PREVENTION MANUAL

FIRE EXTINGUISHING SYSTEMS

405.21 TESTING OF FIRE SERVICE UNDERGROUNDS

EFFECTIVE: FEBRUARY 2004

SCOPE

Hydrostatic testing of fire service underground piping assemblies and visual inspection of installations prior to backfill.

PURPOSE

The purpose of this policy is to clarify fire department requirements for installation and testing of fire service underground piping. This policy consolidates, replaces, and expands upon previous industry bulletins dated September 28, 2004, and February 24, 2004.

BACKGROUND

The previous bulletins resulted from damage done to the City of Fresno water main infrastructure from a hydrostatic test done against a gate valve. Additional concerns raised by the City of Fresno Water Division dealt with water quality issues when pressure testing against a single detector check valve which is not approved as a reduced pressure differential backflow device.

REQUIREMENTS

1. Isolating fire service from the public water supply. As directed in the February 24, 2004 bulletin, pressure testing of the fire service shall be done against a blank test flange or other fitting. Under no circumstances may pressure testing be done against the detector check or a closed gate valve.

2. Failure to follow this standard. If, upon inspection, testing is conducted in violation of the requirements provided in No. 1 above, the test will be immediately terminated and a re-test in the approved manner must be scheduled for a subsequent day. In addition, pre-payment of a re-inspection fee will be required. Any unauthorized testing incident will be referred to the City of Fresno

Water Division or local water purveyor for additional administrative action.

Note: Any costs related to damage of public water valves or mains and any remediation of contaminated water piping will be borne by the contractor.

3. Pressure testing exception. As it has been practiced for many years, it is acceptable to pressure test a single length of underground pipe between the detector check and the ductile iron or other approved transition piece to the above ground riser flange at static public water main pressure. If this method is used, the requirement for a test flange is not applicable.

4. Backfilling pipe trenches. National Fire Protection Association Standard 13, has an allowance for covering underground pipe before pressure testing when conditions present a hazard or if trench remains open. As noted in the handbook narrative and the appendix to in this standard, it is still the best practice to center load the pipe for the test in order for any leaks to be quickly identified and repaired.