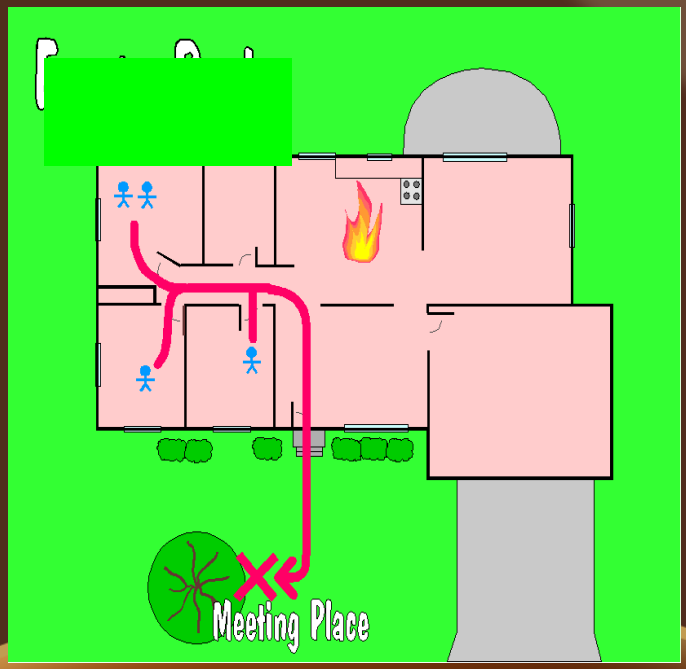
Exit Routes, Emergency Action Plans, Fire Prevention Plans, and Fire Protection

Introduction

- Fires and explosions kill more than 200 and injure more than 5,000 workers each year
- There is a long and tragic history of workplace fires in this country caused by problems with fire exits and extinguishing systems
- OSHA requires employers to provide proper exits, fire fighting equipment, and employee training to prevent fire deaths and injuries in the workplace

Exit Routes

- A continuous and unobstructed path of exit travel from any point within a workplace to a place of safety (including refuge areas)
- Consists of three parts:
  - Exit access
  - Exit
  - Exit discharge



Exit Routes

Basic Requirements

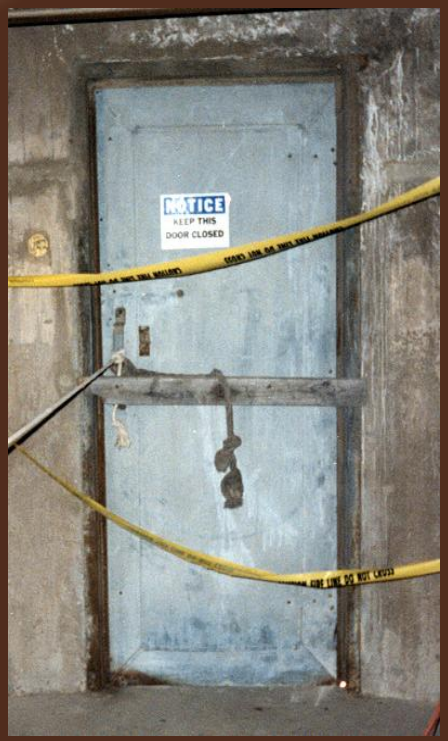
- Exit routes must be permanent and there must be enough exits in the proper arrangement for quick escape
- Exits must be separated by fire-resistant materials
- Openings into an exit must be limited to those necessary to allow access to the exit or to the exit discharge
- An opening into an exit must be protected by an approved self-closing fire door that remains closed or automatically closes in an emergency

Exit Discharge

- Each exit discharge must lead directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside that is large enough to accommodate all building occupants likely to use the exit route
- Exit stairs that continue beyond the level on which the exit discharge is located must be interrupted on that level by doors, partitions, or other effective means that clearly indicate the direction of travel to the exit discharge

