

# *San Antonio Water System Standard Specifications for Construction*

## ITEM NO. 862

### Abandonment of Sanitary Sewer Mains and Manholes/Structures

**862.1 DESCRIPTION:** This item shall govern the abandonment of sanitary sewer mains and manholes specified in the contract documents.

**862.2 REFERENCED STANDARDS:** Reference standards cited in this Specification Item No. 862 refer to the current reference standard published at the time of the latest revision date.

1. San Antonio Water System (SAWS):
  - a. Specifications for Water and Sanitary Sewer Construction
  - b. SAWS Materials Specifications
2. City of San Antonio (COSA) Specifications for Construction
3. Texas Commission of Environmental Quality (TCEQ)
  - a. Chapter 217 Design Criteria for Domestic Wastewater Systems
  - b. Chapter 213 Edwards Aquifer
4. American Society for Testing and Materials (ASTM)
  - a. ASTM C 150 - Standard Specification for Portland Cement.
  - b. ASTM C 494 - Standard Specification for Chemical Admixture for Concrete.
  - c. ASTM C 618 - Standard Specification for Fly Ash and Raw or Calcinated Natural Pozzolan for use as Mineral Admixture in Portland Cement Concrete.
  - d. ASTM C 937 - Standard Specification for Grout Fluidifier for Pre-placed Aggregate Concrete.
  - e. ASTM C 940 - Standard Test Method for Expansion and Bleeding of Freshly Mixed Grout for Replaced Aggregate Concrete in the Laboratory.
  - f. ASTM C 1017 - Standard Specification for Chemical Admixture for Use in Producing Flowing Concrete.
  - g. ASTM C 1107 - Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrink)

**862.3 SUBMITTALS:** Contractor shall submit manufacturer's product data, instructions, grouting plan to include grouting pressure, grout tubes and vent tube locations and number per section, and recommendations prior to start of grouting.

**862.4 MATERIALS:** Materials for abandonment of sanitary sewer pipe and manholes.

1. Sanitary Sewer Pipe: A cement-based grout shall be used to fill the void of the existing sanitary sewer main.
2. The grouting material must have strength of at least 100 psi, and shall have flow characteristics appropriate for filling a sanitary sewer main. The grout mix designed

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and method of installation shall be approved by the Engineer prior to beginning operation.

3. Material for Abandoning Manholes: The sanitary sewer manhole shall be filled to the top of the remaining concrete structure with the same material used to abandon the sanitary sewer main and comply with the manhole abandonment detail.

**862.5 CONSTRUCTION:** Sanitary sewer mains 15 inches or larger in diameter and all abandoned sanitary sewer manholes and structures are to be filled with a cementitious low strength material.

1. The sanitary sewer facility shall be abandoned in accordance with the specifications outlined herein and in conformity with the limits shown in the contract documents.
2. Abandoning of sanitary sewer lines and manholes/structures shall not occur until all existing sanitary sewer services have been transferred to another line and directed by the SAWS Inspector.
3. Lines shall be cleaned and televised before grouting and checked for laterals.
4. Point repairs should be completed prior to abandonment.
5. All debris and build up in existing pipe and structure shall be removed prior to grouting.
6. Abandonment of sanitary sewer lines shall be accomplished by installing the grout material with sufficient pressure and in numerous locations.
7. The method of installation shall be able to meet the requirement of completely filling the existing sanitary sewer main and any voids adjacent to it.
8. The sanitary sewer manhole shall be filled to the top of the remaining concrete structure with the same material used to abandon the sanitary sewer main.
9. The method shall adequately provide for the removal and legal disposal of existing sewer materials in the system.
10. The method shall provide for the release of air.
11. When intermediate points are required to be constructed for the abandonment of the system, they shall be a part of the abandonment project process.
12. Sanitary sewer main that are smaller than 15 inches in diameter are generally not required to be grouted unless it is specified in the contract documents.
13. Mains to be abandoned shall be grouted only if required by the contract documents and payment as per these specifications is provided.
14. The concrete structure of the manhole shall be removed to a depth of 2 feet under proposed subgrade or finished ground elevation.
15. Manhole rings and covers shall be removed and delivered to a facility within the limits of San Antonio designated by the Inspector.

**862.6 MEASUREMENT:** Grouting of abandoned sewer lines shall be measured by linear foot. Grouting of abandoned manholes shall be measured on the basis of each one complete in place.

**862.7 PAYMENT:** Payment for abandoning sewer lines shall be made on the contract unit price per linear foot complete in place and per each abandoned manhole complete in place. Said

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price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work. Debris and build-up accumulated within existing sanitary sewer siphons and other segments of pipeline shall be removed as necessary to complete abandonment of sanitary sewer line and any cost associated with the removal of debris and build-up shall be subsidiary to Specification Item No. 862.

**-End of Specification-**