum and Bailey circus tent, Hartford, CT; July 6, 1944	168 killed
7. Beverly Hills Supper Club, Southgate, KY; May 28, 1977	165 killed
8. Richmond Theater, Richmond, VA; Dec. 26, 1811	160 killed
9. The Station nightclub, West Warwick, RI; Feb. 20, 2003	100 killed
10. Happy Land Social club, Bronx, NY; March 25, 1990	87 killed

## Rhythm Club

April 23, 1940 in Natchez Mississippi

209 Deaths

Decorative moss was draped from the rafters and the windows were boarded up to prevent outsiders from seeing the band and hearing the music.

The decorative moss produced methane gas and the fire is believed to have started by a careless match.

The building was destroyed in 1 hour



## Happyland

March 25, 1990 Bronx, New York

87 Deaths

The building was ordered closed November 1988 for code violations

There was no follow up to the violations or closure

The owners of the building were trying to close the building and evict the club operators

Fire exits were blocked to prevent the entry of people who did not pay the cover charge

Fire started in the stairway up to the club



## Station Nightclub



The photo was taken **40 SECONDS** after the fire started

February 20, 2003-Warwick ,RI

100 Deaths, 230 Injured, 132 Escaped

The Tour Manager ignited pyrotechnics Which started the soundproofing foam on fire.

The building was totally engulfed in flames in five and one half minutes

## Requesting Code Enforcement



## Emergency Response

- 101.2 – Scope- Regulations affecting...
  1. The hazard of fire and explosion
  2. Conditions hazardous to life, property or public welfare.
  3. Fire Hazards in the structure
  4. Matters related to construction, alterations, or removal of fire suppression or alarm systems
- 102.1 – Where there is a conflict between a general requirement and a specific requirement , the specific requirement shall be applicable
- 110 - Fire Department Notification- The fire chief shall notify the CEO of any fire or explosion involving any structural damage, fuel burning appliance, chimney, flue, or gas vent

## How are you contacted ?

Daytime



NIGHT TIME

Set it up before it happens

## What do you do before you get there?

- Document– Time called  
Time arrived  
Who called, Chief Officer in Charge  
Address of structure involved  
Nature of the complaint

What else will you need?

- Camera, Cell Phone,  
copy of Fire Code,  
Property Maintenance  
Code



## You have arrived, now what?

- Who should you see first?  
Fire Incident  
Police Incident

The property owners, tenants, manager, employees?

**IDENTIFY  
YOURSELF**

## Plan of Action

Who is in charge of the incident?

Who is the property owner, tenant or other responsible person?

What is the complaint?

Inspect, photograph

Write violations, unsafe building, unsafe equipment

Explain what needs to be done, fire watch, building permit, documentation of repairs and how to notify

Code Enforcement of progress.



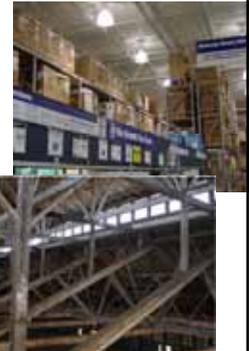
FC 315.2.3 – Combustible material shall not be stored in boiler, mechanical, electrical equipment rooms



## SECTION 505 PREMISES IDENTIFICATION

### 505.3 Buildings Utilizing Truss-Type Construction

- Identified for responders
- Title 19 NYCRR Part 1264 reprinted in Appendix H



## Additional Information

404.5 – Fire Safety and Evacuation Plans  
406.2 - Employee Training and Response Procedures  
506.1 – Key Box  
901.6.2 - Fire Protection Systems  
    Sprinkler Systems  
    Standpipe System  
    Portable Fire Extinguishers  
    Fire Alarms  
    Smoke Control

**Copies to the  
CEO  
UPON REQUEST**

## Unsafe Structures and Equipment

**Fire Code and  
Property Maintenance**

## SECTION 107

FC pg 3  
PM pg 3

107.1 When a structure or equipment is unsafe.....unfit for human occupancy... or unlawful....Such structure shall be condemned

