

DESCRIPTION OF LABORATORY TESTING

CLASSIFICATION

Field classification was verified in the laboratory in accordance with the Unified Soil Classification System. Laboratory classification was determined by both visual examination and sieve analysis testing performed in general accordance with ASTM D 422. The final classifications are shown at the appropriate locations on the Boring Logs, Plates A4.1 through A4.24.

MOISTURE-DENSITY

Representative samples were tested for field moisture content and dry unit weight. The dry unit weight was determined in pounds per cubic foot while the moisture content was determined as a percentage of dry weight. Samples were obtained using a 3-inch O.D. split tube sampler. Test results are shown at the appropriate depths on the Boring Logs, Plates A4.1 through A4.24.

SHEAR TESTS

Shear tests were performed in the Direct Shear Machine which is of the strain control type. Each sample was sheared under varying confining loads in order to determine the Coulomb shear strength parameters, cohesion and angle of internal friction. Test results are presented on Plates B2.1 through B2.3.

PROCTOR TESTS

Modified Proctor tests were performed in general accordance with ASTM D 1557 on bulk samples obtained from near borings B6, B10, and B15 between depths of about 0.5 and 1.5 feet. The test is used to determine the optimum moisture content at which the soil compacts to 100 percent density. Results for bulk samples obtained from near borings B10 and B15 are shown on Plates B3.1 and B3.2.

Due to the relatively high insitu moisture content of the clayey silt (volcanic ash) in the bulk sample obtained from near boring B6, a Modified Proctor test was

performed at the insitu moisture content of the soil sample resulting in a 100 percent maximum wet density of 113 pounds per cubic foot at an insitu moisture content of 37 percent.

CALIFORNIA BEARING RATIO TESTS

CBR tests were performed in general accordance with ASTM D 1883 on bulk samples obtained from near borings B6, B10, and B15 between depths of about 0.5 and 1.5 feet. Due to the thixotropic properties of the onsite clayey silt (volcanic ash) in the bulk sample obtained from near boring B6, the test was performed at the insitu moisture content of the soil sample. The test is used to evaluate the relative quality of subgrade soils to be used in the design of flexible pavements. Results are shown on Plates B4.1 through B4.3.

SIEVE ANALYSES

Sieve analyses tests were conducted in general accordance with ASTM D 422 on a sample obtained from boring B16, and bulk samples obtained from near borings B6, B10, and B15 between depths of about 0.5 and 1.5 feet. The test is used to determine the grain size distribution. Test results are presented on Plates B5.1 and B5.2.

R-VALUE TESTS

R-Value tests were performed on bulk samples obtained from near borings B6, B10, and B15 between depths of about 0.5 and 1.5 feet. The tests were performed by Signet Testing Labs, Inc. in Hayward, California, in general accordance with ASTM D 2844. Test results are shown on Plates B6.1 through B6.3.