

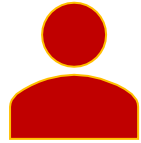


# Emergency Planning and Preparedness

## 2018 IFC® Chapter 4

2019 Fire Prevention Institute  
Washington State Association of Fire Marshals





# Your Instructor



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Former:

Vice President: National Fire Service Activities  
International Code Council

Deputy Superintendent: Curriculum and Instruction  
US National Fire Academy

Fire Marshal/Building Services Manager  
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# Course Goal

Summarize the 2018 IFC Chapter 4 requirements for emergency planning and preparedness.



# Learning Objectives

At the end of this presentation, you will be able to:

1. Identify the minimum requirements for occupancy-driven emergency plans.
2. Describe the required content of fire safety, evacuation and lockdown plans.
3. Explain where employee training is required to fulfill emergency preparedness objectives.



# Washington Rules State Building Code Council

<https://apps.des.wa.gov/sbcc/Page.aspx?nid=14>



# § 401 General Safety Requirements



- Plan approval
- Emergency responder notification
  - Fire
  - Alarm
  - Delayed
- False reports prohibited



# § 403.2 Emergency Preparedness Requirements

- Fire safety and evacuation plan by occupancy group
  - A
    - Except religious < 2,000
  - A with an atrium
    - Seating plan
    - Announcements
    - Fire watch
    - Crow managers



# Seating Plans

*Lewis and Clark Room*

<p>Classroom Style: Meeting Capacity 24 people</p> <p>Refreshments</p>	<p>U Shaped: Meeting Capacity 20 people</p> <p>Refreshments</p>
<p>Theater Style: Meeting Capacity 45 people</p> <p>Refreshments</p>	<p>Conference Style (Hollow Square): Meeting Capacity 24 people</p> <p>Refreshments</p>

SEATING COUNT - 120  
8' TABLES - 5  
5' ROUND - 14  
DANCE FLOOR - 28 PCS.

SEATING COUNT - 120  
8' TABLES - 15  
5' ROUND - 4  
DANCE FLOOR - 28 PCS.





# § 403.3 Ambulatory Care

- Medical, surgical, psychiatric or similar care on less than 24-hour basis for persons incapable of self-preservation or staff has accepted care responsibilities.



# § 403.3 Ambulatory Care

- Fire evacuation plan
  - Defend-in-place
  - Staged evacuation
  - Full evacuation
- Fire safety plan
- Staff training
- Emergency evacuation drills



# § 403.3 Ambulatory Care Fire Safety Plan

- Locations of patients rendered incapable of self-preservation
- Maximum number of patients rendered incapable of self-preservation
- Area and extent of each care facility
- Location of adjacent smoke compartments or refuge areas
- Travel path to adjacent smoke compartments
- Location of special locking or egress control devices



# § 403.4 and 403.9 Business/Mercantile



- Occupant load of 500 or more,
  - More than 100 above or below exit discharge level, or,
  - Buildings with ambulatory care.
- 
- Fire safety and evacuation plan



# § 403.5 Educational

- Group E, and,
- Buildings with Group E and an atrium.
  - Fire safety and evacuation plan
  - First evacuation drill within 10 days of school starting
    - Varying times of day
  - Assembly points



# § 403.6 Factory/Industrial



- Occupant load of 500 or more,
- More than 100 above or below exit discharge level, or,
- Pallet manufacturing and recycling facilities.
  
- Fire safety and evacuation plan



# § 403.7 Hazardous



Fire safety and evacuation plans



# § 403.7.1 Hazardous: Group H-5



- Fire safety and evacuation plan
  - Approximate plan for each area
  - HPM location and amount
    - Storage, handling, use
  - Shutoff valve locations
  - Emergency telephones
  - Exits
- Plans up-to-date and major changes reported to code official
- Designated emergency response team
  - Quarterly emergency drills





# § 403.8.1 Institutional: Group I-1 and R-4



Alcohol and drug  
Assisted living  
Group homes/halfway houses

- Fire safety and evacuation plan
  - Special staff actions
  - Evacuation into adjacent smoke compartment
  - Location and number of resident sleeping rooms
  - Special locking or egress controls
  - Employee and resident training
    - Resident participation
  - Drill frequency



