

301.3 Flood Hazard Resistance.

301.3.1 General. Plumbing systems shall be located above the design flood elevation.

Exception: Plumbing systems are permitted to be located below the design flood elevation provided that the systems are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation.

301.3.2 Flood Hazard Areas Subject to High-Velocity Wave Action. Plumbing systems in buildings located in flood hazard areas subject to high-velocity wave action shall meet the requirements of Section 301.3.1, and the plumbing systems, pipes, and fixtures shall not be mounted on or penetrate through walls that are intended to breakaway under flood loads as required by the building code.

301.4 Alternative Engineered Design.

301.4.1 Design Criteria. An alternative engineered design shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability, and safety. Material, equipment, or components shall be designed and installed in accordance with the manufacturer's installation instructions.

301.4.2 Permit Application. The registered professional engineer shall indicate on the design documents that the plumbing system, or parts thereof, is an alternative engineered design so that it is noted on the construction permit application. The permit and permanent permit records shall indicate that an alternative engineered design was part of the approved installation.

301.4.3 Technical Data. The registered professional engineer shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that the performance meets the intent of this code.

301.4.4 Design Documents. The registered professional engineer shall provide two (2) complete sets of signed and sealed design documents for the alternative engineered design for submittal to the Authority Having Jurisdiction. The design documents shall include floor plans and a riser diagram of the work. Where appropriate, the design documents shall indicate

the direction of flow, all pipe sizes, grade of horizontal piping, loading, and location of fixtures and appliances.

301.4.5 Design Approval. Where the Authority Having Jurisdiction determines that the alternative engineered design conforms to the intent of this code, the plumbing system shall be approved. If the alternative engineered design is not approved, the Authority Having Jurisdiction shall notify the registered professional engineer in writing, stating the reasons therefore.

301.4.6 Inspection and Testing. The alternative engineered design shall be tested and inspected in accordance with the submitted testing and inspection plan and the requirements of this code.

301.5 One- and Two-Family Dwellings. [HCD 1 & HCD 2] *The provisions contained in this code shall not apply to one and two-family dwelling private sewage disposal systems and minimum plumbing facilities when alternate facilities or installations have been approved by the local health authority, provided that such alternative facilities or installations provide substantially equivalent or greater protection to health and safety.*

302.0 Iron Pipe Size (IPS) Pipe.

Iron, steel, brass, and copper pipe shall be standard-weight iron pipe size (IPS) pipe.

303.0 Disposal of Liquid Waste.

It shall be unlawful for any person to cause, suffer, or permit the disposal of sewage, human excrement, or other liquid wastes, in any place or manner, except through and by means of an approved drainage system, installed and maintained in accordance with the provisions of this code.

Exception: [HCD 1] *Limited-density owner-built rural dwellings. A water closet shall not be required when an alternate system is provided and has been approved by the local health official. Where an alternative to the water closet is installed, a system for the disposal or treatment of graywater shall be provided to the dwelling. Graywater systems shall be designed according to water availability, use and discharge. The design, use and maintenance standards of such systems shall be the prerogative of the local health official.*

304.0 Connections to Plumbing System Required.

All plumbing fixtures, drains, appurtenances, and appliances, used to receive or discharge liquid wastes or sewage, shall be connected properly to the drainage