B-3

APPENDIX C
CODE CHANGE PROPOSAL
NORTH CAROLINA
BUILDING CODE COUNCIL

1429 Rock Quarry Road, Suite 105
Raleigh, North Carolina 27610
(919) 647-0008
david.rittlinger@ncdoi.gov

Petition for Rule Making Item Number _____

Granted by BCC	_____	**Adopted by BCC**	_____	**Approved by RRC**	_____
Denied by BCC	_____	**Disapproved by BCC**	_____	**Objection by RRC**	_____

PROPONENT: Anthony L. and Kerry J. Smith PHONE: (252) -241-4814
REPRESENTING: Carteret Boat Storage
ADDRESS: 662 West Beaufort Road
CITY: Beaufort STATE: NC ZIP: 28516
E-MAIL: ksmith49@ec.rr.com FAX: ( ) -

North Carolina State Building Code, Volume 2024 Fire Code ___ - Section 906

CHECK ONE: [x]Revise section to read as follows: [ ] Delete section and substitute the following:
[ ] Add new section to read as follows: [ ] Delete section without substitution:

~~LINE THROUGH MATERIAL TO BE DELETED~~ UNDERLINE MATERIAL TO BE ADDED

Please type. Continue proposal or reason on plain paper attached to this form. See reverse side for instructions.

_____

2024 NC Fire Code

906.1 Where required. Portable fire extinguishers shall be installed in all of the following locations:
1. In new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

Exceptions:

....

4. Group S Self Service Dry Boat storage buildings that are a maximum of one-story in height and contain leased units that are locked and have no common corridor for egress shall only require a portable fire extinguisher in the onsite business office of the storage facility. If no business office is located onsite, a portable fire extinguisher shall not be required. When a fire extinguisher is provided in the business office and this exception is used, a sign located on the exterior of each leased unit door shall be permanently mounted a minimum of 48 inches and a maximum of 60 inches above grade with a minimum height of 2 inches and contrast with the background. that reads as follows: IN CASE OF FIRE CALL 911. The sign lettering shall be all capitals.

Will this proposal change the cost of construction? Decrease [ ] Increase [ ] No [x]
Will this proposal increase to the cost of a dwelling by $80 or more? Yes [ ] No [x]
Will this proposal affect the Local or State funds? Local [ ] State [ ] No [x]
Will this proposal cause a substantial economic impact (≥$1,000,000)? Yes [ ] No [x]

- Non-Substantial – Provide an economic analysis including benefit/cost estimates.
- Substantial – The economic analysis must also include 2-alternatives, time value of money and risk analysis.
- Pursuant to §143-138(a1)(2) a cost-benefit analysis is required for all proposed amendments to the NC Energy Conservation Code. The Building Code Council shall also require same for the NC Residential Code, Chapter 11.

REASON:

See REASON, Attached.

BCC CODE CHANGES

Signature: *Kerry J. Smith* Date: 07/29/2024 FORM 11/26/19

INSTRUCTIONS

Each proposed Code change request shall comply with the following policies:

Rule 1: The Original and twenty-two (22) copies of the proposed Petition for Rule-Making along with supporting documentation shall be filed with the Building Code Council Secretary. Submit one (1) electronic copy via email.

Rule 2: The filing shall be received by the first day of the month prior to the quarterly scheduled meeting date. Example: A December meeting date will require filing by November 1 prior to the meeting.

Rule 3: Each request shall be typewritten on this form and shall contain the following:

(1) The proposed rule change must be set forth in full and contain explicit reference to the affected section or sections of the Code.
(2) The request shall state the reasons for the proposed rule change with supporting documentation.
(3) The proposed rule change shall comply with the standards set forth in GS 143-138(c) and reference to the particular standards shall be set forth in the request for the amendment.
(4) The proposed rule change shall contain an economic impact analysis as required by GS 143-138(a).
(5) A proposed rule change to the NC Energy Conservation Code shall have an accompanying cost-benefit analysis as required by GS 143-138(a1)(2).

Rule 4: When a request is improperly filed or not in accordance with all the rules listed above, the BCC Secretary shall reject the submittal and notify the applicant of the proper procedure to follow.

Rule 5: Upon the proper filing of a request, the BCC Secretary shall forward one copy of said request to each council member prior to the scheduled meeting date. Persons filing proposed petitions are hereby notified of the place and time of the scheduled hearings. The BCC Secretary shall cause to be published the notice of public hearing as specified in GS 143-138(a).

Rule 6: The Council shall either Grant or Deny the proposed Petition for Rulemaking at the meeting following receipt of the proposed rule change. The Council will take no further action on items that are Denied. Granted items may be referred to Committee for review.

Rule 7: The Council will hold a public hearing on Granted items at the next quarterly scheduled meeting. The Council will take final action on Granted items at the next quarterly scheduled meeting after the public hearing.

Timeline Example

Petition received:	**February 1**
Petition Granted:	**March BCC meeting**
Notice of Hearing published:	**April NC Register**
Committee review:	**May - June**
Hearing held:	**June BCC meeting**
Final Adoption:	**September BCC meeting**
Rules Review Meeting:	**November RRC meeting**
Approved:	**December 1**

REASON:

After 52 years of operating Carteret Boat Storage in Beaufort, North Carolina, we are now being required by local fire officials to install fire extinguishers on the outside of our buildings, supposedly in accordance with NC Fire Code 906.1. Why? The Fire Marshals' answer, "because it's the Code." We were threatened with penalties of fines, jail time, and even forfeiture of our property.
This was such an egregious and unexpected attack on our property, our business, and our freedom that I had to pursue an answer. For months I searched the internet for an interpretation of the sighted code, "NC Fire Code 906.1." What I found was a nearly unsurmountable task. The difficulty of electronic searching and interpretation of vague and unspecific language made the possibility to defend ourselves, in the words of a trusted attorney, "slim to none." It was impossible for me to learn what all the capital letters stand for. However, I learned that the letter that stands for our situation is "S," which stands for "storage.' Therefore, this proposal is in defense of storage facilities. We contend that this portion of the Code lacks clarity in considering the primary purpose of fire extinguishers, which is safe escape, especially in Group S occupancies where there is almost no human activity, no accessibility, and no burning allowed, and where escape must first be accomplished to access the fire extinguisher.

