

Standard Specifications for Water & Sewer Construction

The Standard Specifications for Water and Sewer Construction Manual provides guidance and instruction on the design and construction of water systems, sewer systems, reclaimed water systems, and all associated appurtenances. It also includes listings of approved materials and equipment along with requirements for as-builts and testing.

The Manual follows prescribed national standards and best management practices (both public and private) used throughout the United States. References include but are not limited to ANSI – American National Standards Institute; AWWA – American Water Works Association Standard Manual and Practices; WEF – Water Environment Federation Standards and Practices Manual; ISO – International Organization for Standardization; Georgia Department of Natural Resources – Environmental Protection Division.

The overall intent of the Standard Specifications Manual is to establish a level playing field for engineering firms doing design work and underground utility contractors constructing water and sewer infrastructure within the City of Valdosta. The Manual is also used by City inspectors to ensure that City expectations are being met. With this Manual, everyone is held to the same standard and expectations.

To maintain consistency with industry standards and to ensure continuous improvement, the Standard Specifications are revised and updated periodically through a collaborative effort with local contractors, engineers, and developers. We encourage and welcome the community's input and recommendations. If you are a private contractor, engineer or developer and would like to become a member of the Standard Specifications Revision Committee, please contact the Utilities Department.

**CITY OF VALDOSTA
UTILITIES DEPARTMENT STANDARD SPECIFICATION
CONTROL OF WASTEWATER FLOWS
(CONTRACTORS TEMPORARY BYPASS PUMPING SYSTEM)**

1. DESCRIPTION

This specification shall govern all work necessary for designing, installing, implementing, operating, and maintaining a temporary bypass pumping and flow control system, as provided by the **Contractor** for the purpose of diverting wastewater flow around the work area for the duration necessary to complete the work (i.e., control of wastewater flows). The **Contractor** shall furnish all materials, labor, equipment, power, maintenance, and incidentals required to maintain continuous and reliable wastewater service in all lines for the duration of the project.

2. SETUP AND REMOVAL

The **Contractor** shall be responsible for furnishing the necessary labor and supervision to set up and operate the pumping and by-passing system. The **Contractor** is responsible for all maintenance of the bypass pumping system to ensure no disruption in the system. The **Contractor** shall provide any means necessary to provide uninterrupted service on main-line service. The **Contractor** shall assure that an overnight bypass will not result in an overflow event.

The **Contractor** shall provide all labor, materials, equipment, and incidentals necessary to remove the bypass pumping system. Prior to removal of the bypass piping, the **Contractor** shall empty all sewage into the sanitary sewer system. The Contractor shall not allow sanitary sewer to discharge onto the ground.

3. BYPASS PUMPS

All bypass pumps shall be fully automatic self-priming units. The pumps may be electric or engine driven. All pumps used shall be constructed to allow dry running for long periods of time to accommodate the cyclical nature of effluent flows.

4. REDUNDANCY

Unless directed otherwise by the **Owner**, the **Contractor** shall provide a spare bypass pump equal in size for each pump required for all bypassing operations. The spare pump shall be on-site and piped for immediate service during all bypass pumping operations. The spare pump shall be configured to start automatically if initial pump fails or cannot maintain flow level in manhole or wet well.

5. SOUND ATTENUATION

All bypass pumping units used within, or within 1,000 feet, of areas zoned residential shall be enclosed in critical level sound enclosures. Sound operating units shall not exceed 70 dBA measured at 25 feet from the unit.

6. BYPASS HOSE OR PIPING

All bypass pumping hose or pipe shall be provided in good condition. Damaged or leaking pipe or joints shall not be accepted. The **Contractor** is responsible for any sanitary sewer discharge to the surface due to hose or pipe failure.

7. BYPASS PUMPING PLAN

It shall be the **Contractor's** responsibility to legibly and thoroughly complete, in its entirety, a Bypass Pumping Plan Form and submit it to the **Engineer** and/or the appropriate City staff for review and approval, prior to the installation of any pumping system proposed for use.

Unless the bypass pumping is associated with an emergency work order, the standard approval protocol is as follows: The **Contractor** prepares and submits the plan to the **Engineer** a minimum of 7 days prior to mobilizing to site. The **Engineer** reviews the bypass plan and coordinates approval with Engineering Services and the Operating Department. **Engineer** and City will put forth a reasonable level of effort to expedite the review and approval process. No deviation from the procedure shall be allowed.

The **Contractor** shall submit a Bypass Pumping Plan to the **Owner** for review prior to proceeding with bypassing operations. Bypassing operations shall not commence until a Bypass Pumping Plan has been reviewed and approved by the **Owner**. As a minimum, the Bypass Pumping Plan shall contain the following items:

- A. Pump manufacturer's name, model number(s), rated capacity, performance curves, and motor horsepower.
- B. Diameter and material of the bypass piping (suction and discharge).
- C. Hydraulic calculations including flow and head conditions.
- D. Schematic showing the arrangement and layout of the bypass pumping system.
- E. Emergency 24-hour telephone numbers for the Contractor's key personnel.

8. CONTRACTOR'S RESPONSIBILITIES REGARDING SANITARY SEWER OVERFLOWS

The **Contractor** shall be responsible for and shall indemnify and hold the **Owner** harmless for any sanitary sewer overflow occurring as the result of the work performed. The **Contractor** is responsible for any sewer discharge to the surface due to failure in bypass hose, piping or other equipment. Any discharge from air release valves shall be contained. The Contractor shall ensure that raw sewage will not spill on the ground or into any bodies of water, channels, or conduits of conveyance of storm water during the performance of this work. Prior to removal of the bypass pumping pipe, the **Contractor** shall empty all sewage into the sewer system.

The **Contractor** is responsible for and shall indemnify and hold the **Owner** harmless for any sanitary sewer discharge to the environment due to a failure in the equipment and/or bypassing operation.

In the event of a sanitary sewer overflow, the **Contractor** shall contact the **Owner's** representative immediately. If there is a sanitary sewer discharge to the environment due to a failure in the equipment and/or bypassing operation, the Contractor shall reimburse the Owner all costs related in any way to compliance with laws, regulatory requirements, and/or court orders and decrees associated with the overflow or discharge event. The costs include but not limited to water quality monitoring, signage, cleanup, fines, legal fees, claims and reporting. In the event that the peak flows during the bypass pumping operation exceed the projected peak flow figures previously provided by the **Owner** and a sanitary sewer overflow event occurs when the **Contractor's** equipment is operating correctly, the **Contractor** will not be held liable for the sanitary sewer overflow or discharge.