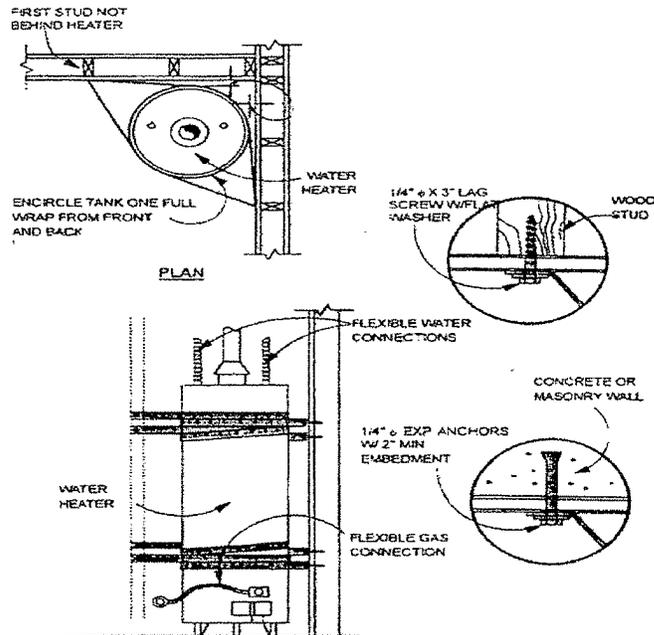
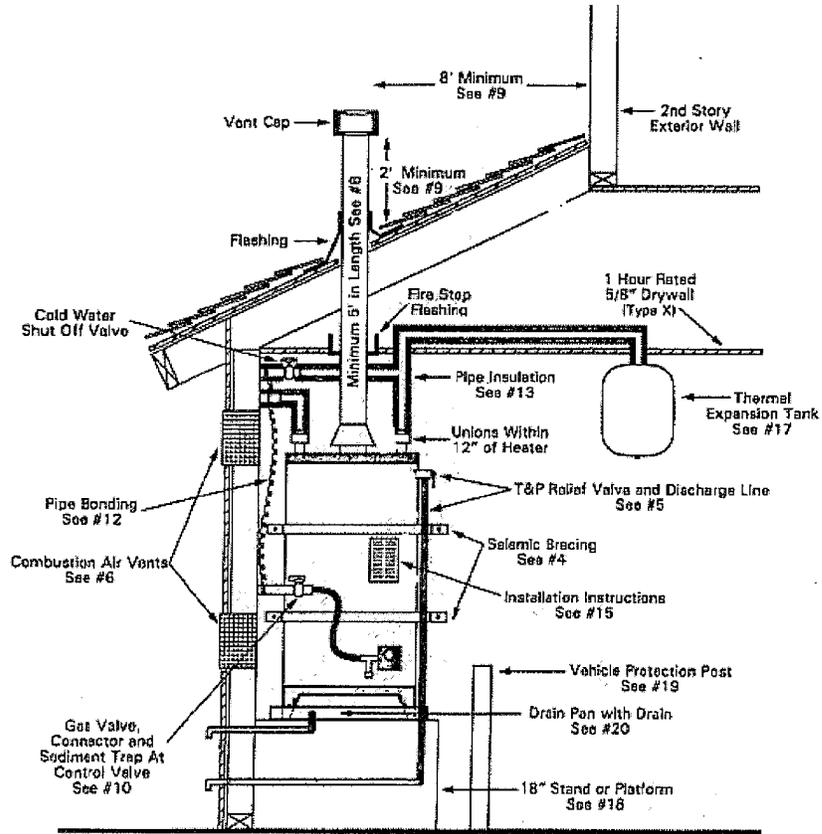


