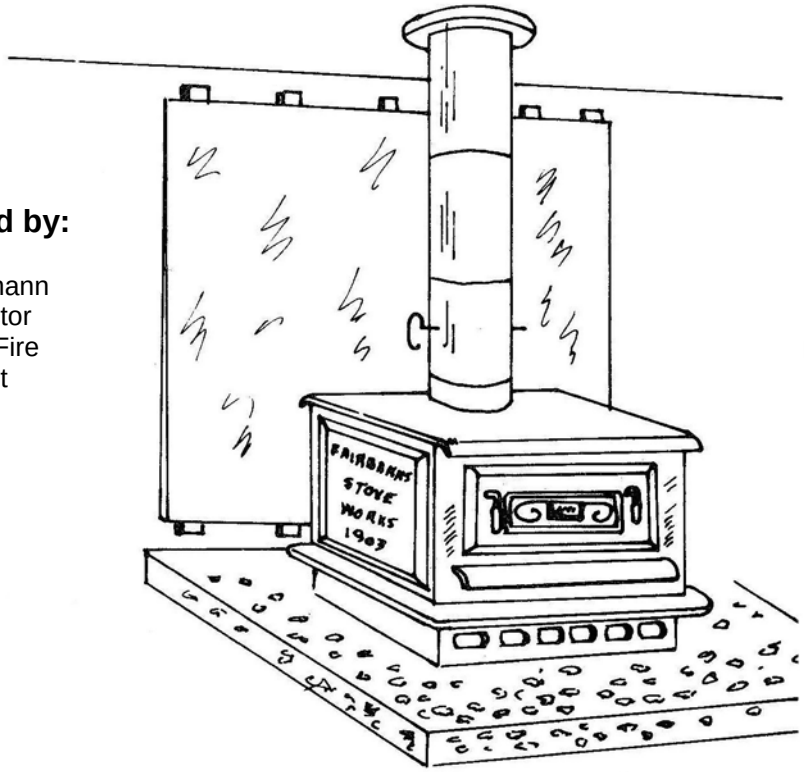
WOOD STOVE SAFETY



Compiled by:

Eric Mohrmann
Fire Inspector
Fairbanks Fire
Department

Proper installation and maintenance of your woodburning stove are the only protection you have against accidental fire.

Did you know

That fire resistant millboard, sheetmetal or decorative brick placed directly upon a combustible wall or even a wall protected by sheetrock provide little or no protection from radiant heat.

Other Installation tips are:

1. Place a shield of 24 gauge sheetmetal over UL approved fire resistant millboard on the floor under the stove. It should extend six (6) inches out from the sides and back and eighteen (18) inches out in front of the stove. Two (2) inches of sand or gravel may also be used.

2. You may want to run a duct from the outside of the building to the front of the fireplace or woodstove. This will provide combustion air for the heating unit and will keep cold air from coming in through the openings in the house. Combustion air must come from somewhere.

3. The stove should have legs at least four inches high or the unit should be placed on masonry blocks with the holes to the sides to allow air circulation under the stove.

4. Manufacturer's specifications for clearances should be followed. If none are available, standard clearances are thirty-six (36) inches from a stove to a combustible wall or ceiling. A wall of wooden studs covered with sheetrock is considered to be a combustible wall.

5. The standard clearances or the manufacturer's specified clearances can be reduced by one half (1/2) by installing a heat shield. A heat shield can be constructed of (28 gauge) sheetmetal or UL approved fire resistant millboard spaced out from the wall at least one (1) inch and open at the top and bottom at least (1) inch to allow air to circulate in back. (see illustration). The spacers must be noncombustible. One (1) inch piece of thin wall metal pipe or tubing or ceramic insulators are excellent. The shield should extend well to the sides and above the stove. Decorative materials such as masonry veneer can be attached to the heat shield. Be sure to use a non-combustible mastic.

6. All open front woodstoves or fireplaces should have a screen.

Chimney installation

1. Avoid connecting more then one heating device to a single chimney flue because poisonous gases or sparks may pass from one appliance out the other.

