



SECTION 2900 – WATERLINES

CITY OF BLUE SPRINGS, MISSOURI CONSTRUCTION SPECIFICATIONS

The City of Blue Springs hereby adopts Section 2900 of the Kansas City Metropolitan Chapter of APWA Construction and Material Specifications, the latest edition. The following additions, deletions and/or revisions are adopted as a part of Section 2900 for use within the City of Blue Springs. Text in bold italics indicates revisions or additions to the APWA standard.

Section 2902 Materials

2902.2.A.1 – Pipe

Delete paragraph 2902.2.A.1 and replace with the following:

“Pipe: Unless indicated otherwise on the construction plans, all ductile iron pipe 6-inch and larger shall be Class 52 complete with all accessories and conforming to ANSI A21.51, AWWA C151, ASTM A 536, and Grade 64-42-10.”

2902.2.A.3.c – Restrained Joints

Delete paragraph 2902.2.A.3.a and replace with the following:

“Restrained joint fittings shall be Krause or approved equal One Bolt System.”

2902.2.C – Polyvinyl Chloride 2 inch

Delete paragraph 2902.2.C.

2902.2.D – Fusible Polyvinyl Chloride (FPVC)

Add the following:

“FPVC shall only be used with approval of the City Engineer.”

2902.2.E – Prestressed Concrete Cylinder, Steel Cylinder Type

Delete paragraph 2902.2.E and all subsections.

2902.3.B – Butterfly Valves

Delete the first paragraph of 2902.3.B and replace with the following:

“Butterfly Valves: Butterfly valves shall be used for water line valves twelve (12) inches and larger in diameter unless otherwise directed by the City Engineer. Butterfly valves shall be of the rubber-seat, tight-closing type. Valve discs shall seat at 90-degree with pipe



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axis. Mechanical joint end valves shall be of the short body type. Packing shall be O-ring cartridge designed for permanent duty in underground service.”

2902.3.F.2 – Iron

Delete paragraph 2902.3.F.2 and all subsections.

2902.3.H – Valve Operation

Delete paragraph 2902.3.H and replace with the following:

“Valve Operation: All valves shall be equipped with a 2-inch square wrench nut and the direction of rotation to open the valve shall be to the left (counterclockwise).”

2902.3.J – Valve Boxes, Bases, Lids and Covers

Delete paragraph 2902.3.J and all subsections and replace with the following:

“J. Valve Boxes, Bases, Lids and Covers

Valve boxes, bases, lids and covers shall meet the requirements as shown on the City of Blue Springs Standard Details WAT-02 and WAT-03.”

2902.4.A.4 – Hydrants

Delete paragraph 2902.4.A.4 and replace with the following:

“Hydrants shall meet the requirements as shown on the City of Blue Springs Standard Detail WAT-01.”

2902.5.A – General

Delete paragraph 2902.5.A and replace with the following:

“General: Air release, meter, and pressure-reducing valve vaults shall be precast concrete conforming to ASTM C 478. Access lid castings shall be as shown in Plans, Standard Drawings, or as noted in the Special Provisions, and shall meet the requirements as shown on the City of Blue Springs Standard Detail WAT-12.”

2902.5.D – Blow-Off Assemblies

Delete paragraph 2902.5.D and replace with the following:

“Blow-Off Assemblies: Blow-off assemblies shall only be used when approved by the City Engineer. When approved, blow-off assemblies shall be installed at the locations indicated on the Plans or Standard Drawings. Blow-off assemblies shall be installed with the appurtenant piping and valves as indicated on the Plans, Standard Drawings, or Special Provisions.”

2902.6 – Bedding Material

Delete paragraph 2902.6 and replace with the following:

“Granular Bedding Material: All materials used for granular embedment for pipe bedding shall conform to the requirements of ASTM C 33 and shall meet the requirements as shown on the City of Blue Springs Standard Detail WAT-16.”

2902.7 – Location Wire and Tape

Delete paragraph 2902.7 and all subsections and replace with the following:

“Location wire shall be attached to the top of the water main and shall meet the requirements as shown on the City of Blue Springs Standard Detail WAT-17.”

