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# Exit Routes

- ***Subpart E – Exit Routes, Emergency Action Plans, and Fire Prevention Plans***

# Objectives

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In this course, we will discuss the following:

- Exit routes (means of egress)
- Coverage
- Design requirements
- Operational features
- Emergency action plan
- Fire prevention plan



# Means of Egress

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§ 1910.34(a)–(b)

- Every employer is covered.
- Exits routes are covered.
  - Minimum requirements for exit routes to allow for the safe evacuation of employees during an emergency.
  - Also covers the minimum requirements for emergency action plans and fire prevention plans.



# Means of Egress

§ 1910.34



# Definitions

§ 1910.34(c)

- **Egress**

- Act or an instance of going from an enclosed place
- A means or place of going out; an exit
- Right or permission to go



# Definitions

§ 1910.34(c)

- **Exit route**

- A continuous and unobstructed path of exit travel from any point within a workplace to a place of safety (including refuge areas).



# Definitions

§ 1910.34(c)

- **Exit access**

- That portion of a means of egress that leads to an entrance to an exit.



# Definitions

§ 1910.34(c)

- **Exit**
  - That portion of an exit route that is generally separated from other areas to provide a protected way of travel to the exit discharge.



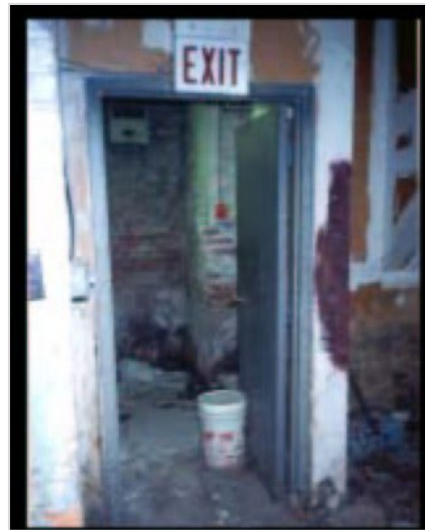


# Definitions

§ 1910.34(c)

- **Exit discharge**

- The part of the exit route that leads directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside.

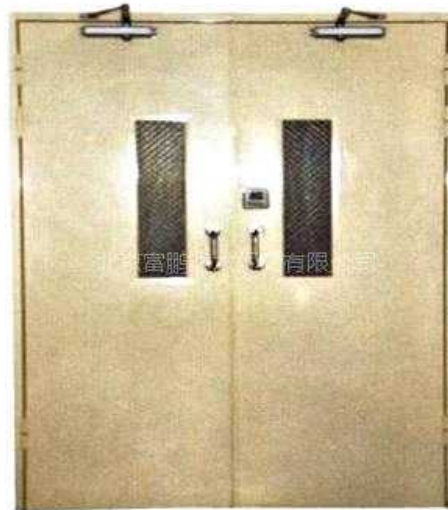


# Design Basic Requirements

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§ 1910.36(a)(1)–(3)

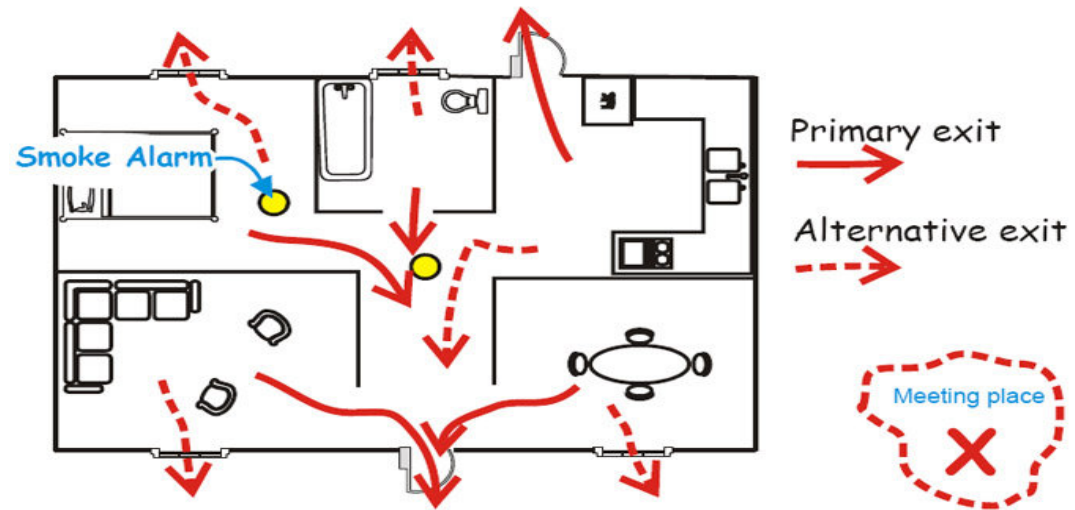
- Exit routes must be:
  - Permanent
  - Separated by fire resistant materials
  - Openings into an exit must be limited