2. Chimney pipes also require proper clearances. A single wall chimney pipe needs eighteen (18) inches of clearances to combustibles. Metalbestos or triple wall chimney pipes and masonry chimneys need (2) inches of clearance to combustible materials. Follow the manufacturer's instructions. If you insulate around the chimney, increase these minimum recommended clearances and insulate with mineral wool (rock wool) or a similar non-combustible insulation.

3. Fiber glass insulation is non-combustible but it is held together with a resin that vaporizes at 250° F. It falls apart when used as insulation near chimney pipes.

4. Keep polyurethane, styrofoam, cellulose or other combustible insulation away from chimney pipes. Each will and has been known to burn.

5. A damper on the chimney pipe itself is advisable even if your stove is equipped with one. This is so you can control a chimney fire should one occur.

6. If you are using single wall stove pipe, each joint should be secured with three metal screws. A severe chimney fire can blow unsecured joints apart.

7. The chimney should extend at least two feet higher than any point of the roof within ten (10) feet of the chimney pipe. (see illustration)

If you need further information, contact your wood-stove dealer or local fire department.

OPERATIONS AND MAINTENANCE

1. If you use an airtight stove, open the intake damper fully before you open the door. The hot unburned fuel gases can burn explosively if air is introduced too quickly.

2. Never burn coal and wood in the same stove. Clearances for coal stoves and the construction of coal stoves are different than wood stoves because coal generates higher heat.

3. Burn dry, well seasoned wood. The wood should be dried at least one year. This will reduce creosote deposits.

4. If you burn artificial logs, never poke it or burn more than one at a time. They contain up to 60% wax or sterno and will burn extremely fast if broken up. This will damage your stove and may cause a house fire.

5. Keep all wood, paper, matches or other combustibles away from the wood stove or chimney pipe.

6. When you reload your woodstove or start a fire, let it burn with dampers wide open for five minutes. This will help burn out creosote deposits in the chimney. Warning do not start a hot fire if there is an 1/8 inch or more thick layer of creosote in the chimney pipe.

7. NEVER USE FLAMMABLE OR COMBUSTIBLE LIQUIDS TO KINDLE OR REKINDLE A FIRE!

CHIMNEY FIRES

Chimney fires are usually started by allowing a stove or fireplace to get out of hand, overfiring or using it as a trash burner. Don't burn material like cardboard, milk cartons, and Christmas wrap, which produce higher temperatures then a normal fire. Trash burning has also contributed to several burns and injuries.

Any wood fire will produce accumulations of creosote, and these accumulations can be considered dangerous. Not only can they contribute to chimney fires, but such fires can cause structural damage to your home as well. The best preventative is frequent chimney cleaning and burning of well-seasoned year-old wood.

BE PREPARED FOR A FIRE

No wood-burning system is 100% safe and fireproof. A safe installation and extra care will help prevent fire, but accept the idea that there could be a fire and be prepared to handle it. Make certain everyone in the house is familiar with the warning signs of a chimney fire (sucking sounds, a loud roar, and shaking pipes). Instruct everyone on what to do. All adults should know how and when to use a fire extinguisher. Place the fire Department emergency phone stickers on every phone (available at your nearest fire station).