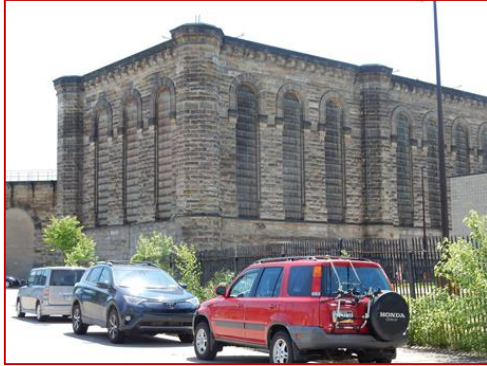
# § 403.8.2 Institutional: Group I-2

Hospitals, nursing homes, psychiatric care

- Fire evacuation plan
  - Special needs and post-evacuation containment
  - Written plan for egress maintenance
  - Defend-in-place strategy
  - Full-floor or building evacuation
- Drills
  - Patient relocation



# § 403.8.3 Institutional: Group I-3



## Prisons, reformatories

- Employee training
  - Entry on duty and annually
  - Portable extinguishers and manual suppression equipment
- Staffing
  - 24-hours
  - One employee within 300 feet or three floors of access door to each resident area
- Keys identified by sight and touch





# § 403.10 Residential: R-2 College/University

- First drill within 10 days of school
  - Variable times thereafter
- Emergency guide
  - Given to each tenant
  - Fire protection equipment location, function, use
  - Evacuation plan for each dwelling unit
  - Evacuation diagram at dorm sleeping room doors



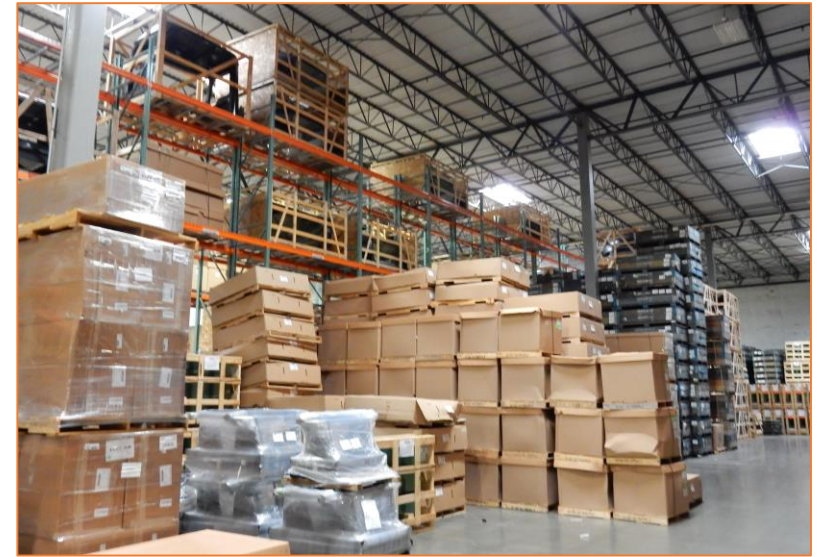
# § 403.11 Special Uses

- Covered malls
- High-rise buildings
- Underground buildings
- Occupant evacuation elevators



# § 403.11 Special Uses

## High-piled storage



Use	Area	Condition
Class I-IV commodities	> 500,000 ft <sup>2</sup>	
High-hazard commodities	>300,000 ft <sup>2</sup>	
H occupancy	Any	
Group F or M	Any	Occupant load of 500 or more, or, more than 100 above or below level of exit discharge
All	Any	Where required by fire code official.



# § 403.12 General Public Safety

- Fire watch
- Public gathering plan
- Crowd managers





# Public Safety Plans

- Emergency vehicles ingress/egress
- Fire protection
- Escape routes
- Public assembly areas
- Vendor and concession distribution
- Law enforcement need
- Standby fire services
- Weather monitoring



# Crowd Managers

- Event exceeds 500 indoors/ 1,000 outdoors
  - Religious worship not exceeding 1,000 exempt
- At least two, and, one for each 250 persons
- Duties
  - Conduct pre-event inspection and mitigate hazards
  - Verify compliance with all permit conditions
  - Direct evacuees in case of emergency
  - Assist first responders
  - Other duties as assigned by fire code official or in fire safety plan



