



The Park Manor Subdivision canal is located in eastern Orange County and is roughly bounded by Rouse Road on the east, Dean Road on the west, Colonial Boulevard (SR 50) on the north and Bloomfield Drive on the south. The canal system collected runoff from overland flow and a storm sewer system which serves the residential subdivision and also portions of Rouse Road and an elementary school. Historically, the canal had experienced severe erosion and sedimentation problems and had several areas that posed potential safety hazards near the backyards of homes. The canal is a tributary to the Little Econlockhatchee River, an impaired water body.

Several design alternatives were conceptualized including canal bank armoring, bank regrading, and replacement with pipes. The final design alternative was to replace the canal with storm sewer pipes. This was selected over canal bank armoring due to the proximity of homes and limited right-of-way. Small swales graded to ditch bottom inlets were proposed above the pipe system for water quality treatment purposes. The construction was divided into segments for flexible implementation purposes. The most severely eroded portions of the project were constructed as part of an emergency restoration effort funded by the National Resources Conservation Service following the hurricanes of 2004.

Included in the project was an extensive field investigation to support analysis of existing conditions and identification of all drainage deficiencies. ICPR and GIS were utilized throughout the project to help aid in the analysis. The development of project construction plans was completed utilizing MicroStation, which included detailed erosion control methods to limit downstream impacts during construction. Permitting was necessary through St. John's River Water Management District due to surface water impacts within the protected Econlockhatchee basin. Support services during construction were also provided.

This project was conducted with Inwood as the prime consultant under a continuing services contract with Orange County.