1. Call the Fire Department immediately, before doing anything else.

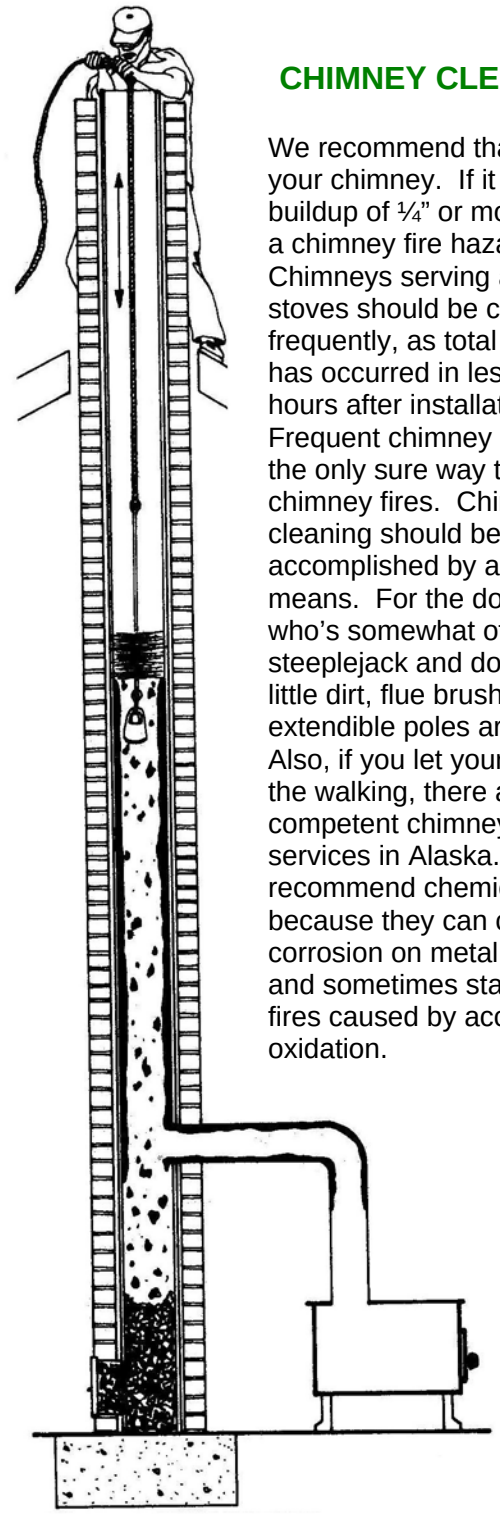
2. Cut off the fire's air supply by closing all dampers on the woodstove and/or chimney pipe.

3. Get everyone out of the house and put them to work watching for sparks or signs of fire on the roof or nearby.

4. Keep a Class 1A:10BC dry chemical fire extinguisher handy. If the house catches on fire, try to extinguish it if it is safe to do so. Stand back 6 to 8 feet (6-8') and direct the nozzle to the base of the flames.

