



City of Union City – Economic and Community Development Department
Building Division
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RESIDENTIAL GAS WATER HEATER

PERMIT REQUIRED:

A permit is required to install a new and for the replacement of an existing water heater. The following is a listing of the general requirements for a water heater replacement based on the 2013 California Mechanical Code, 2013 California Plumbing Code, and the 2013 California Electrical Code. This handout is intended to provide general information, contact the Building Division for any questions or additional information.

PERMIT PROCESS: **Tank Water Heater** - A plumbing permit shall be obtained at the City of Union City's Building Division, no plans are required. **Tankless Water Heater** - A plumbing, mechanical and electrical permit may be required. Contact the Building Division for further information, no plans are required.

FEE: Please refer to the Building Division Fee Schedule or contact the Building Division.

INSPECTION:

One inspection shall be performed after the water heater has been replaced. If the installation of a tankless water heater required for a new gas line to be installed and/or new electrical receptacle to be installed, a rough inspection shall be performed before the final inspection.

GENERAL REQUIREMENTS:

- **Installation:** Listed water heaters shall be installed in accordance with tier listings and the manufacturer's installation requirements. (CPC 507.24)
- **Location:** Water heaters located in bedrooms and bathrooms shall be of direct vent type or be installed in a closet; provided the closet is equipped with a listed, gasketed door assembly and a listed self-closing device. Combustion air shall be obtained from the outdoors and the closet shall be for the exclusive use of the water heater. (CPC 504.0)
 - **Install in Garage:** Water heater shall be installed so that the burners and burner-ignition devices located not less than 18" above the floor. Shall be guarded against damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles. (CPC 507.13)
 - **Separate Enclosure in Garage:** Shall be allow the install at floor level, provided the required combustion air is taken from and discharged to the exterior of the garage. (CPC 507.13)
 - **Install in Attics and Under-Floor Spaces:** Shall be accessible through an opening and passageway not less than the largest component of the appliance, and not less than 22" by 30". A level working platform not less than 30" by 30" shall be provided in front of the service of the appliance. (CPC 508.4)
- **Outdoor Combustion Air:** Outdoor combustions air shall be obtained by two (2) permanent openings, one commencing with 12" of the top and one commencing within 12" of the bottom of the enclosure. (CPC 506.4.1)
- **Seismic Provisions:** Water heaters shall be strapped within the upper one-third and lower one third of its vertical dimensions. At the lower point, a minimum distance of four (4) inches shall be maintained above the controls with the strapping. (CPC 507.2)
- **Drainage Pan:** Where a water heater is located in an attic, attic-ceiling assembly, floor -ceiling assembly, or floor-subfloor assembly, a watertight pan of corrosion-resistant materials shall be installed beneath the water heater with not less than 3/4" diameter drain to an approved location. (CPC 507.4)
- **Single Wall Metal Pipe Vents:** Shall be constructed of galvanized sheet steel not less than 0.0304 of an inch thick or of an approved non-combustible corrosion resistant material and shall terminate not less than 5 feet in vertical height above the highest connected appliance. (CPC 509.7 and CPC 509.7.2)
 - Shall not originate in an unoccupied attic or concealed space and shall not pass through an attic, inside wall, concealed space, or floor. (CPC 509.7.3.2) Minimum clearance from a single-wall metal pipe to combustible material is 6". (CPC 509.7.3.4)
- **Control Valves:** Required shutoff or control valves shall be accessible. (CPC 606.6)
- **Combination Pressure and Temperature Relief Valve:** Shall terminate to an approved location, not allowed to drain into drainage pan. (CPC 608.3) Relief valves located inside the building shall be provided with a drain, and shall extend from the valve to the outside of the building, with the end pipe not more than 2 feet nor less than 6 inches aboveground. Relief drains shall not terminate into a building's crawl space. (CPC 608.5)
- **Gas Shut Off Valves:** Shall have an accessible and installed within 6 feet of the appliance it serves. (CPC 1211.5)
- **Sediment Trap:** Shall be installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical. (CPC 1211.8)
- **Pipe Insulation:** Pipe insulation is required on the first 5 feet of the hot and cold water pipes from the storage tank. (Energy Code STDS 150.0(j)2(i))