

NDDOT Technical Certification Program (TCP)

Certification Summary

Certifications are available for aggregate testing, asphalt mix testing, soil field testing. ACI Concrete Field-Testing reciprocity is allowed.

QC/QA asphalt paving projects require Asphalt Inspection and Asphalt Mix Controller certification in addition to Aggregate Testing and Asphalt Mix Testing certification.

Certifications are valid for five years.

QC/QA CERTIFICATION – ASPHALT

ASPHALT PAVEMENT INSPECTOR (API)

Requires successful completion of the Asphalt Pavement Inspection class. (Required for QC/QA Asphalt Paving)

ASPHALT MIX CONTROLLER (AMC) OR ASPHALT MIX DESIGN (AMD)

Requires completion of four classes: Asphalt Pavement Inspection, Aggregate Testing, Asphalt Mix Testing, and Asphalt Mix Design/Control. (Required for QC/QA Asphalt Paving)

**Asphalt Mix Designer certification is a tester certification for individuals who submit mix designs. A performance exam is required.*

ASPHALT MIX TESTER (AMT)

Requires completion of Aggregate Testing and Asphalt Mix Testing classes, plus a performance exam of each test or procedure. Certification in Aggregate Field Lab or Aggregate Designer is required. This certification is required for an individual responsible for working in a construction field lab on a QC/QA asphalt paving project.

ND T 166 - Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens, Method A

ND T 209 -Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt

ND T 312 - Preparing and Determining Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor

NDDOT 5 - Sampling and Splitting Field Verification Hot Mix Asphalt (HMA) Samples

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Certification Summary

QC/QA CERTIFICATION - AGGREGATE

Aggregate Tester certification requires successful completion of an Aggregate Testing class and performance exam of each test or procedure. There are four choices for aggregate tester certification. Aggregate Field Lab or Aggregate Designer is required for individuals who work in QC/QA asphalt field lab. Aggregate Designer certification is required for testing or creating asphalt mix designs. Aggregate Field/Gradation and Aggregate Sampler certifications are also offered.

Aggregate testers may work on asphalt paving projects or any project that requires aggregate testing.

Individuals who only wish to take samples and have attended the *Asphalt Pavement Inspection* class may request Aggregate Sampler certification.

AGGREGATE SAMPLER

- ND T 2 - Sampling of Aggregates
- ND T 248 - Reducing Samples of Aggregate to Testing Size

AGGREGATE FIELD/GRADATIONS

- ND T 2 - Sampling of Aggregates
- ND T 11 - Materials Finer Than No. 200 Sieve in Mineral Aggregate by Washing
- ND T 27 - Sieve Analysis of Fine and Coarse Aggregate
- ND T 248 - Reducing Samples of Aggregate to Testing Size
- ND T 255 - Total Evaporable Moisture Content of Aggregate

AGGREGATE FIELD LAB (QC/QA FIELD LAB TESTER)

- ND T 2 - Sampling of Aggregates
- ND T 11 - Materials Finer Than No. 200 Sieve in Mineral Aggregate by Washing
- ND T 27 - Sieve Analysis of Fine and Coarse Aggregate
- ND T 248 - Reducing Samples of Aggregate to Testing Size
- ND T 255 - Total Evaporable Moisture Content of Aggregate
- ND T 113 - Lightweight Pieces in Aggregate
- ND T 176 - Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
- ND T 304 - Uncompacted Void Content of Fine Aggregate
- ND D 4791 - Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
- NDDOT 4 - Percentage of Fractured Particles in Coarse Aggregate

AGGREGATE (MIX) DESIGNER (QC/QA ASPHALT MIX DESIGN TESTER OR DESIGNER)

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ND T 2 - Sampling of Aggregates
ND T 11 - Materials Finer Than No. 200 Sieve in Mineral Aggregate by Washing
ND T 27 - Sieve Analysis of Fine and Coarse Aggregate
ND T 248 - Reducing Samples of Aggregate to Testing Size
ND T 255 - Total Evaporable Moisture Content of Aggregate
ND T 113 - Lightweight Pieces in Aggregate
ND T 176 - Plastic Fines in Graded Aggregates and Soils by Use of the Sand
Equivalent Test
ND T 304 - Uncompacted Void Content of Fine Aggregate
ND D 4791 - Flat Particles, Elongated Particles, or Flat and Elongated Particles in
Coarse Aggregate
NDDOT 4 - Percentage of Fractured Particles in Coarse Aggregate
ND T 84 - Specific Gravity and Absorption of Fine Aggregate
ND T 85 - Specific Gravity and Absorption of Coarse Aggregate
ND T 30 – Mechanical Analysis of Extracted Aggregates

AGGREGATE AND ASPHALT PERFORMANCE EXAMS

A performance exam is required for certification as a tester. Prior experience is necessary to complete the performance exam. *

Schedule through the [TCP Web Page registration link](#).

**Performance exams for Aggregate Specific Gravity tests, ND T84 and ND T85 are completed at the Materials Lab in Bismarck.*

CONCRETE

CONCRETE FIELD TESTER

American Concrete Institute Field Testing Technician – Grade 1 is accepted, by request for Concrete Field Tester certification. A reciprocity request with proof of current ACI certification is needed to process the request.

The ACI class schedule can be found on the [ND Ready Mix website](#).

NDDOT Technical Certification Program (TCP) Certification Summary

SOIL

SOILS FIELD TESTER

Requires successful completion of the Soils Field Testing class which includes a performance exam of each procedure.

- ND T 99 & 180 - Moisture-Density Relations of Soils
- ND T 191 - Density In-Place by the Sand Cone Method
- ND T 217 - Determination of Moisture in Soil by Means of Calcium Carbide Gas Pressure Moisture Tester (Speedy)
- ND T 265 - Laboratory Determination of Moisture Content of Soils
- ND T 255 - Total Evaporable Moisture Content of Aggregate
- ND D 2167 - Density of Soil in Place by the Rubber-Balloon Method
- ND D 4643 - Microwave Method of Drying Soils

SOIL DENSITY TESTER

- ND T 191 - Density In-Place by the Sand Cone Method
- OR
- ND D 2167 - Density of Soil in Place by the Rubber-Balloon Method
- ND T 265 - Laboratory Determination of Moisture Content of Soils
- ND T 255 - Total Evaporable Moisture Content of Aggregate
- ND D 4643 - Microwave Method of Drying Soils

CERTIFICATION RENEWAL

CLASSROOM OR ONLINE

Certification renewal is required every five years. Class lengths vary but are one day or less. Some classes are available online.

PERFORMANCE EXAM

Tester certification requires a performance exam to be completed every five years. Exams must be scheduled in addition to the renewal class. *(Exception -soil certification includes the performance exam)*

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TEMPORARY (1-YEAR) CERTIFICATION

Some test methods and procedures are available as a [one-year \(Temporary\)](#) certification. This level of certification is intended for new or seasonal employees. It is not a substitution for the certification required to run a QC/QA field lab on an asphalt paving project.

RESOURCE MATERIALS

The tests and procedures are available in the [Field Sampling and Testing Manual](#).

CONTACT

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[NDDOT TCP Web Link](#)