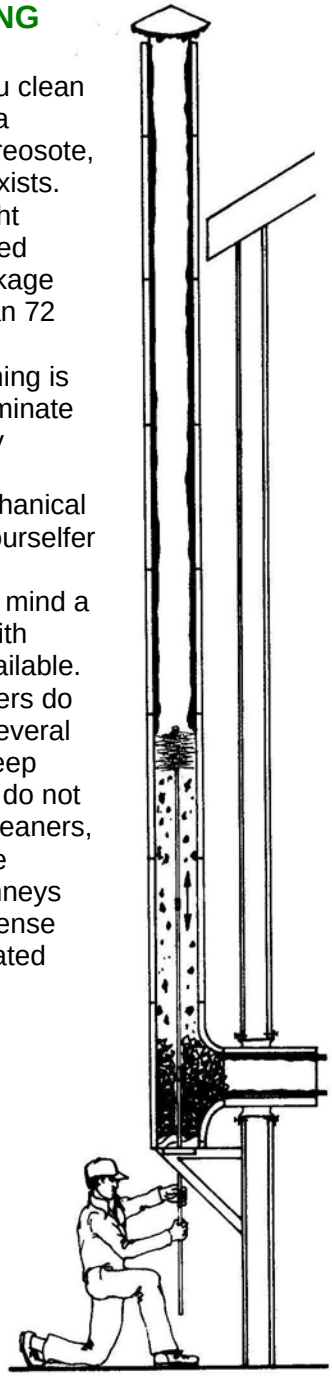
SMOKE AND FIRE PROTECTION

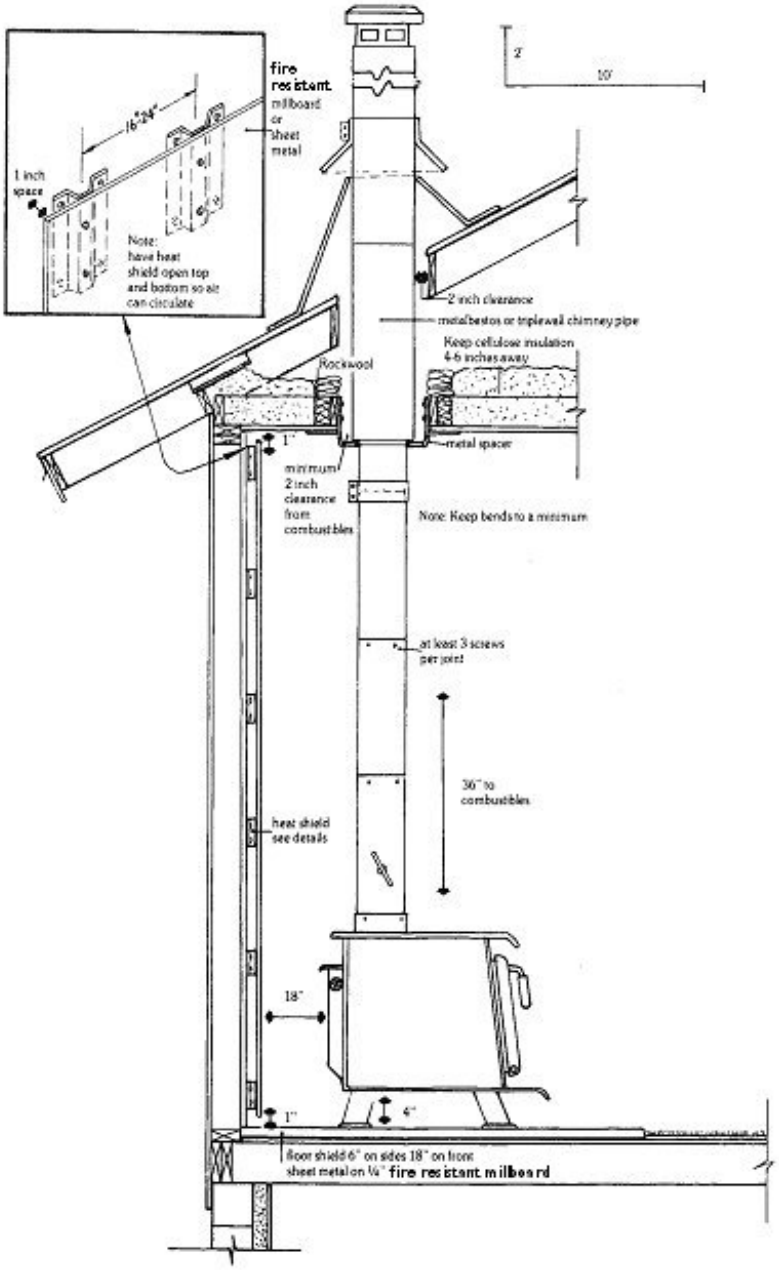
Smoke detectors in working condition and sleeping with the bedroom closed at night are important considerations for everyone, as 97% of the fire fatalities nationwide died of smoke inhalation without ever receiving a burn and 64% died in bed without ever knowing there was a fire. It has been estimated that one-third of these fatalities would have been prevented had they slept with their bedroom door closed at night.

