



FIRE PREVENTION MANUAL

DEVELOPMENT REQUIREMENTS

403.003 FIRE HYDRANT SPACING & FIRE FLOW REQUIREMENTS

EFFECTIVE: JUNE 2008

SCOPE

This policy establishes fire hydrant spacing and water flow requirements.

PURPOSE

The purpose of this policy is to establish the requirements for fire hydrant spacing, along with minimum water flows and pressures for firefighting.

REQUIREMENTS

Where fire hydrants are to be installed by a developer, such fire hydrants shall be tested, painted, numbered, and approved by the City of Fresno Fire Department.

Fire hydrants shall be installed and maintained in a serviceable condition prior to and during construction.

Single-Family Dwellings

- I. Residential area fire hydrants shall be no further than 600 feet apart and the travel distance to a fire hydrant over a paved access surface shall not exceed 300 feet.
- II. In single-family dwelling subdivisions, fire hydrants shall be installed in accordance with City of Fresno specifications with no less than a minimum 6-inch water main capable of flowing at least 1,500 gallons per minute as calculated by using methods in Fire Flow Tests, published by the Insurance Services Office. This system may be incorporated with the domestic water supply service.
- III. Required fire flows, plus residential dwelling domestic demand must be available within the water system at a minimum of 20 pounds per square inch residual pressure.

- IV. For residential streets with medians and fire lanes on both sides, fire hydrants shall not be spaced more than 600 feet apart. Hydrants shall be located at the intersections of streets; however, if the intersections are located more than 600 feet apart, hydrants are required at the intersections and at intermediate points in the median (double 4-1/2 inches outlets or hydrants on each side of the median). These additional requirements must be approved by, and coordinated with, the Public Works Department.
- V. Hydrants shall be located within 500 feet of every building opening.

Multi-Family Dwellings (Condominiums, Apartments, Hotels, and Motels)

- I. Multi-family area hydrants shall be no further than 450 feet apart, and the travel distance to a fire hydrant over a paved access surface shall not exceed 225 feet.
- II. In multi-family areas, the fire hydrants shall be installed in accordance with City of Fresno specifications with no less than a minimum 8-inch water main capable of flowing at least 2,500 gallons per minute as calculated by using methods in Fire Flow Tests, published by the Insurance Services Office. This system may be incorporated with the domestic water service.

Exception: When all buildings served are fully protected with an approved, NFPA 13 design criteria automatic fire extinguishing system, or buildings with four or fewer units, onsite hydrants may be spaced and fire flows approved per the single-family dwelling standards.
- III. Required fire flows, plus multi-family domestic demand, must be available within the water system at a minimum of 20 pounds per square inch residual pressure.
- IV. For commercial streets with medians and fire lanes on both sides, fire hydrants shall not be spaced more than 450 feet apart. Hydrants shall be located at the intersections of streets; however, if the intersections are more than 450 feet apart, hydrants are required at the intersections and at intermediate points in the median (double 4-1/2 inch outlets or hydrants on each side of the median). These additional requirements must be approved by, and coordinated with the Public Works Department.
- V. Hydrants shall be located within 425 feet of all building openings.

Commercial

- I. Commercial area fire hydrants shall be no further than 600 feet apart and the travel distance to a fire hydrant over a paved access surface shall not exceed 300 feet.

Exception: Mini-storage facilities may space hydrants solely on 450-foot travel distance to a hydrant.

- II. In commercial areas, fire hydrants shall be installed in accordance with City of Fresno specifications with no less than a minimum 8-inch water main capable of flowing at least 1,500 gallons per minute as calculated by using methods in Fire Flow Tests, published by the Insurance Services Office. Special hazard occupancies may require higher flow rates or spacing changes and must be approved by the Fire Marshal (or designee). This system may be incorporated with the domestic water service
- III. Required fire flows, plus domestic demand, must be available within the water system at a minimum 20 pounds per square inch residual pressure.

For commercial streets with medians and fire lanes on both sides, fire hydrants shall not be spaced more than 450 feet apart. Hydrants shall be located at the intersections of streets; however, if the intersections are more than 450 feet apart, hydrants are required at the intersections and at intermediate points in the median (double 4-1/2 inch outlets or hydrants on each side of median). These requirements must be approved by, and coordinated with, the Public Works Department.

- IV. Hydrants shall be located within 500 feet of all building openings.