



Water Heater Replacement (Residential Storage Type)

CITY OF NEWARK, CALIFORNIA

BUILDING INSPECTION DIVISION

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GENERAL

This brochure covers the code requirements for the replacement of residential water heaters (electric and gas-fired storage type). For information on residential tankless water heaters, please refer to Information Bulletin titled, "Tankless (Instantaneous) Water Heaters for Residential Applications."

PERMITS

A permit is required for the replacement of a domestic water heater and can be obtained at the Building Inspection Division, City Administration Building, 37101 Newark Boulevard. The cost of the permit is \$59 per water heater. Contractors who participate in the City's "Permits by Fax" program, can obtain a permit by using faxed requests. Call 510-578-4261 for information.

INSPECTIONS

A single inspection is needed and occurs after the water heater has been installed and all associated work is complete.

EARTHQUAKE STRAPS

All water heaters shall be secured to prevent dislocation during an earthquake. Water heaters shall have two straps securely fastened to adjacent walls, one located in the lower 1/3 of the heater and the other in the upper 1/3. For details showing various strapping methods, please visit the state architect's website at <http://www.documents.dgs.ca.gov/dsa/pubs/waterheaterbracing01.31.02.pdf>.

TEMPERATURE AND PRESSURE RELIEF VALVES

Water heaters shall be equipped with a temperature and pressure relief valve connected to a drain line which extends to the exterior of the building and discharges between 6 and 24 inches above grade. Drain lines shall be copper or galvanized iron and shall be installed so that all water will drain completely out of the pipe. Plastic pipe is prohibited.

For commercial installations, if it is physically impossible to extend a drain line to the exterior, the drain line can discharge into a floor sink or janitor's mop sink. For residential installations in which drain lines cannot be installed to an exterior location, other methods of safeguarding against overpressure may be used if first approved by the Building Official.

COMBUSTION AIR

Gas-fired water heaters shall be supplied with combustion air. Water heaters located in closets shall have two 6"x14" vents that open to the outside air. One vent shall be located within 12 inches of the bottom of the closet and the other within 12 inches of the ceiling.

GAS SUPPLY

Gas-fired water heaters shall be connected to the house gas line with an approved flexible connector properly sized for the BTUH capacity of the heater. A shutoff valve shall be installed between the house gas line and the flexible connector. Existing valves and flexible connectors need not be replaced provided they are not damaged and are the correct size for the new water heater.

FLUES

Gas-fired water heaters shall have their exhaust gases vented to the exterior using double walled Type "B" sheet metal flue pipe. Single wall sheet metal flue pipe may be used within the water heater closet, but cannot extend into enclosed framing, attics, or roof areas. The transition between single wall pipe and double wall Type "B" flue pipe shall be done with an approved transition collar. All Type "B" flue pipe shall be held clear of all wood a minimum of 1 inch.

INSULATION

The first 5' of the hot and cold water pipes connected to the water heater shall be insulated with a foam plastic pipe insulation. The piping shall be installed so that it is at least 6" from the sheet metal flue pipe.

ELECTRIC WATER HEATERS

Electric resistance storage-type water heaters cannot be installed in residential construction unless they are replacing an existing electrical water heater of the same size.

BONDING

Metallic water and gas pipes within a residence are connected together with electrical bonding wires and then grounded to prevent shock hazards should an energized electrical wire come in contact with the pipe. Generally the replacement of a water heater does not affect the bonding of the pipes. However, if existing bonds are present, they need to be reinstalled. It is recommended that a #8 copper wire be connected to the gas, hot water, and cold water pipes using clamps that can be obtained at a hardware store.

RAISED PLATFORMS

Water heaters, including replacement units located in garages, shall be installed on a platform elevated 18" above the garage floor.

DRAINAGE PANS

Water heaters, including replacement units located in attics or second stories and located over a habitable living space, shall be installed on a sheet metal pan. Pans shall be 26 gauge sheet metal with 2" high sides with a 3/4" drain to an exterior location. Drain pipes may be PVC, copper, or iron.

