



# CHINO VALLEY INDEPENDENT FIRE DISTRICT FIRE PROTECTION STANDARD

**FIRE HYDRANT LOCATION AND DISTRIBUTION**  
STANDARD # 101 REVISED 09/15/2000 PAGES 7

## 1. ADMINISTRATIVE

- 1.1 **AUTHORITY:** This standard is adopted under authority of the 1997 Uniform Fire Code, Sections 901 and 903 as adopted by Chino Valley Independent Fire District.
- 1.2 **SCOPE:** This standard applies to every private fire hydrant and their appurtenances hereafter designed, constructed or modified within the boundaries of the Chino Valley Fire District. Sections 2.4, 2.6, 3, 4 and 5.1 of this standard shall apply to public and private fire hydrant systems. This standard shall also apply to all repairs conducted on existing private fire hydrants.
- 1.3 **DEFINITIONS:** For definitions of APPROVED, FACILITY, FIRE DEPARTMENT INLET CONNECTION, HAZARDOUS MATERIAL, LISTED AND STANDPIPE SYSTEM see Uniform Fire Code Article 2. Multiple Family Development: Three (3) or more attached dwelling units including residential condominiums.
- 1.4 **PLANS SUBMITTAL:** A minimum of three (3) complete sets of detailed plans, drawn to scale, shall be submitted to the Chino Valley Fire District for review and approval prior to installation. Plans shall also be submitted for modifications to private fire service water systems and for repairs to existing systems, when such repairs vary from details on previously approved plans. See Chino Valley Fire District Standard #102 for complete plan submittal requirements for the installation of private fire service mains.

## 2. GENERAL

- 2.1 **FIREFLOW:** Minimum fire flow required shall be determined using the Uniform Fire Code, current adopted edition, by The Chino Valley Fire District. The Fire District may modify fire flow due to the severity of the hazard.
- 2.2 **LOCATION, SIZE, AND TYPE:** Fire hydrant size, type and location shall be approved by the Fire District and shall be in accordance with the following.

- 2.2.1 The location of fire hydrants shall be designated and approved by the Fire Chief.
  - 2.2.2 The approved type of hydrant that shall be installed is CLOW 2050 series, CLOW 2060 Series or equivalent. (See Page 5, Figure 2.2)
  - 2.2.3 Where the sidewalk is five feet (5') or less in width the centerline of the hydrant riser shall be located one-foot, six-inches (1'6") behind the finished edge of the sidewalk.
  - 2.2.4 Where the sidewalk is greater than five feet (5') in width the centerline of the hydrant riser shall be located two feet (2') behind the curb face.
  - 2.2.5 The centerline of the bottom outlet must be no less that 20-inches and no more than 30-inches above the finished grade around the hydrant.
  - 2.2.6 No fire hydrant shall be installed closer than five feet (5') from the edge of any driveway apron.
- 2.3 PHYSICAL PROTECTION: Guard posts shall be installed to protect hydrants subject to vehicular damage. Posts shall be constructed and installed as follows:
- 2.3.1 Constructed of steel not less than 6 inches (6") in diameter and concrete filled,
  - 2.3.2 Spaced not more than four feet (4') between posts on center,
  - 2.3.3 Set not less than three feet (3') deep in a concrete footing of not less than a fifteen-inch (15") diameter,
  - 2.3.4 Set with the top of the posts not less than three feet (3') above the ground, and
  - 2.3.5 Located not less than three feet (3') from the hydrant outlet in a manner so as to provide optimum protection of the hydrant and not obstruct the operation and use of the hydrant.
- 2.4 CLEARANCE: Consideration shall be made in the placement of fire hydrants with respect to potential or anticipated changes in the nearby surroundings.
- 2.4.1 Landscaping at maturity and topography around the fire hydrant shall be of the type and design that will not obscure or obstruct the operation of the hydrant.
  - 2.4.2 All fire hydrants shall be located with at least three feet (3') clearance from all obstructions.
- 2.5 INSTALLATION: Hydrants shall be installed in accordance with the following requirements:
- 2.5.1 Hydrants shall be installed with a gate valve installed no closer than 5' and no farther than 20' from the fire hydrant. Ten feet (10') is the preferred distance.
  - 2.5.2 Hydrants shall be installed upon a minimum three feet (3') by three feet (3'), four- inch (4") thick concrete pad. Exception: hydrants located in finger islands less than 3 feet in width.
  - 2.5.3 Breakaway bolts or a breakaway spool shall be installed on each fire hydrant.  
Exception: When a shear valve is installed neither a breakaway spool nor breakaway bolts shall be used.
  - 2.5.4 For specific requirements for underground water system see N.F.P.A. 24 and Chino Valley Fire District Standard # 102.
  - 2.5.5 The exterior of the hydrant, including the riser but excluding the threads and caps shall be painted with two coats of alkyd or solvent based primer and two coats of Safety/Industrial Yellow alkyd or solvent based rust inhibitive paint.

