

Materials Procedures Committee Regular Meeting

Meeting Time/Date: August 4th, 11:00 AM

Meeting Location: MCS&T (Conference Room) – 190 Dry Branch Drive, Charleston WV, 25301

Online Meeting: Google Meet Video Conference

Online Link - (Online Meeting)

Files Available on Webpage:

<https://transportation.wv.gov/highways/mcst/Pages/MP-Committee-Page.aspx>

Materials Procedures – Approved at Last Meeting

1. 106.10.50 – WVDOH Buy America Acceptance Guidelines
2. 601.00.49 – Method of Test for Determining the Condition of Concrete Bridge Decks
Method of Test for Determining the Condition of Concrete Bridge Decks
3. 603.06.20 – Test Method for the Determination of Bond Strength Between Prestressing Steel Strand and Self-Consolidating Concrete (SCC)
4. 604.02.40 – Inspection and Acceptance Procedures for Precast Concrete Products
5. 711.03.26 – Maintaining Specified Level of Strength in Portland Cement Concrete

Materials Procedures - Old Business

Number	Champion	Title	Description
1* - 100.00.00	Boothroyd/ Brayack	Preparing Materials Procedures	Update to further standardize the general structure of MPs, focused on the beginning sections.
2 - 106.03.50	Harper/ Boothroyd	General Information Guide for Technician and Inspector Certification Program (TICP)	Change from “apprenticeship” requirements to “hands-on training” requirements.
3 - 688.02.20	Ratchford	Guide for Contractor’s and Fabricator’s Quality Control Plan for Painting	Add procedure for the approval of contractor’s quality control plan.
4 - 688.03.20	Ratchford	Guide for Development of the Contractor’s Environmental Control Plan for Spent Material Prior to Painting Existing Structures	Add procedure for approval of contractor’s environmental protection/control plan. Due to amount of changes the old version is completely struck through and provided a "CLEAN" version in red.

Materials Procedures – Editorial Edits

None

Materials Procedures - New Business with Significant or Process Updates

Number	Champion	Title	Description
5& - 109.00.21	Ian Shaffer	Basis For Charges For Non-Submittal of Sampling & Testing Documentation by the Established Deadline	Update Concrete Section on Attachment page, remove “Rapid Chloride Permeability” replace with Surface Resistivity
8& - 700.00.53	Ian Shaffer	Procedure for Evaluating Independent Assurance Samples With Acceptance Samples	Update the PCC section 7, add Surface Resistivity testing and frequency details
9& - 700.00.54	Ian Shaffer	Procedure for Evaluating Quality Control Sample Test Results with Verification Sample Test Results	Update the scope section, 4.2.4 Portland Cement Concrete, adding Surface Resistivity
10& - 700.00.56	Thomas Ross	Commercial and Potential Skid Resistant Aggregate Source Approval Procedures	This a new MP- to provide procedure for approval and monitoring any aggregate producers/suppliers intending on supplying aggregates to any WVDOH projects.

Note 1:  Denotes this MP is up for Vote

Note 2: & Denotes this MP is not up for Vote

Comments

Comments are due July 28th, so the Champion may review and address them. Submit comments to Kristy Huffman (kristy.j.huffman@wv.gov)

Next Meeting

New or Updated MPs due to the MP Chair 3-weeks before the next meeting: September 15th

Meeting Time/Date: 11:00 AM, October 6th, 2026

Meeting Location: MCS&T Conference Room

Online Meeting: Google Meet Video Conference (Link TBD)

Additional MP Committee Meeting Information

For details of previous meetings, please visit the MCST MP Committee Webpage

<https://transportation.wv.gov/highways/mcst/Pages/MP-Committee-Page.aspx>

Tentative MP Committee Dates for 2026:

October 6, December 1

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

PREPARING MATERIALS PROCEDURES

1. PURPOSE

- 1.1 To set forth instructions for drafting Materials Procedures (MP) concerning sampling, testing, reporting, and inspection.
 - 1.1.1 To establish a numbering system for MPs.
 - 1.1.2 To establish a styles guideline for MPs.
- 1.2 To establish a workflow for the creation, acceptance, and approval for MPs.
 - 1.2.1 To set up a reconfirmation schedule for existing MPs.
- 1.3 To provide further guidance and clarification from that set forth in DD-105.

