

TIPS FOR HOW TO SECURE YOUR FURNISHINGS AND HOME STRUCTURE

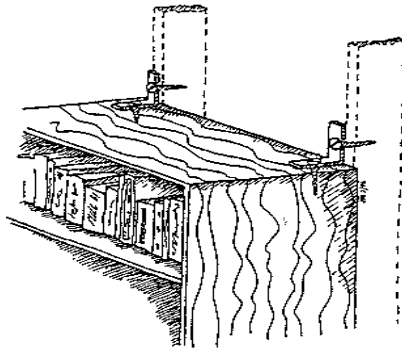
A major earthquake has the potential for causing substantial damage to your possessions. Approximately one-third of the cost of earthquake damage is due to non-structural losses like furniture, equipment, heirlooms, etc.

There are many ways to protect yourselves and your surroundings.

- Move beds away from windows that can shatter and implode.
- Remove pictures, mirrors, TVs and lights from over beds.
- Close curtains or blinds at night for additional protection.
- Keep a pair of sturdy shoes under the bed (upside down) with a flashlight inside.

Securing Furniture and Contents

- Secure tall free-standing furniture, such as bookcases, china cabinets and shelving units to the wall studs using “L” brackets, corner brackets or anodized aluminum moulding. Examples are illustrated below.
- Attach a wooden or metal guardrail to open shelves to keep items from sliding off. This is especially important wherever there are a lot of glass items.
- Place heavy and/or large items on lower shelves.



Securing Items to Shelves or Countertops

Secure items such as televisions, stereos, computers, microwaves and breakable collectibles with Velcro, putty, dental wax, double-sided tape or specially designed fasteners.

Fastening with Velcro:

- Choose Velcro with adhesive on the back and cut into 1” squares.
- Leaving the two sides of the Velcro together, remove the paper to expose the adhesive on one side and attach this to the legs or corners of the equipment or appliance.
- Leaving the two sides of the Velcro fastened together, remove the paper from the other side and set the item down on the shelf or countertop where you want it placed.

Other ways to secure items:

- Lay a rubber strip across shelf fronts to help keep books and files from sliding forward.
- Line shelves with rubbery shelf liner that keeps items from sliding off the shelves.
- Check with local emergency suppliers for a variety of fastening devices to secure items.

Securing Pictures, Mirrors, Hanging Objects and Cabinets

Earthquakes have a tendency to knock pictures and mirrors off the walls.
 You may be seriously injured if they happen to fall on you.
 Consider moving all framed pictures and mirrors away from beds, couches and chairs.

Securing pictures and mirrors

- Place angle screws on their top and bottom or secure them with wire to an eyebolt. Screw these directly into wall studs if possible.
- Poster Putty or Velcro may also be used in diagonal corners to secure pictures, mirrors, wall clocks, etc. to the wall.
- Check with local emergency suppliers for a variety of fastening devices to secure items.

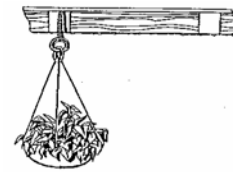


Eyebolt

Securing hanging objects

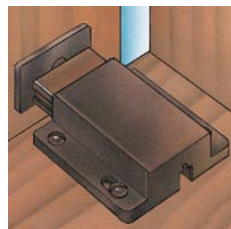
Carefully check the location of all hanging plants and other hanging objects. Determine if they are close enough to windows to strike them in the motion of an earthquake. If they are, consider moving them.

- Secure these objects by closing the opening in their hook. Make sure the hook is screwed directly into a ceiling stud.



Securing kitchen cabinets

- To prevent cabinet doors from flying open, install one of these types of latches.



Push Latch

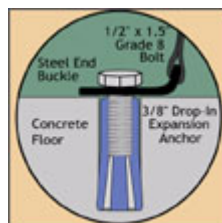


Pull Latch

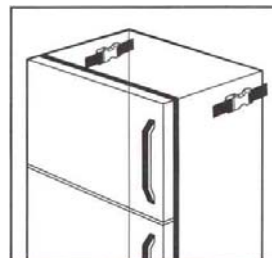
Securing

Appliances

Appliances such as refrigerators, freezers, washers, dryers and water coolers can move significantly during a strong earthquake. Use strong strapping and ratchets or other connectors to secure appliances to the cement floor with anchor bolts (shown below) or 5/16" by 3" lag screw into the wall studs.

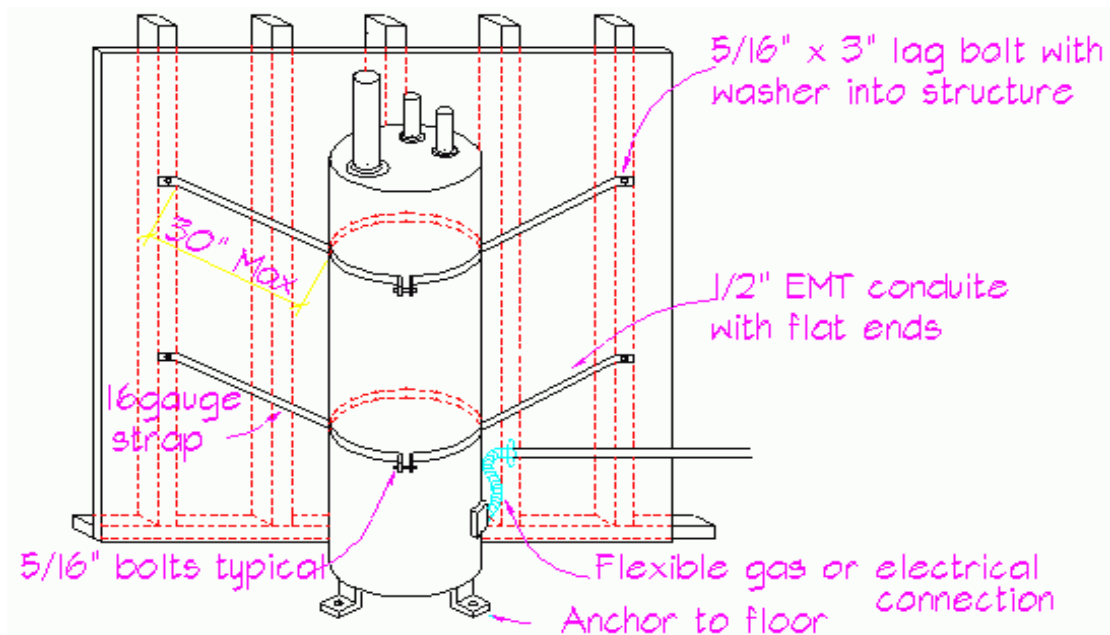


Anchor Bolt



Refrigerator strapping

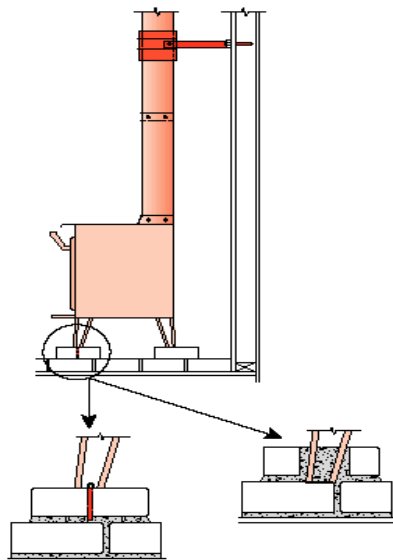
Securing the Water Heater



- Wrap a 1 1/2" wide, 16 gauge thick metal strap around the top of the water heater and about 1/3 of the way up from the bottom. Bolt the ends together.
- Take 4 lengths of EMT electrical conduit, each about 30 inches. Flatten the ends. Bolt one end to the metal strap as shown. Screw the other end to a 2" by 4" stud in the wall using a 5/16" by 3" lag screw (see illustration).

Once the appliance has been secured a flexible pipe may be installed to connect the gas supply. The installation of this pipe should only be carried out by a licensed gas fitter.

Securing Wood Burning Appliances



A typical wood burning stove or heater weighs between 100 and 150 kilograms. It can easily topple over from the rolling action of an earthquake. This movement can cause a fire or let smoke and other gases leak into the house.

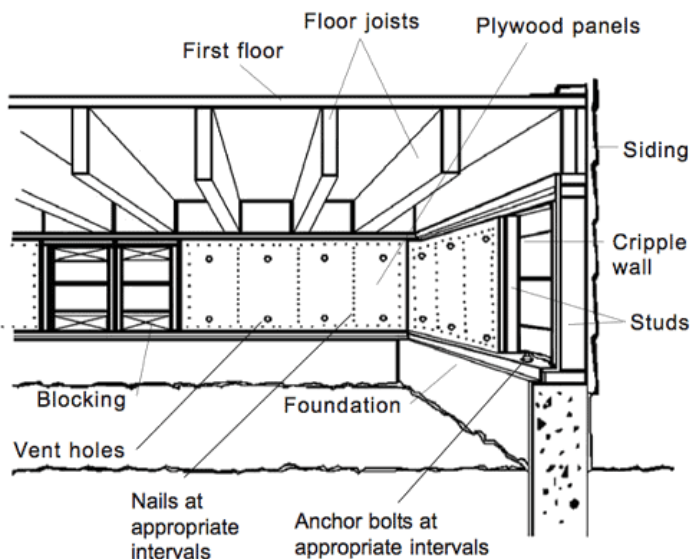
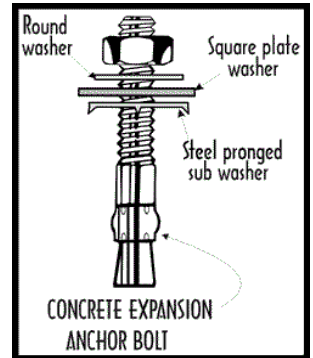
Have a professional secure your wood-burning appliance so it will not move or topple over. If you do the work yourself, have it inspected.

Do not compromise your safety!

Foundation

The majority of residential structural damage is caused by homes sliding off their foundations during major earthquakes.

- Check your house and garage for foundation bolts. They are placed approximately 2 metres (~6 feet) apart along the sill plate and should look like the one illustrated.
- Using a hammer drill and carbide bit, drill a hole through the sill plate into the foundation. Place these holes every 2 metres (~6 feet).
- Drop a ½" x 8" expansion bolt into the hole and finish by tightening the nut and washer.



Cripple Walls

- Inspect the vertical studs that extend from the foundation to the first floor of your home. These are called cripple walls. If they are exposed on the inside, they could buckle with severe ground motion.
- Strengthen cripple walls by nailing plywood sheeting to vertical studs.
- Inspect the garage for exposed cripple walls. This is particularly important if the garage is supporting living quarters.

Mobile Home Foundations

It is relatively easy for a mobile home to be thrown off its supports during an earthquake, even those that produce minor shaking.

- Leave the wheels on the coach to limit its fall.
- Check the undercarriage to make sure that it has been securely tied to the foundation.
- Tie doublewide mobiles together. The two halves generally are of different weights so they move differently in an earthquake and can easily pull apart.

