Chapter 13.28 Water Systems

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13.28.010 Applicability and definitions. a. This chapter is limited to:
1. Water service installations;
2. Water service meter installations; and
3. Backflow and cross-connection prevention.
b. Definitions. For the purposes of this chapter, the following words and phrases shall have the meanings set forth below:
“Directly adjacent” A water main is directly adjacent to a lot when the water main is located in an easement or right-of-way that is adjacent to the lot, and either (i) the water main extends the entire length of the frontage of the lot along the easement or right-of-way; or (ii) the water main extends at least 10 feet into the easement or right-of-way adjacent to the lot, and the public works director has determined that at no time will the water main be extended to serve additional lots.
"Temporary connection” means a line that connects a lot to a water main that is not directly adjacent to the lot. (Ord. 09-45(S) §4(part), 2009; Ord. 85-25 Art. 60.1.1., 1985).

13.28.020 Materials. a. Water line. This subsection is limited to utility water service connections and does not apply to water mains.
1. No galvanized pipe shall be used.
2. Three-fourths-inch to two-inch service lines shall be Scheduled K, flexible soft copper, conforming to ASTM B-88.
3. Four-inch and larger service lines shall be ductile iron water pipe (DIWP), class 52, conforming to AWWA STD. C-151 and AWWA STD. C-104.
b. Water Service Valves.
1. No galvanized parts shall be used
2. Corporation stops shall be flare-type brass only; Mueller Co. only are approved.
3. Curb stops shall be flare-type brass only; Mueller Co. only are approved.
4. Curb boxes: Mueller Co. only are approved (must be furnished with stationary operating rods).
5. Valves four inches and larger shall be mechanical joint, two hundred fifty pound test pressure rated. Mueller Co. only are approved.
c. Fittings.
1. no galvanized fittings shall be used. Use brass, stainless steel, cast iron or ductile iron only, two hundred fifty point test pressure rated.
2. Three-part unions must be flare-type brass. Mueller Co. only are approved.
d. Thaw Wire. Thaw wire shall be solid or braided, rubber-covered or plastic-covered No. 2 copper cable. (Ord. 85-25 Art. 60.1.2, 1985).

13.28.030 Water service construction and installation. This section is limited to water service installations.
a. Seven feet is minimum bury unless specifically allowed by the Public Works Inspector. In cases allowed, rigid board insulation with two-inch thickness minimum by twenty-four inches wide shall be placed six to twelve inches above the component on top of the bedding/backfill and centered in line with the component.
b. The service line may not be placed within five feet of any property line not parallel to main line.
c. the water service line must have a minimum horizontal separation of ten feet from any sewer service line.
d. The contractor shall install the service at ninety degrees to the street main line whenever possible.
e. The service line may not cross property lines, except where the line comes from the main line in the public

