

## Tier Requirements for Laboratory and Technician Certifications

The Laboratory and the Technician must be certified by NCDOT – Materials & Tests Unit - Soils Laboratory. The costs for the certifications are as follow:

Tier #	Laboratory Certification (per location)	Technician Certification (per person)
1	\$100	\$500
2	\$50 (Exclude Tier1)	\$300
3	\$50 (Exclude Tier1)	\$300

Certification is required for **all** the test methods shown in the list below in a Tier to be approved for that Tier. *Lab certification for Tier 2 or 3 requires Tier 1 certification.* **Optional Tests:** Once approved for a Tier the Firm may request additional certifications for Optional Test Methods at **NO COST**.

The Laboratory Certification is valid for **1 year**. The Technician Certification is valid for **3 years**.

### **Tier 1: Tests Relate to Materials Physical Properties. Tier 1 is a prerequisite for Tiers 2 and 3**

The test methods required for approval in Tier 1 are the following:

#### **AASHTO / NCMOD.**

#### **TEST METHOD DESCRIPTION**

T11	Materials Finer than 75 µm (No. 200) Sieve by Washing
T27	Sieve Analysis of Fine and Course Aggregates
T87 (NCMod)	Dry Preparation of Disturbed Soil and Soil Aggregate Samples
T88 (NCMod)	Particle Size Analysis of Test Soils
T89 (NCMod)	Determining the Liquid Limit of Soils
T90 (NCMod)	Determining the Plastic Limit and Plasticity Index of Soils
T265	Laboratory Determination of Moisture Content of Soils
M145	Classification of Soils for Highway Construction Purposes

**Optional Tests:** T-267 Organic Content in Soils, T-289 pH of Soil

### **Tier 2: Tests Relate to Pavement Construction**

In addition to Tier1 test methods, the test methods required for approval in Tier 2 are the following:

#### **AASHTO / ASTM**

#### **TEST METHOD DESCRIPTION**

T99	Moisture-Density Relations of Soils (5.5 lb. rammer & 12 in. drop)
T100	Specific Gravity of Soils
T134	Moisture-Density Relations of Soil-Cement Mixtures
T193	California Bearing Ratio (CBR)
D1633	Compressive Strength of Molded Soil-Cement Cylinders

### **Tier 3: Tests Relate to Soil-Structure Design**

In addition to Tier1 test methods, the test methods required for approval in Tier 3 are the following:

#### **AASHTO**

#### **TEST METHOD DESCRIPTION**

T216	One-Dimensional Consolidation Properties of Soils
T296	Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression
T297	Consolidated, Undrained Triaxial Compression Test on Cohesive Soils

**Optional Test:** T-208 Unconfined Compressive Strength of Cohesive Soil, T-215 Permeability of Granular Soils (Constant Head)

Please contact Soils Laboratory (919-329-4150) for any questions.