



DHS Training

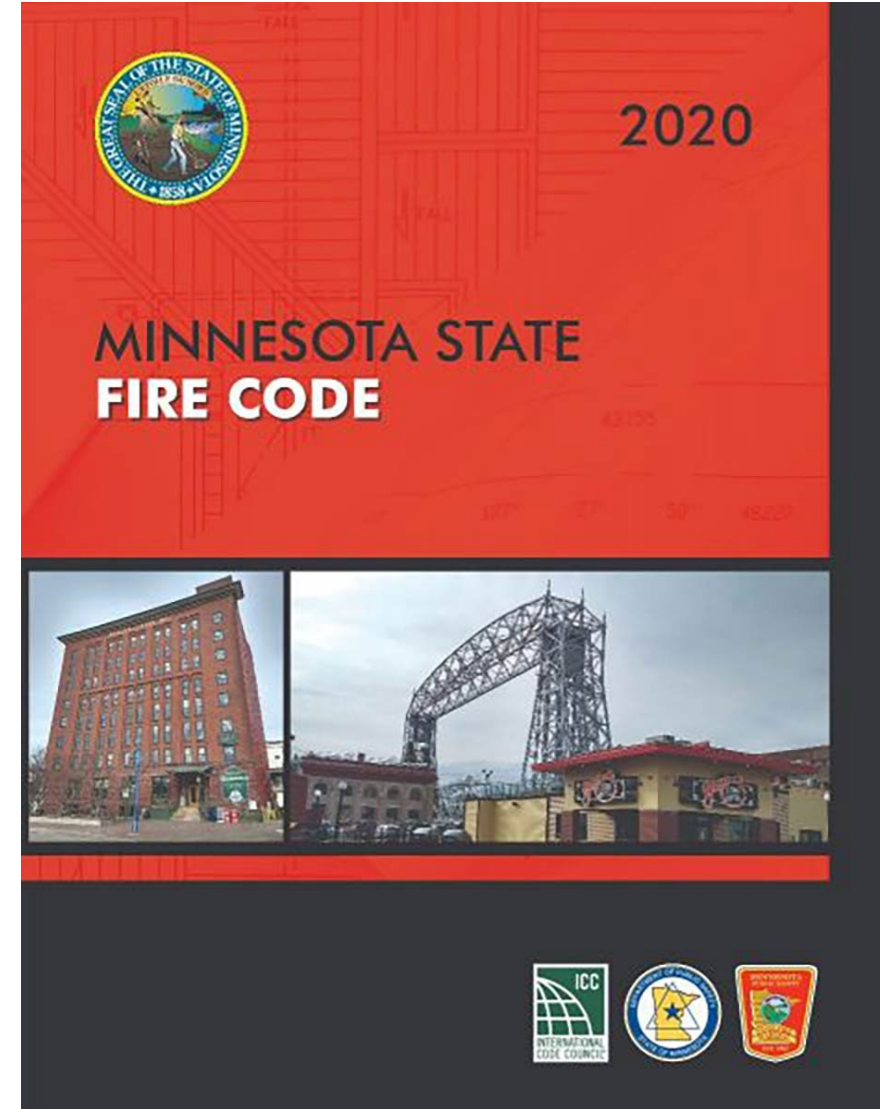
Building Systems

MINNESOTA STATE FIRE MARSHAL DIVISION

445 Minnesota Street; Suite 145 Saint Paul, MN 55101

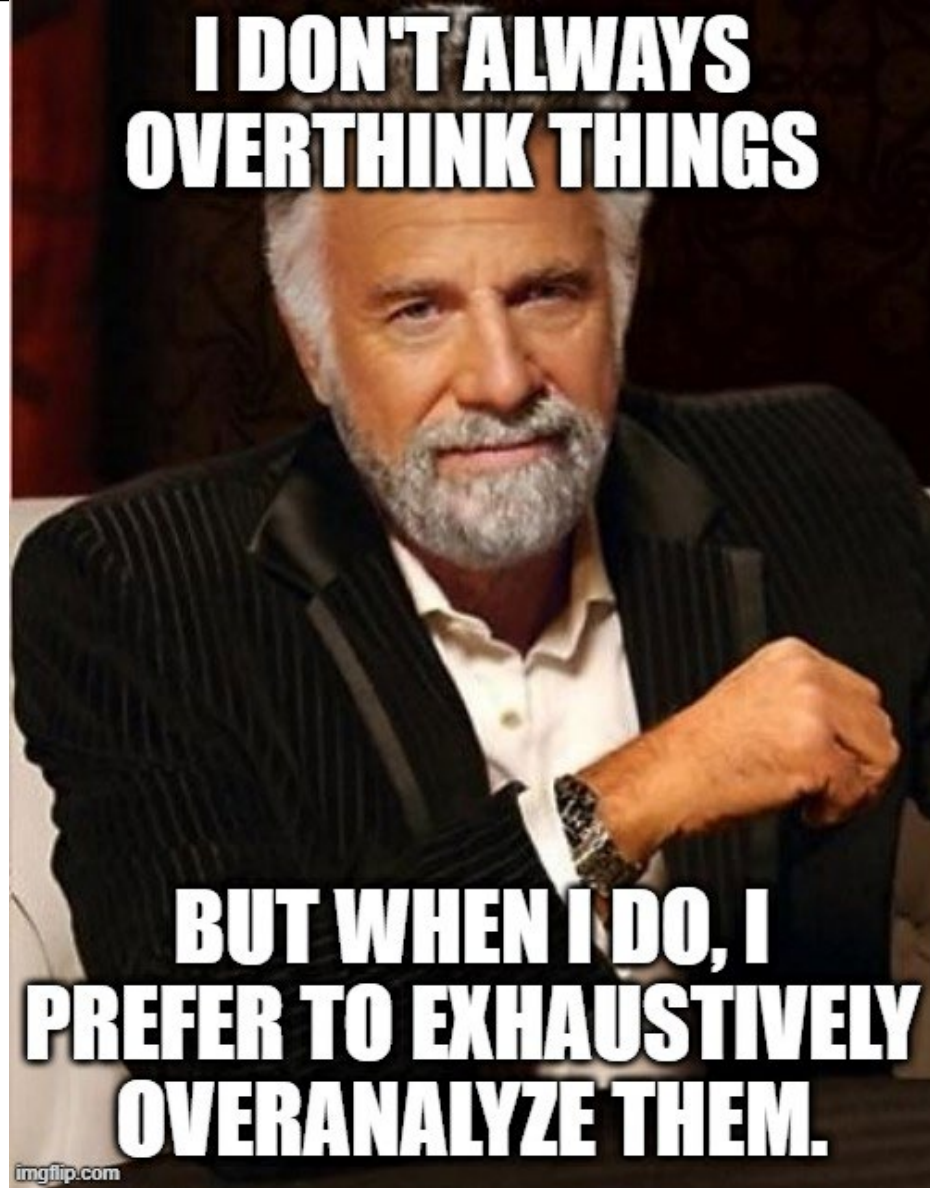
Topics

- Smoke Alarms
- Carbon Monoxide Alarm
- Fire Extinguishers
- Sources of Ignition
- Heating Appliances
- Manufactured Homes
- Attached Garage
- Interior Finish
- Locking Arrangements
- Inspection Checklist



Fire Code Philosophy

- Does it look professional?
- Would “I” pay for that?
- Does this look typical?



Smoke Alarms

Existing Homes:

- On each level of the dwelling including basements
- Smoke alarms shall be replaced 10 years from the date of manufacture
- Replacement alarms must have the same power type as originally installed



Carbon Monoxide Detection

- Every dwelling shall have a carbon monoxide alarm within 10' of each bedroom/sleeping area
- May be located on the floor, wall or ceiling
- Replace when device fails



Fire Extinguishers

- Minimum 2-A:10-B:C rating required
- Annual inspection tag
- Located close to the homes main exit such as the front door
- Only (1) extinguisher required per home
- Can be locked or secured as long as readily accessible by staff