First…The word "In" is used at the beginning of NC Fire Code 906.1 NOWHERE IN CODE 906.1 IS THE WORD "ON" OR "OUTSIDE" USED. NEITHER IS THERE ANY MENTION OR INDICATION THAT A FIRE EXTINGUISHER SHALL BE PLACED "OUTSIDE" OR "ON" S-OCCUPANCIES WHERE STORAGE ITEMS ARE LOCKED INSIDE. We are being required to install fire extinguishers on the outside of our buildings, even on the outside of entry doors to meet the 75 ft. maximum distance of travel. Therefore, we propose to change the word "in" to "inside' for clarity.

Second…Group S Occupancies, as described in 311.2 Moderate-hazard storage, Group S-1, and 311.3 Low hazard storage S-2, is not defined.
"Boat storage (inside)" is considered Group S-1, while "Parking garages, open or enclosed," is considered Group S-2. "Dry Boat Storage," is not defined in the 2018 Fire Code.. (See ATTACHMENT #2)

Third…According to NFPA, the Primary purpose of a fire extinguisher is safe escape. A fire extinguisher cannot prevent a fire. A fire extinguisher cannot even eliminate a fire without the help of a trained individual employing it. Fires are dangerous, and a fire extinguisher in the hands of an untrained fire fighter can be dangerous. Installing fire extinguishers on the outside of buildings where burning is prohibited, human activity is negligible, and accessibility is prohibitive defies the purpose of the fire extinguisher. (SEE ATTACHMENT #4)

Buildings in which Group S-1 and S-2 items are stored may be very different. One-story buildings with individual locked units have minimal occupant load as compared to warehouse buildings or dry-stack boat storage where multiple units are stored in large facilities, and human activity is present. The need for escape from an individually leased unit which is locked and inaccessible is minimal, and since the only place for a fire extinguisher to be installed is outside the building, the extinguisher cannot aid in the escape from inside the building. There is no common corridor from which to escape. Once outside, an individual's escape has already been accomplished. In addition, if the exterior fire extinguisher is meant to provide a tool for fighting a fire, large or small, NFPA states that only adults who know how to operate a fire extinguisher should use them. If safe escape is the primary use of a fire extinguisher, and only trained adults should use them, requiring exterior fire extinguishers, in situations where doors are locked, and any untrained person or vandal is invited to use the device is a gross defiance of the standards of the National Fire Protection Association. Therefore, the Code should be changed to more specifically address the practical need for extinguishers.

We propose the code be changed to include (<u>EXCEPTION: One-story storage facilities with individual locked units with no common corridor for exit.)</u>

ACCORDING TO THE NATIONAL FIRE PROTECTION ASSOCIATION:

1. Fire extinguishers are one element of a fire response plan, but the primary element is safe escape. (ATTACHMENT #4)
2. A portable fire extinguisher can save lives and property by putting out a small fire or containing it until the fire department arrives. (ATTACHMENT #4)
3. Because fire grows and spreads so rapidly, the #1 priority for residents is to get out safely. (ATTACHMENT #4)

4. Install fire extinguishers close to an exit and keep your back to a clear exit when you use the device so you can make an easy escape if the fire cannot be controlled. (ATTACHMENT #4)
5. NFPA continues to believe that only adults who know how to operate portable fire extinguishers should use them. (ATTACHMENT #4)
6. NFPA Fact Sheet, FIRE EXTINGUISHER LOCATION AND PLACEMENT states: "This fact sheet identifies which occupancies require extinguishers and where they should be placed within them. (ATTACHMENT #3)
7. Once you are out, Stay Out! Under no circumstances should you EVER go back into a burning building. (ATTACHMENT #5)
8. The distribution of portable fire extinguishers is a balance between having an extinguisher nearby when you need it but not being overly burdened by the cost and maintenance of having excessive extinguishers. (ATTACHMENT #6)
9. "When NFPA10 addresses extinguisher placement it uses the term 'MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER.' This means that at any point INSIDE the building you should never have to travel more than the maximum distance to reach extinguisher." (ATTACHMENT #6)

ATTACHMENT #1:	NC FIRE CODE 906.1
ATTACHMENT #2:	CARTERET BOAT STORAGE FACILITIES
ATTACHMENT #3:	omitted
ATTACHMENT #4:	NC FIRE CODE 906.1; NC FIRE CODE 906.3; NC FIRE CODE 906.5
ATTACHMENT #5:	311.2 MODERATE-HAZARD STORAGE S-1; 311.3 LOW-HAZARD STORAGE S-2
ATTACHMENT #6:	NFPA FACT SHEET: FIRE EXTINGUISHER LOCATION AND PLACEMNET
ATTACHMENT #7	NFPA FACT SHEET: FIRE EXTINGUISHER INFORMATION
ATTACHMENT #8:	NFPA FACT SHEET: HOME FIRE ESCAPE PLANNING
ATTACHMENT #9	NFPA FACT SHEET: FIRE EXTINGUISHER PLACEMENT GUIDE

CBS 01.jpg

CBS 02.jpg

CBS 03.jpg

ATTACHMENT #1

NC FIRE CODE 906.1

#1

905.8 Dry standpipes. Dry standpipes shall not be installed.

Exception: Where subject to freezing and in accordance with NFPA 14.

905.9 Valve supervision. Valves controlling water supplies shall be supervised in the open position so that a change in the normal position of the valve will generate a supervisory signal at the supervising station required by Section 903.4. Where a fire alarm system is provided, a signal shall be transmitted to the control unit.

Exceptions:

1. Valves to underground key or hub valves in roadway boxes provided by the municipality or public utility do not require supervision.
2. Valves locked in the normal position and inspected as provided in this code in buildings not equipped with a fire alarm system.

