

WEST VIRGINIA TECHNICIAN INSPECTOR CERTIFICATION PROGRAM HANDBOOK



Revised July 2021

1. INTRODUCTION

The purpose of the West Virginia Division of Highways (WVDOH) Technician and Inspector Certification Program (TCIP) is to improve the quality assurance of embankments, subgrades, base course, asphalt and Portland cement concrete by the certification of industry and Division of Highways personnel. This document is to establish guidelines for this purpose.

The Division's intent is to conduct a cooperative program of training, study, and examination so that personnel of the producer, contractor, and the Division of Highways will be able to better assure, by their increased technical knowledge, the level of quality required by the governing specifications.

This document, along with MP 106.03.50, is applicable to all requirements, guidelines, and other support documents of the Division of Highways that reference conditions, methods, and levels of qualification specific to the Division of Highways' training and certification program.

There are often changes and additions to the TICP, so please, thoroughly review this document as well as the Materials Division Website to find out about any changes that may pertain to you

2. CERTIFICATION BOARD

As per MP 106.03.50 the certification board members are:

1. State Highway Engineer
2. Human Resources Director
3. Materials Control Soils & Testing Director
4. Quality Assurance Training Program Administrator
5. Applicable Materials Control Soils and Testing Group Supervisors

3. APPLICATION AND CLASS SIGN-UP INSTRUCTIONS

For course registration, instructions, please visit the [WVDOH MCST Webpage](#)¹ for Instructions:

4. CERTIFICATIONS

The TICP offers certification classes in the following disciplines:

1. Aggregate Technician
2. Aggregate Sampling Inspector
3. Soils & Aggregate Compaction Technician
4. Portland Cement Concrete Technician
5. Portland Cement Concrete Inspector

¹ <https://transportation.wv.gov/highways/mcst/Pages/techcert.aspx>

6. Asphalt Plant Technician
7. Asphalt Field & Compaction Technician
8. Radiation safety

****EXCEPT AS NOTED HEREIN ALL CERTIFICATIONS ARE VALID FOR A THREE-YEAR PERIOD****

5. CLASS SUPPLY LIST

We recommend that participants bring the following items with them to the certification classes:

1. Laptop Computer or Tablet (Mandatory)
2. Photo ID
3. Current WV specification book and the latest supplemental to the specification book. You will need this during the test. These are also available in printable PDF format on the [WVDOH Webpage](#).²
4. Hand held calculator (No electronic devices other than a Hand held calculators are allowed to be used during testing.)
5. Hi-lighters
6. Sticky Notes
7. Ruler / Straight edge

6. SPECIAL NEEDS AND REQUESTS

Applicants with special needs should notify the Quality Assurance Training Program Administrator prior to the class to ensure that the training location is prepared to accommodate their needs.

7. RECIPROCAL CERTIFICATIONS

The West Virginia Division of Highways may recognize reciprocity certifications from other states. Please see MP 106.03.51 for detailed instructions.

American Concrete Institute (ACI) Field Testing Grade I certification will be accepted as a portion of the West Virginia PCC Inspector training. However, the applicant must pass the online West Virginia PCC Inspector written certification test before a certification will be issued.

Acceptance of WVDOH Certifications by other state agencies is at the sole discretion of the other agency.

8. TRAINING

The Division of Highways, contractors, and producers may sponsor courses of

² <https://transportation.wv.gov/highways/contractadmin/specifications/Pages/default.aspx>

instruction consisting of schools and seminars to help prepare personnel for certification under one or more of these certification programs. To the extent possible, these courses of instruction will be joint efforts of the industry and WVDOH. Nothing in this document shall be interpreted to prohibit any party from conducting courses of instruction for their personnel to assist in preparation for these exams.

The purpose of the schools is to provide helpful information and instruction for persons preparing to take the technician/inspector examinations. These courses are designed to provide instruction for persons with a basic foundation in the subject matter.

9. CERTIFICATIONS

All certifications listed in the sections below require written examinations. Some of the listed certifications require a practical examination after successful completion of the written examination. Applicants are responsible to determine which certification is applicable to their assignment. The following is a description of the certifications listing relevant information about each:

10. AGGREGATE CERTIFICATIONS

10.1 Aggregate Sampling Inspector

The written examination for an Aggregate Sampling Inspector consists of the following areas:

1. Specifications
2. Sampling Fundamentals
3. Sampling Methods and Equipment
4. Gradations
5. T11 Wash Test

There is no in-person class for the Aggregate Sampling Inspector Certification; the class is online-only and on-demand. The Aggregate Sampling Inspector Certification requires the successful completion of the examination. Certification as an Aggregate Sampling Inspector qualifies the employee, either industry or Division, to perform sampling of aggregates relevant to the quality control program or acceptance program respectively.