2. REFERENCED DOCUMENTS

- 2.1 [AASHTO Publications Style Manual and Process Guide](#)¹, current edition.
- 2.2 [Using SI Units in ASTM Standards: A Guide to Form and Style for ASTM Standards, Part H](#)²
- 2.3 [WVDOH Design Directives DD-105](#)³
- 2.4 ASTM E29 - Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications.

3. NUMBERING GUIDELINES

- 3.1 A MP consists of a sequence of numbers such as 120.20.01.
 - 3.1.1 The first set (three digits) of an MP are taken from the WVDOH Specifications Roads and Bridges to denote the general area to which the procedure applies.
 - 3.1.2 The second set (two digits) of an MP are taken from the WVDOH Specifications Roads and Bridges denotes the particular area to which the procedure applies.
 - 3.1.3 The third set (two digits) is defined by this Division thus:
 - 1. .00 - .09 Field Sampling
 - 2. .10 - .19 Pre-sampling (Source or Intermediate Points)
 - 3. .20 - .29 Testing
 - 4. .30 - .39 (For future designation)
 - 5. .40 - .49 Inspection
 - 6. .50 - .59 Quality Assurance System

¹ <https://materials.transportation.org/>

² <https://sn.astm.org/rules-and-regs/using-si-units-astm-standards-nd12.html>

³ <https://transportation.wv.gov/highways/engineering/Pages/Design-Directives.aspx>

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- 7. .60 - .69 Reporting (laboratory)
- 8. .70 - .79 Reporting (issuance under master control)
- 9. .80 - .89 (For future designation)
- 10. .90 - .99 Miscellaneous

4. COMMON DEFINITIONS

- 4.1 To stay consistent, this section will define some commonly used terms and specify the term that is to be used in Materials Procedures.
- 4.2 Authors may choose to spell out these terms in titles, sections, or headers.
- 4.3 Specific Terms:
 - 4.3.1 DWR: When referring to a Daily Work Report that is performed on a WVDOH project, the term to be used is "DWR".
 - 4.3.2 Coverage: When referring to coverage for a material, traditionally referred to as "Direct Coverage" or "Master Coverage", the term to be used is "coverage".
 - 4.3.3 Specifications: When referring to the WVDOH Standard Specifications, Roads and Bridges, current edition including Supplementals and Special Provisions, the term to be used is "Specification(s)" with a capital "S". There is no need to list the Specifications in the referenced document, this link is assumed. Specific references to aid in navigation are encouraged.
 - 4.3.4 Should: When referring to a rule or provision, it indicates that said rule or provision is not mandatory, but is recommended as part of good practice.
 - 4.3.5 Shall: When referring to a rule or provision, indicates that said rule or provision is mandatory.
 - 4.3.6 WVDOH project: When referring to any construction project in the state that is governed by the Specifications, the term to be used is "WVDOH project(s)."
 - 4.3.7 MS&P: When referring to Manufacture and/or a Supplier and/or a Producer, the term to be used is: "MS&P". This author may choose to define this in the first instance of use in the document as this is not a common, industry wide term.
 - 4.3.8 Chief Engineer: When referring to the final approving entity, the term "Chief Engineer" shall be used based on the WVDOH org chart.
 - 4.3.9 Division: When referring to the Department of Transportation, Division of Highways as an entire entity, the term: "Division" shall be used with a capital "D". There is no need to spell out the name in any materials procedure.
 - 4.3.10 MCS&T Division: When referring to the Materials Control, Soils and Testing Division, the term: "MCS&T Division" shall be used. There is no need to spell out the name in any materials procedure, though the author may choose to do so.
 - ~~4.3.11 TED Division: When referring to the Traffic Engineering Division, the term: "TED Division" shall be used. There is no need to spell out the name in any materials procedure.~~
 - ~~4.3.12 All other Divisions shall be spelled out once and then given an appropriate abbreviation. For example, Engineering Division "Engr Division"~~
 - ~~4.3.13~~ 4.3.11 APL: When referring to MCS&T Approved Product List, the term to be used is "APL", with all letters capitalized.

~~4.3.13.14.3.11.1~~ When referring to an APL submission, the following text shall be used:
“Prospective Producers/Suppliers shall complete form HL-468, as per MP 106.00.02 indicating their intention to be included on the WVDOT APL”.