# § 404 Fire Safety, Evacuation, Lock Down Plans



Image courtesy Surrey Fire.UK

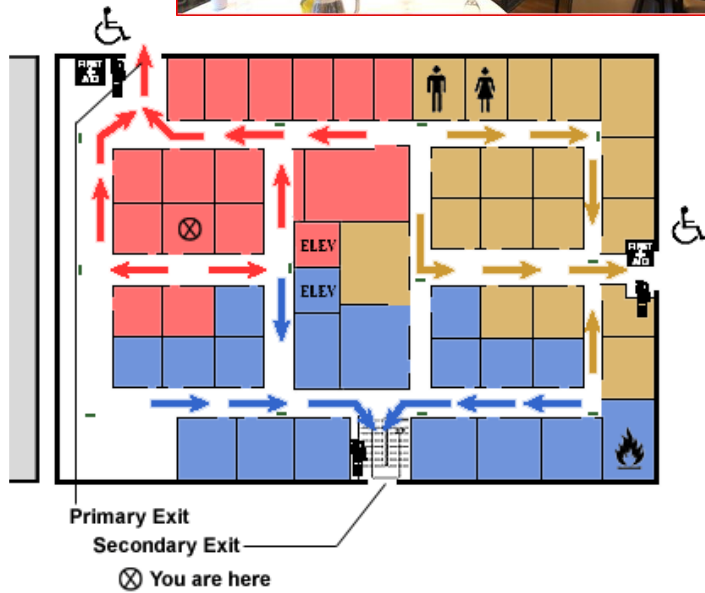


Image courtesy OSHA.gov



Image courtesy PCFD.org



Image courtesy Common Dreams.org



# Fire Evacuation Plans

- Emergency escape routes
- Critical employee operational procedures
- Elevator procedures
- Assisted rescue
- Accountability

