Village of Bartlett

Water Heater Guide

January 2023

WHAT YOU NEED TO APPLY

- ❑ HOA acknowledgment signed by property owner (if applicant is not the homeowner).
- ❑ Letter of intent (only if applicant is the homeowner and contractor is doing work).
- ❑ Copy of current plumbing license and State Contractor's License (055).
- ❑ **Permit fee $75.00.**

REQUIREMENTS

- ❑ **General:**
  - o Installation should comply with the most current Illinois Plumbing code, department standards, and local amendments.
  - o Locations like bedrooms and bathrooms are typically prohibited because of the need for dedicated combustion air and also because pilots and standing flames are adversely affected by exhaust fans and negative pressure.
  - o 30" x 30" clearance in front of the controls is required for service, repair, replacement, and inspection.
  - o Elevated and Bottom feed water heaters must have a vacuum relief valve (VRV) installed between the water heater and the shut off valve.
  - o A water heater in an unconfined space uses indoor air for combustion and requires at least 50 cubic feet for each 1,000 BTUH of the total input for all gas appliances. The table below shows a few examples of the minimum square footage (area) required for various BTUH inputs.

BTUH Input	Min. Sq. Ft With 8' Ceiling	Typical Room with 8' Ceiling
30,000	188	9 x 21
45,000	281	14 x 20
60,000	375	15 x 25
75,000	469	15 x 31
90,000	563	20 x 28
105,000	657	20 x 33
120,000	750	25 x 33
135,000	844	28 x 30

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- **Venting:**
  - Appliances in closets, alcoves, and small rooms must be ventilated. Two vents (1-hi & 1-low) minimum 100 square inches each is the minimum allowed. Louvered doors are also an option and an easy way to supply sufficient combustion air.
  - Gas appliance venting:
    - Single wall vent clearance to combustible: 6".
    - Double wall vent clearance to combustible: 2".
    - Minimum pitch/slope for both types of vent piping: 1/4" per foot.
  - Water heater must be properly vented to an approved chimney or venting system and secured.
  - Exhaust vent must be separated from combustibles.
  - Vent and chimney connectors must be made of approved materials. Joints must be sealed with screws, rivets, or other approved materials.
  - There must be an approved draft hood.
  - The vent and chimney connectors must pitch upward from the water heater to the chimney, and the penetration at the chimney should be sealed to prevent leakage into the building's interior.
- **Gas Supply:**
  - Electrical bonding: a number 6 bonding jumper is required between gas pipe and both hot and cold-water lines.
  - Gas Pipe, fittings, and connectors must be schedule 80 black steel and flex connectors are prohibited.
  - An approved gas shut-off valve shall be located within 6 feet of the appliance.
  - The gas supply line must be made of approved material and properly connected.
  - The gas supply shut-off valve must be accessible and properly installed.
- **Electric Water Heaters: NEC:**
  - Must have an EGD (equipment grounding conductor) and a compliant disconnect
- **Water Connections:**
  - Safety pans are strongly recommended to prevent flood damage and are required for second floor connections with finished space below.
  - Piping must be type M or L rigid copper
  - Flexible connectors are prohibited.
  - Brass union adapters or dielectric unions are required.

- Each water heater must have a separate, lead free, full port ball valve on the cold supply line within 5 feet.
- Piercing valves and saddle clamps for humidifiers etc. are not approved vales and are prohibited.

❑ **Safety Controls:**

- T&P discharge pipe: no threads, reducers, or couplings are allowed on the bottom relief discharge piping. Safety valve piping shall be metallic/water rated material. Floor drain shall be located in the same room as the water heater. A properly sized expansion tank is required on closed water systems and water heaters with 75,000 BTUH or higher input.
- Are the safety controls in good condition with no evidence of tampering?
- Is the thermostat in good condition?
- Does the water heater have a temperature/pressure relief valve to relieve excessive pressure and prevent explosions? Does the water heater have a tag indicating 210 degrees Fahrenheit and a maximum of 150 PSI?
- Is the temperature/pressure relief valve located within 6 inches of the top of the tank? Is the temperature/pressure relief valve in good condition and free from leaks and corrosion?
- Is the relief valve discharge pipe made of rigid, metal piping; the same diameter as the relief valve outlet (no threads); and within 6 inches of the floor?
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ADDITIONAL INFORMATION

❑ **No work can begin until a building permit has been issued.**

❑ If a contractor is performing the work, they must be registered with the Village of Bartlett as a licensed contractor.

❑ **A final inspection is required** upon completion of work. The inspections may be requested through the Village portal or by contacting the Building Division at 630-540-5920 at least 48 hours in advance.