rights-of-way to the property being served.
f. A lot may be connected only to a water main that is directly adjacent to the lot.
g. Within the time provided in this subsection, a temporary connection shall be disconnected at the water main and replaced with a connection to a water main that is directly adjacent to the lot, at the expense of the lot owner. Upon connecting to the directly adjacent water main, the lot shall bear a portion of the cost of constructing the directly adjacent water main on the same basis as other lots that receive access to water service through the construction.
1. If there is no water main directly adjacent to the lot as of the effective date of this subsection, the temporary connection shall be replaced no later than one year after a water main directly adjacent to the lot is placed in service; provided that the replacement shall be made during construction of the directly adjacent water main when necessary to maintain water service to the lot. The city shall notify a lot owner of the owner's obligations under this paragraph before commencing construction of the water main.
2. If there is a water main directly adjacent to the lot as of the effective date of this subsection, the temporary connection shall be replaced no later than one year after the effective date of this subsection The city shall notify a lot owner of the owner's obligations under this paragraph within 60 days after the effective date of this subsection.
h. The water service line shall be a minimum of three-fourths-inch diameter. Larger water service lines shall be required as the Public Works Inspector determines necessary.
i. No three-part union will be allowed closer than sixty-foot intervals either side of the curb box.
j. A curb box shall be installed at the property line adjoining the public rights-of-way or on the utility easement line as appropriate.
k. Curb box shall extend zero to three inches above the finish grade.
l. All taps into the main line must be made with tools designed specifically for that purpose and must be sized correctly for the specific water service connection.
m. The City of Homer will not rent or loan any tools for water service installation except in the case of emergency as determined by the Public Works Director of his appointed agent.
n. The bottom of the excavation and/or bedding must be uniformly graded, and free of dips, bumps and large rocks.
o. The trench shall be kept free of water at all times by pumping if required.
p. The service line must be laid in the ditch with slack for expansion if required.
q. A thaw wire shall be attached to the corporation stop if such stop is designed for this attachment. If the corporation stop is not designed for direct attachment, a brass or copper grounding clamp shall be installed on the copper tubing as close as possible to the corporation stop and the thaw wire attached to the ground clamp.
r. The taw wire shall be laid in the ditch with slack for expansion or ground movement and surface at the curb box with enough excess to permit easy location and attachment of an electric thawing device.
s. There shall be no breaks or splices in the taw wire.
t. The work must be free of leaks and flaws.
u. The water service connections, corporation stops, curb stops and all joints will be pressure tested at static main line pressure for ten minutes and inspected by the Public Works Inspector before backfilling is allowed.
v. All water service lines and components shall be bedded, backfilled and compacted ninety-five percent of maximum material density. Only classified material shall be used for bedding and backfill as determined by the Public works Inspector. In some cases, suitable bedding or backfill material may be found in the excavation and imported material may not be required as determined by the Public Works Inspector.
w. Backfilling shall be done in such a manner as to assure that no large rocks or frozen lumps fall on the pipe or components.
x. No extension of a water service line may be made even on private property without the approval of the Public works Inspector so that appropriate sizing, inspection and as-built records can be made.
y. In the event that ductile iron pipe is used for the service, pipe shall be carried into position and not dragged. It shall be lowered into the excavation by means of slings in such a manner that it is not dropped, nor are the pipe or fitting coating injured. The full length of the pipe shall rest firmly along the bottom of the excavation with a recess allowed for the joint. While work is in progress, the open ends of the pipe shall be kept plugged so no trench water, dirt or other foreign substance enters the pipe. where pipe coating or lining are disturbed, they shall be repaired in a satisfactory manner. A valve shall be located at the property line or utility easement line as applicable to shut off the service in place of a curb box. No thaw wire shall be required. The valve shall be securely tied back to the main, using two runs of three-fourths-inch all thread, coated with a galvanized spray or bituminous material. The main shall be joined using a cast iron tee and, if necessary, a cast coupling. The tee shall be property thrust block against the undisturbed ditch using only property sized concrete thrust blocks. wooden blocks shall not be permitted. If a poured-in -place block is used, all fittings shall be wrapped in sheet plastic and care taken to see that ll bolts are accessible. The valve box top shall be flush with the finish grade. All pipe and fittings shall be sanitized during installation. After installation, the line is to be flushed in the presence of the inspector to his satisfaction. All joints shall be lubricated with Johns-Manville pipe joint lubricant or inspector-approved equal.
z. The public rights-of-way must be restored to their original condition before a service is accepted.

aa. No service will be accepted without copies of the required as-built plans, records, and test data. (Ord. 09-45(S)§ 5&6 part, 2009, Ord. 85-25 Art. 60.1.3, 1985).

13.28.040 Operation of water valves, fire hydrants and curb stops. Only authorized city personnel shall operate water valves, fire hydrants or curb stops. (Ord. 85-25 Art. 60.1.4, 1985).