5. UNITS

- 5.1 For units each champion has the option of using solely SI, or both SI and Imperial (combined units) as the standard.
- 5.2 When writing a procedure, the following two statements govern:
 - 5.2.1 For solely SI, the values stated in SI are to be regarded as standard. No other units of measurement are included.
 - 5.2.2 For combined units, the values stated in either SI or Imperial are to be regarded separately. The value stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance.
 - 5.2.3 When providing a sample calculation or an example of a filled form, the champion may choose to use any single unit system.
 - 5.2.4 When converting units, rounding shall be performed as specified in ASTM E29- Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications.
 - 5.2.4.1 In the instance of length measurement, inches and feet shall be rounded to the nearest 5 mm. For example, 1 foot or 12 inches is 305 mm.
- 5.3 An example of the unit syntax is as follows:
 - 5.3.1 The distance between the earth and moon is 238,900 mi (384,400 km).
 - 5.3.2 The cylinder shall be 6 in (150 mm) x 12 in (305 mm).

6. FORMAT GUIDELINES

- 6.1 The style guides for MPs shall follow the general guidelines established in “Section 6.4.3” of [AASHTO Publications Style Manual and Process Guide Typography in Design](#)⁴. These guidelines are further refined in this document.
 - 6.1.1 The font shall be Times New Roman, size 12, fully justified for all text except for the section title. The section title shall be all capital letters, fully justified, Times New Roman, size 12 and bold. There shall also be a horizontal line above this text.
 - 6.1.2 The line numbering shall be as follows: “x.” For a section title and “x.x” for a section paragraph. From here, follow the format of “x.x.x...” for additional layers of sub paragraphs. This document provides an example of the formatting.

6.1.3 The first section shall be titled “purpose/scope”, whichever is more fitting for the context, and provide a description of the purpose of the MP and what it applies to. Both a “purpose” and “scope” section may be used when deemed appropriate. The following sections listed, if they are present or necessary in the MP, should be immediately after the “purpose/scope” section(s) and in the order listed:

⁴ https://downloads.transportation.org/Publications/aashto_style_manual.pdf

- 1. General
- 2. References
- 3. Definitions

The following sections shall contain the necessary information and procedures for the MP.

- ~~6.1.3~~6.1.4 Links shall be [blue and clickable](#)⁵. The link path shall also be included as a footnote. An example of this is demonstrated by the “blue and clickable” text and link above and the footer at the bottom of this page.
- ~~6.1.3.1~~6.1.4.1 Any instances of an email address shall also be clickable and adhere the guidelines for a link.
- ~~6.1.4~~6.1.5 Figure labels shall follow the guidelines of “Section 2.1.4” of AASHTO Publications Style Manual and Process Guide Typography in Design. This section states: “The title should be succinct noun or noun phrase that describes the figure, but does not provide unnecessary background information, nor repeat information found in the text.” Do not abbreviate “Figure” and capitalize key words such; an example of this is as follows: “Conditions Determined to Be Pre-Existing.”
- ~~6.1.4.1~~6.1.5.1 Formatting for labels shall be the same as normal body text, except that “Figure X.” shall be bold. All figure text shall be centered and located below the figure.

7. HEADER GUIDELINES

- 7.1 A standard numbering and indexing system shall appear in the upper right-hand corner shall of pages of all MPs. All header text shall be in “All Caps” format.
- 7.1.1 The letters MP shall appear first, denoting Materials Procedure. The number of the MP shall follow that text and be in the header of every page. The numbering of the MP shall follow the format as described in this document.
- 7.1.2 All MPs shall contain headers in the manner described in this section. There are two instances of a header. If an MP has been reconfirmed, the header will follow the example in Figure 1. This includes the date the latest date the MP was approved, and the date of confirmation.

MP 700.00.00
JULY 6, 2020
RECONFIRMED: JULY 6, 2022
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Figure 1 – MP Header with Approval Date and Reconfirmation Date

⁵ <https://transportation.wv.gov/highways/mcst/Pages/default.aspx>

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- 7.1.3 In the instance of either a new MP or an approved update to a MP, only the effective date (located at the end of the body section of the document) is in the header. A sample is provided in Figure 2.