905.10 During construction. Standpipe systems required during construction and demolition operations shall be provided in accordance with Section 3313.

905.11 Existing buildings. Deleted.

SECTION 906
PORTABLE FIRE EXTINGUISHERS

906.1 Where required. Portable fire extinguishers shall be installed in all of the following locations:

1. In new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

   Exception: In Group R-2 occupancies, portable fire extinguishers shall be required only in locations specified in Items 2 through 6 where each *dwelling unit* is provided with a portable fire extinguisher having a minimum rating of 1-A:10-B:C.
2. Within 30 feet (9144 mm) of commercial cooking equipment.
3. In areas where flammable or *combustible liquids* are stored, used or dispensed.
4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3315.1.
5. Where required by the sections indicated in Table 906.1.
6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the *fire code official.*

906.2 General requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Exceptions:

1. The distance of travel to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.
2. Thirty-day inspections shall not be required for dry-chemical or halogenated agent portable fire extin-

TABLE 906.1
ADDITIONAL REQUIRED PORTABLE FIRE EXTINGUISHERS

SECTION	SUBJECT
303.5	Asphalt kettles
307.5	Open burning
308.1.3	Open flames—torches
309.4	Powered industrial trucks
2005.2	Aircraft towing vehicles
2005.3	Aircraft welding apparatus
2005.4	Aircraft fuel-servicing tank vehicles
2005.5	Aircraft hydrant fuel-servicing vehicles
2005.6	Aircraft fuel-dispensing stations
2007.7	Heliports and helistops
2108.4	Dry cleaning plants
2305.5	Motor fuel-dispensing facilities
2310.6.4	Marine motor fuel-dispensing facilities
2311.6	Repair garages
2404.4.1	Spray-finishing operations
2405.4.2	Dip-tank operations
2406.4.2	Powder-coating areas
2804.3	Lumberyards/woodworking facilities
2808.8	Recycling facilities
2809.5	Exterior lumber storage
2903.5	Organic-coating areas
3006.3	Industrial ovens
3104.12	Tents and membrane structures
3206.10	High-piled storage
3315.1	Buildings under construction or demolition
3317.3	Roofing operations
3408.2	Tire rebuilding/storage
3504.2.6	Welding and other hot work
3604.4	Marinas
3703.6	Combustible fibers
5703.2.1	Flammable and combustible liquids, general
5704.3.3.1	Indoor storage of flammable and combustible liquids
5704.3.7.5.2	Liquid storage rooms for flammable and combustible liquids
5705.4.9	Solvent distillation units
5706.2.7	Farms and construction sites—flammable and combustible liquids storage
5706.4.10.1	Bulk plants and terminals for flammable and combustible liquids
5706.5.4.5	Commercial, industrial, governmental or manufacturing establishments—fuel dispensing
5706.6.4	Tank vehicles for flammable and combustible liquids
5906.5.7	Flammable solids
6108.2	LP-gas

guishers that are supervised by a *listed* and *approved* electronic monitoring device, provided that all of the following conditions are met:

2.1. Electronic monitoring shall confirm that extinguishers are positioned, charged and unobstructed.

2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal.

2.3. The extinguishers shall be installed inside of a building or cabinet in a noncorrosive environment.

2.4. Electronic monitoring devices and supervisory circuits shall be tested every 3 years when extinguisher maintenance is performed.

2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the *owner* to verify that hydrostatic tests are conducted at the frequency required by NFPA 10.

3. In Group I-3, portable fire extinguishers shall be permitted to be located at staff locations.

906.2.1 Certification of service personnel for portable fire extinguishers. Service personnel providing or conducting maintenance on portable fire extinguishers shall possess a valid certificate issued by an *approved* governmental agency, or other *approved* organization for the type of work performed.

906.3 Size and distribution. The size and distribution of portable fire extinguishers shall be in accordance with Sections 906.3.1 through 906.3.4.

906.3.1 Class A fire hazards. Portable fire extinguishers for occupancies that involve primarily Class A fire hazards, the minimum sizes and distribution shall comply with Table 906.3(1).

TABLE 906.3(1)
FIRE EXTINGUISHERS FOR CLASS A FIRE HAZARDS

	LIGHT (Low) HAZARD OCCUPANCY	ORDINARY (Moderate) HAZARD OCCUPANCY	EXTRA (High) HAZARD OCCUPANCY
Minimum rated single extinguisher	2-A[c]	2-A	4-A[a]
Maximum floor area per unit of A	3,000 square feet	1,500 square feet	1,000 square feet
Maximum floor area for extinguisher[b]	11,250 square feet	11,250 square feet	11,250 square feet
Maximum distance of travel to extinguisher	75 feet	75 feet	75 feet

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m^2, 1 gallon = 3.785 L.

a. Two $2^1/_2$-gallon water-type extinguishers shall be deemed the equivalent of one 4-A rated extinguisher.

b. Annex E.3.3 of NFPA 10 provides more details concerning application of the maximum floor area criteria.

c. Two water-type extinguishers each with a 1-A rating shall be deemed the equivalent of one 2-A rated extinguisher for Light (Low) Hazard Occupancies.

906.3.2 Class B fire hazards. Portable fire extinguishers for occupancies involving flammable or *combustible liquids* with depths of less than or equal to 0.25-inch (6.4 mm) shall be selected and placed in accordance with Table 906.3(2).

Portable fire extinguishers for occupancies involving flammable or *combustible liquids* with a depth of greater than 0.25-inch (6.4 mm) shall be selected and placed in accordance with NFPA 10.

TABLE 906.3(2)
FLAMMABLE OR COMBUSTIBLE LIQUIDS WITH DEPTHS OF LESS THAN OR EQUAL TO 0.25-INCH[a]

TYPE OF HAZARD	BASIC MINIMUM EXTINGUISHER RATING	MAXIMUM DISTANCE OF TRAVEL TO EXTINGUISHERS (feet)
Light (Low)	5-B 10-B	30 50
Ordinary (Moderate)	10-B 20-B	30 50
Extra (High)	40-B 80-B	30 50

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. For requirements on water-soluble flammable liquids and alternative sizing criteria, see Section 5.5 of NFPA 10.