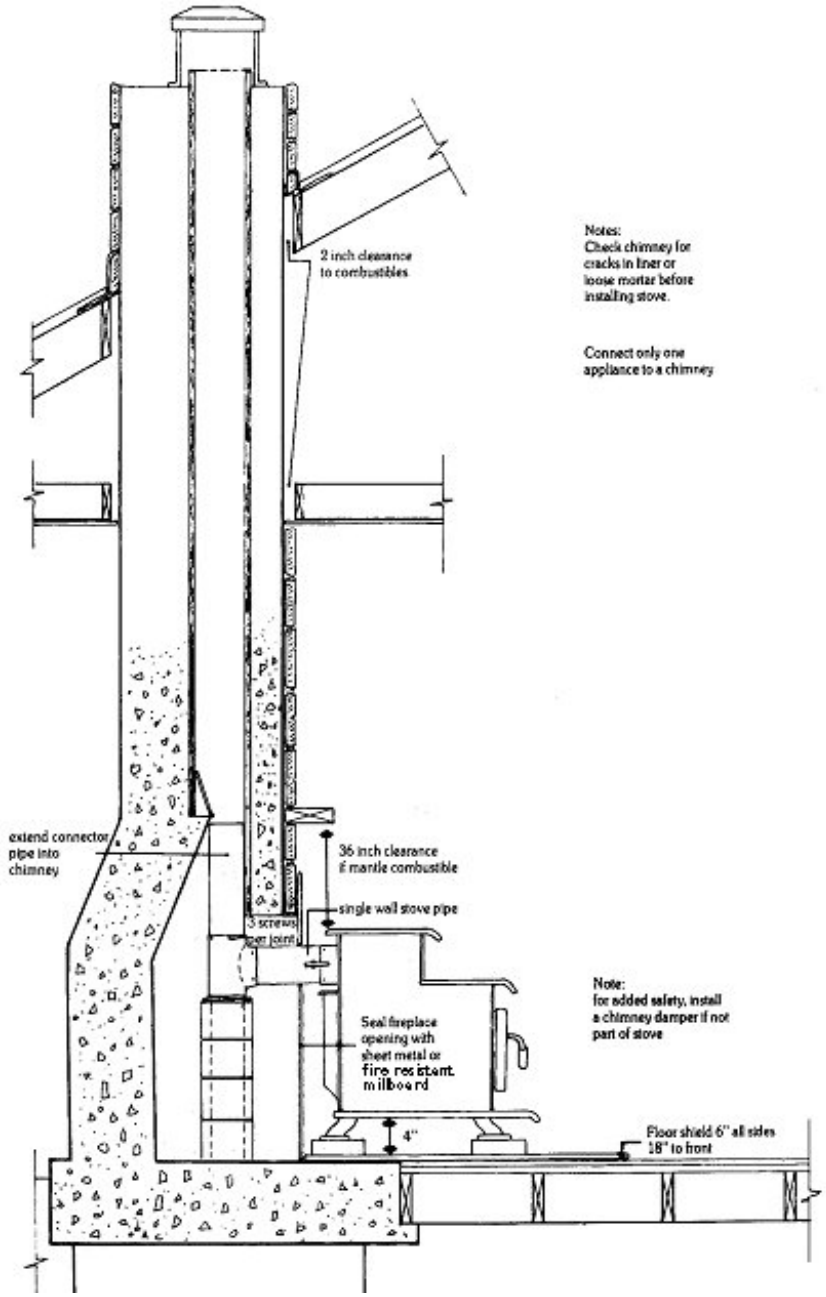


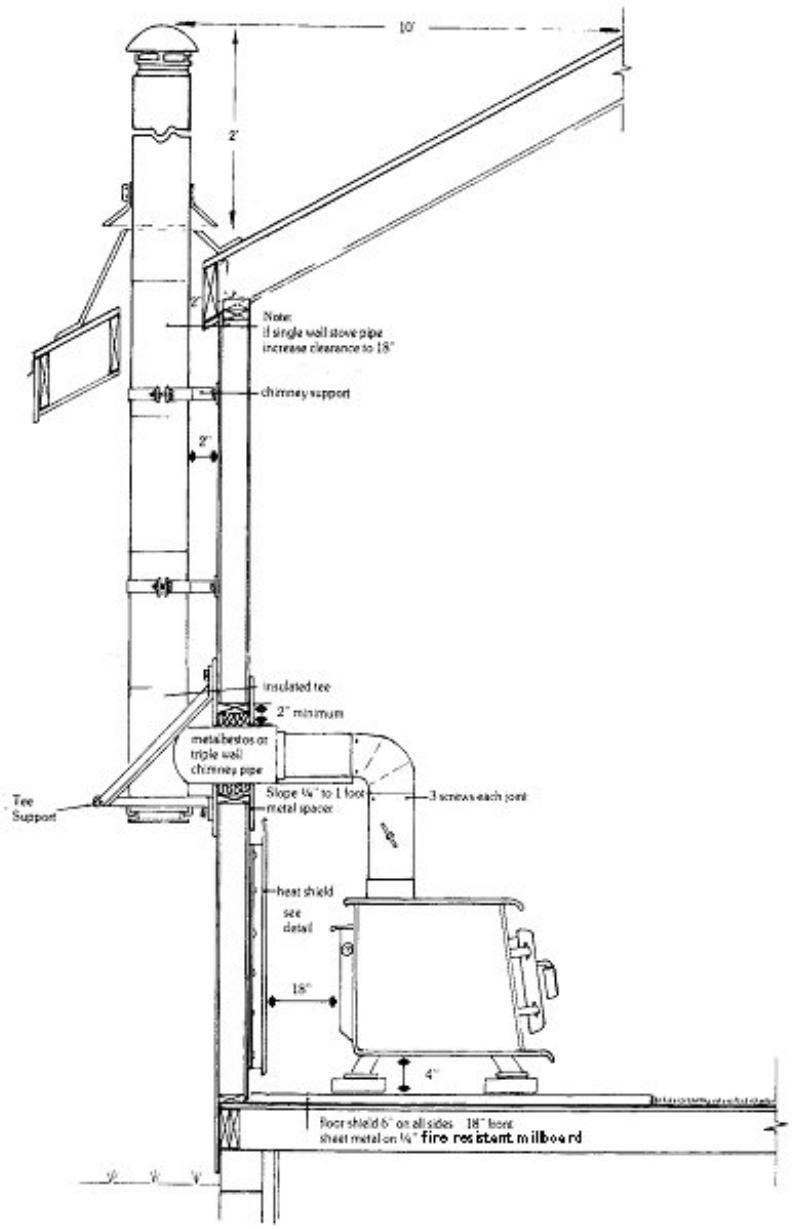
CHIMNEY CLEANING

We recommend that you clean your chimney. If it has a buildup of ¼" or more creosote, a chimney fire hazard exists. Chimneys serving airtight stoves should be checked frequently, as total blockage has occurred in less than 72 hours after installation. Frequent chimney cleaning is the only sure way to eliminate chimney fires. Chimney cleaning should be accomplished by a mechanical means. For the do-it-yourselfer who's somewhat of a steeplejack and doesn't mind a little dirt, flue brushes with extendible poles are available. Also, if you let your fingers do the walking, there are several competent chimney sweep services in Alaska. We do not recommend chemical cleaners, because they can cause corrosion on metal chimneys and sometimes start intense fires caused by accelerated oxidation.




fire resistant millboard or sheet metal
1 inch space
Note: have heat shield open top and bottom so air can circulate
2'
10'
2 inch clearance
metal/asbestos or triplewall chimney pipe
Keep cellulose insulation 4-6 inches away
Rockwool
metal spacer
1"
minimum 2 inch clearance from combustibles
Note: Keep bends to a minimum
at least 3 screws per joint
36" to combustibles