# Exit Routes

§ 1910.36(b)

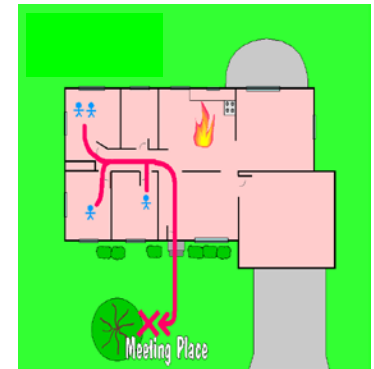
- The number of exit routes must be adequate.
  - Two exit routes
  - More than two exit routes
  - A single exit route



# Exit Discharge

§ 1910.36(c)(1)–(2)

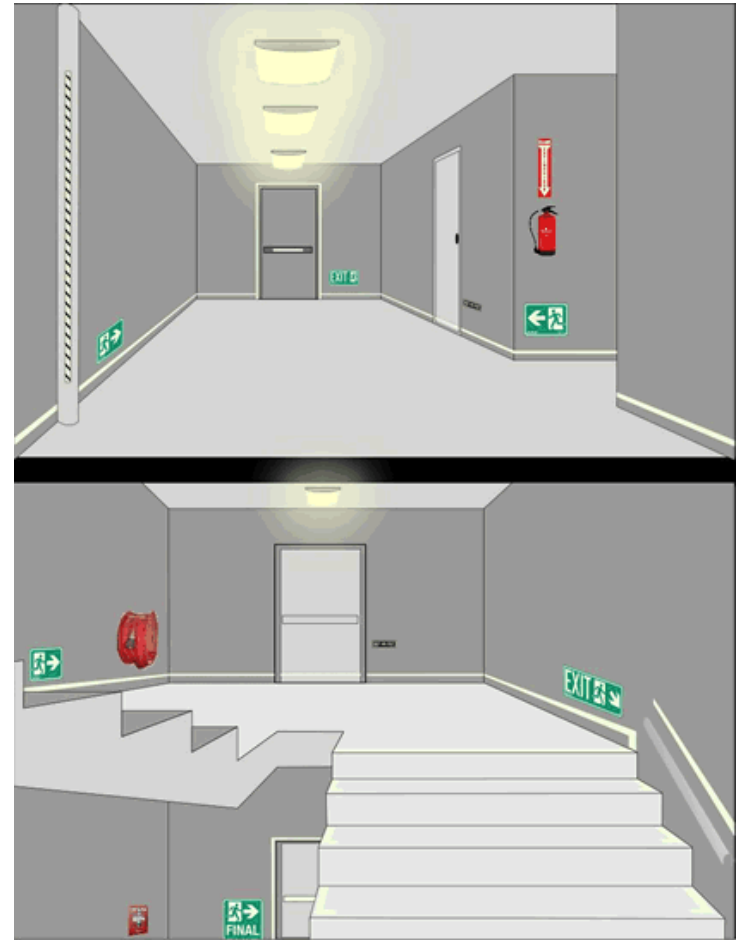
- Each exit discharge must lead directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside.
- The street, walkway, refuge area, public way, or open space to which an exit discharge leads must be large enough to accommodate the building occupants likely to use the exit route.



# Exit Discharge

§ 1910.36(c)(3)

- Exit stairs that continue beyond the level... clearly indicate the direction of travel...”



