SECTION 031
SPECIFICATIONS - BUILDING INLETS

1.0 Building Inlets

Building inlets shall be located as directed by GPSD. Generally, this shall be on the sewer opposite each lot or parcel of land that is to be directly benefited by the improvement. Inlets shall be constructed using pipe tees placed in the constructed sewer. The branch-inlets of tees shall be six (6) inches in diameter and sloped with an axis at approximately forty-five (45) degrees with the horizontal toward the property to be served, or as directed by GPSD.

The bell of the branched-tee or the end bell of the riser or stub sewer shall be fitted with a polyvinyl chloride (PVC) glue on cap.

When the branch tees are located in the sewer line with both tees pointing the same direction there shall be a minimum of one (1) pipe length between tees. Two sewer stubs shall not be installed in a common trench for the purpose of servicing adjoining lots unless approved by GPSD.

2.0 Construction of Polyvinyl Chloride (PVC) Tees

PVC tees shall be fabricated with gasketed joints and have wall thickness in conformance with the dimension ratio of the adjoining host pipe. Each tee shall have a gasketed bell capable of accepting PVC SDR 26 pipe without use of other fittings such as couplers, adapters or reducers. PVC tees shall be constructed in accordance with these Specifications and the recommendations of the tee manufacturer.

3.0 Construction of Sewer Service Connections Using Saddles

Construction of sewer service connections using saddles shall be permitted only with written approval from GPSD and only when connecting to:

a) non-pressurized public sewers constructed using horizontal directional-drilling methods,
b) public sewers constructed using trenchless pipe replacement systems,
c) sewers constructed using high-density polyethylene pipe (HDPE), or
d) sewers constructed using ductile iron pipe (DIP) with a nominal diameter of fourteen (14) inches or greater.

Construction of sewer service connections using saddles shall be performed in accordance with these Specifications and the recommendations of the manufacturers of both the receiving pipe and the saddles. Cores made into pipes to receive saddles shall be positioned above the springline of the receiving pipe. After the construction of an opening within DIP, all exposed surfaces shall be sealed with a coating approved by GPSD and the pipe manufacturer.

All connections of saddles to receiving pipes shall be fully encased around the whole of the saddle and receiving pipe in no less than twelve-inches (12”) of controlled low-strength material (CLSM); however, if a saddle specified includes an upstream bell intended to receive sewer service pipe, the bell of the saddle shall not be encased such that the connection of the saddle to the sewer service pipe can be constructed and deconstructed. If the saddle specified utilizes a flexible-type coupling to connect the saddle to sewer service pipe, the connection made using the flexible type coupling shall be fully encased as specified above. Flexible-type couplings shall be 5000 Series, Strong Back (RC) shielded flexible-type couplings as manufactured by Fernco. CLSM used to construct encasements around saddles and receiving pipes shall meet IDOT specifications.

Saddle-type connections shall be in accordance with the following table based on the lateral material and receiving sewer diameter.

6” Diameter Lateral Sewer Type	Receiving Sewer Diameter	Manufacturer	Saddle Type
PVC, SDR 26	8-29”	The General Engineering Company	SEALTITE TEE Gravity Sewer Saddle Type U, Model 26
	8-14”	Ford Meter Box	FSS-1440
	15-25”	Ford Meter Box	FSS-25800
	26-50”	Ford Meter Box	FSS-5080
	30-72”	The General Engineering Company	SEALTITE TEE Gravity Sewer Saddle Type C, Model 26
DIP	>30”	The General Engineering Company	SEALTITE TEE Gravity Sewer Saddle Type C, Model S

Sewer services with nominal diameter greater than six-inches (6”) shall not be connected using saddles.

4.0 Cleanouts

Cleanouts shall be installed on all lateral lines:

- within five feet of all building foundations when in direct line with the building drain and sewer,
- at all changes in horizontal direction of the horizontal alignment, and
- at a minimum of every 100 feet along the lateral between the building and the receiving sewer.

Cleanouts shall be capped with a Dura Coated Cast Iron Zurn Z1402 Heavy-duty Non-adjustable Floor Cleanout.

5.0 Service Risers

Service risers shall be constructed in accordance with these Specifications, including the Detail Drawings. The end of the riser shall be sealed with a glued PVC cap.

Type A service risers shall be constructed on a building inlet with the six (6)-inch tee laid at a variable angle to a maximum of forty-five (45) degrees as approved by GPSD. Angles greater than forty-five (45) degrees shall be constructed as a Type B service riser. Tees and service riser pipes shall be bedded in approved bedding material.

Type B service risers shall be constructed on a building inlet with the six (6)-inch tee laid at a forty-five (45) degree angle and a forty-five (45) degree bend placed to receive the vertical riser pipe. Twenty-four (24) hours

after encasement of the tee and lower bend, the riser may be extended and shall be covered with six (6) inches of controlled, low-strength material (CLSM) encasement up to the bottom of the bell of the forty-five (45) degree bend at the top of the riser. Type B risers shall only be used when approved by GPSD.

6.0 Sewer Services Extended and Capped

Where shown on the Plans or directed by GPSD, a six (6)-inch diameter sewer service shall be constructed and capped. The sewer service extension shall be constructed using PVC, SDR 26, pipe and be connected to the mainline inlet in accordance with these Specifications. Sewer service extensions shall extend toward the lots or parcels to be served as shown on the Plans and have a slope of 1.0%. The end of the sewer service extension shall be capped using a PVC glue-on cap. If ductile iron pipe is specified, a properly-sized ductile iron mechanical cap shall be used. At the location of each sewer service extension cap, a two-inch (2") by four-inch (4"), lumber, marker shall be buried such that it vertically extends at least two-feet (2') above the crown of the sewer service extension at the cap.

In the construction of the stub sewers not more than one-half the width of the street shall be opened at one time in order to maintain traffic at all times.

7.0 Plugs

Plugs shall be constructed such that the existing pipe to be plugged is cut and cleaned so that an approved flexible type coupling can be installed over the plain end. A section of equal diameter pipe, including the same SDR for PVC pipe and the same class thickness, or an equivalent pressure class thickness for DI pipe shall then be installed at the other end of the coupling. The pipe shall be plugged by installing a cap over the open end of the pipe.

END OF SECTION