

Creek flows from southeast to northwest to the St. Johns River. The St. Johns River is located approximately five miles west of the nearest point in the project corridor and flows from south to north.

Surface topography may also influence regional groundwater flow direction. The available hydrologic information indicates that the regional groundwater flow direction in the surficial aquifer is southwest. It should be noted that local geologic features may cause local groundwater flow direction to differ from the regional flow direction. Local hydraulic gradient at the project site is interpreted based on a review of the Picolata, FLA (1949, photorevised 1970), Bakersville, FLA (1970, photorevised 1992), and Orangedale, FLA (1993) USGS Topographic 7.5 Quadrangles.

3.1.3 Geotechnical Data

A preliminary geotechnical investigation was performed to help evaluate the possible habitat types and locations within the project area. Specifically, the purpose of this preliminary geotechnical investigation was to review readily available published information regarding anticipated geotechnical conditions within the study area. This information included the US Department of Agriculture (USDA), Natural Resources Conservation Services “Soil Survey of St. Johns County, Florida.” Figure 3.1.3 displays the SCS Soil Survey Map of the study area, and Table 3.3.1 describes the existing soils.

Table 3.1 - Existing Soils

Florida MUID	Hydrological Soil Group	Description
92	A	Ortega-Penney-Centenary
101	A	Tavares-Zolfo-Paolo
102	A	Palm Beach-Canaveral-Urban Land
103	B/D	Pamona-Eaugallie-Malabar
105	D	Floridana-Rivera-Terra Ceia
107	B/D	Terra Ceia-Samsula-Tomoka

Areas possessing a hydrologic soil group of D are considered poorly drained soils. The B/D hydrologic soil group is soils that are typically saturated with water and are considered very poorly drained. Group A soils are characterized as having well drained sandy or gravelly soils.