Section 2903 Construction

2903.1.C – Blasting

Change “Engineer” in the first sentence to “Community Development Director”.

2903.2.A.3 – Installation

Delete paragraph 2903.2.A.3.

2903.2.D – HDPE Pipe

Add the following:

“HDPE pipe shall only be used with approval of the City Engineer.”

2903.2.E – Fusible Polyvinyl Chloride Pipe (FPVC)

Add the following:

“FPVC pipe shall only be used with approval of the City Engineer.”

2903.4 – Connection to Existing Mains

Delete section 2903.4 and replace with the following:

“The Contractor shall furnish and install all fittings necessary to join the existing and new water mains as shown on the Plans or Standard Drawings.

The Contractor shall coordinate with the City of Blue Springs at least three (3) business days before the City will shut off any water mains.



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Connections shall be made using suitable fittings from the conditions encountered. Each connection with an existing pipe shall be made at a time and under conditions which will minimize any disruption in service. Special care shall be taken to prevent contamination when dewatering, cutting into, and making connections with existing pipe. The interior of all pipe, fittings, and valves installed in such connections shall be thoroughly cleaned and swabbed with, or dipped in chlorine solution having a chlorine content of 200 parts per million (ppm).”

2903.7.A – Thrust Restraint

Delete paragraph 2903.7.A and replace with the following:

“Hydrants shall meet the requirements as shown on the City of Blue Springs Standard Detail WAT-01.”

2903.8 – Embedment and Backfilling

Delete paragraph 2903.8 and replace with the following:

“Embedment and backfill shall be accomplished in accordance with the laying condition as specified and as shown on the Plans or Standard Drawings and shall meet the requirements as shown on the City of Blue Springs Standard Detail WAT-16.”

Section 2904 Water Mains Near Sewers

2904.1 – Horizontal Separation

Delete paragraph 2904.1 and replace with the following:

“Water mains shall be located at least ten feet horizontally from any existing or proposed line carrying non-potable fluids such as, but not limited to drains, storm sewers, sanitary sewers, combined sewers, sewer service connections, and process waste or product lines. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten-foot separation, the department may allow deviation on a case by case basis, if supported by data from the design engineer. Such deviation may allow installation of the water main closer to a non-potable fluid line, provided that the water main is laid in a separate trench located as far away from the non-potable line as feasible and meets other specific construction requirements. Locating a water main on an undisturbed earth shelf located on one side of the non-potable line is not recommended and requires justification by the engineer and specific case-by-case approval of the department. In either case, an elevation shall be maintained such that the bottom of the water main is at least 18 inches above the top of the non-potable line while meeting minimum cover requirements. In areas where the recommended separations cannot be obtained, either the waterline or the non-potable line shall be constructed of mechanical or manufactured restrained joint pipe, fusion welded pipe, or cased in a continuous casing. Casing pipe must be a material that is

approved for use as water main. Concrete encasement shall be in accordance with the City of Blue Springs Standard Detail MIS-05.”

2904.2 – Vertical Separation

Delete paragraph 2904.2 and replace with the following:

“Water mains crossing sewers, or any other lines carrying non-potable fluids shall be laid to provide a minimum vertical clear distance of 18 inches between the outside of the water main and the outside of the non-potable pipeline. This shall be the case where the water main is either above or below the non-potable pipeline. An 18-inch separation is a structural protection measure to prevent the sewer or water main from settling and breaking the other pipe. At crossings, the full length of water pipe shall be located so both joints will be as far from the non-potable pipeline as possible, but not less than ten feet or centered on a 20-foot pipe. In areas where the recommended separations cannot be obtained either the waterline or the non-potable pipeline shall be constructed of mechanical or manufactured restrained joint pipe, fusion welded pipe, or cased in a continuous casing that extends no less than ten feet on both sides of the crossing. Special structural support for the water and sewer pipes may be required. Casing pipe must be a material that is approved for use as water main. Concrete encasement shall be in accordance with the City of Blue Springs Standard Detail MIS-05.”