# Exit Route Design

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§ 1910.36(d)–(h)

- **Must be:**
  - Unlocked and unrestricted
  - Side-hinged
  - Adequate capacity and height
  - Must meet height and width requirements
  - Outdoor exit route permitted



# Unlocked and Unrestricted

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§ 1910.36(d)

- Must be able to open door from inside without keys, tools, or special knowledge
    - Panic bars that lock from the outside are permitted
  - Must be free of device or alarm that could restrict emergency use if device or alarm fails
  - May be locked from inside in mental, penal, or correctional facilities
    - And only if supervisory personnel are continuously on duty and there is an emergency plan
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# Unlocked and Unrestricted

§ 1910.36(d)

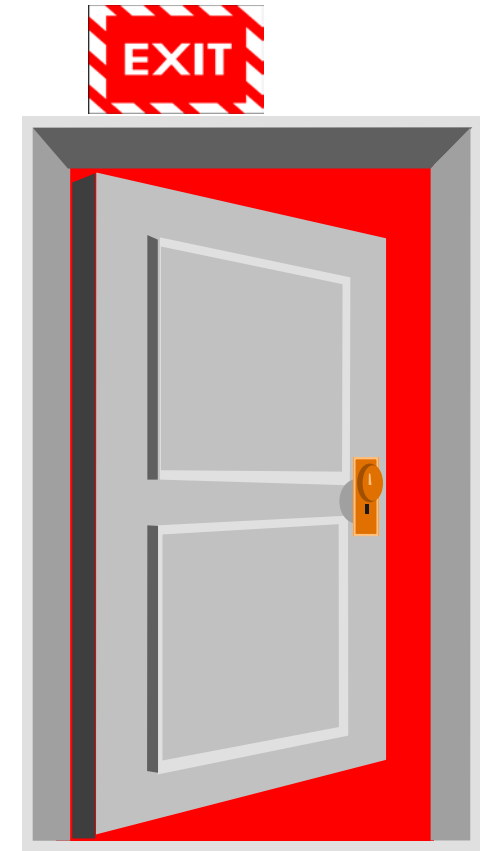




# Side-Hinged

§ 1910.36(e)

- Must be used to connect any room to an exit route
- Door that connects any room to an exit route must swing out in direction of exit travel if room is designed to be occupied by more than 50 people or if room is a high hazard area





# Adequate Capacity

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§ 1910.36(f)

- Must support maximum permitted occupant load for each floor served
- Capacity of exit route may not decrease in direction of exit route travel to exit discharge.
  - **Note:** Information regarding “occupant load” is located in NFPA 101-2000, Life Safety Code.



# Minimum Height and Width

§ 1910.36(g)

- Ceiling of exit route must be at least seven feet six inches high
- Exit access must be at least 28 inches wide at all points
- Objects that project into exit route must not reduce width of exit route to less than minimum width requirements



# Outdoor Exit Route

§ 1910.36(h)

- Have guardrails to protect unenclosed sides if a fall hazard exists
- Covered if snow or ice is likely to accumulate along route
- Reasonably straight and have smooth, solid, substantially level walkways
- Must not have a dead-end that is longer than 20 feet



# Exit Route Maintenance and Safeguards

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§ 1910.37(a)–(e)

- Danger to employees minimized
  - Adequate and appropriate lighting and marking
  - Fire retardant properties maintained
  - Exit routes maintained during construction and repairs
  - Employee alarm system must be operable
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# Danger to Employees Minimized

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§ 1910.37(a)

- Kept free of explosive or highly flammable furnishings or other decorations
  - Arranged so employees will not travel toward a high hazard area
  - Must be free and unobstructed
  - Safeguards designed to protect employees during an emergency must be in proper working order at all times
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# Lighting and Marking

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§ 1910.37(b)

- Adequately lighted
- Clearly visible and marked by a sign reading “**Exit**”
- Free of decorations or signs that obscure visibility of exit
- If direction of travel to exit is not apparent, signs must be posted along exit access indicating direction of travel to nearest exit





# Lighting and Marking

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§ 1910.37(b)

- Each doorway or passage along exit access that could be mistaken for an exit must be marked “**Not an Exit**” or be identified by a sign indicating its actual use
  - Must have the word “**Exit**” in plainly legible letters not less than six inches high, with the principal strokes of the letters in the word “**Exit**” not less than three-fourths of an inch wide
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# Fire Retardant Properties

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§ 1910.37(c)

- Fire retardant paints or solutions must be renewed as often as necessary to maintain their fire retardant properties.