MP 700.00.00
JULY 6, 2022
PAGE 1 OF 2

Figure 2 – MP Header With Approval Date

- 7.1.4 In the instance of an attachment, the first line of the MP header shall be in the format: MP XXX.XX.XX – ATTACHMENT. All other lines shall follow the guidelines previously described. This is demonstrated in Figure 3.

MP 100.00.00 - ATTACHMENT
JULY 6, 2020
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Figure 3 – MP Attachment Header

- 7.1.4.1 In all instances, on all pages (do not use different first page), the text “PAGE X1 to X2” shall be last, with X1 being the current page and X2 being the total pages in the section. The main body and each attachment shall be considered a separate section; numbering shall be restarted on any new attachment instance.

8. MP APPROVAL PROCESS

- 8.1 In the instance of any MP Committee work, the champion is a person defined as the person who is the primary author, editor and/or liaison for the document. The champion is responsible for introducing and presenting the document. The champion is also responsible for addressing comments on the document.
- 8.2 Attachment 1 provides an overview of the approval process of an MP. First the document is brought to the MP committee chair (chair) by the champion with redlined track changes (if applicable). The document is distributed by the chair and discussed at the next MP committee meeting. After the document has been at a minimum of two consecutive MP meetings, the committee may vote to recommend or reject the proposed document. The document is then reviewed, and if approved, signed by the Director of Materials Control, Soils and Testing Division (Director, MCS&T). The signed document is sent through DOH management for review and approval. Once the review is complete, the document is reviewed and affirmed by Federal Highways Administration (FHWA). Once the document is affirmed by FHWA, the document is posted and distributed. If any comment is received during the approval process, the document is cycled back to the MP Committee meeting for review and another approval vote.
- 8.2.1 In the instance where a document has no content changes (editorial changes only), the MP committee may choose to vote to approve the document after one meeting. In this

case, any voting member of the MP committee or the FHWA representative may veto this decision.

- 8.2.2 The details of the MP committee, including the submission process, distribution practices, and current voting members is available for review in Design Directive 105 and available at the [WVDOH Technical Support Webpage](#)⁶

9. RECONFIRMATION PROCESS

- 9.1 Each MP shall be periodically reviewed for both relevancy and accuracy. At a minimum frequency, each MP shall be reviewed every 4 years by the applicable MCS&T Section Supervisor (Reconfirmation Champion). ~~In the instances~~ On the occasion where there is no obvious Section Supervisor, the delegation of the review shall be the responsibility of the chair in liaison with the Director of MCS&T.
- 9.2 After reviewing the document, if the Reconfirmation Champion determines that no changes are required, they will submit the document to chair for reconfirmation. The reconfirmation shall be done by the voting members.
- 9.3 If approved by the Committee, the MCS&T Director shall review the document and if accepted, sign the document. Because no changes were made to this document, once the document is signed, it shall be posted and distributed.

10. POSTING AND DISTRIBUTION OF MPS

- 10.1 Active MPs are available on the [WVDOH MCST MP Webpage](#)⁷. The webpage shows the MP number, the title of the MP and the latest approval or reconfirmation date.
- 10.1.1 For each document (if applicable), an archived link is available to provide a documented history of updates. Figure 4 provides an example.

106.00.02	Procedure for Evaluation of New Products for Use In Highway Construction	November 2016
Archive		

Figure 4 – MP Committee Webpage Example

- 10.2 When a document is affirmed by FHWA, the documents will be distributed to applicable Division Directors, District Engineer/Managers and District Material Supervisors.
- 10.3 The effective date of an MP is the next contract letting date after the date of the FHWA affirmation. The Director may push this back one letting date at their discretion if the affirmation date is too close to the letting.
- ~~10.3.10.4~~ A list of MP updates, including their passage and effective date will be maintained on the MCS&T webpage. Additional distribution notifications may be considered at the discretion of the Director of MCS&T.

