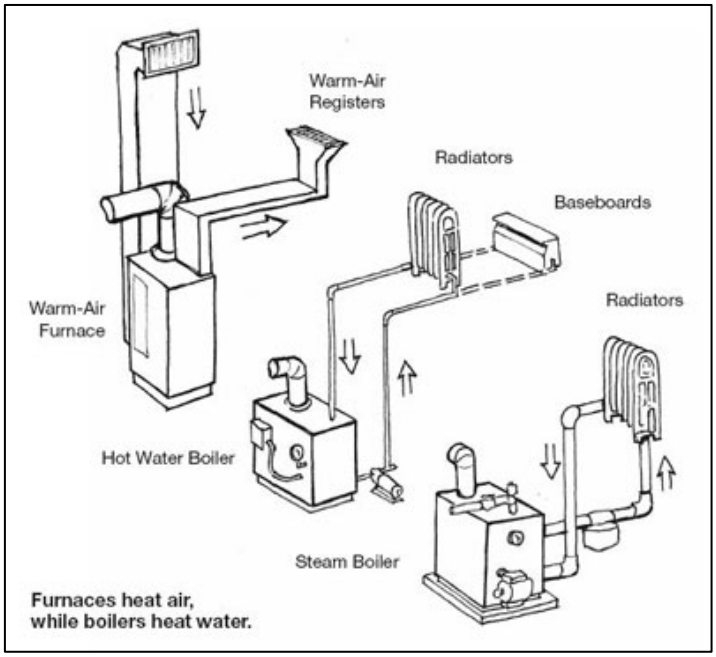
Heat System Types in the ICC

Primary Heat Systems (House-wide)
- Hot Water (Hydronic)
- Two-Pipe Steam
- One-Pipe Steam
- Forced Air

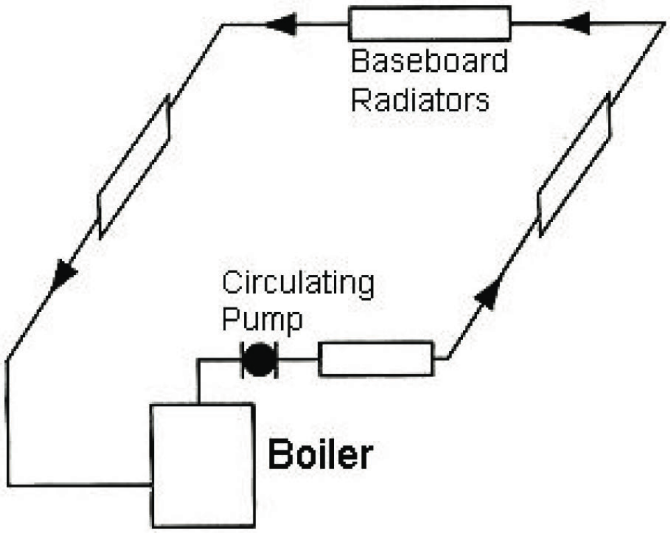
Secondary Heat Systems (Room-specific)
- Make-Up Air Unit (Feeds Kitchen)
- Electric Baseboard & Electric Fan Heaters
- Hydronic Fan Heaters

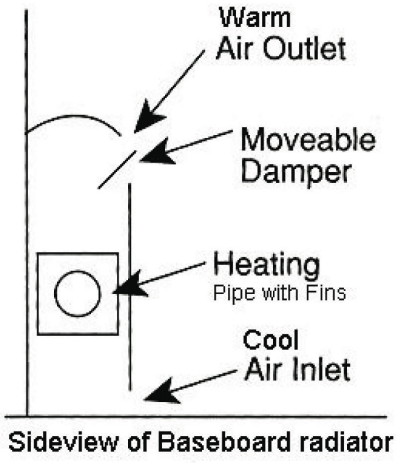
Additional Factors
- Domestic hot water tank: connected vs. isolated
- Thermostats vs. boiler controls
- Steam boiler blowdown



Hydronic Heat System Diagram

Using natural gas, water is heated by a boiler (located somewhere in your basement). This heated water is then pumped (forced circulation) through pipes that carry the heat to various zones (consisting of pipes and radiators that form heating loops). Heat is then distributed in individual rooms through convective baseboard radiators.





Room-Specific Troubleshooting

1) Weatherization
   a) Windows fully shut and locked
   b) Good airflow around radiators or forced air vents

2) System Controls
   a) Understand which thermostat controls each section of house
   b) Ensure thermostat is turned on and set to proper temperature

3) Maintenance Valves
   a) Ensure all valves in heat loop are open
      - Ball valves, gate valves, thermostatic radiator valves, steam radiator air valves

4) Trapped Air
   a) Bleed trapped air from radiators as necessary
      - Bleeder valves & bleeder keys
      - System water pressure: ~18psi to reach 3rd floor

"Homework"

1) **Close and latch all windows before winter.**
2) Set all thermostats to appropriate temperatures.
3) Hot Water Systems Only:
   Check system pressure while boiler is running.
   Submit RFA if not in the range of **18-20 psi**.
4) Troubleshoot cold rooms as necessary.