# Construction and Repairs

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§ 1910.37(d)

- During new construction, employees must not occupy a workplace until exit routes are completed and ready for employee use
  - During repairs or alterations, employees must not occupy a workplace unless exit routes are available and existing fire protections are maintained, or until alternate fire protection is furnished
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# Operable Alarm System

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§ 1910.37(e)

- Install and maintain an operable employee alarm system that has a distinctive signal to warn employees of fire or other emergencies, unless employees can promptly see or smell a fire or other hazard in time to provide adequate warning to them.
- Employee alarm system must comply with § 1910.165.





# Psychological Hazards

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- Lack of information
- Panic
- Confusion



# Physical Hazards

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- Fire
- Toxic vapors
- Threats
- Storms
- Other safer location



# Emergency Action Plan

§ 1910.38(a)–(b)

- An employer must have an emergency action plan whenever an OSHA standard in this part requires one.
- An emergency action plan (EAP) must be in writing kept at the workplace and available to employees when required.
- If an employer has 10 or fewer employees, may be communicated verbally.

\_\_\_\_\_  
(Company Name)

**EMERGENCY ACTION PLAN**  
(Ref: 1910.38)

**INTRODUCTION:**

This document is a plan to prepare for workplace emergencies. By auditing the workplace, training employees, obtaining and maintaining the necessary equipment, and by assigning responsibilities, human life and company resources will be preserved. The intent of this plan is to ensure all employees a safe and healthful workplace. Those employees assigned specific duties under this plan will be provided the necessary training and equipment to ensure their safety. This plan applies to emergencies that could be reasonably expected in our workplace such as fire/smoke, tornadoes, bomb threats, leaks, etc.

**EMERGENCY PLAN COORDINATORS:**

Building/Department	Name/Title	Phone #

Coordinators are responsible for the proper inventory and maintenance of equipment. They may be contacted by employees for further information on this Plan.

**PLAN OUTLINE/DESCRIPTION:**

I. Means of Reporting Emergencies: All fires and emergencies will be reported by one or more of the following means as appropriate:

- Verbally to the Coordinator during normal working hours.
- By telephone if after hours/weekends.
- By the building alarm system.

Note: The following numbers will be posted throughout the facility:

FIRE: \_\_\_\_\_ POLICE: \_\_\_\_\_ AMBULANCE: \_\_\_\_\_

# EAP Elements

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§ 1910.38(c)

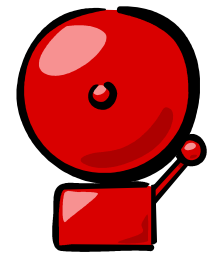
- Must have procedures for:
  - » Reporting a fire or other emergency
  - » Emergency evacuation
  - » Employees who operate critical operations
  - » Account for employee post evacuation
  - » Employees performing rescue or medical duties
  - » Name or job title of every employee who may be contacted about the EAP



# Alarm System and Training § 1910.38(d)–(e)

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- Maintained and distinctive sounds based on an emergency
- Employer must designate and train employees for a safe and orderly evacuation
- Employer must review plan with employees:
  - Development and/or initial hiring
  - Job change
  - Plan change





# Fire Prevention Plan

§ 1910.39(a)–(b)

- An employer must have a fire prevention plan when an OSHA standard in this part requires one.
- A fire prevention plan must be in writing, kept at the workplace, and available to employees for review.
- If an employer has 10 or fewer employees, it may be communicated verbally.

**FIRE PREVENTION PLAN**

I. Policy

Established \_\_\_\_\_  
(date)

\_\_\_\_\_  
(Executive officer)

It is the policy of \_\_\_\_\_ to provide to employees the safest practical workplace free from areas where potential fire hazards exist. The primary goal of this fire protection program is to reduce or eliminate fire in the workplace by heightening the fire safety awareness of all employees. Another goal of this plan is to provide all employees with the information necessary to recognize hazardous conditions and take appropriate action before such conditions result in a fire emergency.

This fire prevention plan complies with the requirements of 29 CFR 1910.39.

This plan details the basic steps necessary to minimize the potential for fire occurring in the workplace. Prevention of fires in the workplace is the responsibility of everyone employed by the company but must be monitored by each supervisor overseeing any work activity that involves a major fire hazard. Every effort will be made by the company to identify those hazards that might cause fires and establish a means for controlling them.

