

**San Antonio Water System Standard Specifications for Construction**

**ITEM NO. 831**

**Cut-In Tee**

**831.1 DESCRIPTION:** This item shall consist of cut-in tees (various types and sizes) installed in accordance with these specifications and as directed by the Engineer.

**831.2 REFERENCED STANDARDS:** Reference standards cited in this Specification Item No. 831 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) Standard Specifications for Construction
3. Texas Commission of Environmental Quality (TCEQ) Chapter 290 Public Water Supply
4. American Society for Testing and Materials International
  - a. ASTM D 1248 - Standard Specification for Polyethylene Plastics Molding and Extrusion Materials.
  - b. ASTM D 1784 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
  - c. ASTM D 2122 – Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings.
  - d. ASTM D 2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
  - e. ASTM 2412 – Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel Plate Loading
  - f. ASTM D 2444 - Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight).
  - g. ASTM D 3139 - Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
  - h. ASTM F 477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
5. American Water Works Association (AWWA)
  - a. AWWA C 900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings 4 in through 60 in (100 MM through 1,500 MM).
  - b. AWWA C 909 - Standard for Molecularly-Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 Inches through 12 Inches (100mm through 300 mm), for Water Distribution.
  - c. AWWA M23 – PVC Pipe – Design and Installation
6. Plastic Pipe Institute
  - a. PPI TR3 - Policies and Procedures for Developing Recommended Hydrostatic Design Stresses for Thermoplastic Pipe Materials.
7. Uni-Bell PVC Pipe Association
  - a. UNI-B-13 - Recommended Standard Performance Specification for Joint Restraint Devices for Use with Polyvinyl Chloride Pipe.

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- 831.3 SUBMITTALS:** Contractor shall submit manufacturer's product data, instructions, recommendations, shop drawings, and certifications. All submittals shall be in accordance with Engineer's requirements and submittals shall be approved prior to delivery.
- 831.4 MATERIALS:** The materials for cut-in tees shall conform to the specifications contained within the latest revision of SAWS' Material Specification for all appropriate items.
- 831.5 CONSTRUCTION:** The work involved in cutting in a tee shall consist of the following: excavation, shutdown and isolation of existing main to which the new main is to be connected, cutting pipe for the connection, dewatering the excavation, customer notification of service interruption where required, installation of all pipe used to complete the connection, all necessary tie-ins (connections to existing or new main), fittings, approved reaction blocking required and backfilling the excavation with approved selected materials or flowable fill in accordance with Specification Item No. 804 – Trenching, Excavation and Backfill, if required.
1. Where the installation of a valve is required, payment will be made in accordance with, Specification Item No. 828, "Gate Valves."
  2. The processes associated with disturbing and restoring pavements (any type), curbs, sidewalks, backfilling to final grade, flowable fill (if required) and sodding for the installation of a cut-in tee will be considered subsidiary to the work and must comply with the applicable TxDOT Specification or City of San Antonio Specifications for Public Works Construction, any other governing entity's specifications, and applicable street cut policies, ordinances, or permits.
- 831.6 MEASUREMENT:** Cut-in tees will be measured by the unit of each such assembly of the various sizes of tee installed.
- 831.7 PAYMENT:** Payment for cut-in tees will be made at the unit price bid for each assembly of the various types and sizes of tees to be installed to the size of the existing main.
1. Payment shall also include; all necessary tie-ins, protective coating materials for bolts, nuts, ferrous surfaces, polyethylene sleeve, cutting and replacement of surface, pavement restoration, flowable fill, thrust blocking, where required, and any necessary hauling and disposition of surplus excavated materials.
  2. Materials paid on site will be in accordance with Table 1 of Specification Item No. 100 Mobilization

**-End of Specification-**