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⁶ <https://transportation.wv.gov/highways/TechnicalSupport/Pages/Design-Directives.aspx>
⁷ <https://transportation.wv.gov/highways/mcst/Pages/WVDOH-Materials-Procedures.aspx>

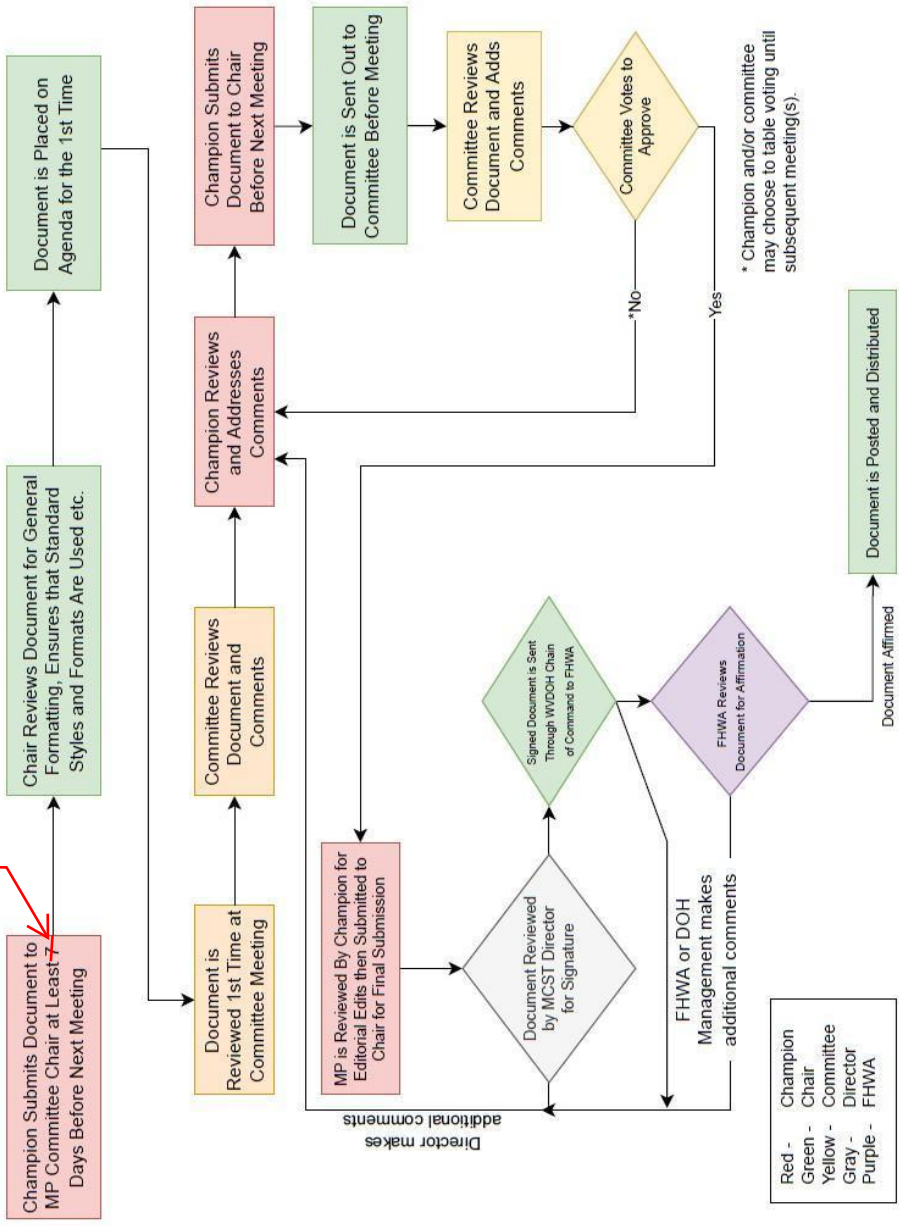
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Michael A Mance, PE
Director
Materials Control, Soils & Testing Division

MP 100.00.00 Steward – Materials Control Section
MAM:Bb
ATTACHMENT

21 Days



ATTACHMENT 1 – MP Committee Meeting Flowchart

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

GENERAL INFORMATION GUIDE FOR TECHNICIAN AND INSPECTOR
CERTIFICATION PROGRAM (TICP)

1. PURPOSE

- 1.1. The purpose of the West Virginia Division of Highways (WVDOH) Technician and Inspector Certification Program is to improve the quality assurance of various materials by the certification of industry and WVDOH. This procedure is to establish guidelines for this purpose.
- 1.2. The purpose of the schools is to provide helpful information and instruction for people preparing to take the WVDOH Technician/Inspector examinations. These courses are designed to provide instruction for people with a basic foundation in the subject matter. Work experience in the subject matter is encouraged before attending classes.
- 1.1.1.3.