**What do these mean???**

FC 107.2- **Unsafe Structures:** An unsafe structures is:

found to be dangerous to the life, health, property or safety of the public or the occupants

by not providing the MINIMUM safeguards to protect or warn the occupants in the event of fire,

or contains UNSAFE equipment

or is so damaged, or structurally unsafe,

or is such faulty construction or unstable foundation

FC 107.2.1 Unsafe Equipment

Boilers, Heating equipment,

Elevators, Moving stairway

Electrical Wiring / Equipment

Flammable liquid containers-ON THE PREMISIS or IN THE STRUCTURE

**Hazard to life, health,  
property or safety**

FC 107.3 Structure Unfit for Human Occupancy

When the structure is

Unsafe, Unlawful, or because of the degree of disrepair or lacks maintenance

**Constitutes a Hazard  
to the occupants or to  
the public**

FC 107.4

## What is an UNLAWFUL STRUCTURE?

Is one found in WHOLE or PART :

A: To be occupied by MORE persons than permitted

B: Was erected , altered, or occupied contrary to law

## Posting Unsafe Structures

FC 107.7 Notice

FC 107.6.1 Removal of Placard

FC 107.6 Prohibited Occupancy

What 's FC Section 311.5 ?

## 1 AM

FC 1029.5 – Overcrowding  
"Shall be prohibited for buildings to be overcrowded.....

### Who's Responsible?

The building owner, OR authorized agent shall be RESPONSIBLE

**BUT WHAT DO YOU DO NOW?**

## What is an Evacuation Plan

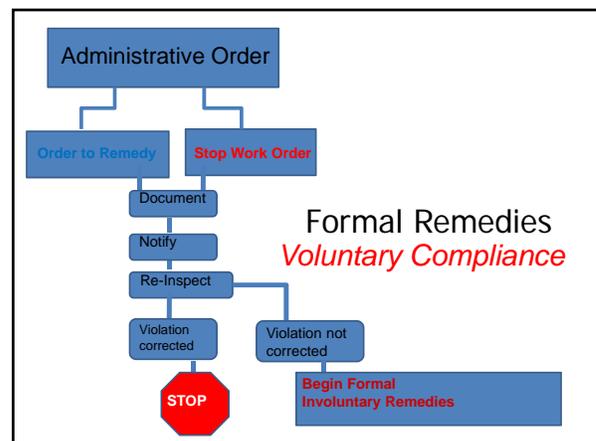
FC 404.3.1 Evacuation Plan

1. Emergency Egress or Escape Routes
2. Procedures for Employees
3. Accounting
4. Identifying Rescue Personnel
5. Notifying the Occupants
6. Alternate means of notifying emergency services
7. Identifying personnel with more information
8. Description of emergency voice/ alarm communications

## What is a Fire Safety Plan?

FC 404.3.2

1. Procedure for reporting fire
2. Life Safety Strategy
3. Site Plans
4. Floor Plans
5. Fire Hazards
6. Responsible persons for maintenance of fire systems
7. Responsible persons for maintenance / housekeeping



## Appearance Tickets

What information do you need on the ticket ?

Court Name, address, City, State, Zip Code

Defendants Name

Address, City, State, Zip Code

Complainants Name, Title, signature (this is you)

Code Violation Numbers and Titles

Date to appear and Time



**BUT.....**

Contact your municipalities  
attorney, court office **FIRST**

They can help you get started.

## Court Appearance

**You must be there**  
**Bring ALL the information**

**The Codes**

**Be Prepared**

**REMEMBER!!!!!!**

**COMPLIANCE IS  
WHAT WE ARE  
LOOKING FOR!!!**

Court appearances and fines are the  
very last choice.

## Summary

Document Everything!!!!!!!!!!!!!!

