Inspection of Residential Plumbing Systems
Introduction

The purpose of this booklet is to summarize items needed for various plumbing inspections.

All plumbing piping shall be tested, inspected, and approved before covering. Except for emergency work, permits shall be obtained before starting work. The permittee’s copy of the permit and the approved plans are required to be on the job site and available for inspection.

It is not practical for this booklet to provide detailed plumbing inspection criteria for every situation. Depending on the exact nature of a specific installation, the inspector may require more than the testing presented below.

1. **Ground Plumbing Inspection: #340**

   All drains, wastes, and water piping below grade or 1st below floor level are to be installed and secured in place. Vertical piping and trap arms are to be securely supported and braced to remain in place. All drain, waste, and vent piping below floor level shall be subjected to a water pressure test with at least a 10 foot column of water. All water piping shall be tested using potable water at main pressure, or to a 50 psi air test. The minimum test duration is 15 minutes.

2. **Sewer Inspection: #341**

   The sewer piping shall be bedded on firm, undisturbed soil, sand, gravel, or compacted earth fill. All cleanout extensions shall be brought to grade. The sewer shall be filled with water to grade measured at the two-way cleanout. The property line cleanout extension may be removed for the test but must be replaced prior to filling the ditch.

3. **Water Service Inspection: #342**

   The water service may be installed in the same trench as a sewer constructed of materials approved for use within a building (cast iron, DWV plastic, or copper). The water service shall be installed 12 inches horizontally from the sewer. When installed with other sewer materials, the water service shall be on the shelf 12 inches above the sewer and 12 inches horizontally from the sewer. The water service shall be tested with the water main pressure or by a 50 psi air test for 15 minutes.

4. **Topout Plumbing Inspection: #341** (Will include the following unless a separate inspection is required.)

   a. **Drains, Wastes, and Vents #343**
      The drains, wastes, and vents above ground floor level shall be completely and properly secured. Vents on lower floors shall be capped, and a water test shall be made from the two-way cleanout through the highest opening.

   b. **Water Piping #344**
      Water piping shall be installed, protected with metal plates where the pipe is near the face of the studs or plates, and shall be secured in place. The piping shall be tested with the water main pressure or by a 50 psi air test for 15 minutes.

   c. **Gas Piping #347**
      Gas piping shall be installed and secured in place. All openings shall be capped. No gas test will be approved until all gas piping is covered.
      *Inspection Code

   *Note: The gas pressure test is a part of the final plumbing inspection.*

   d. **Bathtubs and Shower Pans #345**
      Bathtubs and shower pans shall be installed. Bathtub wastes may be tested through the waste and overflow or, if an access panel as described in the Uniform Plumbing Code is provided, tested to the trap.

*Inspection Code*
Shower Pans #345
Shower pans are to be installed with the base at ¼ inch per foot slope to weep holes in the shower drain.

Note: Listed shower pans are to be installed in accordance with the terms of their listing. The pan shall be tested with water to the height of the rough threshold. The weep holes shall be open to test both sides of the joint between the shower pan and the drain.

5. Final Plumbing Inspection: #399 (Shall include the following unless a separate inspection is required.)

All fixtures shall be securely installed in place and shall be connected. Fixtures shall be cleaned to allow a visual check for damage. Openings around Fixtures supplies and trap arms shall be sealed. Tub and shower valves shall be made watertight, and joints between fixtures and the wall or floor shall be sealed. Shower doors or curtain rods shall be installed.

a. Dishwashers
Dishwashers shall be connected to the hot water supply. Dishwashers must drain through an air gap fitting with the critical level marking at or above the overflow level of the sink. Dishwasher drains shall not connect to the waste line between a garbage disposal and the trap.

b. Water Heaters #350
Water heaters shall be furnished with a temperature and pressure relief valve installed in the top 6 inches of the tank. The relief valve drain shall be of rigid metallic pipe of the same size as the valve outlet. The relief valve drain shall not be trapped, shall end outside the building between 6 inches and 24 inches above grade, shall be pointing down, and without a threaded end. Water heaters may be installed in a garage providing that any part capable of producing a spark, glow or flame is elevated above the floor at least 18 inches. Water heater vents in concealed areas shall be Type B vents. Single wall vent connectors shall have their joints secured by screws or rivets and shall have 6 inches clearance from combustible construction. Water heaters shall be anchored or strapped to resist horizontal displacement due to earthquake motion.

c. Outside Hose Bibbs and Lawn Hydrants
Outside hose bibs and lawn hydrants shall be provided with non-removable vacuum breakers. Atmospheric vacuum breakers for lawn sprinkler systems shall be installed at least 6 inches above at least half of the sprinkler heads. Other atmospheric vacuum breakers shall be installed at least 6 inches above the highest point of use.

d. Cleanouts
Cleanouts shall be brought to grade and have protective boxes installed where required.

6. Gas Pressure Test #352*
Piping for gas supplied at a pressure of a 14 inch column of water or less shall be tested with a 10 psi air test for a period of at least 15 minutes. (Normal gas pressure supplied is equal to a 7 inch water column.) Unless specifically approved for pressures higher than 10 psi, gas valves shall be installed after the pressure test; but gas valves and connectors must be on the job for a final inspection. AGA listed and marked valves are required. On completion of the final inspection, the gas tag is filled out by the inspector, attached to the gas pipe next to the meter, and PG&E is notified. When appliances are not in place at final inspection, cap all gas lines with hard caps.

Note: The gas pressure test is part of the final inspection. *Note approved gauge size.