2. GENERAL

- 2.1. It is the WVDOH's intent to conduct a cooperative program of training, study, and examination so that personnel of the producer, contractor, and the WVDOH will be able to better assure, by their increased technical knowledge, the level of quality required by the governing Specifications.
- 2.2. **Hands-On-Training** is performing the tests outlined in this MP for the certification the technician is seeking, for a minimum of 40 hours. These tests may be performed on a state project, private project, or any place the company has available but are not to be submitted for the actual project. Acceptance tests must be performed by certified technicians.
- 2.1.2.3. **A Responsible Person** is an individual, such as a Project Engineer, Quality Control Manager, Supervisor, or other personnel, who is familiar with the testing procedures set by the WVDOH, AASHTO, and ASTM but is not necessarily "certified" in West Virginia.

3. REFERENCED DOCUMENTS

- 3.1. ~~MP 720.10.01 — Guide for Using a High-Speed Inertial Profiler to Measure the Longitudinal Profile of Pavement.~~
- 3.2.3.1. MP 106.03.51 - Policy for Materials Certification Reciprocity with PCC Inspector, PCC Technician, and Aggregate Technician

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4. SCOPE

- 4.1. This procedure is applicable to all requirements, guidelines, and other support documents of the WVDOH that reference conditions, methods, and levels of qualification specific to the WVDOH Training and Certification Program.

5. POLICIES AND ADMINISTRATION

- 5.1. Certification Board - ~~The Certification Program will be carried out in accordance with general policy guidelines established or approved by the State Highway Engineer. They will be advised by a Board composed of the following members: The board shall be responsible for administering the Certification Program in accordance with general policy guidelines established or approved by the State Highway Engineer. It will be composed of the following members:~~

1. Deputy State Highway Engineer - Construction
2. ~~Deputy~~ General Counsel
3. Director of MCS&T - hereafter referred to as "Director"
4. Quality Assurance Program Administrator
5. Applicable MCS&T Supervisor(s)

~~5.1.1. The Certification Board will meet when called by the Director.~~

~~5.1.2. Administration - The program will be administered by the Director.~~

~~5.1.3. The Program Administrator shall be appointed by the Director. The Program Administrator will be assigned to assist the Director in administering the program and to handle planning, administration, and coordinating functions as may be delegated within the scope of appropriate WVDOH directives.~~

6. REQUIREMENTS

~~6.1. Where applicable, quality control representatives of the contractor and/or producer will be certified in the applicable certifications listed below, depending on the individual's duties or responsibilities. Responsibilities and qualification requirements are listed in appropriate support documents such as Specifications, Materials Procedures and/or Quality Control Plans.~~

~~6.2. For purposes of the WVDOH Quality Assurance Program, a non-WVDOH employee who is a certified Technician/Inspector represents the company of which they are an employee on the project, owner, or partner (as defined by the Federal Wage and Hour Legislation). If said company has subsidiary or affiliated organizations, each organization will be required to have its own certified Technicians/Inspectors where applicable unless the State Highway Engineer makes an exception. Exceptions will be granted only when it can be proven that the certified Technician/Inspector performs the duties of the Technician/Inspector for all the subsidiary or affiliated organizations.~~

7.6. CERTIFICATION CLASSES

7.1.6.1. The Technician and Inspector Certification Program (TICP) ~~offers~~offers certification classes in the following disciplines:

1. Aggregate Sampling Inspector, refer to Section 78
2. Aggregate Technician, refer to Section 89
3. Asphalt Field & Compaction Technician, refer to Section 910
4. Asphalt Plant Technician, refer to Section 1011
5. Asphalt Preservation Technician, refer to Section 1112
6. Inertial Profiler Operator, refer to Section 1213
7. Portland Cement Concrete Inspector, refer to Section 1314
8. Portland Cement Concrete Technician, refer to Section 1415
9. Radiation Safety, refer to Section 1516
10. Soils & Aggregate Compaction Technician, refer to Section 1617

Details of these classes are available on the MCS&T Webpage
Refer to section 19 for Certification Process Requirements

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8.7. AGGREGATE SAMPLING INSPECTOR

8.1.7.1. Certification as an Aggregate Sampling Inspector qualifies the technician to perform sampling of aggregates for both Quality Control and Quality Assurance.