906.3.3 Class C fire hazards. Portable fire extinguishers for Class C fire hazards shall be selected and placed on the basis of the anticipated Class A or B hazard.

906.3.4 Class D fire hazards. Portable fire extinguishers for occupancies involving combustible metals shall be selected and placed in accordance with NFPA 10.

906.4 Cooking grease fires. Fire extinguishers provided for the protection of cooking grease fires shall be of an *approved* type compatible with the automatic fire-extinguishing system agent and in accordance with Section 904.12.5.

906.5 Conspicuous location. Portable fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. These locations shall be along normal paths of travel, unless the *fire code official* determines that the hazard posed indicates the need for placement away from normal paths of travel.

906.6 Unobstructed and unobscured. Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, means shall be provided to indicate the locations of extinguishers.

906.7 Hangers and brackets. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on the hangers or brackets supplied. Hangers or brackets shall be securely anchored to the mounting surface in accordance with the manufacturer's installation instructions.

906.8 Cabinets. Cabinets used to house portable fire extinguishers shall not be locked.

Exceptions:

1. Where portable fire extinguishers subject to malicious use or damage are provided with a means of ready access.

2. In Group I-3 occupancies and in mental health areas in Group I-2 occupancies, access to portable fire extinguishers shall be permitted to be locked or to be located in staff locations provided the staff has keys.

906.9 Extinguisher installation. The installation of portable fire extinguishers shall be in accordance with Sections 906.9.1 through 906.9.3.

906.9.1 Extinguishers weighing 40 pounds or less. Portable fire extinguishers having a gross weight not exceeding 40 pounds (18 kg) shall be installed so that their tops are not more than 5 feet (1524 mm) above the floor.

906.9.2 Extinguishers weighing more than 40 pounds. Hand-held portable fire extinguishers having a gross weight exceeding 40 pounds (18 kg) shall be installed so that their tops are not more than 3.5 feet (1067 mm) above the floor.

906.9.3 Floor clearance. The clearance between the floor and the bottom of installed hand-held portable fire extinguishers shall be not less than 4 inches (102 mm).

906.10 Wheeled units. Wheeled fire extinguishers shall be conspicuously located in a designated location.

SECTION 907
FIRE ALARM AND DETECTION SYSTEMS

907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing buildings and structures. The requirements of Section 907.2 are applicable to new buildings and structures. The requirements of Section 907.9 are applicable to existing buildings and structures.

907.1.1 Construction documents. *Construction documents* for fire alarm systems shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code, the *International Building Code* and relevant laws, ordinances, rules and regulations, as determined by the *fire code official.*

907.1.2 Fire alarm shop drawings. Shop drawings for fire alarm systems shall be submitted for review and approval prior to system installation, and shall include, but not be limited to, all of the following where applicable to the system being installed:

1. A floor plan that indicates the use of all rooms.
2. Locations of alarm-initiating devices.
3. Locations of alarm notification appliances, including candela ratings for visible alarm notification appliances.
4. Design minimum audibility level for occupant notification.
5. Location of fire alarm control unit, transponders and notification power supplies.
6. Annunciators.
7. Power connection.
8. Battery calculations.
9. Conductor type and sizes.
10. Voltage drop calculations.
11. Manufacturers' data sheets indicating model numbers and listing information for equipment, devices and materials.
12. Details of ceiling height and construction.
13. The interface of fire safety control functions.
14. Classification of the supervising station.

907.1.3 Equipment. Systems and components shall be *listed* and *approved* for the purpose for which they are installed.

907.2 Where required—new buildings and structures. An *approved* fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

Where other sections of this code allow the elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed when a manual fire alarm system is required. A minimum of one manual fire alarm box shall be provided in an *approved* location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices.

Exceptions:

1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.
2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the *fire code official* to provide a means for fire watch personnel to initiate an alarm during a sprinkler system impairment event. Where provided, the manual fire alarm box shall not be located in an area that is accessible to the public.

907.2.1 Group A. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more. Group A occupancies not separated from one another in accordance with Sections 707.3.10 and 711.2.4 of the *International Building Code* shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

6.1.3.8.3 In no case shall the clearance between the bottom of the hand portable fire extinguisher and the floor be less than 4 in. (102 mm).

6.1.3.9 Label Visibility.

6.1.3.9.1 Fire extinguishers shall be installed so that the fire extinguisher's operating instructions face outward.

6.1.3.9.2 Hazardous materials identification systems (HMIS) labels, 6-year maintenance labels, hydrostatic test labels, or other labels shall not be located or placed on the front of the extinguisher.

6.1.3.9.3 The restrictions of 6.1.3.9.2 shall not apply to the original manufacturer's labels, labels that specifically relate to the extinguisher's operation or fire classification, or inventory control labels specific to that extinguisher.

6.1.3.10* Cabinets.

6.1.3.10.1 Cabinets housing fire extinguishers shall not be locked, except where fire extinguishers are subject to malicious use and cabinets include a means of emergency access.

6.1.3.10.2 The location of fire extinguishers as described in 6.1.3.3.2 shall be marked conspicuously.

6.1.3.10.3 Fire extinguishers mounted in cabinets or wall recesses shall be placed so that the fire extinguisher's operating instructions face outward.

6.1.3.10.4* Where fire extinguishers are installed in closed cabinets that are exposed to elevated temperatures, the cabinets shall be provided with screened openings and drains.

6.1.3.10.5 Cabinets or wall recesses for fire extinguishers shall be installed such that the extinguisher mounting heights specified in 6.1.3.8.1 and 6.1.3.8.2 are met.

N **6.1.3.10.6*** For fire resistance–rated walls, only surface-mounted cabinets or listed fire-rated cabinets shall be installed.