2.6 REFLECTIVE MARKERS: Blue reflective markers shall be used to properly identify the location of fire hydrants. The type of marker, adhesive and the placement of the reflective marker shall be in accordance with the following specifications.

2.6.1 Markers shall be Ray-O-Lite 2SRPM-DB or equivalent.

2.6.2 Adhesive shall be Ray-O-Lite 2SRMESS1 or equivalent. In addition, the adhesive shall comply with the specifications by the manufacturer of the hydrant pavement marker.

2.6.3 The blue reflective markers shall be installed in accordance with the following:

2.6.3.1 Generally markers shall be placed eighteen inches (18") from the painted centerline, or if no painted centerline exists, eighteen inches (18") from the actual center of the roadway or drive aisle on the side nearest the fire hydrant. See Figure 2.6 Example number 1.

2.6.3.2 At a four-lane street with turn lane at the intersection, the marker shall be eighteen inches (18") from the edge of the turn lane on the side nearest the hydrant. See Figure 2.6 Example number 2.

2.6.3.3 For multi-lane streets with a center turn lane not at an intersection, the marker shall be placed as indicated in Figure 2.6 Example number 3.

2.6.3.4 For fire hydrants located at or within twenty feet (20') of the beginning of an intersection, the marker shall be placed on both streets in accordance with Figure 2.6 Example number 4.

2.6.3.5 Hydrants located within a roadway median shall have a marker installed on both sides of the median eighteen inches from the median edge. See Figure 2.6 Example number 5.

2.6.3.6 When a fire hydrant is located on one side of a roadway with a raised median, a marker shall be placed eighteen inches (18") from the centerline or edge of the painted line. A marker shall be installed on each side of the median. See Figure 2.6 Example number 6.

2.7 SIGNAGE: Signs shall be installed on each private fire hydrant that is served by a privately owned fire pump. The signs shall read "WARNING – Fire Hydrant on Fire Pump. Fire Department Will Respond". All signs shall have white lettering on a red background. "WARNING" lettering shall be a minimum of three inches (3") in height and all other lettering shall be a minimum of one inch (1"). Signs shall be permanently attached to the fire hydrant in an approved manner, which shall not impede the operation of the fire hydrant.

2.8 MAINTENANCE AND TESTING: Private fire hydrants and fire service mains shall be maintained in accordance with nationally recognized standards.

## 2 RESIDENTIAL DEVELOPMENT

3.1 SINGLE FAMILY DEVELOPMENT: Fire hydrants shall be installed at spacing no greater than 600 feet, but in no case shall be greater than 300 feet from the area to be protected, unless approved residential fire sprinklers are installed in dwelling units. Distance from hydrant to structure on an approved access road may be increased to 600 feet with fire sprinklers.

3.2 MULTIPLE FAMILY DEVELOPMENT: Fire hydrants shall be installed at spacing no greater than 300 feet, but in no case shall be greater than 150 feet from the area to be protected.

#### **4. OTHER**

Hydrants shall be located at the entrance to wildland access points.

#### **5. INDUSTRIAL AND COMMERCIAL DEVELOPMENT**

5.1 GENERAL REQUIREMENTS: Density and type shall be determined by size of the system, the required gallons per minute and hydrant location, but in no case shall be less than the requirements for multiple family developments. The fire hydrant placement shall also comply with the following:

5.1.1 On-site hydrants shall be installed if any portion of the building(s) is constructed more than 150 feet from the street.

5.1.2 On-site hydrants shall be installed along the designated fire access roads within a facility.

5.2 PIPING SUPPLY SIZE: The underground water mains serving fire hydrants in commercial and industrial developments shall be as follows:

5.2.1 Minimum main size shall be eight inches (8”).

5.2.2 Hydrant laterals not exceeding 30 feet may be 6 inches. (See Standard #102 for installation of mains)

#### **6. DETAILS AND FIGURES**

Figure 2.2 and Figure 2.6 to follow.

## Approved Types of Fire Hydrant



**CLOW 2050**



**CLOW 2060**

**Figure 2.2**

# Location of Fire Hydrant Pavement Markers

**KEY**

## **7. Date of Effect**

The revisions in this standard shall apply to all projects that are approved after its effective date. All drawings and plans submitted for approval on or after the signature date of the Fire Chief shall comply with the provisions set forth within this Standard. In addition, existing fire hydrants shall comply with Sections 2.3, 2.4, 2.6, 2.7 and 2.8 from the effective date forward.