heat shield see details
18"
1"
4"
floor shield 6" on sides 18" on front sheet metal on ¼" fire resistant millboard


2 inch clearance
to combustibles
Notes:
Check chimney for
cracks in liner or
loose mortar before
installing stove.
Connect only one
appliance to a chimney
extend connector
pipe into
chimney
36 inch clearance
if mantle combustible
single wall stove pipe
3 screws
per joint
Note:
for added safety, install
a chimney damper if not
part of stove
Seal fireplace
opening with
sheet metal or
fire resistant
millboard
4"
Floor shield 6" all sides
18" to front


10'
2'
Note:
if single wall stove pipe
increase clearance to 18"
chimney support
2"
insulated tee
2" minimum
metal sleeve or
triple wall
chimney pipe
Slope ¼" to 1 foot
3 screws each joint
metal spacer
Tee
Support
heat shield
see
detail
18"
4"
floor shield 6" on all sides 18" front
sheet metal on ¼" fire resistant millboard

Acknowledgements:

We wish to express our appreciation to Mr. Don Callahan and Mr. Larry Richards for their efforts on the illustrations for this pamphlet.

Additional information and literature is available through:

Wood Heat Safety
By Jay W. Shelton
Box 5235 Coronado Sta.
Sante Fe, N.M. 87502
Out of Print - (Available Used)

Your Local Fire Department

Your neighborhood wood stove dealer