N **6.1.3.10.6.1** The provisions of 6.1.3.10.6 shall not apply to existing installations.

6.1.3.11* Fire extinguishers shall not be exposed to temperatures outside the listed temperature range shown on the fire extinguisher label.

6.1.4 Antifreeze.

6.1.4.1 Fire extinguishers containing only plain water shall be protected to temperatures as low as –40°F (–40°C) by the addition of an antifreeze that is stipulated on the fire extinguisher nameplate.

6.1.4.2 Calcium chloride solutions shall not be used in stainless steel fire extinguishers.

6.1.5 Electronic Monitoring and Alarm System. Where an electronic monitoring and alarm system is installed, 6.1.5.1 and 6.1.5.2 shall apply.

6.1.5.1 The connection to the electronic monitoring device shall be continuously supervised for integrity.

6.1.5.2 The power source for the electronic monitoring device shall be supervised for continuity of power.

6.2 Installations for Class A Hazards.

6.2.1 Fire Extinguisher Size and Placement for Class A Hazards.

6.2.1.1 Minimal sizes of fire extinguishers for the listed grades of hazards shall be provided on the basis of Table 6.2.1.1, except as modified by 6.2.1.3.1 and 6.2.1.4.

6.2.1.2 The minimum number of extinguishers for Class A hazards shall be sufficient to meet the requirements of 6.2.1.2.1 through 6.2.1.2.3.

6.2.1.2.1 The minimum number of fire extinguishers for Class A hazards for each floor of a building shall be determined by dividing the total floor area by the maximum area to be protected per extinguisher as determined by Table 6.2.1.1. *(See Annex E.)*

6.2.1.2.2 Fire extinguishers shall be located so that the maximum travel distances shall not exceed 75 ft (22.9 m), except as modified by 6.2.1.4.

6.2.1.2.3 Where the quantity of extinguishers required to satisfy 6.2.1.2.2 exceeds the number calculated in 6.2.1.2.1, additional extinguishers shall be installed.

6.2.1.3 Smaller fire extinguishers that are rated on Class B and Class C fires but do not have a minimum 1-A rating shall not be used to meet the requirements of 6.2.1.

6.2.1.3.1 Fire extinguishers of lesser rating shall be permitted to be installed but shall not be considered as fulfilling any part of the requirements of Table 6.2.1.1, except as permitted in 6.2.1.3.1.1 and 6.2.1.3.1.2.

6.2.1.3.1.1 Up to two water-type extinguishers, each with 1-A rating, shall be permitted to be used to fulfill the requirements of one 2-A rated extinguisher.

6.2.1.3.1.2 Two 2½ gal (9.46 L) water-type extinguishers shall be permitted to be used to fulfill the requirements of one 4-A rated extinguisher.

6.2.1.4 Up to one-half of the complement of fire extinguishers specified in Table 6.2.1.1 shall be permitted to be replaced by uniformly spaced 1½ in. (38 mm) hose stations for use by the occupants of the building.

Δ Table 6.2.1.1 Fire Extinguisher Size and Placement for Class A Hazards

Criteria	Light Hazard Occupancy	Ordinary Hazard Occupancy	Extra Hazard Occupancy
Minimum rated single extinguisher	2-A	2-A	4-A
Maximum floor area per unit of A	3000 ft²	1500 ft²	1000 ft²
Maximum floor area per extinguisher	11,250 ft²	11,250 ft²	11,250 ft²
Maximum travel distance to extinguisher	75 ft	75 ft	75 ft

For SI units, 1 ft = 0.305 m; 1 ft² = 0.0929 m².
Note: For maximum floor area explanations, see E.3.3.

ATTACHMENT #2

CARTERET BOAT STORAGE FACILITIES

1. 662 West Beaufort Road, Beaufort, NC
2. 1391 NC Hwy 101, Beaufort, NC
3. 1683 NC Hwy 101, Beaufort, NC

Carteret County, N.C.

July 18, 2024

Carteret County, N.C.

July 18, 2024

Carteret County, N.C.

July 18, 2024

ATTACHMENT #4

NC FIRE CODE 906.1

NC FIRE CODE 906.3

NC FIRE CODE 906.5

NC FIRE CODE 906.1 – Where required portable fire extinguishers shall be installed "IN" all the following locations: "IN" new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4, and S occupancies.

NC FIRE CODE 906.3 (1) – The maximum travel distance is 75 feet.

NC FIRE CODE 906.5 – Conspicuous Location – Portable fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. These locations shall be along normal paths of travel, unless the fire code official determines that the hazard posed indicates the need for placement away from normal paths of travel.

ATTACHMENT #5

311.2 MODERATE-HAZARD STORAGE, GROUP S-1

311.3 LOW-HAZARD STORAGE, GROUP S-2

311.2 Moderate-hazard storage, Group S-1. Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

Aerosols, Levels 2 and 3
Aircraft hangar (storage and repair)
Bags: cloth, burlap and paper
Bamboos and rattan
Baskets
Belting: canvas and leather
Books and paper in rolls or packs
Boots and shoes
Buttons, including cloth covered, pearl or bone
Cardboard and cardboard boxes
Clothing, woolen wearing apparel
Cordage
Dry boat storage (indoor)
Furniture
Furs
Glues, mucilage, pastes and size
Grains
Horns and combs, other than celluloid
Leather
Linoleum
Lumber
Motor vehicle repair garages complying with the maximum allowable quantities of hazardous materials listed in Table 307.1(1) (see Section 406.8)
Photo engravings
Resilient flooring
Silks
Soaps
Sugar
Tires, bulk storage of
Tobacco, cigars, cigarettes and snuff
Upholstery and mattresses
Wax candles

311.3 Low-hazard storage, Group S-2. Storage Group S-2 occupancies include, among others, buildings used for the storage of noncombustible materials such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products are permitted to have a negligible amount of plastic *trim*, such as knobs, handles or film wrapping. Group S-2 storage uses shall include, but not be limited to, storage of the following:

Asbestos
Beverages up to and including 16-percent alcohol in metal, glass or ceramic containers
Cement in bags
Chalk and crayons
Dairy products in nonwaxed coated paper containers
Dry cell batteries
Electrical coils
Electrical motors
Empty cans
Food products
Foods in noncombustible containers
Fresh fruits and vegetables in nonplastic trays or containers
Frozen foods
Glass
Glass bottles, empty or filled with noncombustible liq
Gypsum board
Inert pigments
Ivory
Meats
Metal cabinets
Metal desks with plastic tops and *trim*
Metal parts
Metals
Mirrors
Oil-filled and other types of distribution transformers
Parking garages, open or enclosed
Porcelain and pottery
Stoves
Talc and soapstones
Washers and dryers

SECTION 312
UTILITY AND MISCELLANEOUS GROUP U

312.1 General. Buildings and structures of an access character and miscellaneous structures not classified in a specific occupancy shall be constructed, equipped and ma tained to conform to the requirements of this code comme surate with the fire and life hazard incidental to th occupancy. Group U shall include, but not be limited to, t following:

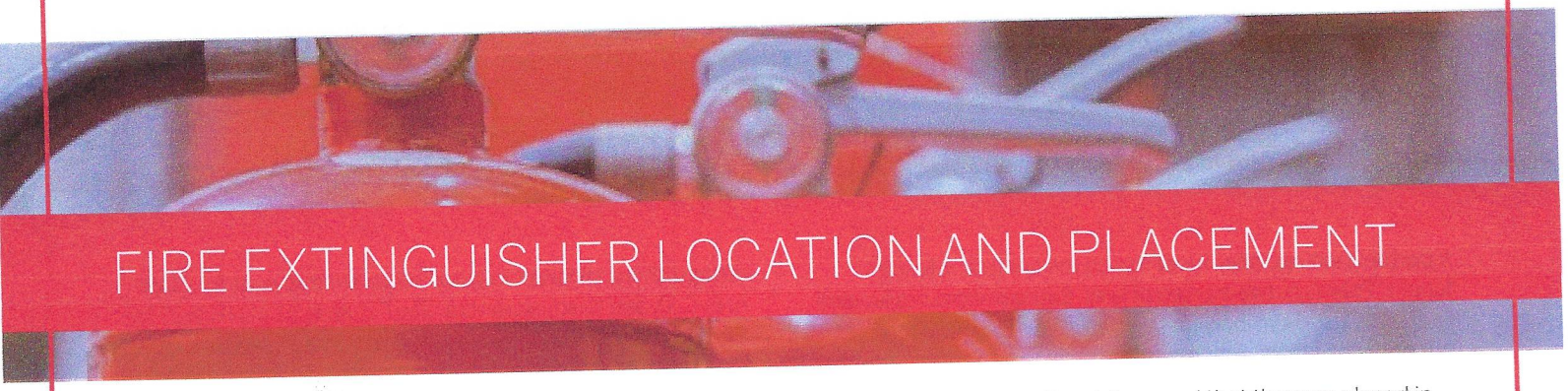
Agricultural buildings
Aircraft hangars, accessory to a one- or two-family residence (see Section 412.5)
Barns
Carports and ground signs (A)
Fences more than 6 feet (1829 mm) in height
Grain silos, accessory to a residential occupancy
Greenhouses
Livestock shelters
Photovoltaic panel system (mounted at grade)
Private garages
Retaining walls
Sheds
Stables
Tanks
Towers

ATTACHMENT #6

NFPA FACT SHEET:

FIRE EXTINGUISHER LOCATION AND PLACEMENT

FACT SHEET



FIRE EXTINGUISHER LOCATION AND PLACEMENT

Code officials are charged with ensuring that occupancies are properly outfitted with fire extinguishers and that they are placed in the right locations. This resource identifies which occupancies require extinguishers and where they should be placed within them. It also outlines related fire extinguisher requirements in NFPA® 10, *Standard for Portable Fire Extinguishers* (2022).

Occupancy Requirements

Fire extinguishers **are required** in the following occupancy types:

- Ambulatory health care
- Apartments
- Assemblies
- Businesses
- Day care
- Hotel and dormitory
- Industrial
- Lodging and rooming
- Mercantile
- Occupancies in special structures
- Health care
- Educational
- Storage
- Detention and correctional
- Residential board and care

Fire extinguishers **are not required** in one- and two-family dwellings. For more information on occupancy requirements, see Table 13.6.1.2 of NFPA 1, *Fire Code* (2021).

Where and How Should Extinguishers Be Located?

Fire extinguishers that are placed correctly can be accessed more quickly to help control a fire until the fire department arrives. Fire extinguishers are not intended to be a substitute for evacuating the building safely and quickly. Two key factors for locating extinguishers are that they should be accessible and visible.

Accessible

Extinguishers should be placed where they are readily accessible in the event of a fire, which typically includes normal paths of travel.

Visible

If visual obstructions cannot be avoided, then arrows, lights, or signs are needed to help indicate where a fire extinguisher is located.

If extinguisher weighs **more than 40 lb (18.14 kg) ...**

- **Top of extinguisher** cannot be more than **3.5 ft (1.07 m)** from the ground
- **Bottom of extinguisher** must be at least **4 in. (102 mm)** off the ground