Water Heater Requirements



1. **Permits are Required** for new and replacement water heaters. (503.0 C.P.C. 2010) Contact the Building & Safety Department to obtain needed permit.
 2. **Inspection Is Required** after the water heater is installed to verify compliance within the minimum safety requirements of the code regarding; locations of water heater, combustion air, venting & vent cap, seismic protection/strapping, access and working space around water heater and other appliances, clearances to combustibles, gas piping supply with sediment trap and connections, temperature and pressure relief valve and discharge piping to outside, water and gas hand shut off valves, water piping and connections, metallic piping continuously bonded, to meet required Energy compliance and if required by location 18" elevation, vehicle damage protection and drain pan with drain. (504.2 C.P.C. 2010)
 3. **Prohibited Locations** Do not install water heaters which depend on the combustion of fuel in rooms used for sleeping purposes, bathroom, closet or other confined space opening into a bedroom, bathroom, or under a stairway landing. (505.1 C. P.C. 2010)
 4. **Seismic Bracing System** shall be installed to provide protection from displacement due to earthquake motion. Water heater shall be anchored/secured with a code approved restraint system consisting of strapping the upper and lower 1/3's of the water heater, minimum 4" above gas control valve and 4" below side T & P outlet. (508.2 C.P.C 2010 and 17958.5 Health and Safety Code)
 5. **Temperature and Pressure Relief Valve & Discharge Line** Water Heaters shall be installed with a T & P relief valve that is ran in rigid metal piping from T&P valve to the outside of the building with slope and the end of the pipe not more than 2 feet nor less than 6" above the ground or flood level of the area receiving the discharge and pointing downward. The discharge line shall not be trapped or have a valve installed, and the terminating end shall not be threaded. (505.6 C.P.C. 2010)
 6. **Combustion Air Vents** within 2' of top and bottom of enclosure is required where enclosure has volume less than 50 C.F. per 1000 B.T.U. / H of all appliances within enclosure. Minimum area per opening shall be based on 1 square inch per 4000 B.T.U./ H of input capacity, with minimum screen mesh of a 1/4". (507 C.P.C. 2010)
 7. **Venting System** shall be constructed, sized appropriately and installed to code and per manufacturer's installation instructions; in no case shall vent piping be smaller than required for water heater's draft diverter or venting outlet. (510.10.3 C.P.C. 2010)
 8. **Venting Clearance** Single wall metal vent piping shall be installed in a manor to provide 6" clearance from combustible materials and shall be secured together with Tex screws or rivets. Single wall vent piping shall not be installed in a confined space, and only installed below fire stop flashing. **Type B Double wall** vent piping shall be installed in a manor to provide 1" clearance from combustible materials and shall not be secured together with Tex screws or rivets. (510.10.7 C.P.C. 2010)
 9. **Vent Pipe Termination** shall not terminate less than 2' above roof, additional height required if roof pitch is greater than 6:12 slope, nor shall a vent terminate less than 8 feet from any second story exterior wall. Vent termination in all other cases not to terminate any less than 2 feet above any structure within 10 feet. Other venting rules may apply see section (510.5.2 C.P.C. 2010)
 10. **Gas Appliance Connectors** shall not exceed 3 feet in length and shall not be reused per manufacture's installation instructions. Gas connectors shall be attached to a hand shut-off type gas valve and be properly sized to B.T.U. rating of water heater.
 11. **Sediment Trap** shall be installed to gas supply at water heater control valve with a T fitting and a minimum 3-inch nipple in length with cap for sediment trap. (1212.7 C.P.C. 2010)
 12. **Metallic Piping to be Bonded** continuously with a #8 copper bonding wire and bonding clamps, to cold, hot, and lines to tie systems together at water heater. (250.104 C.E.C. 2010)
 13. **Water Piping Insulation** shall be installed 5-feet on the cold and 5-feet on the hot water supplies at water heater when possible, and to maintain 6-inch from and flue. NOTE; if water heater has a re-circulating pump system the entire length of circulating piping loop will need to be insulated. (2010 California Energy Commission Mandatory Requirements)
 14. **State Energy Regulations** requires the following: If the water heater has an EF of less than 0.58 an R-12 water heater blanket is required (internal insulation can not be used to satisfy this mandatory requirement.) For water heaters with 0.58 EF or higher, no blanket is required. The blanket should be securely attached around the water heater. The top of the water heater should not be insulated and a cut out in the blanket should be provided for combustible air intake and controls. (2010 California Energy Commission Mandatory Requirements)
 15. **Installation Instructions** for water heater to be on site and readily available for reference. (508.26 C.P.C. 2010)
 16. **Working Platform** A level working surface not less than 30"x 30" shall be provided for service. (509.4.4 C.P.C. 2010)
 17. **Thermal-Expansion Tank System** shall be required to protect water heater and water piping systems from excess pressure due to thermal-expansion. (608.3 C.P.C. 2010 & 1006.0 C.M.C. 2010) if a regulator is installed.
 18. **Water Heater Stand** or built in platform is required when water heater is installed in a garage to elevate water heater a minimum 18" above grade. (508.14 C.P.C. 2010)
 19. **Vehicle Protection** must be provided where subject to mechanical damage, post or built-in platform (508.14 C.P.C. 2010)
 20. **Drain Pan** shall be required when a water heater and/or tank is installed in a location where it could cause damage; in case of failure/leak to floor, sub-floor, drywall, or platform. Drain pan shall be installed with a minimum 3/4" drain outlet and discharge that drain to the exterior of the building or approved location. (508.4 C.P.C. 2010)
- NOTE: Discharge from T&P relief valve can not terminate into water heater drain pan. (508.5 C.P.C. 2010)

Prescriptive Certificate of Compliance: Residential Water Heating**CF-1R-ALT-WH****General Information**

Site Address:

Climate Zone:

Date:

*NOTE: This form is only used for alteration or addition of water heating systems.***WATER HEATING**

List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating. Individual dwelling DHW heaters must be gas or propane fired, and may not exceed 50 gallons. Hot water pipe insulation from the DHW heater to the kitchen(s) and on all underground hot water pipes is required in all component packages in all climate zones.

Water Heater Type / Fuel Type ¹	Distribution Type (Standard) ²	Number of System	Tank Capacity (gal)	Energy Factor or Thermal Efficiency	External Tank Insulation R-Value ³

1. Indicate Type (Storage Gas, Heat Pump, Instantaneous, etc.)

2. Recirculating systems serving multiple dwelling units shall meet the recirculation requirements of 150(n). **The Prescriptive requirements do not allow the installation of a recirculating water heating system for single dwelling units.**

3. The water heating tank and pipes shall be insulated to meet the requirements of 150(j).

Contractor (Documentation Author's /Responsible Designer's Declaration Statement)

- I certify that this Certificate of Compliance documentation is accurate and complete.
- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
- I certify that the energy features and performance specifications for the building design identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.
- The building design features identified on this Certificate of Compliance are consistent with the information provided to document this building design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name:

Signature:

Company:

Date:

Address:

License:

City/State/Zip:

Phone: