



## TOWN OF LOS GATOS

### WATER HEATER BRACING REQUIREMENTS

**Permit Required.** In order to process and expedite your request for a plumbing permit, **please submit the application and if you are relocating or changing to a tankless system, plans of a gas line and specifications (installation instructions) will be required.** Incomplete submittals will not be accepted. We do not accept submittals by mail or courier.

You may also use the Town's Online Permit System for Water Heater Replacement (same type and location). Contractors and property owners can register to use the system to create the permit. **Contractors must have a current Business License for the Town in order to obtain permits.**

The state of California requires that all water heaters in our area be anchored or strapped to resist movement during an earthquake. This can be accomplished by installing any of the over-the-counter products specifically made for restraining water heaters (Example 1) or you can or you can make your own out of a heavy-duty metal strap material (Example 2). It is required that at least two restraints are used, with one in the upper one-third and one in the lower one-third of the water heater. Fasten the anchor or strap to the structure, use a screw not less than  $\frac{1}{4}$ " diameter with a minimum penetration of  $\frac{1}{2}$ " into a wood stud on the wall, with a washer between the head of the screw and the restraint. Below are examples of acceptable methods for restraining a water heater.

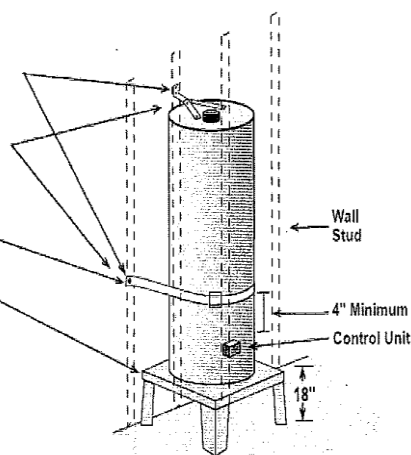
Example 1

These types of restraints are over-the-counter products sold at your local hardware store.

Drill pilots on center line of stud, insert screws through punched holes in strap. Use washers.

The lower strap must be a minimum of 4" above the control unit.

This 18" stand is required for heaters installed in a garage location.



Example 2

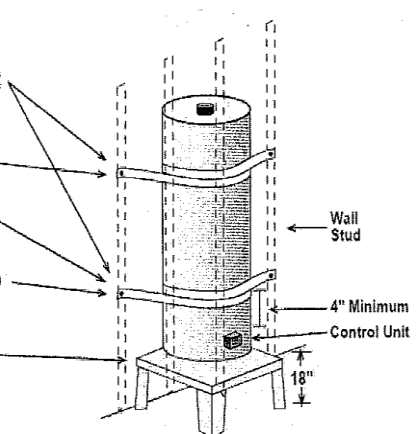
Minimum 22 Gauge metal strap material installed within the top  $\frac{1}{3}$  of the heater and the bottom  $\frac{1}{3}$  of the heater.

Drill pilots on center line of stud, insert screws through punched holes in strap.

Use minimum  $\frac{1}{4}$ " screws with minimum  $1\frac{1}{2}$ " penetration. Use washers.

The lower strap must be a minimum of 4" above the control unit.

This 18" stand is required for heaters installed in a garage location.



#### Installation Requirements:

- Water heaters are prohibited in bedrooms, bathrooms, or in a closet that opens into a bathroom or bedroom.
- Water heaters located in a garage shall have the ignition source, or pilot light, elevated 18 in.
- Pressure relieve valve shall terminate to the exterior, 6 in. to 24 in. above grade with a no-thread fitting pointing downward. Minimum  $\frac{1}{4}$  in. per foot downward slope shall be

maintained at pressure relief drain line.

- In basements, or areas where gravity drainage for pressure relief valve cannot be achieved, a Watts-210 valve shall be required.
- Water piping shall be insulated within the first 5 feet of water heater.
- A drain pan shall be installed if located at interior other than garage.
- Water heaters shall be strapped at upper 1/3 and lower 1/3 of tank. Approved strap kits may be used. Use of plumber's tape or EMT conduit is allowed, as long as it is installed per the Guidelines for Earthquake Bracing of Residential Water Heaters, published by the Division of the State Architect.
- 75 gallon water heaters shall have 3 straps.
- 100 gallon water heaters shall have 4 straps.