Exit Doors Must Be Unlocked

Locked and blocked exit



- Must be able to open from the inside at all times without keys, tools, or special knowledge
- Device such as a panic bar that locks only from the outside is permitted
- Must be free of any device or alarm that could restrict emergency use if the device or alarm fails
- May be locked from the inside only in mental, penal, or correctional facilities where there is constant supervision

Side-Hinged Exit Door

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

Exit Route Capacity and Dimensions

- Must support the maximum permitted occupant load for each floor served
- Capacity must not decrease in the direction of exit route travel to the exit discharge
- Ceiling must be at least 7-½ ft. high with no projection reaching a point less than 6 ft.-8 in. from floor
- An exit access must be at least 28 in. wide at all points

Minimize Danger to Employees

Obstructed exit route

- Exit routes must be free and unobstructed
- Keep exit routes free of explosive or highly flammable materials
- Arrange exit routes so that employees will not have to travel toward a high hazard area, unless it is effectively shielded
- Emergency safeguards (e.g., sprinkler systems, alarm systems, fire doors, exit lighting) must be in proper working order at all times

Exit Marking

- Each exit must be clearly visible and marked with an "Exit" sign
- Each exit route door must be free of decorations or signs that obscure the visibility of the door

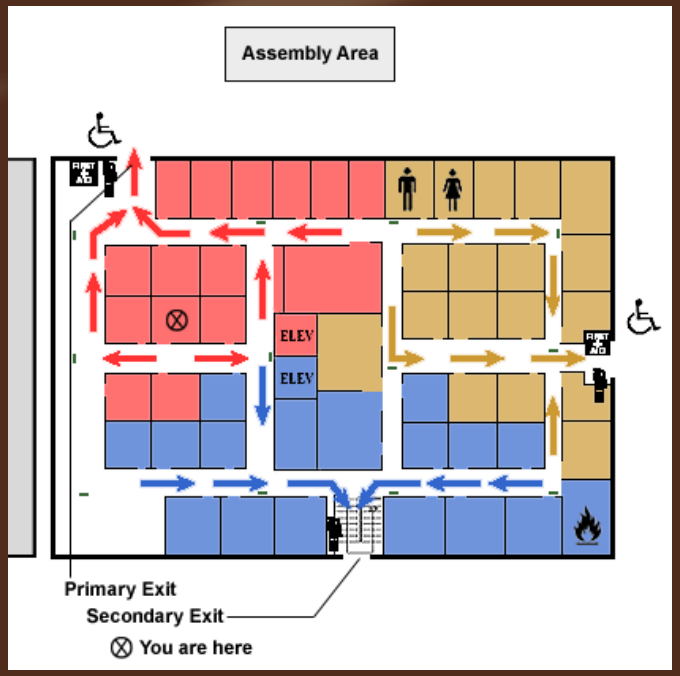
Exit Marking

- If the direction of travel to the exit or exit discharge is not immediately apparent, signs must be posted along the exit access indicating direction to the nearest exit
- The line-of-sight to an exit sign must clearly be visible at all times

Exit Marking

Each doorway or passage along an exit access that could be mistaken for an exit must be marked “Not an Exit” or similar designation, or be identified by a sign indicating its actual use (e.g., closet).

Emergency Action Plan



- Describes actions that must be taken to ensure employee safety in emergencies
- Includes floor plans or maps which show emergency escape routes
- Tells employees what actions to take in emergency situations
- Covers reasonably expected emergencies, such as fires, explosions, toxic chemical releases, hurricanes, tornadoes, blizzards, and floods

Fire Prevention Plan

The plan must include:

- A list of the major fire hazards and handling, storage, and control procedures
- Names or job titles of persons responsible for maintenance of equipment and systems to prevent or control ignitions or fires
- Names or job titles of persons responsible for control of fuel source hazards
- Training for all employees who have responsibilities in the plan

