

Engineering Interpretations

Engineering Index Properties

This table gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey areas. Most soils have layers of contrasting properties within the upper 5 to 6 feet. Information in this table includes depth, USDA texture, Unified and AASHTO Classification, rock fragments larger than 3 inches, percentage passing designated sieves, liquid limit, and plasticity index.

Properties

DEPTH to the upper and lower boundaries of each layer is indicated.

TEXTURE is given in the standard terms used by the USDA. The terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. (Textural terms are defined in Chapter 4, Soil Survey Manual or in the glossary of most soil survey reports) If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

UNIFIED CLASSIFICATION SYSTEM classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content.

AASHTO CLASSIFICATION is the system adopted by the American Association of State Highway and Transportation Officials. It classifies soils according to those properties that affect roadway construction.

ROCK FRAGMENTS, 3 to 10 inches and greater than 10 inches in diameter, are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

PERCENTAGE (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven dry weight. The sieves, numbers 4, 10, 40, and 200, have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

LIQUID LIMIT AND PLASTICITY INDEX (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area, or from nearby areas, and on field examination.

This subsection includes:

- (a) **Engineering Properties**