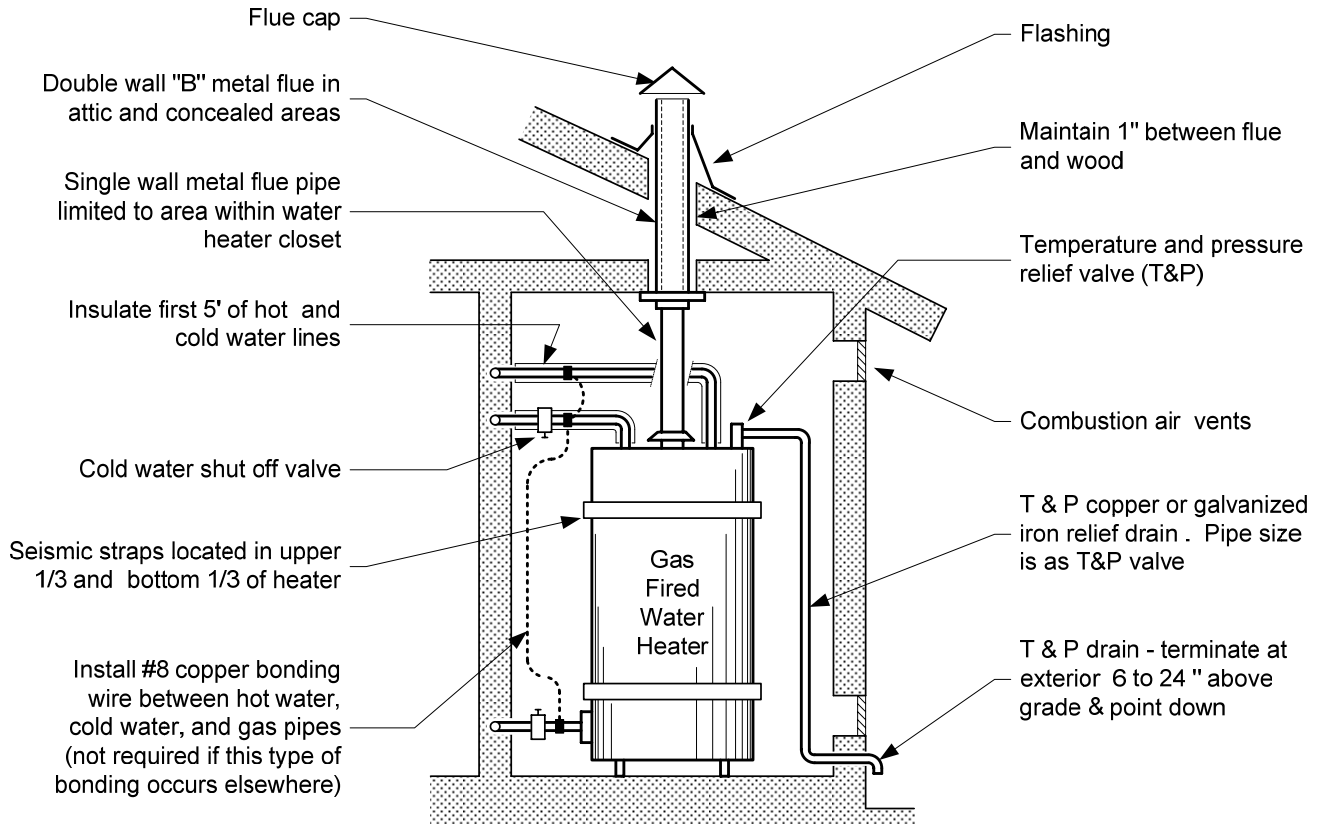
RECYCLE OLD WATER HEATERS

State law requires all cities in California to reduce the amount of waste they send to landfills. You can help by taking old water heaters to a recycler rather than a landfill. In addition to helping your community's recycling effort, you can save both money and time. Generally, taking a water heater to a recycler is cheaper and more convenient than using a landfill. Area recyclers for water heaters are:

Simsmetal
30104 Industrial Parkway, S.W.
Hayward, CA (510) 471-6600

Davis Street Transfer Station
Recycling Park
2615 Davis Street
San Leandro, CA (510) 638-2303

Jaco Environmental
1-800-741-0172



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