The test will be available online throughout the year but may only be attempted twice per year. A score of 70 is required for passing Aggregate Sampling Inspector.

10.2 Aggregate Technician

The written examination for an Aggregate Technician consists of the

following areas:

1. Specifications
2. Aggregate Specifications and Procedures
3. Aggregate Fundamentals
4. Sampling, Control, and Inspection of Aggregates
5. Aggregate Testing

After successful completion of the written examination, applicants will be required to pass a practical examination consisting of their demonstration of procedures common to normal aggregate quality requirements. Certification as an Aggregate Technician qualifies the employee, either industry or Division, to perform sampling and/or testing of aggregates relevant to the quality control program or acceptance program respectively.

11. COMPACTION CERTIFICATIONS

11.1 Soils & Aggregate Compaction Technician (SACT) - The written examination for the Soils & Aggregate Compaction Technician consists of the following areas:

1. Specifications
2. Compaction Test Procedures
3. Radiation Safety and Nuclear Gauge
4. Test Procedure Problems

After successful completion of the written examination, the applicant will be required to pass a practical examination demonstrating his/her proficiency in using the testing equipment. Certification of the Compaction Technician qualifies the employee, either industry or Division, to conduct tests on all soil construction materials that require compaction testing.

12. CONCRETE CERTIFICATIONS

12.1 Portland Cement Concrete Technician

The written examination for a Portland Cement Concrete Technician consists of the following areas:

1. Specifications
2. Fundamentals
3. Sampling and Testing
4. Control and Inspection
5. Mix Proportioning and Adjustment

The Portland Cement Concrete Technician certification requires only the

successful completion of the written examination; no practical examination is required. Certification of the Portland Cement Concrete Technician qualifies the employee, either industry or Division, to make plant and mix adjustments, proportioning, and other duties.

12.2 Portland Cement Concrete Inspector

The written examination for a Portland Cement Concrete Inspector consists of the following areas:

1. Specifications
2. Fundamentals
3. Sampling and Testing
4. Control and Inspection
5. Specifications

After successful completion of the written examination, applicants will be required to pass a practical examination demonstrating their proficiency in conducting tests common to concrete quality control. Certification as a Portland Cement Concrete Inspector qualifies the employee, either industry or Division, to perform sampling and/or testing of concrete relevant to the quality control program or acceptance program respectively.

13. ASPHALT CERTIFICATIONS

13.1 Asphalt Plant Technician

The written examination for the Asphalt Plant Technician consists of the following areas:

1. Specifications
2. Fundamentals
3. Sampling and Testing
4. Control and Inspection
5. Mix Proportioning and Adjustment

After successful completion of the written examination, applicants will be required to pass a practical examination demonstrating their proficiency in conducting tests common to Asphalt quality control. Certification of the Asphalt Technician qualifies the employee, either industry or Division, to take asphalt mixture samples, perform quality control or quality assurance testing on plant produced asphalt mixtures, make plant and mix adjustments, aggregate proportioning, and other duties.

13.2 Asphalt Field and Compaction Technician (AFCT) –

The written examination for the Asphalt Field and Compaction Technician consists of the following areas:

1. Specifications

2. Compaction Test Procedures
3. Radiation Safety and Nuclear Gauge
4. Test Procedure Problems
5. Testing Forms

After successful completion of the written examination, applicants will be required to pass a practical examination demonstrating their proficiency in using the testing equipment. Certification of the Asphalt Field & Compaction Technician qualifies the employee, either industry or Division, to conduct tests on all asphalt materials that require compaction testing.

14. RADIATION SAFETY

This certification is required by the Nuclear Regulatory Commission (NRC) before operating a portable nuclear gauge. The training consists of 3 - 4 hours classroom instruction and has a 25-50 question closed book exam. A minimum score of 70% is required for passing the course. The course and exam will cover the following areas:

1. Proper storage and security of portable nuclear gauges
2. Transportation of portable nuclear gauges
3. Personal safety while operating a portable nuclear gage

15. EXAMINATIONS

All participants are required to furnish their own laptop or tablet to take the final course exams. Examinations, both written and practical, will be coordinated by the Materials Control, Soils & Testing Division (MCS&T) of the Division of Highways. The locations and dates of the examinations will be announced at least two weeks prior to being given. All written examinations will be a one-part, 'open-book' type, with a time limit.

If an applicant fails to receive a minimum score of 70% on the first exam, they will be given another attempt to score a 70%. This second attempt shall be a subsequent, scheduled make-up exam. Failure to attend any examination counts as a failed exam.

If the re-test examination is not passed, the applicant must attend the certification school. Practical examinations require performance of the tests required by the specifications for the material type involved.