Fire Inspections

Complaints

Emergency Complaints

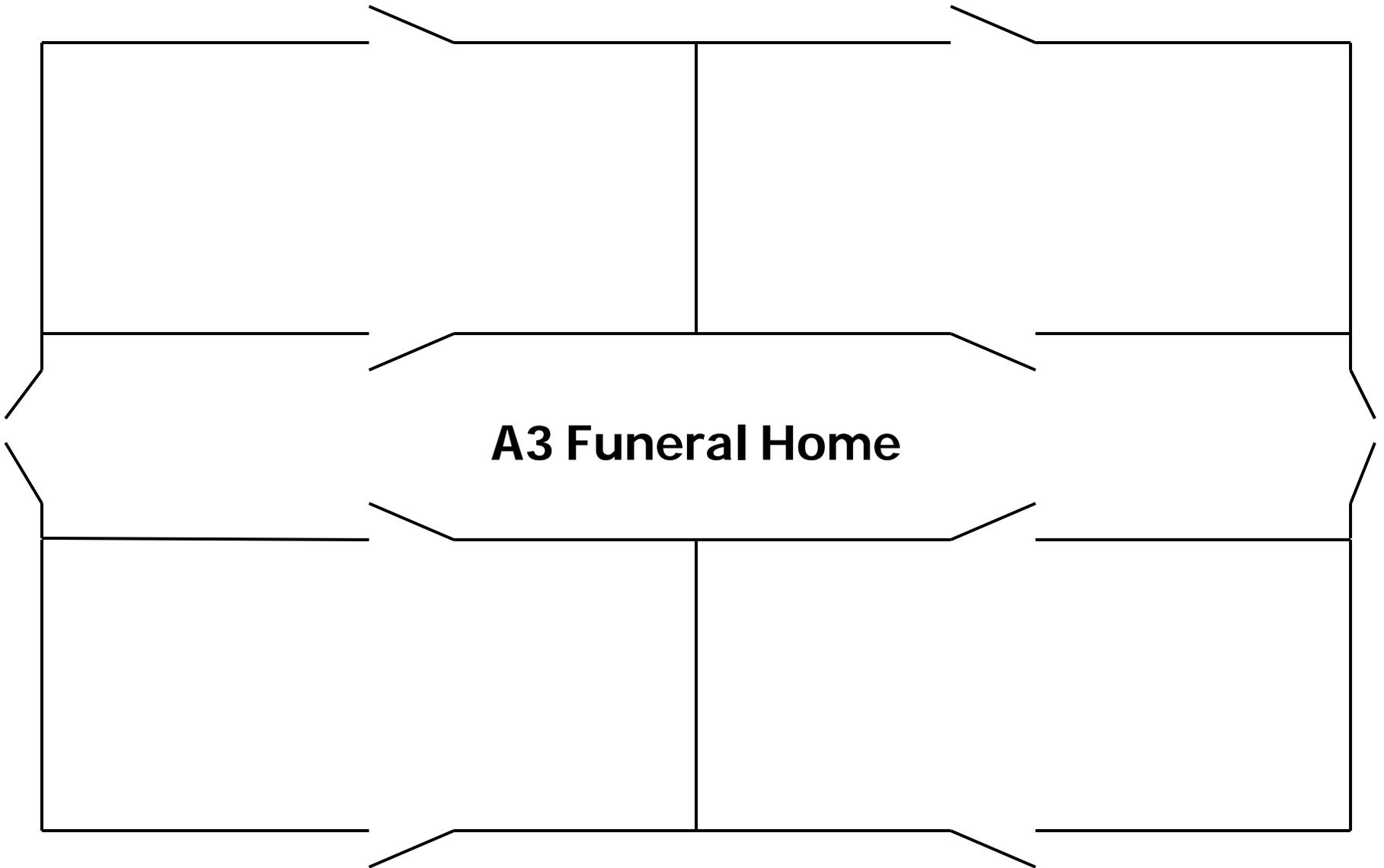
Be Careful what you say and  
Where you say it!!!!!!

Make sure you let people know  
you are taking pictures.

Follow up  
on ALL complaints  
and  
Inspections



# Exercise



# Exercise

