

4.22 Design of Fire Pump Wiring Methods (2022)

Reference: 2022 San Francisco Fire Code, Section 913; 2019 NFPA 20; 2022 California Electrical Code and 2022 San Francisco Electrical Code

Purpose: The purpose of this bulletin is to aid the design professionals, installers and inspectors with regards to the wiring method used when wiring fire pumps.

Scope: The guidelines in this Administrative Bulletin shall apply to both new buildings and existing buildings where new fire pumps, drivers or controllers are installed; or the replacement of existing system components. The information provided herein details the San Francisco Fire Department's minimum requirements for all wiring methods used as directly related to the functioning of the fire pump.

- I. **Protection against interruption of service:** The fire pump, driver and controller shall be protected in accordance with 2019 NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.
 - A. All wiring methods that connect to the fire pump, driver and controller shall be suitable for use in a wet location as defined in the San Francisco Electrical Code.
 - B. Wiring methods shall not void the listing of the fire pump controller.
 - C. As a minimum, a Type 2, drip-proof enclosure (junction box) shall be used. The enclosure shall be listed to match the fire pump controller enclosure type rating.
- II. **Raceway Terminations:**
 - A. Listed conduit hubs shall be used to terminate raceway (conduit) to the fire pump controller.
 - B. The type of rating of the conduit hubs shall be at least equal to that of the fire pump controller.
 - C. The installation instructions of the fire pump controller manufacturer shall be followed.

NOTE: Alterations to the fire pump controller, other than conduit entry as allowed by the San Francisco Electrical Code, shall be approved by the San Francisco Electrical Inspection Division on a case by case basis prior to installation.

The Fire Pump Room shall be considered a **Wet Location (High Pressure Water System)** and all wiring methods, including the following, shall be installed under Wet Location Conditions: Fire Pump(s), Fire Pump Controller(s) or Fire Pump Controller(s)/Transfer Switch(s), Lighting, Receptacles, Switches, Tamper / Flow Switches, Smoke Detectors, Strobes, Conduit, Wire, Junction Boxes, etc.