13.28.050 Water meter installation. a. the meter shall be the size and model indicated by the Public Works Inspector.
b. Fittings on the meter shall be screw-type bronze or brass for brass meters and screw-type plastic for plastic meters.
c. The meter shall be installed in a horizontal and upright position.
d. The meter shall be in a warm dry place above ground water, easily accessible, preferably inside the building structure.
e. The shutoff valve shall be installed immediately before the meter on the incoming service line for customer use. A pressure regulator provided by the City must also be installed between this valve and the meter on all installations with a distribution system pressure of more than eighty pounds per square inch (80 P.S.I.) and the pressure must be regulated at sixty pounds per square inch (60 P.S.I.) or less.
f. An appropriate backflow-prevention device shall be installed immediately after the meter on the outgoing service line.
g. Water meters shall be installed prior to providing any service to a water utility customer.
h. The City of Homer shall have the right to install a meter remote on the building in any location the City deems most appropriate.
i. Water meters remain the property of the City of Homer. The initial fee for the meter is a one time rental fee. The customer is responsible for normal protection of the meter and/or generator from external damage and freezing. Internal wear and failure of the meter and/or generator due to normal use will be the responsibility of the City. Customers shall provide reasonable access for City personnel and to make necessary repairs.
j. All water sold must be metered.
k. All plumbing parts, processes, and installation and workmanship shall be in accordance with current State-approved Uniform Plumbing Codes (UPC). (Ord. 89-24(A) 1, 1989; Ord. 87-28 5, 1988; Ord. 85-25 Art. 60.1.5, 1985).

13.28.060 Backflow and Cross-connection prevention.
a. All connections to the public potable water system shall have an approved backflow-prevention device where required in accordance with the minimum requirements listed below.
b. All devices recommended in this section are minimum standards and thus the requirements for backflow-prevention may be made more stringent should the Public Works Director deem it necessary or appropriate.
c. The location and type of the backflow-prevention devices shall be approved by the Public Works Inspector.
d. All backflow-prevention devices or the installation of the devices, excepting residences (single, family and duplex), shall include test cocks and shutoff valves for testing the device for correct and continuous function. Annual tests shall be made to verity that the device is functioning correctly anc continuously. The owner shall be responsible for making these tests and for the maintenance of the device and shall maintain a record of these tests in a form suitable to the City and shall submit the records to City upon request.
e. The City has the right to inspect all installations and structures, and to review plumbing plans to determine compliance with the backflow and cross-connection prevention requirements. The City has the right to reject the devices or installations not in compliance with the requirements and has the right to disapprove the plumbing plans if not in compliance with the requirements.
f. All boiler make up water feed systems must have an approved reduced-pressure type backflow-prevention device.
g. Minimum requirement for backflow-prevention:

Minimum Requirement for Backflow Prevention	Structure of System.	Recommended Device.
	1. Residences	(Single-family and duplex) Single check valve at meter and a reduced-pressure/air break vented device (Watts series 9D or

	equal), at boiler feed line.
2. Hotels, apartments, public and private buildings.	Air-gap separation or reduced-pressure device.
3. Canneries, packing houses and reduction plants.	Air-gap separation or reduced-pressure device.
4. Chemical plants	(Same as above)
5. Chemically contaminated water systems	(Same as above)
6. Civil works.	Air-gap separation or reduced-pressure device or double check valve, depending on the situation.
7. Dairies and cold storage plants	(Same as above)
8. Film laboratories	Air-gap separation or reduced-pressure device
9. Fire systems	Air-gap separation or reduced-pressure device or double check valve, depending on the situation.
10. Hospitals, medical, buildings,sanitariums, morgues, mortuaries, autopsy facilities, nursing and convalescent homes and clinics.	(Same as above)
11. Waterfront facilities and industries	(Same as above)
12. Oil and gas production storage or transmission properties	Air-gap separation or reduced-pressure device
13. Plating plants	(Same as above)
14. Power plants	(Same as above)
15. Radioactive materials or substances plants or facilities handling	(Same as above)
16. Restricted, classified or other closed facilities	(Same as above)

	17. Schools and colleges	(Same as above)
	18. Sewage and storm drain facilities	(Same as above)

h. All devices must be approved by the State and the Public Works Department.
i. All installations shall be done to conform to all applicable City and State building and plumbing codes. (Ord. 89-24(A) 2, 1989).

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