



Building Sewer Notes for Knights Key and Grassy Key

Waste Water Treatment Plant #7 on Grassy Key is not a vacuum system. It is essentially a 'force-main' system from the collection tanks to the main plant at 59255 Overseas Highway. This handout details the typical building sewer connections from the building to the City connection at the City right-of-way. Knights Key is very similar because it is connected to WWTP #3 by force-main.

Note: This is not a vacuum system and does not require a candy cane (air intake).

Option #1

Gravity building sewer - appropriate for runs of 400 feet or less. This is because of the anticipated invert elevation at the City connection point of approximately 54" below grade. This sewer is laid in 4" PVC schedule 40 DWV pipe and fittings using purple primer and grey (heavy-duty) cement. The minimum slope is 1/8" per foot (1%); this must be uniform with no "bellies." Low-volume toilets will function best at this slope. Pipe must be surrounded in a 3" minimum of bedding. Pea-gravel is suggested (no rick over 1"). Backwater valves are required where the building drain connects to the building sewer. Cleanouts shall be installed no more than 100 ft apart.

2010 Florida Building Code – Plumbing. Table 702.3 lists acceptable types of building sewer pipe.

2010 Florida Building Code – Residential. Chapter 30. Sanitary Drainage. Table P3002.2 same table.

Option #2

Fore-Main Sewer – appropriate for runs of more than 400 ft or through valuable landscaping. The building drain will be gravity to a tightly covered and vented sump. Minimum size of the sump pit is not less than 18-inch diameter and 24-inches deep. The pit shall be accessible and located so that all drainage flows into the pit by gravity. The pit shall be fitted with a gas-tight removable cover strong enough to support all anticipated loads. The pit shall be vented with 1½-inch PVC schedule 40 minimum size. Maximum effluent level to be 2-inches below the invert of the gravity drains. Grinder pumps shall discharge thru a 1½ -inch minimum force-main into the City 3-inch gravity connection at the City right-of-way line. A check valve and a full open valve located on the discharge side of the check valve shall be located next to the sump pit in the force-main line an access pit with a removable access cover. Electric power for the pump is to be 18-inches above grade in outdoor enclosures and GFCI protected.

2010 Florida Building Code – Plumbing Section 712 Sumps and Ejectors

2008 National Electric Code