The fire prevention plan will be administered by \_\_\_\_\_ who will compile a list of all major workplace fire hazards, the names or job titles of personnel responsible for fire control and prevention equipment maintenance, names or job titles of personnel responsible for control of fuel source hazards and locations of all fire extinguishers in the workplace. The plan administrator, or safety officer, must also be familiar with the behavior of employees that may create fire hazards as well as periods of the day, month, and year in which the workplace could be more vulnerable to fire.

This fire prevention plan will be reviewed annually and updated as needed to maintain compliance with applicable regulations and standards and remain up-to-date with the state of the art in fire protection. Workplace inspection reports and fire incident reports will be maintained and used to provide corrections and improvements to the plan.

This plan will be available for employee review at any time during all normal working hours.

II. CLASSIFICATION

Fire is a chemical reaction involving the rapid oxidation or burning of a fuel. It needs four elements to occur as illustrated below in the tetrahedron. This is described by the following illustration:

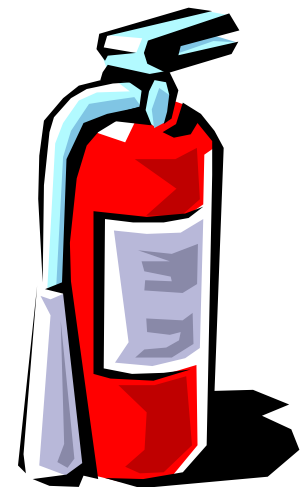
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# Fire Plan Elements

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§ 1910.39(c)

- Must have procedures for:
  - A list of all major fire hazards, proper handling and storage
  - Accumulation controls for flammable and combustible waste materials
  - Procedures for regular maintenance
  - Name or job title of employees responsible maintaining equipment
  - Name or job title of employees responsible for control of fuel source



# Employee Information

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§ 1910.39(d)

- An employer must inform employees upon initial assignment to a job of the fire hazards to which they are exposed.
- An employer must also review with each employee those parts of the fire prevention plan necessary for self-protection.



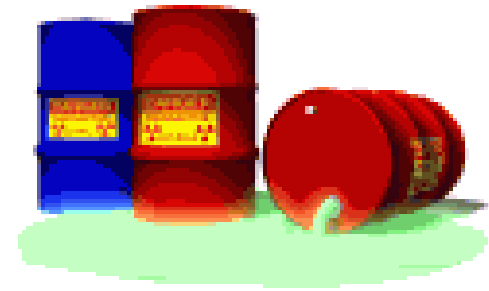


# Exit Routes, Emergency Action Plans, and Fire Prevention Plans

1910 Subpart E Appendix

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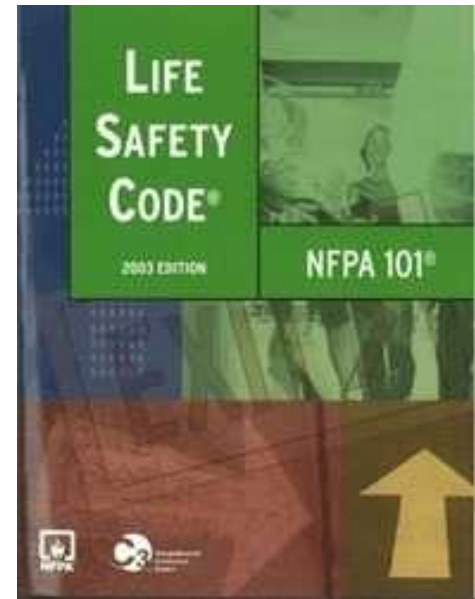
- Nonmandatory guideline to assist employers in complying with the appropriate requirements
  1. Emergency action plan elements
  2. Emergency evacuation
  3. Emergency action plan training
  4. Fire prevention housekeeping
  5. Maintenance of equipment



# Life Safety Code

§ 1910.35

- The 2000 Life Safety Code goes far beyond the requirements of OSHA's standard, both in details of compliance and flexibility for unique workplace conditions.
- If an employer complies with NFPA 101-2000, OSHA will deem such compliance to be compliance with the OSHA standards.



# Summary

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- Means of egress
- Definitions
- Design requirements
- Exit marking and signs
- Emergency action plan
- Fire prevention plan



**Thank You For Attending!**

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**Final Questions?**

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