If extinguisher weighs **less than 40 lb (18.14 kg) ...**

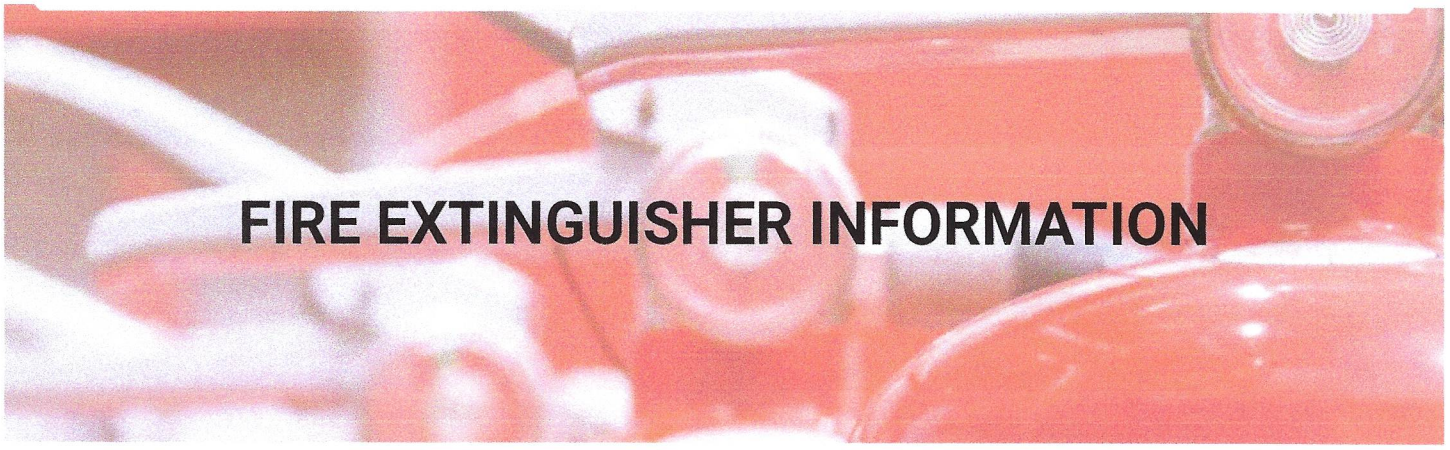
- **Top of extinguisher** cannot be more than **5 ft (1.53 m)** from the ground
- **Bottom of extinguisher** must be at least **4 in. (102 mm)** off the ground

In both cases, this includes extinguishers in cabinets, but it does not include wheeled extinguishers.

ATTACHMENT #7

NFPA FACT SHEET:

FIRE EXTINGUISHER INFORMATION



A portable fire extinguisher can save lives and property by putting out a small fire or containing it until the fire department arrives; but portable extinguishers have limitations. Because fire grows

and spreads so rapidly, the #1 priority for residents is to get out safely.

Fire extinguishers are one element of a fire response plan, but the primary element is safe escape. Every household should have a **home fire escape plan** and working **smoke alarms**.