Portable Fire Extinguishers

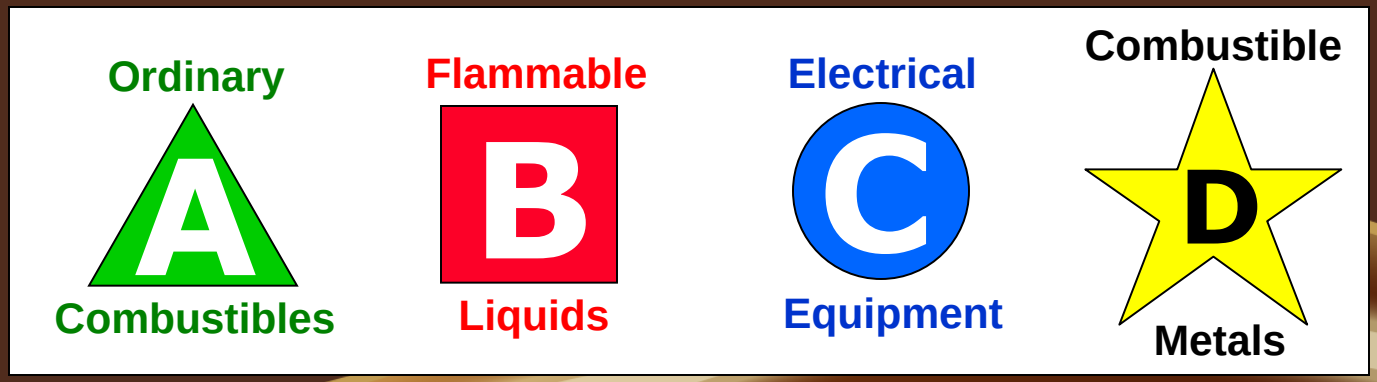
If portable fire extinguishers are provided for employee use, the employer must mount, locate and identify them so workers can access them without subjecting themselves to possible injury.

Blocked extinguisher

Extinguisher Classification

Letter classification given an extinguisher to designate the class or classes of fire on which it will be effective.

- **Class A** – ordinary combustibles (wood, cloth, paper)
- **Class B** – flammable liquids, gases, greases
- **Class C** – energized electrical equipment
- **Class D** – combustible metals



Extinguisher Rating

- Numerical rating given to Class A and B extinguishers which indicate how large a fire an experienced person can put out with the extinguisher
- Ratings are based on tests conducted at Underwriters' Laboratories, Inc.
  - Class A: 1-A, 2-A, . . . 40-A
  - Class B: 1-B, 2-B, . . . 640-B
- A 4-A extinguisher, for example, should extinguish about twice as much fire as a 2-A extinguisher

Maintaining Portable Fire Extinguishers

- Must maintain in a fully charged and operable condition
- Must keep in their designated places at all times except during use
- Must conduct an annual maintenance check
- Must record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less

Portable Fire Extinguisher Training and Education

- Where portable fire extinguishers have been provided for employee use in the workplace, employees must be provided with an educational program on the:
  - General principles of fire extinguisher use
  - Hazards of incipient (beginning) stage fire fighting
- Employees designated to use extinguishers must receive instruction and hands-on practice in the operation of equipment

Summary

- There must be enough exits in the proper arrangement for quick escape
- Exit routes must be marked, lighted, free of obstructions, and locks must not be used to impede or prevent escape
- An emergency action plan and a fire prevention plan must be in place
- Fire extinguisher classes and numerical ratings help a user understand its capabilities
- Fire extinguishers must be inspected, maintained and employees must be trained in how to use them

Quiz

Click on the link below to take a 5-Question Quiz.

https://secure.rutherfordcountytn.gov/Fire_Protection_2011/

Once you have linked to the quiz, please enter your Social Security Number at the top. You will need to enter it according to the example shown (ex. 999-99-9999 with hyphens included).

Once finished with the questions, please click the submit button and your training will be recorded.

Note: It takes 90 days for newly hired employees to be loaded to the training database. In this case print out the quiz and submit to your supervisor or safety training point of contact.