Standard Practice for

Technician Training and Certification Programs

AASHTO Designation: R 25-19[1]

Tech Subcommittee: 5c, Quality Assurance and Environmental

Release: Group 1 (April)

AASHTO

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1. SCOPE AND LIMITATION

1.1. This document provides a guideline for establishing evaluation and certification procedures for personnel engaged in sampling and testing of soils, aggregates, asphalt mixture, and portland cement concrete in accordance with AASHTO test methods. The guideline is intended for use by organizations providing certification of sampling and testing technicians at the basic testing level for acceptance of materials and independent assurance testing.

1.2. The terms used in this standard regarding "technician" or "certification" are meant to be generic descriptions. The term "qualification" is equivalent to "certification" within this standard. Each state will need to use appropriate terminology consistent with state law and practices.

1.3. This guideline does not purport to address all possible events and procedures inherent in the administration and use of a technician certification program (TCP).

2. REFERENCED DOCUMENTS

2.1. *AASHTO Standards and Publications*:

- R 47, Reducing Samples of Hot Mix Asphalt (HMA) to Testing Size
- R 76, Reducing Samples of Aggregate to Testing Size
- R 90, Sampling Aggregate Products
- T 11, Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
- T 19M/T 19, Bulk Density ("Unit Weight") and Voids in Aggregate
- T 22, Compressive Strength of Cylindrical Concrete Specimens
- T 23, Making and Curing Concrete Test Specimens in the Field
- T 27, Sieve Analysis of Fine and Coarse Aggregates
- T 44, Solubility of Bituminous Materials
- T 84, Specific Gravity and Absorption of Fine Aggregate
- T 85, Specific Gravity and Absorption of Coarse Aggregate
- T 89, Determining the Liquid Limit of Soils
- T 90, Determining the Plastic Limit and Plasticity Index of Soils
- T 99, Moisture–Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop

- T 113, Lightweight Particles in Aggregate
- T 119M/T 119, Slump of Hydraulic Cement Concrete
- T 121M/T 121, Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
- T 152, Air Content of Freshly Mixed Concrete by the Pressure Method
- T 166, Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens
- T 168, Sampling Bituminous Paving Mixtures
- T 176, Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
- T 180, Moisture–Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop
- T 196M/T 196, Air Content of Freshly Mixed Concrete by the Volumetric Method
- T 209, Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)
- T 245, Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus
- T 255, Total Evaporable Moisture Content of Aggregate by Drying
- T 269, Percent Air Voids in Compacted Dense and Open Asphalt Mixtures
- T 283, Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
- T 304, Uncompacted Void Content of Fine Aggregate
- T 308, Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method
- T 309, Temperature of Freshly Mixed Portland Cement Concrete
- T 310, In-Place Density and Moisture Content of Soil and Soil–Aggregate by Nuclear Methods (Shallow Depth)
- T 312, Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor
- T 329, Moisture Content of Asphalt Mixtures by Oven Method
- T 335, Determining the Percentage of Fracture in Coarse Aggregate
- T 355, In-Place Density of Asphalt Mixtures by Nuclear Methods
- *Implementation Manual for Quality Assurance,* Joint Construction Quality Assurance Task Force, 1995
- *Quality Assurance Guide Specification*, Joint Construction Quality Assurance Task Force, 1995

2.2. *ASTM Standard*:

- D4791, Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

3. INTRODUCTION

3.1. *This guideline is provided to*:

- Help individual states, and where desired, combinations of states and other public agencies develop a TCP for use in conjunction with quality assurance (QA) specifications as described in the *Implementation Manual for Quality Assurance* and the *Quality Assurance Guide Specification*.
- Describe the activities and organizational needs for the development and operation of a TCP that provides a flexible and effective means for ensuring qualified personnel perform sampling and testing.
- Identify the commonly used tests performed to ascertain material or product characteristics, for acceptance and/or payment under project contracts incorporating soils, aggregates,