BROOKINGS
MUNICIPAL UTILITIES

525 Western Avenue | PO Box 588
Brookings, SD 57006

April 15, 2025

Please note that Brookings Municipal Utilities (BMU) has updated our Design Standards and Standard Specifications for Water and Sanitary Sewer. These updated specifications can be found on our website at the following location:

https://www.brookingsutilities.com/developers-contractors/standards-specifications

Some of the changes that we would like to bring to your attention are:

GENERAL COMMENTS

- BMU Standard Specifications for water and sanitary sewer have been converted to Master Spec formats. The following standard specifications have been created:
  - 22 1319.33 – Backwater Vave (*Previous in Sanitary Sewer Standards*)
  - 22 1323 – Sanitary Sewer Interceptor (*Previous in Sanitary Sewer Standards*)
  - 31 2319 – Dewatering *(Previous in Water and Sanitary Sewer Standards)*
  - 31 2333 – Trenching and Utility Backfilling *(Previous in Water and Sanitary Sewer Standards)*
  - 33 1000 – Water Utilities *(Previous in Water Standards)*
  - 33 1419 – Valves and Fire Hydrants *(Previous in Water Standards)*
  - 33 1900 – Water Utility Metering Equipment *(Previous in Water Standards)*
  - 33 3100 – Sanitary Sewer Utilities (*Previous in Sanitary Sewer Standards*)
  - 33 3211 – Field Erected Wastewater Pumping Facilities (*Previous in Sanitary Sewer Standards*)
  - 40 7110 – Industrial Flow Measurement (*New*)

BMU WATER DISTRIBUTION & SANITARY SEWER COLLECTION DESIGN STANDARDS

- No Changes made in 2025 Revisions

22 1319.33 – BACKWATER VALVE (*Previous in Sanitary Sewer Standards*)

- No Changes made in 2025 Revisions

22 1323 – SANITARY SEWER INTERCEPTOR *(Previous in Sanitary Sewer Standards)*

- Included a requirement in the Submittal section for shop drawings to be submitted to the design engineer. Shop drawing shall contain interceptor loading and sizing calculations specific to the business that will be using the interceptor.

31 2319 – DEWATERING *(Previous in Water and Sanitary Sewer Standards)*

- Included more stringent requirements for dewatering the utility trench. Ground water shall be drawn down to an elevation one (1) foot lower than the bottom of the utility trench.

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31 2333 – TRENCHING AND UTILITY BACKFILLING *(Previous in Water and Sanitary Sewer Standards)*

- Consolidated requirements from the Water and Sanitary Sewer Standards into separate, standalone specification.
- The TRENCHING AND UTILITY BACKFILLING specification identifies the requirements from the subgrade down. Subgrade prep, base course, and subbase course requirements are identified in Section 31 2400 – ROADWAY EXCAVATION AND EMBANKMENT, published by the City of Brookings Engineering Department.
- Section 3.5 – EXCAVATION FOR UTILITY TRENCHES, paragraph B.3. The initial backfill zone is identified as the trench greater than six (6) feet below the subgrade and above the pipe bedding material. The initial backfill zone is only when the utility pipe has greater than six (6) feet of cover to the top of the pipe.
- Section 3.8 – CLAY DAMS. Specifications require installation of clay dams at a maximum interval of 500 feet in the utility trench when the adjacent material is impermeable material (i.e. clay).
- Section 3.11 – COMPACTION OF SOIL BACKFILL AND FILLS, Paragraph G.3. It indicates that materials within the Initial Backfilling Zone are compacted to 97 percent Standard Proctor.

33 1000 – WATER UTILITIES *(Previous in Water Standards)*

- Section 2.6 – WATER MAIN FITTINGS, Paragraph C. Interior and exterior of all ductile iron fittings shall have a fusion bonded epoxy coating applied to the fitting.
- Section 2.14 – CURB STOPS, Paragraph B. Added requirement that indicates brass alloys containing greater than 6% zinc shall not be allowed and brass alloys containing less than 84% copper shall not be allowed.
- Section 2.25 – TAPPING SLEEVE WITH VALVE (WET TAP), paragraph D. Tapping sleeves shall be provided with mechanical Joint (MJ) outlets in lieu of flanged outlets.
- Section 2.26 – CORPORATION STOPS, Paragraph B. Added requirement that indicates brass alloys containing greater than 6% zinc shall not be allowed and brass alloys containing less than 84% copper shall not be allowed.
- Section 2.27 – PACK JOINT COUPING, Paragraph B. Added requirement that indicates brass alloys containing greater than 6% zinc shall not be allowed and brass alloys containing less than 84% copper shall not be allowed.
- Section 3.14 – FITTINGS, Paragraph F. Added requirement for Contractor to torque all fitting bolts to manufacture torque requirements.

