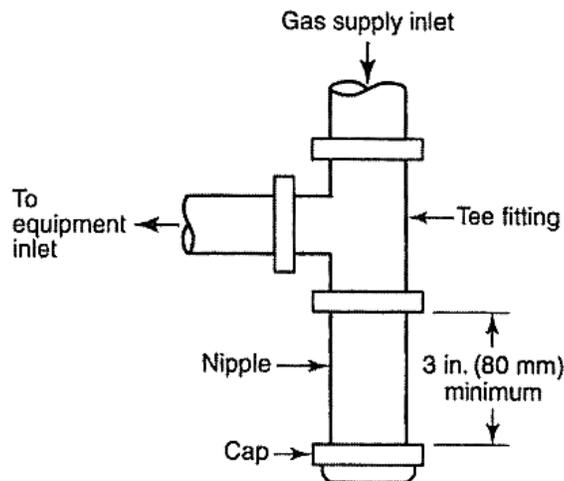
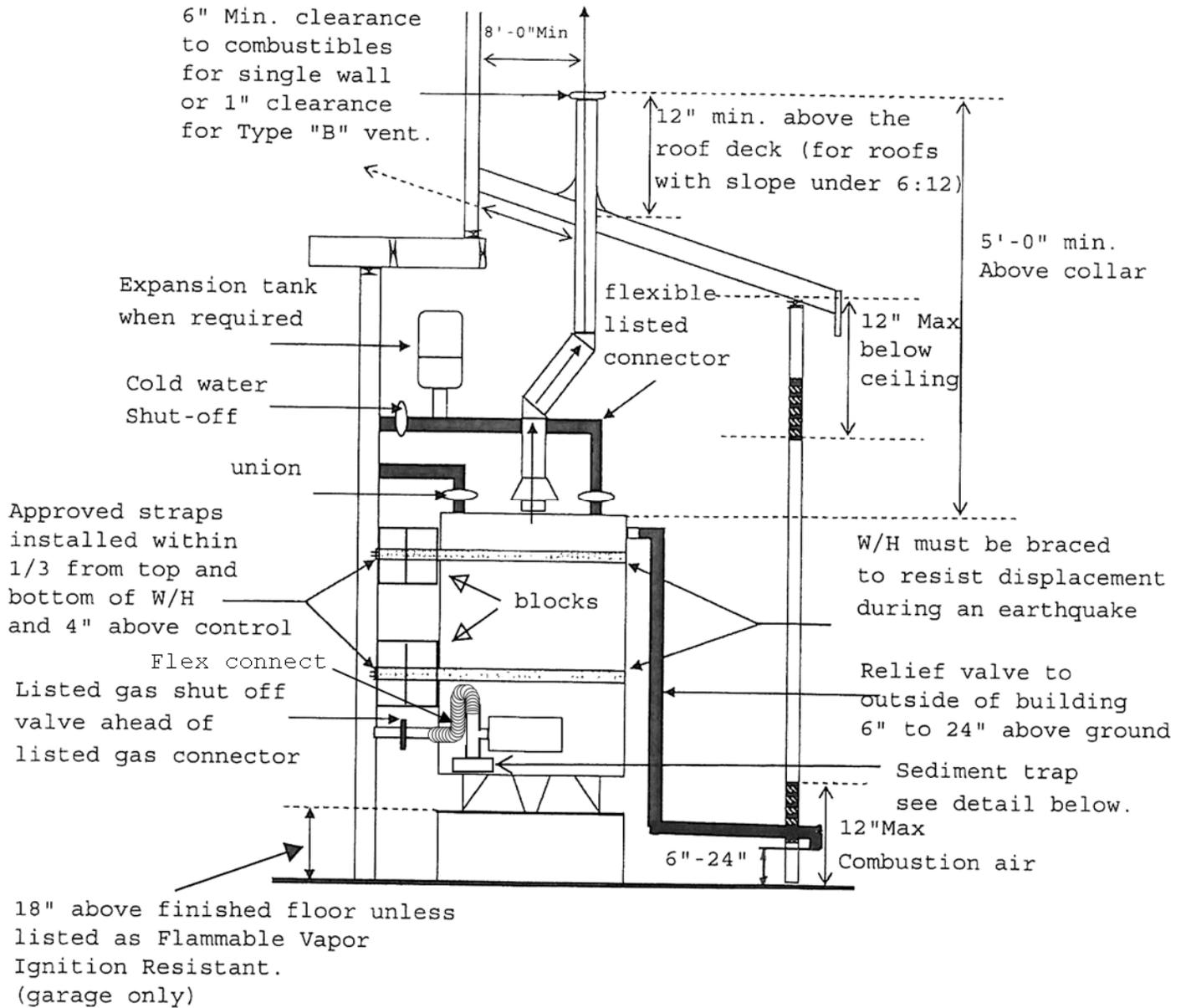