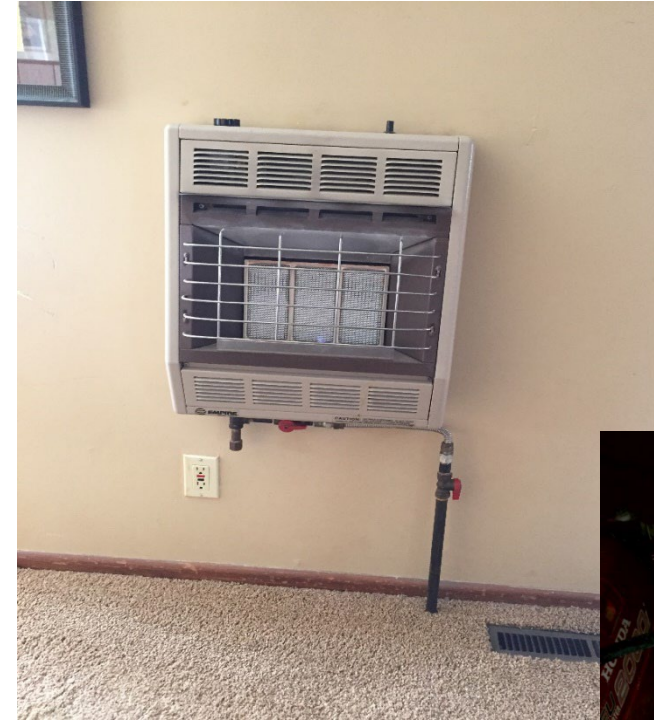
Sources of Ignition

- No ignition sources allowed in attached garage within 18" of the floor.
 - Fuel Fired Heater
 - Wood Stoves



Heating Appliances

- Non-portable unvented, fuel-fired heaters are prohibited
 - Look for gas lines
 - Open heating elements
- Portable unvented, fuel-fired heaters not allowed in R occupancies.
 - Exception for UL 647 listed heaters
 - Cannot be in bedrooms, bathrooms, toilet rooms or storage closets.



Heating Appliances

- Installed per manufacturer listing and applicable codes
- Maintained in good working condition
- Clear of combustibles
- Properly vented to the exterior
- Non-vented fuel fired heaters prohibited after 09/20/2004

PRODUCT FEATURES

SAFETY PILOT

This heater has a pilot with an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS/pilot shuts off the heater if there is not enough fresh air.

PIEZO IGNITION SYSTEM

This heater is equipped with an electronic piezo control system. This system requires one AAA battery (provided).

THERMOSTATIC CONTROL

The control automatically cycles the burner on and off to maintain a desired room temperature.

2 GAS OPTIONS AVAILABLE

Your heater is equipped to operate on either Propane/LP or Natural gas. The heater is shipped from the factory ready for connecting to Propane/LP. The heater can easily be changed to Natural gas by having your qualified installer follow the instructions on page 10 and the markings on the heater.

LOCAL CODES

Install and use heater with care. Follow all local codes. In the absence of local codes, use the latest edition of *The National Fuel Gas Code, ANSI Z223.1/NFPA 54**.

*Available from:

American National Standards Institute, Inc.
25 West 43rd Street
New York, NY 10036

National Fire Protection Association, Inc.
1 Batterymarch Park
Quincy, MA 02269-9101

This heater is designed for vent-free operation. State and local codes in some areas prohibit the use of vent-free heaters.

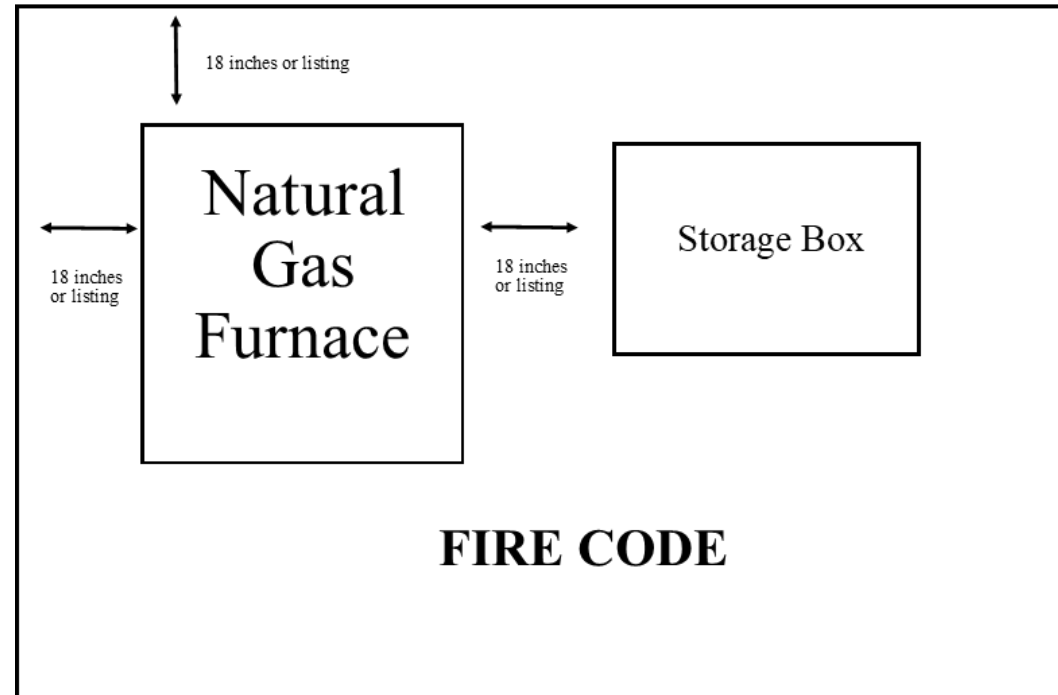
State of Massachusetts: The installation must be made by a licensed plumber or gas fitter in the Commonwealth of Massachusetts.