33 1419 – VALVES AND FIRE HYDRANTS *(Previous in Water Standards)*

- Section 2.1 – GATE VALVES, Paragraph J. Added Clow as an acceptable manufacturer of gate valves.
- Section 2.3 – VALVE BOX RISER. Added this entire section for valve box adjustment materials.
- Section 2.5 – FIRE HYDRANTS, Paragraph C.1. Added requirement that “Private” or “non-Public” hydrants be provided with YELLOW coating.

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- Section 3.6 – FIRE HYDRANTS, Paragraph G. Added paragraph requiring Contractor to protect the fire hydrant during installation from damage to the coating.

33 1900 – WATER UTILITY METERING EQUIPMENT *(Previous in Water Standards)*

- Section 2.4 – WATER METER, Paragraph F.2.a. Updated reference to provide a high-resolution absolute encoder output compatible with Elster EQ Water 4.0 Module.
- Section 2.5 – MAGNETIC FLOW METER, Paragraph C.1. Updated reference to provide a high-resolution absolute encoder output compatible with Elster EQ Water 4.0 Module.

33 3100 – SANITARY SEWER UTILITIES (*Previous in Sanitary Sewer Standards*)

- Section 2.7 – REPAIR COUPLING – EXTERNAL. Added new specification for externally installed repair coupling for sanitary sewer pipe.
- Section 2.8 – REPAIR COUPLING – INTERNAL. Added new specification for internally installed repair coupling for sanitary sewer pipe.
- Section 2.13 – ADJUSTMENT RINGS, Paragraph D. Added new specification for polypropylene adjustment rings. Polypropylene AND HDPE adjustment rings will be acceptable products.
- Section 2.16 – SANITARY SEWER MANHOLE- INTERNAL FRAME SEAL. Added new specification for internal frame seal. An externally or internally frame seal will be acceptable on BMU projects.
- Section 3.24 – SANITARY SEWER SERVICE CONNECTION- NEW MAIN, Paragraph B. Sanitary sewer stubs shall be provided with a 18-inch piece of pipe and glue-on cap. When service is extended from stub, contractor shall remove the 18-inch piece of pipe from the bell and new service stubbed into existing bell.
- Section 3.27 – ABANDON SANITARY SEWER SERVICE. Added this section to clarify the requirements of abandoning an existing sanitary sewer service in the system. PVC mains and PVC services can be capped and abandoned in the right-of-way. All other sanitary sewer services will need to be abandoned at the main. Three (3) different options have been identified for abandoning sewer services that are clay tile.

33 3211 – FIELD ERECTED WASTEWATER PUMPING FACILITIES (*Previous in Design Standards*)

- Specification was included in its entirety. Provided additional information and requirements for lift stations that will be turned over to BMU. Some of the clarifications provided are:
  - Section 2.1 – WETWELL AND VALVE VAULT. Added requirements for the wet well to be HDPE lined and vent pipes to include check valves to minimize drafting through the valve vault.
  - Section 2.1 – WETWELL AND VALVE VAULT. Added requirements for fusion bonded epoxy fittings for ductile iron fittings inside the valve vault.
  - Section 2.1 – WETWELL AND VALVE VAULT. Added requirements for the sewage combination air valve to be discharged back into the wet well.

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- Section 2.2 – WASTEWATER MAGNETIC FLOW METER. Added requirements for a flow meter to be installed in the valve vault. Flow meter to be wired back to the control system for remote monitoring.
- Section 2.4 – AIR BREAK ELECTRIC JUNCTION BOX. Added requirements for a junction box on the outside of the lift station to provide a transition between the wet well/valve vault and the lift station building.
- Section 2.7 – PACKAGED ENGINE GENERATOR SET. Added requirement for either Natural gas or diesel fueled generator

40 7110 – INDUSTRIAL FLOW MEASUREMENT (*New*)

- Specification was included in its entirety. Provided additional information and requirements for metering equipment for Industrial users regulated by the Pretreatment Program.