After the applicant passes the written examination, they will be granted two attempts within a 12-month period to pass the practical exam. All practical examinations are pass / fail. If an applicant fails the practical twice, the applicant may not take another practical test in the same 12-month period without first attending the certification school. The scheduling of the practical examination and re-examination is established by the MCS&T section running the certification class.

16. CERTIFICATION AND RE-CERTIFICATION

16.1 Certification

An individual must pass the examination in each level for which they are requesting certification. Unless otherwise noted, to pass the written examinations, the applicant must obtain minimum score of 70 percent.

If an applicant fails to receive a minimum score of 70% on the first exam, they will be given another attempt at a later date to score a 70%. This second attempt shall be a subsequent, scheduled make-up exam. Failure to attend any examination counts as a failed exam.

Upon successfully completing the requirements for certification, applicants may print their certification card from the divisions web-site.

<http://dotftp.wv.gov/materialsdir/>

This certification is not transferable. A certification is valid for up to Three years and expires December 31, of the 3rd year of certification.

16.2 Re-Certification

The renewal of all certifications shall require a written exam and a hands-on practical exam, where applicable.

Applicants will be given two scheduled attempts to pass the recertification exam and one attempt to pass the practical exam (each, respectively). Any applicant that fails to acquire a minimum score of 70% on a recertification exam or who fails the subsequent practical exam will not have their certification renewed. The applicant will be required to take the respective certification classes at the next available time given by the WVDOH.

Any failed recertification examination taken prior to the expiration date of the current certification, either practical or written will not result in termination of any current certification prior to the expiration date of that certification.

The certification holder is responsible updating their personal information on the online learning website.

<http://www.onlinelearning.wv.gov/student/home.html>

Certification holders are responsible to ensure that their certifications stay current. The West Virginia Division of Highways will no longer mail reminder letters to certification holders.

If an applicant seeking recertification disagrees with a recertification decision, they may file a written appeal with the board. (See Appealing a Decision).

17. TESTING PROTOCOL

The TICP has a testing protocol that must be followed. The protocol includes testing environment, time limits, proctoring exams, etc. The entire protocol will be covered with attendees prior to testing.

18. REVOCATION OF CERTIFICATION

The Certification Board grants certification upon satisfactory completion and maintenance of certain conditions and may be revoked upon any breach of these conditions.

Generally, certifications may be revoked if in the opinion of the certifying authority, an individual has knowingly committed acts detrimental to the integrity of the Certification Program or transportation industry. Examples of situations that warrant revocation include, but are not limited to:

- Deliberate falsification of field or quality control test results or records.
- Deliberate falsification of calculations, test results or materials
- Cheating on certification/re-certification exams.
- Submittal of false information on certification applications.
- Submitting trial mix mixture and/or calculations completed by someone other than the signatory, or knowingly supplying trial mix mixture and/or calculations for another individual's certification.

The Quality Assurance Training Program Administrator will take the lead in gathering facts and investigating any allegations which may require revocation of a certification. The review board will notify the individual in writing of intent to revoke certification(s).

19. APPEALING A DECISION

Any individual who disagrees with a decision by the Certification Board has 10 business days from the date of receipt of the notification to respond in writing to the board and present documentation to support their continued certification and/or request an opportunity for a meeting to present their case.

If the individual fails to respond within 10 days of receipt of the original notification of revocation letter, the revocation becomes final.

Not later than 20 business days after receiving a request for a meeting from the individual, the Certification Board will schedule a meeting in which the appellant can present their case. If the Certification Board was not persuaded

by the documentation provided by the appellant and believe that revocation of the certification is warranted, the appellant may file a written appeal to the State Highway Engineer for review. All information including any letter(s) of explanation from the appellant will accompany the documents submitted to the State Highway Engineer. The board will mail the decision of the State Highway Engineer to the appellant. The decision by the State Highway Engineer is final.

20. THE LENGTH OF REVOCATION:

20.1 First Offense

This may include revocation of all certifications for up to one year. After the revocation period the individual may obtain recertification by passing respective certification exam and a practical (if applicable). If either exam is failed, the individual will be required to take the certification class before being permitted to test again. The individual will be required to retake and pass the written exam regardless of whether it was previously passed.

20.2 Second Offense

This may include revocation of all certifications for up to for five years. There is also the possibility of demotion and reduced pay for WVDOH employees. After the revocation period the individual may obtain recertification by passing respective certification exam and a practical (if applicable) at the discretion of the board. If either exam is failed, the individual will be required to take the certification class before being permitted to test again. The individual will be required to retake and pass the written exam regardless of whether it was previously passed.

20.3 Third Offense

This may include revocation of all certifications for life. There is also the possibility of termination, demotion and reduced pay for WVDOH employees.

21. CONTACT INFORMATION

If an applicant/technician/appellant has any questions about the DOH program or needs more information. Please contact:
Qaschoolscoordinator@wv.gov