

San Juan Water District (SJWD)
Standard Pressure Design Procedure
for Residential Water Service Connections
with Automatic Fire Sprinkler Systems
(Rev. 04-16-19)

This design methodology is based on SJWD's determination of a Standard Design Pressure which is provided by SJWD to the fire system designer. Reference SJWD's "Residential Fire System Design Procedure Summary" for additional information related to designing a system based on a specific hydraulic analysis for a specific service location.

1. SJWD's Standards require that Residential Fire Sprinkler System designs shall be a Modified Passive Purge (MPP) type system which requires, at a minimum, the following:
 - a. All water closets (toilets) within the residential structure must be supplied from the fire sprinkler piping system.
 - b. The fire system plumbing shall be designed to eliminate dead-ends and dead-zones as necessary to provide circulation throughout the piping system and between each floor level, prevent stagnant water within the piping, and to ensure flushing of the entire fire system piping network occurs with use of the toilets.
 - c. The longest terminal pipe segment in the network shall be shorter than 36-inches. This requirement includes the vertical sprigs in the attic, and covering FAU's.
 - d. This standard requires that the design must of course also incorporate the design requirements of the jurisdictional fire agency/entity.
2. Prior to beginning an automatic fire sprinkler system design, the designer shall verify the available water supply system pressure at the project location with SJWD. Standard Pressure designs may be allowed using a Standard Pressure of either 35- or 45-psi depending on the location within SJWD's service area. This pressure is considered the pressure within the water main fronting the project location. The designer is responsible to verify the applicable Standard Pressure available at any given location with SJWD, and obtain that Standard Pressure value from SJWD in writing.
3. Custom designs are allowed under a separate process based on the results of a site-specific Flow and Pressure Analysis as performed by SJWD.
4. Contact SJWD for Standard Details and other water service related design information.
5. Approval of the MPP system requires review and approval of residential fire sprinkler piping layout design plans by SJWD prior to or concurrent with the approval by the jurisdictional fire entity/agency.
6. Review and approval of calculations and plans is finalized prior to construction/installation by the jurisdictional fire entity/agency.
7. Copies of jurisdictional fire entity/agency's testing and inspection reports must be submitted to SJWD for review and approval prior to service activation.
8. Exceptions are allowed only when pre-approved by SJWD and in such cases an SJWD approved backflow device shall be installed.