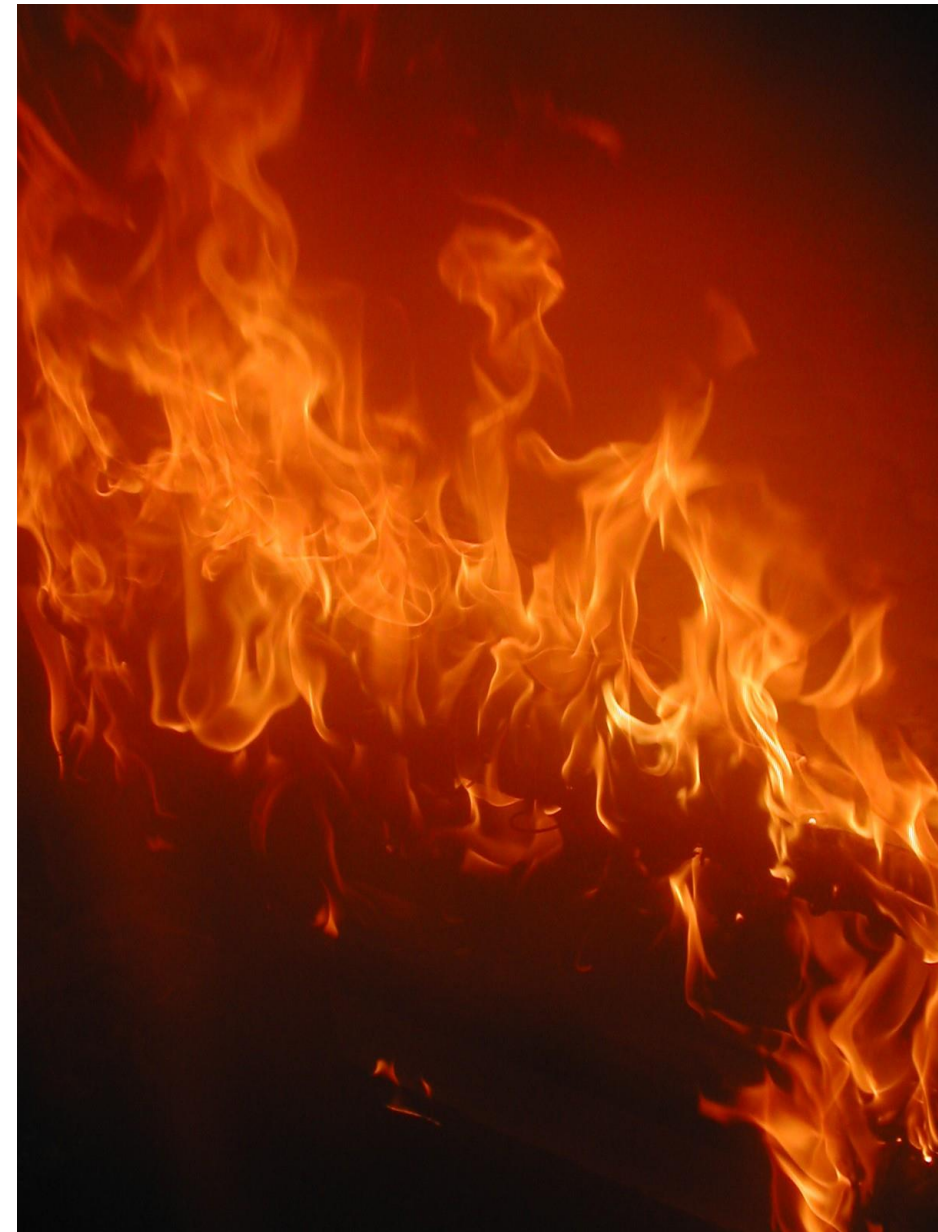


- Notification means
- Alert tones and programmed messages



# Fire Safety Plans

- Emergency reporting procedures
- Life safety strategies
  - Defend-in-place
  - Relocation
  - Phased evacuation
- Site and floor plans
- Major fire hazards
- Personnel assignments



# Lockdown Plans



- Authorizing individual(s)
- Security measures that could affect fire safety and egress
- Lockdown methods
- Fire service notification
- Egress clearing and restoration
- Terminating signal
- Training procedures and drill frequency



# § 405.2 Evacuation Drill Frequency/Participants

**EXTRACT:  
Not entire table**

**Check footnotes**

Group or Occupancy	Frequency	Participation
Group A	Quarterly	Employees
Group B <sup>b</sup>	Annually	All occupants
Group B ambulatory care <sup>c</sup>	Quarterly each shift	Employees
Group B outpatient <sup>b</sup>	Annually	Employees
Group E	Monthly <sup>a</sup>	All occupants
Group F	Annually	Employees
Groups I-1/R-4	Semi-annually each shift <sup>a</sup>	All occupants
Groups I-2/I-3	Quarterly each shift	Employees
Group R-1	Quarterly each shift	Employees



# § 405.5 Evacuation Drill Record Keeping

- Person conducting drill
- Date and time
- Notification method used
- Employees on duty and participating
- Number of occupants evacuated
- Special conditions simulated
- Problems encountered
- Weather conditions
- Time required for complete evacuation





# § 406 Employee Training and Response

- Job-related roles and responsibilities
  - Fire prevention
  - Evacuation
  - Fire safety
  - Emergency lock down



Image courtesy of Cal Poly Pomona

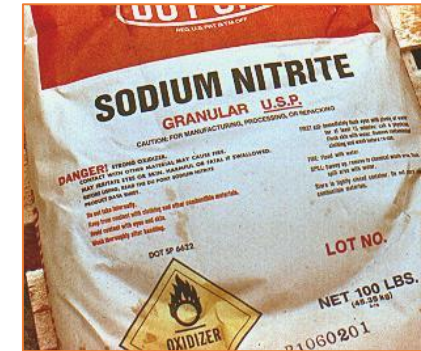


Image courtesy of WHBM.org



# § 407 Hazard Communication

- Permit threshold
- Safety Data Sheets
- Container identification
- Training
- HMIS
- HMMP
- Facility closure plan



# Appendix H

## HM Inventory Statement

- Report for each control area and Group H occupancy
  - Product name
    - CAS number
  - Amounts in storage, use-closed, use-open
    - Container capacity
  - IBC/IFC hazard class
  - Physical state
  - MAQ per control area

## HM Management Plan

- Emergency notification
  - Facility liaison
  - Fire
  - LEPC
  - Other
- Title, home and work telephone

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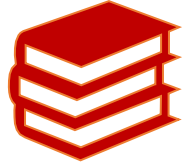




# Review

- Identify the minimum requirements for occupancy-driven emergency plans.
- Describe the required content of fire safety, evacuation and lockdown plans.
- Explain where employee training is required to fulfill emergency preparedness objectives.





# References

- International Fire Code, 2018 Edition [www.iccsafe.org](http://www.iccsafe.org)
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<https://albanyfire.net/about-contact/blog/53-11-things-that-make-up-a-perfect-fire-evacuation-drill.html>
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- Fire Safety Plans – OSHA [https://www.osha.gov › SLTC › etools › evacuation › fire](https://www.osha.gov/SLTC/etools/evacuation/fire)



# Questions or Comments?

Thanks for your participation.



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