WATER HEATER REQUIREMENTS



Permit Requirements

A plumbing permit is required to install, remove, replace, raise, lower or relocate a water heater. (2010 CPC Sec. 503.0). A permit must be obtained before beginning the work. Work performed without proper permits is subject to additional fees.

Venting of Water Heater

Type "B" vents shall extend above the roof surface, through a flashing, and terminate in a **listed** vent cap or roof jack which shall be installed according to its listing and the manufacturer's installation instructions. The vent height above the roof surface shall be in accordance with Section 510.6.2.

Type "B" gas vent shall terminate at least **5 feet** in vertical height **above the highest connected equipment draft hood** or flue collar.

Type "B" vents must maintain **1 inch clearance** from any combustible materials. A single wall connector must be installed with a minimum of 6 inch clearance from any combustible materials. (2010 CPC Table 5-3)

A single wall vent connector shall not be located in or pass through an attic or crawl space. (2010 CPC Sec. 510.10.2.3). The entire length of a vent connector shall be **readily accessible** for inspection. (510.10.12).

Single wall vent connector sections must be attached to each other with 3 sheet metal screws at each joint. Use of a listed transition fitting from single- wall to a type "B" vent is recommended. Screws and other fasteners shall not penetrate the inner wall of a double wall vent. Cutting a double wall vent is not permitted. Use of tape to seal joints or to support a vent is not permitted.

Gas vents shall be supported, strapped or braced in accordance with their listings and the manufacturer's installation instructions. (2010 CPC Sec. 510.6.5).

The maximum horizontal length of a single-wall connector shall not exceed 75 percent of the height of the vent. The maximum horizontal length of a Type "B" connector shall not exceed 100 percent of the height of the vent. (2010 CPC Sec. 510.10.9.2 (3)).

Air for Combustion and Ventilation

Combustion air must be provided per 2010 CPC Section 507.0. For water heaters located in a room large enough to support the combustion process (**minimum 50 cubic feet of space per 1000 BTU/Hr. of appliances input rating (507.2.1)**) additional openings are not required. In all other instances, please refer to the Code for specific details and requirements.

Pressure Temperature Relief Valve

A Relief Valve shall be provided with the drain made of galvanized steel, hard-drawn copper or CPVC (CPVC shall be installed with a minimum of 6" metallic separation from the valve) and shall extend to the **outside** of the building, with the end of the pipe not more than 2 feet nor less than 6 inches above the ground. (2010 CPC Sec. 608.5). Discharge from a relief valve into a water heater pan shall be prohibited. (2010 CPC Sec. 508.5). A Watts 210 Valve is an approved alternative for water heaters installed in basements or other locations where the extending of a pressure relief drain to the outside is not practical.

Expansion Tank

Any water system provided with a check valve, backflow preventer or any other normally closed device (**including a pressure regulator, no exceptions**) that prevents dissipation of building pressure back into the water main shall be provided with an approved, listed and adequately sized expansion tank or other approved device to control thermal expansion. (2010 CPC Sec. 608.3).

Installation

A water heater shall be located or protected so it is not subject to physical damage by a moving vehicle. (508.14)

When a water heater is located in an attic or **any other area within the structure** where damage may result from a leaking water heater, a **watertight pan** shall be installed beneath the water heater with a minimum of 3/4 inch drain to the outside of the building. Storage tanks for non-recirculating systems must have **pipe insulation on both hot and cold water pipes for a length of 5'**. Minimum one inch of R-4 insulation is required. The entire length of piping, whether buried or exposed, of a recirculating system must be insulated.

Inspection

A final inspection is required after the water heater has been installed and all work has been completed. The inspection code is 304. The permit card and the approved job copy of the drawings (if any) must be presented to the inspector. **The permit holder (contractor or home owner) is responsible for the all necessary tools and equipment required to conduct the inspection. A re-inspection fee may be assessed if access to the inspection is not provided, the job is not ready for the inspection or when required corrections have not been made.**