

Figure 10-1(b) Contractor's material and test certificate for underground piping.

Contractor's Material and Test Certificate for Underground Piping	
PROCEDURE Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job. A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.	
Property name	WEBSTER UNIVERSITY Date 5/3/2017
Property address	8274 BIG BEND
Plans	Accepted by approving authorities (names)
	Address
	Installation conforms to accepted plans ☒ Yes ☐ No
	Equipment used is approved if no, state deviations ☒ Yes ☐ No
Instructions	Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment? If no, explain ☐ Yes ☐ No
	Have copies of appropriate instructions and care and maintenance charts been left on premises? If no, explain ☐ Yes ☐ No
Location	Supplies buildings
Underground pipes and joints	Pipe types and class DUCTILE Type joint MP
	Pipe conforms to _____ standard ☒ Yes ☐ No
	Fittings conforms to _____ standard ☒ Yes ☐ No
	Joints needed anchorage clamped, strapped, or blocked in accordance with _____ standard ☒ Yes ☐ No
Test description	Flushing: Flow the required rate until water is clear as indicated by no collection of foreign material in burlap bags at outlets such as hydrants and blow-offs. Flush at flows not less than 390 gpm (1476 L/min) for 4-in. pipe, 880 gpm (3331 L/min) for 6-in. pipe, 1560 gpm (5905 L/min) for 8-in. pipe, 2440 gpm (9235 L/min) for 10-in. pipe, and 3520 gpm (13,323 L/min) for 12-in. pipe. When supply cannot produce stipulated flow rates, obtain maximum available. Hydrostatic: Hydrostatic tests shall be made at not less than 200 psi (13.8 bar) for 2 hours or 50 psi (3.4 bar) above static pressure in excess of 150 psi (10.3 bar) for 2 hours. Leakage: New pipe laid with rubber gasketed joints shall, if the workmanship is satisfactory, have little or no leakage at the joints. The amount of leakage at the joints shall not exceed 2 quarts per hour (1.89 L/hr) per 100 joints irrespective of pipe diameter. The leakage shall be distributed over all joints. If such leakage occurs at a few joints, the installation shall be considered unsatisfactory and necessary repairs made. The amount of allowable leakage specified above can be increased by 1 fluid ounce per inch valve diameter per hr. (30 mL/25 mm/hr) for each metal seated valve isolating the test section. If dry barrel hydrants are tested with the main valve open so the hydrants are under pressure, an additional 5 ounces per minute (150 mL/min) leakage is permitted for each hydrant.
Flushing tests	New underground piping flushed according to ALUMA standard by (company) HARPER CONST. INC. ☒ Yes ☐ No If no, explain FLOW EXCEEDED 3 FT/SEC
	How flushing flow was obtained ☒ Public water ☐ Tank or reservoir ☐ Fire pump Through what type opening ☐ Hydrant butt ☒ Open pipe
	Lead-ins flushed according to _____ standard by (company) ☐ Yes ☐ No If no, explain
	How flushing flow was obtained ☒ Public water ☐ Tank or reservoir ☐ Fire pump Through what type opening ☐ Y connection to flange ☐ Open pipe and spigot

Figure 10-1(b) (Continued)

Hydrostatic test	All new underground piping hydrostatically tested at <u>140</u> psi for <u>2</u> hours <u>PSI TESTED MAY 2, 2017</u>		Joints covered ☒ Yes ☐ No
Leakage test	Total amount of leakage measured — gallons — hours		
	Allowable leakage — gallons — hours		
Hydrants	Number installed <u>0</u>	Type and make <u>—</u>	All operate satisfactorily ☐ Yes ☐ No
Control valves	Water control valves left wide open If no, state reason <u>NEW CONSTRUCTION. INSIDE NOT COMPLETE</u> <u>WET TAP VALVE CLOSED</u>		☐ Yes ☒ No
	Hose threads of fire department connections and hydrants interchangeable with those of fire department answering alarm		☐ Yes ☐ No
Remarks	Date left in service		
Signatures	Name of installing contractor <u>CASTLE CONSTRUCTION INC.</u>		
	Tests witnessed by		
	For property owner (signed)	Title	Date
	For installing contractor (signed) <u>Mike Harney</u>	Title <u>PSI</u> <u>HAUSER CONSTRUCTION INC. TEST & FLUSH ONLY</u>	Date <u>MAY 3, 2017</u>
Additional explanation and notes <u>MIKE HARNEY, CITY OF W.G. WITNESS PRESSURE TEST OF UNDERGROUND SYSTEM</u> <u>Tom Parks Fire Marshal - WITNESS FLUSH OF DOMESTIC/SPRINKLER Supply</u>			

10-2 Acceptance Requirements.

10-2.1* Flushing of Piping. Fire service mains (from the water supply to the system riser) and lead-in connections to system risers shall be completely flushed before connection is made to sprinkler piping. The flushing operation shall be continued for a sufficient time to ensure thorough cleaning. The minimum rate of flow shall be not less than one of the following:

- (1) The hydraulically calculated water demand rate of the system including any hose requirements
- (2) That flow necessary to provide a velocity of 10 ft/sec (3.1 m/sec) [see Table 10-2.1(2)]
- (3) The maximum flow rate available to the system under fire conditions

10-2.2 Hydrostatic Tests.

10-2.2.1* All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi (13.8 bar) and shall maintain that pressure without loss for 2 hours. Loss shall be determined by a drop in gauge pressure or visual leakage. The test pressure shall be read from a gauge located at the low elevation point of the system or portion being tested.

Exception No. 1: Portions of systems normally subjected to system

scribed in 10-2.2.1 at a pressure of 50 psi (3.5 bar) in excess of system working pressure.

Exception No. 2: Where cold weather will not permit testing with water, an interim air test shall be permitted to be conducted as described in 10-2.3.

Exception No. 3: Modifications affecting 20 or fewer sprinklers shall not require testing in excess of system working pressure.

Exception No. 4: Where addition or modification is made to an existing system affecting more than 20 sprinklers, the new portion shall be isolated and tested at not less than 200 psi (13.8 bar) for 2 hours.

Exception No. 5: Modifications that cannot be isolated, such as relocated drops, shall not require testing in excess of system working pressure.

Exception No. 6: In buried pipe, leakage shall be permitted as follows:

(a)* The amount of leakage at the joints shall not exceed 2 qt/hr (1.89 L/hr) per 100 gaskets or joints, irrespective of pipe diameter.

(b)* The amount of allowable leakage specified in item (a) of this exception shall be permitted to be increased by 1 fluid ounce (30 ml) per inch valve diameter per hour for each metal seated valve isolating the test section.

(c) If dry barrel hydrants are tested with the main valve open so the hydrants are under pressure, an additional 5 oz/min (150 ml/min) of leakage shall be permitted for each hydrant.

(d) The amount of leakage in buried piping shall be measured at