318 Soil Survey

318.1 General

The Soil Survey sheet (essentially a soil test analysis sheet) depicts the various types of soils encountered within the limits of the project. This sheet also shows the classification, mechanical properties and recommended usage of those soils. A preformatted CADD sheet can be found in the FDOT CADD Software.

Assign soils having identical characteristics to the same stratum and group for identification and recommendation purposes. The test analysis sheet must be signed by the responsible Engineer.

318.2 Roadway Soil Survey Compilation and Presentation

Upon completion of the proposed typical section, and after placing alignment, proposed grades and existing utilities on the plan-profile sheets and preliminary sections, prints of these sheets must be utilized for determining the location and depth of borings for the sampling of soils for testing and classifications. These classification and test results, including pH, resistivity, sulfides, and chlorides must be shown on the test analysis sheet. Show date and weather conditions at the time of sampling. Refer to Exhibit 318-1 for an example of Soil Survey sheet.

After completion of soils testing, show the boring data on cross sections by columns approximately 1/4 inch wide below the ground line at test sample locations. Show stratum limits and numbers inside the column. Transmit this information to the appropriate responsible materials engineer for verification. Retain one hard copy of the soils information, including cross sections with soils information, in the Soils Engineer's Record.
318.3 Other Soil Surveys

Soil surveys other than those for roadway plans are required for various plans components. Included in these are soil surveys/borings for retention/detention ponds, overhead sign structures, high mast poles and traffic signal mast arms.

Soil Survey sheets generated for such components are generally located in the plans set with the other details and information for each component. Requirements for the Soil Survey sheets are similar to those prepared for the roadway soil survey, showing such things as the location of test holes, various strata encountered, soil properties, classification and recommended usage.
The material from Stratum Number 1 is Rock Base under Asphaltic Concrete.

The material from Stratum Number 2 appears satisfactory for use in the embankment when utilized in accordance with Standard Plans, Index 120-001. However, this material is likely to retain excess moisture and may be difficult to dry and compact. It should be used in the embankment above the water level existing at the time of construction.

The material from Stratum Number 3 appears satisfactory for use in the embankment when utilized in accordance with Standard Plans, Index 120-002. They may be placed above the existing water level at the time of construction, to within 4 feet of the proposed base. They should be placed uniformly in the lower portion of the embankment for some distances along the project rather than full.

This material may not be used in the subgrade portion of the roadbed due to its organic content.

The material from Stratum Number 4 and 5 is plastic materials and shall be removed in accordance with Standard Plans, Index 120-002. They may be placed above the existing water level at the time of construction, to within 4 feet of the proposed base. They should be placed uniformly in the lower portion of the embankment for some distances along the project rather than full.

The material from Stratum Numbers 6 and 8 is ORGANIC/A-8 material and shall be removed in accordance with Standard Plans, Index 120-002, except where noted in the cross sections.

The material from Stratum Number 7 is Highly Plastic material and shall be removed in accordance with Standard Plans, Index 120-002. It may be used within the project limits as indicated in Standard Plans, Index 120-001 only when excavated within the project limits and is not to be used when obtained from outside the project limits.

The material from Stratum Number 9 is the Natural Limestone Formation. Special tools and equipment may be required to excavate and/or dewater this material.