Sellers of unvented propane or natural gas-fired supplemental room heaters shall provide to each purchaser a copy of 527 CMR 30 upon sale of the unit.

In the State of Massachusetts the gas cock must be a T-handle type. The State of Massachusetts requires that a flexible appliance connector cannot exceed three feet in length.

Clearance to Combustibles

- Minnesota Fire Code
 - Clearance based on manufacturers instructions or listings OR:
 - MSFC 603.5.3.1 Gas or fuel-oil heaters requires 18 inches of clearance to combustibles
 - MSFC 603.5.3.2 Solid Fuel-burning heaters requires 36 inches of clearance to combustibles



Exhaust ducts and Clearances



Electrical Services

- Extension cord for temporary tasks only. Not permanent
- Multi-plug adapters shall be UL listed
- No taped wiring
- No open electrical boxes (covered)
- “Power Taps” are permitted with UL-1363 listing



Domestic Clothes Dryers

- Must be vented in accordance with the manufacturer's instructions
- Plastic vent pipe is not allowed
- Transition duct no more than 8 feet in length
- Must be stretched out and not drooping
- No screws



Manufactured Homes

- 2 exit doors – both with landings, stairs, handrails, guards per the Residential Code.
 - Easily openable, not taped shut or hidden
- All other requirements the same



Manufactured Homes

Egress Windows

- Same requirements as site constructed home
- HUD labeled home with factory egress windows that work



Fire Resistive Construction

- Attached garage
 - Must extend from floor to above deck
 - Vertical wall must be ½” gypsum board
 - Must have 5/8” gypsum board ceiling if above level is occupied
 - Must resist passage of smoke
 - Penetrations are sealed
 - “Functional” not “Perfect”



Fire Resistive Construction

Garage doors must meet one of the following requirements:

- Solid-wood door at least 1-3/8 inches in thickness, or
- Insulated steel door at least 1-3/8 inches in thickness, or
- A labeled door having a fire-protection rating of not less than 20 minutes
- Windows approved if rated
- Door closing devices are not required



Fire Rated Glazing



Interior Finishes

- Foam insulations
 - Must be covered with a 15 minute thermal barrier - ½” minimum thickness gypsum board
- Exception: Certain sheet foam products (must be labeled)
- If unfinished basement has poly, it must be flame retardant (6 mil)



Interior Finishes

- Unfinished basements
 - Fire code only addresses basic items
 - All other items are a DHS license requirement



Why interior finish matters



Drywall in a fire



Wall paneling in a fire



Locks and Latches

1010.1.9 Door Operations

- Egress Doors shall be readily openable from egress side without the use of a key or special knowledge or effort.
- May have one night latch or deadbolt provided it does not require a key or tool to open.



Stay low to live, No delays



Delayed Egress-CRS and State DHS

- Fire sprinkler system or approved smoke detection system required with additional requirements
- Annual testing and maintenance
- No more than (1) device along the egress path
- Only (1) exit required from a dwelling





Questions

Website: <https://sfm.dps.mn.gov>



Thank you

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