

3. Flow testing of hydrants shall be done in accordance with the latest edition of "Simplified Water Supply Testing for Fire Departments and Insurance Engineers" available from American Mutual Insurance Alliance, 20 North Wacker Drive, Chicago, Illinois 60606. A copy is available for review at the Fire Department and the Engineering Department.
4. If Ductile Iron Pipe (D.I.P.) is required in a main water line, for example due to utility conflict, the D.I.P. shall be accomplished utilizing 45-degree fittings, and a fire hydrant shall be connected at the low point in the line to allow blow off of sand build up.

D. FIRE FLOW

Minimum fire flow shall be as recommended by the latest edition of I.S.O "Fire Suppression Rating Schedule", except that for single-family and duplex not over two stories in height in an existing developed area require 500* gpm minimum and in new development require 1,000* gpm minimum. Minimum residual pressure shall be 20 psi with combined domestic peak hour demand and fire flow and shall meet the provisions of Title 22, Chapter 16, of California Code of Regulations.

(*plus 500 gpm if roof is combustible)

E. DOMESTIC FLOW

Domestic flow shall be determined from the maximum potential population at the highest land use of the area served. Design domestic flow shall be the peak hour demand using Chart 1 of PUC General Order No. 103, C=5. Flow rate shall not exceed 5 fps in any pipe at maximum domestic flow.

NOTE: FOR COMMERCIAL AND INDUSTRIAL SERVICE THERE SHALL BE SEPARATE FIRE AND DOMESTIC SERVICE FROM THE CITY MAIN.

F. CONSTRUCTION REQUIREMENTS

1. Nothing in these Standards or on the Plans and Specifications shall relieve the contractor from failure to follow State and Federal health standards and requirements.
2. When disinfecting new water mains there must be an air-gap at the point of discharge to the manhole, catch basin or gutter to protect the entire system, even if the discharge line is a temporary hose, regardless of whether there is a double check valve assembly in place.
3. When disinfecting new water lines, due to Permit requirements, the Wastewater Treatment Plant's (WWTP) first preference is not to discharge into the sanitary sewer at all, unless there is absolutely no other option. If the sewer is the only place available for discharge, then the contractor must check with the WWTP to determine if they can accept the type and quantity of discharge and for monitoring requirements. Preference is to dechlorinate and discharge to the storm drain system.

ENGINEERING DEPARTMENT		CITY OF MERCED, CA.	
WATER SYSTEM - CONSTRUCTION SPECIFICATIONS			W-23
DRAWN: KGE	APPROVED BY:	DATE:	SHEET OF
DATE: 12/05	<i>David L. Tucker</i>	3/17/09	
REVISED: 3/17/08	CITY ENGINEER		