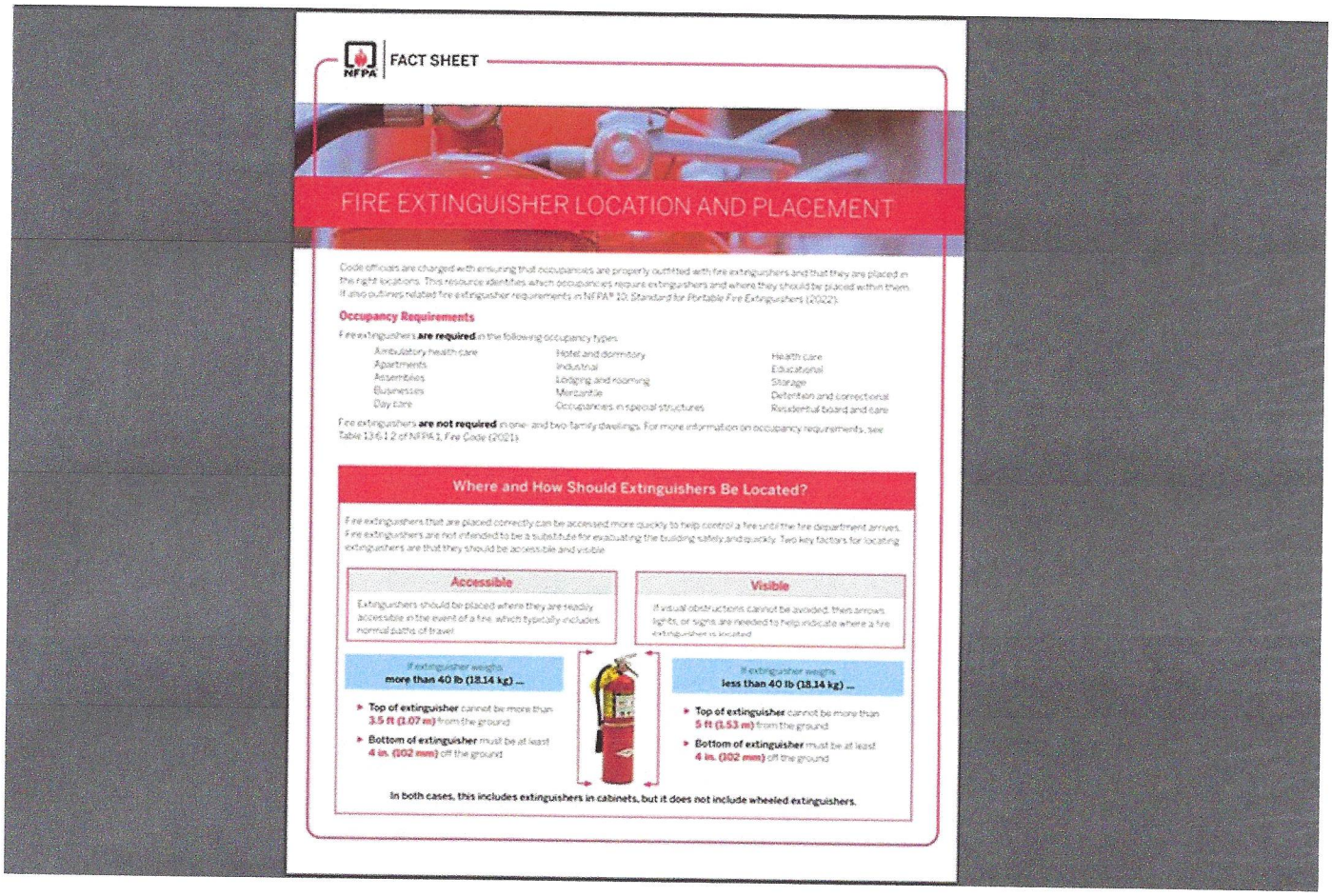
Safety Tips

- Use a portable fire extinguisher when the fire is confined to a small area, such as a wastebasket, and is not growing; everyone has exited the building; the fire department has been called or is being called; and the room is not filled with smoke.
- To operate a fire extinguisher, remember the word PASS:
  - Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
  - Aim low. Point the extinguisher at the base of the fire.
  - Squeeze the lever slowly and evenly.
  - Sweep the nozzle from side-to-side.
- For the home, select a multi-purpose extinguisher (can be used on all types of home fires) that is large enough to put out a small fire, but not so heavy as to be difficult to handle.
- Choose a fire extinguisher that carries the label of an independent testing laboratory.
- Read the instructions that come with the fire extinguisher and become familiar with its parts and operation before a fire breaks out. Local fire departments or fire equipment distributors often offer hands-on fire extinguisher trainings.
- Install fire extinguishers close to an exit and keep your back to a clear exit when you use the device so you can make an easy escape if the fire cannot be controlled. If the room fills with smoke, leave immediately.
- Know when to go. Fire extinguishers are one element of a fire response plan, but the primary element is safe escape. Every household should have a **home fire escape plan** and working smoke alarms.

Portable fire extinguishers and children

NFPA believes that children should not be trained how to operate portable fire extinguishers.

Teaching children to use portable fire extinguishers runs counter to NFPA messaging to get out and stay out if there is a fire. Furthermore, children may not have the maturity to operate a portable fire extinguisher properly or decide whether or not a fire is small enough to be put out by the extinguisher. They may not have the physical ability to handle the extinguisher or dexterity to perform the complex actions required to put out a fire. In the process of extinguishing flames, children may not know how to respond if the fire spreads. NFPA continues to believe that only adults who know how to operate portable fire extinguishers should use them.



Fire Extinguisher Location and Placement

This fact sheet identifies which occupancies require extinguishers and where they should be placed within them. It also outlines related requirements in NFPA 10, Standard for Portable Fire Extinguishers. *Note: You must fill out a brief form to download the fact sheet.*

Download the fact sheet.

ATTACHMENT #8

NFPA FACT SHEET:

HOME FIRE ESCAPE PLANNING

5

NFPA (0)

HOME

Safety Tips

Your ability to get out of your home during a fire depends on advance warning from smoke alarms and advance planning.

Safety Tips

are permitted to attend "sleepovers" at friends' homes.

- Be fully prepared for a real fire: when a smoke alarm sounds, get out immediately. Residents of high-rise and apartment buildings may be safer "defending in place."
- Once you're out, stay out! Under no circumstances should you ever go back into a burning building. If someone is missing, inform the fire department dispatcher when you call. Firefighters have the skills and equipment to perform rescues.

Escape planning tools

ATTACHMENT #9

NFPA FACT SHEET:

FIRE EXTINGUISHER PLACEMENT GUIDE

Fire Extinguisher Placement Guide

By Brian O'Connor
30-Apr-2021

In the hands of trained personnel, portable fire extinguishers are the first line of defense against incipient fires, but in order to be useful they need to be accessible. This blog tackles the topic of portable fire extinguisher placement, both how portable fire extinguishers should be distributed and exactly where they are allowed to be placed.

Watch a related video from the NFPA LiNK YouTube channel.

The first step is to choose the correct extinguisher based on the fire risk. Extinguishers are broken down into the following ratings:

- Class A: Ordinary Combustibles
- Class B: Flammable Liquids
- Class C: Energized Electrical Equipment
- Class D: Combustible Metals
- Class K: Cooking Media

The distribution of portable fire extinguishers is a balance between having an extinguisher nearby when you need it but not being overly burdened by the cost and maintenance of having excessive extinguishers. Let us start off with what NFPA 10, *Standard for Portable Fire Extinguishers*, requires.

When NFPA 10 addresses extinguisher placement it uses the term "maximum travel distance to extinguisher". This means that at any point inside the building you should never have to travel more than the maximum distance to reach an extinguisher. It is important to ensure the distance being measured is the actual distance a person would need to walk to get the extinguisher (as shown in Figure 1) and that occupants are not expected to walk through walls.

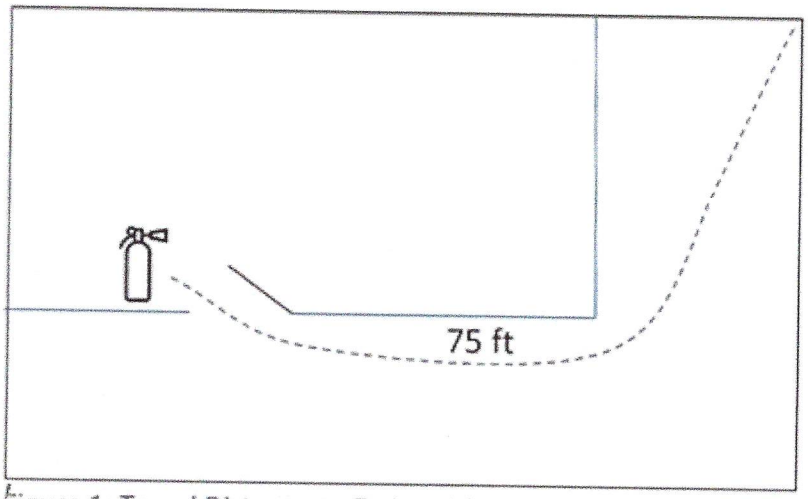


Figure 1: Travel Distance to Extinguisher

The maximum travel distance is often the limiting factor but for certain Class A extinguishers there is an additional floor area limitation. This maximum floor area that a single extinguisher can cover is directly related to the numerical A rating and level of hazard occupancy but reaches a maximum of 11,250 ft^2. It is important to know both the maximum travel distance and floor area per extinguisher since you need to follow