



## **WATER HEATER INSTALLATIONS**

CITY OF HIGHLAND BUILDING DIVISION  
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Bulletin

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### **Combustion Air Openings:**

Two permanent openings, one commencing within 12 inches of the top and one commencing within 12 inches of the bottom of the water heater enclosure shall be provided. The openings shall communicate directly, or by ducts, with the outdoors. Combustion air openings shall not be less than 100 square inches.

### **Seismic Strapping of Water Heaters:**

Strapping shall be at a point within the upper 1/3 and the lower 1/3 of the water heater's vertical dimensions. At the lower point, a minimum distance of four (4) inches shall be maintained above the controls to the strap. Other methods and locations may be acceptable, check with the Building & Safety Division.

### **Drainage Pan (Smitty Pan):**

A corrosion resistant drainage pan, min. 1½ inches deep, is required when the water heater is located in an attic, on a sub floor or floor ceiling assembly. The pan is to drain to the exterior of the structure or to an approved location using a minimum ¾ inch drain line.

### **Water Heaters in Garages:**

Water heaters in garages and in adjacent spaces that open to a garage shall be installed so that all burners and burner-ignition devices are located not less than 18 inches above the floor, unless listed as flammable vapor ignition resistant. Water heaters shall be located or protected so that they are not subject to physical damage by moving vehicles.

### **Water Heater Venting:**

Type B gas vents shall extend in a generally vertical direction with offsets not exceeding 45 degrees, except that a vent system having not more than one 60 degree offset shall be permitted. Any angle greater than 45 degrees from the vertical is considered horizontal. The total horizontal distance of a vent, plus the horizontal vent connector serving draft-hood equipped appliances, shall not be greater than 75 percent of the vertical height of the vent.

### **Water Heater Vent Termination:**

Type B gas vents shall terminate at least 5 feet in vertical height above the water heater. Lowest discharge height above roofing material is determined by the pitch of the roof. See the table found in the California Plumbing Code, Chapter 5.

### **Temperature / Pressure (TP Relief Valve):**

TP Relief valves shall be provided with a drain to the outside of the building, terminating between 6" and 24" above grade and shall not be smaller than the relief valve outlet. Approved piping shall be either galvanized steel, hard-drawn copper, CPVC, or a listed relief valve drain tube.