



CITY OF WHEATLAND

CITY COUNCIL MEETING STAFF REPORT

March 22, 2022

SUBJECT: Consider adopting a revised residential water meter standard

PREPARED BY: Dane H. Schilling – City Engineer

Recommendation

City staff recommends the City Council adopt a revised Public Works Construction Standard for residential water meters (Drawing W-3).

Background/Discussion

The City's Comprehensive Project is currently underway and includes several elements including a new municipal accounting and billing software system, new communication infrastructure and new state-of-the-art water meters.

In 2020, City staff completed a thorough review and selection of the latest water meter technology available and selected its preferred water meter products and automation system. On September 22, 2020, the City Council authorized the City Manager to award contracts to Mueller Systems, LLC (Mueller) for the AMI system communications work. Additionally, on October 13, 2020, the City Council adopt Resolution No. 41-20 making a public interest finding for the sole source procurement of water meters and AMI endpoints supplied by Muller Systems, LLC for the City-wide AMI Water Meter Installation Project.

On March 23, 2021, the City Council adopted Resolution No. 13-21 authorizing the City Manager to award a construction contract to Keystone Exteriors, LLC of Luzerne, Pennsylvania (dba. Keystone Metering Systems, Inc.) for construction of the Advanced Metering Infrastructure (AMI) Water Service Meter Installation Project. This project involves changing out all of the City's existing water meters to the new meters selected in 2020.

City staff recommends the City Council adopt a revised Public Works Construction Standard for residential water meters (Drawing W-3) to be consistent with recent upgrades occurring in the City's water meter infrastructure. The new detail will be applied to all new home construction occurring in Wheatland.

Fiscal Impact

No substantial direct cost impact to the City is anticipated by this item. Costs to residential developments may vary slightly when comparing the old meter costs to the new meter costs.

Attachments

Attachment 1 –Residential Water Meter Standard Detail W-3 (Proposed)

A schematic diagram of a two-way gas valve assembly. The assembly is shown in a cross-sectional view. At the bottom, a gas inlet pipe (1) enters the assembly. It passes through a valve (4) and a solenoid coil (3). Above the coil is another valve (4). The gas then flows into a central manifold (12). From this manifold, two pipes branch out. The left pipe passes through a valve (10) and a solenoid coil (9) before exiting as 'FIRE'. The right pipe passes through a valve (11) and a solenoid coil (9) before exiting as 'DOMESTIC'. The entire assembly is enclosed in a rectangular housing.

- ① REINFORCED CONCRETE UTILITY BOX (CHRISTY N30 FOR 1", N36 FOR 1-1/2" OR 2", OR EQUAL).
- ② COMPOSITE OR FIBRELYTE NON-CONCRETE LID WITH PROBE HOLE OPTION (CHRISTY N30RP, N36RP, OR FL36P OR EQUAL).
- ③ MUELLER SOLID STATE METER MODEL NO. SSM (1", 1-1/2" OR 2").
- ④ BRONZE ANGLE METER STOP BALL VALVE. 1": MUELLER B24266M, 1-1/2" & 2": MUELLER P24276N.
- ⑤ SUPPORT FULL BOX PERIMETER UNIFORMLY WITH CONCRETE BLOCK OR BRICK. COVER ANY OPENINGS OR HOLES IN THE SIDE OF BOX WITH BRICK OR BLOCK.
- ⑥ MUELLER MI.NET M NODE ENDPOINT WITH THROUGH HANGER (TTL-H).
- ⑦ BRONZE OR TYPE K COPPER NIPPLE.
- ⑧ TYPE K COPPER OR BRONZE 90-ELL WITH FIP x FIP.
- ⑨ PLUMB AS NEEDED TO CONNECT TO EXISTING SERVICE PLUMBING WITH SCH-80 PVC MATERIALS.
- ⑩ CHECK VALVE: MUELLER H-14243, FIP x FIP.
- ⑪ LOCK OUT VALVE: MUELLER MODEL B20020N FIP x FIP.
- ⑫ U BRANCH: MUELLER MODEL H15364M MIP x MIP.

A. ALL BURIED METALLIC PIPES AND FITTING SHALL BE ENCASED WITH 6 MIL PLASTIC SO THAT NO SOIL IS IN CONTACT WITH THE PIPES AND FITTINGS.

B. SERVICE LINE SIZES TO BE DETERMINED BY DEVELOPER-BUILDER BASED ON FIRE SPRINKLER FLOW ANALYSIS.

C. METER BOXES IN DRIVEWAYS OR CONCRETE AREAS ARE NOT ALLOWED.

D. EQUIVALENT PRODUCTS MAY ONLY BE USED WITH PRIOR WRITTEN APPROVAL.

The diagram illustrates a cross-section of a service line installation. A horizontal pipe is shown, encased in a layer of compacted crushed rock. The rock layer is labeled 'COMPACT 3/4" CRUSHED ROCK 18" MIN. DEPTH'. The pipe is labeled 'SERVICE PER STD DETAILS W-1 AND W-2'. A 'TEE/SPLIT FOR FIRE & DOMESTIC' is shown on the pipe. The pipe is also labeled 'FIRE & DOMESTIC PIPES'. A 'LOCATING WIRE' is shown running parallel to the pipe. The pipe is labeled 'MIN. RADIUS 15 TIMES PIPE O.D.'. The diagram is labeled with circled numbers 8 and 9.

DEPARTMENT OF
PUBLIC WORKS

DRAFT
RESIDENTIAL WATER SERVICE
1", 1-1/2" & 2"

SCALE: NONE
DATE: MARCH 2022

DANE SCHILLING RCE #56908

W-3