Section 02701 - WASTEWATER SERVICE CONNECTIONS

1. SCOPE. This section covers the construction of wastewater service connections with the necessary piping, fittings, and plugs as shown on the details and specified herein.

2. GENERAL. Materials furnished and installed under this section shall be installed with proper joints and at proper grades in full conformity with drawings, specifications, engineering data and manufacturer's recommendation and instructions unless exceptions are noted by the Engineer.

3. LOCATION OF SERVICES. The Contractor shall, where shown on the plans or instructed by the Engineer, install a tee and lateral to the property line that the service is to serve. Service lines shall be direct bored under all paved roads.

4. MATERIALS.

4.01. Service Line. The piping for the service laterals shall be Schedule 40 PVC except for laterals or sections of laterals that have less than 12 inches of cover or more than 18 feet of cover. For laterals or sections of laterals with less than 12 inches or greater than 18 feet of cover, the pipe shall be ductile iron pipe for the section with less than 12 inches or more than 18 feet of cover.

4.02. Fittings. All clean out plugs shall be no hub cast iron. All other plugs shall be threaded PVC.

5. INSTALLATION. Each typical service connection shall be as indicated in the standard drawings.

The Contractor shall be required to set in position in the main line, as directed by the Engineer, wye branches for making lateral connections to the sewer. All wye branches shall be elevated so that the axis of the branch pipe forms an angle of 30 degrees with the horizontal. The service lines shall have a uniform grade. The barrel of the pipe shall be supported uniformly. The open end of both the service line and the riser pipe shall be plugged and sealed watertight.

The exact position of each wye branch and corresponding service line shall be determined by accurate measurements from the nearest manhole before any backfilling of the service branch. Such measurements shall always extend up the grade of the sewer. The record of locations of the wye branches and corresponding service lines shall be kept by the Contractor in a permanent book for this purpose and independently of the record of the Engineer or Inspector.
All PVC service laterals shall be installed using Class B bedding. DIP service laterals shall use Class C bedding.

Where depth of the wye branch is more than ten (10) feet, a standpipe shall be installed as detailed on the plans (unless otherwise noted) to bring the connections within eight (8) feet of the ground surface unless a greater depth then 8 feet is required to provide at least a slope of 1/8 inch per foot in the service line. Install the necessary fittings or specials and make joints as specified for the main sewer line. Encase both the wye branch and riser in concrete.

Laterals shall normally tie to the collector in the line. When so directed by the Engineer the Contractor may core into an adjacent manhole and install the lateral into the manhole. Laterals connected to manholes shall be laid on a line from the center of the lot to the center of the manhole and shall extend not more than six inches inside the manhole wall. Manholes in cul-de-sacs shall have a maximum of three (3) laterals. Any in line manhole shall have a maximum of two (2) laterals. The invert of the lateral shall be level with the manhole shelf and a channel shall be built for each invert to provide smooth flow from the lateral to the invert of the main line. The laterals will be installed with a minimum of four (4) feet of cover unless otherwise approved by Owner.

6. SIX INCH AND LARGER LATERALS. Unless otherwise approved by the Engineer, laterals 6 inches and larger will connect to manholes with lateral crown equal to the crown of the main line pipe, or with outside drops, in accordance with the specifications and standard details for mainline construction. When the lateral is the same diameter as the main line pipe, a drop of 0.2 feet shall be provided in the manhole between the invert of the lateral and the invert of the main line pipe. The lateral shall be laid with a minimum slope of 1/8 inch per foot (1%).

7. DRAWINGS AND DATA. Complete specifications, data, and catalog cuts or drawings covering the items furnished under this section shall be submitted in accordance with the submittals section.

End of Section