



## CITY OF SAN JOSÉ, CALIFORNIA

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SAN JOSE FIRE DEPARTMENT

### **17.12. 1050 Standard for Installation of Centrifugal fire Pumps (NFPA 20-1996)**

NFPA 20-1996 edition, including appendices is hereby added to the list of recognized standards, as contained in Section 9003 of the California Fire Code, with the following amendments:

Section 2-7.1 Amend to add the following:

All exterior fire pumps shall be installed in a dedicated building (pump house).

Section 2-9.4\* Amend to read as follows:

All fire pumps shall be installed with a bypass. The size of the bypass shall be at least as large as the pipe size required for discharge pipe as specified in Table 2-20.

Section 2-9.9 Amend to add the following:

(c) Positive supply pressure shall be maintained by one or both of the following methods:

(1) Alarms shall be arranged for audio and visual annunciation at the FACP and in the fire pump room if the water supply drops below 5 psi.

(2) A low-suction throttling valve shall be installed to sense the pressure in the water supply and automatically send a signal to a valve on the discharge side of the pump. This valve will not close all the way, but it will throttle back the discharge, allowing the pump to keep sending water to the fire, while the water supply recovers because the flow demand has been decreased.

## Section 2-11 Amend to read as follows:

Where provided, the suction valve, discharge valve, jockey pump valves controller valves, and isolation valves on the backflow prevention device or assembly shall be supervised open by the following methods:

- (a) Central station, proprietary or remote station signaling services through the FACP;
- (b) Locking valves open.

Exception: The test outlet control valves shall be supervised closed.

## Section 2-14.1.1 Amend to add the following:

To facilitate flow testing, all fire pumps shall be equipped with both of the following:

1. Test Header. This device is connected to the discharge side of the pump and has a number of hose outlets (equal to the number required at 15 percent capacity ÷ 250 gpm). When testing the pump, the hose is connected to the outlets with water discharged in a safe location. Flow readings are usually taken from the end of the hose with a Pitot gauge.
2. Flowmeter. A special pipe is run from the discharge side of the pump back to the water supply (or to some other acceptable discharge point) with a flowmeter, control valve, and check valve in the line. When testing the pump, the control valve is opened partially (with the pump already running) to achieve the 100 percent flow condition. The valve is opened more to achieve the 150 percent flow condition.

## Section 2-15 Amend to add the following:

San Jose has been subject to "Brown Outs" and PG&E has selectively cut power regionally during high use periods. Therefore, electric motor driven fire pumps shall be provided with a secondary private power station in accordance with Section 6-2.3.1 of NFPA 20.

## Section 2-18 Amend to add the following:

Pump controller shall be connected to the building fire alarm system to provide remote signals as required by NFPA 20.

## Section 4-7.2.3 Amend to add the following:

Provide sufficient space in pump room so that there is adequate workspace on all sides of the pump and associated equipment.

Section 7-5.2.1 Delete Exception to subsection (b).

Section 8-4.3.1 Amend to add the following:

Diesel fuel storage tank capacity may be calculated based on actually engine fuel usage. The example given in the NFPA Fire Pump Handbook under Section A-8-4.3 shall be followed, as modified for the proposed situation.