8.1.1.7.1.1. ~~Details of this class are available on the MCS&T Webpage~~¹

8.2.7.2. The web-based examination for an Aggregate Sampling Inspector consists of the following areas:

1. Specifications
2. Sampling Fundamentals
3. Sampling Methods and Equipment
4. AASHTO T 27 Sieve Analysis of Fine and Coarse Aggregates
5. AASHTO T 11 Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing

The Aggregate Sampling Inspector requires the successful completion of an online examination.

8.3.7.3. No practical examination ~~nor apprenticeship~~Hands-On-Training is required for this certification.

9.8. AGGREGATE TECHNICIAN

9.1.8.1. Certification as an Aggregate Technician Inspector qualifies the technician to perform sampling and/or testing of aggregates for both Quality Control and Quality Assurance.

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

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~~9.1.1.8.1.1. Details of this class are available on the MCS&T Webpage²~~

~~9.2.8.2.~~ The written examination for ~~an~~ Aggregate Inspector consists of the following areas:

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

~~9.2.1.8.2.1.~~ The applicant ~~shall must~~ complete ~~an apprentice Hands-On Training eyele, please~~ refer to section ~~1918.2.~~ After successful completion of the written examination, the applicant will be required to pass the practical examination. The technician must be able to perform the routine tests associated with aggregate quality assurance.

~~9.3.8.3.~~ American Concrete Institute (ACI) Aggregate Testing Technician - Grade I certification will be accepted for the practical portion of the West Virginia Aggregate Technician training. ~~as a portion of the West Virginia Aggregate Technician training. However, the applicant must pass the online West Virginia Aggregate Technician written certification test before a certification is issued. Refer to MP 106.03.51. Documented 40 hours of work experience shall be submitted for certification, but a practical exam is not required.~~

~~9.4.8.4.~~ APPRENTICESHIP HANDS-ON-TRAINING REQUIREMENTS

~~9.4.1.8.4.1.~~ Before scheduling the Practical Exam, each participant shall complete a ~~minimum 40 hours of Hhands-On T~~training under the supervision of a ~~WVDOH Certified Aggregate Technician Responsible Person~~ in the eight different aggregate tests on which the participant will be tested. The tests to be trained in are:

1. AASHTO T 11 Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
2. AASHTO T 19 Bulk Density ("Unit Weight") and Voids in Aggregate
3. AASHTO T 27 Sieve Analysis of Fine and Coarse Aggregates
4. AASHTO T 84 Specific Gravity and Absorption of Fine Aggregate
5. AASHTO T 85 Specific Gravity and Absorption of Coarse Aggregate
6. AASHTO T 89 Determining the Liquid Limit of Soils
7. AASHTO T 90 Determining the Plastic Limit and Plasticity Index of Soils
8. MP 703.00.21 Standard Method of Test for Percent Crushed Particles

~~Once the pParticipant has completed the minimum 40 hours of training, The WVDOH Certified Aggregate Technician who performed the training will complete the Apprenticeship Log Sheet and include their written name, signature and certification number with the date of completion. The Log Sheet shall then be submitted to the QA Program Administrator electronically.~~

~~9.4.2.~~ ~~Once the Training Log has been received and verified by the QA Program Administrator, the participant will be contacted by the MCS&T Aggregate Section to schedule the practical exam (All Practical Examinations must be completed within 90~~

² <https://transportation.wv.gov/highways/mcst/Pages/Agg-Technician.aspx>

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days from the date of the original written test date.) If the participant fails, they will be denied the Certification.

~~10.9.~~ ASPHALT FIELD AND COMPACTION TECHNICIAN

~~10.1.9.1.~~ Certification as an Asphalt Field and Compaction Technician qualifies the technician to oversee or inspect asphalt pavement construction. In addition, the class hand-out material is a valuable reference tool for each stage of the construction process. The required radiation safety training is included in this class and will certify attendees with a passing score to perform nuclear density testing on asphalt pavements.

~~10.1.1.9.1.1.~~ Details of this class are available on the MCS&T Webpage³

~~10.2.9.2.~~ The written examination for this class consists of the following areas:

1. Specifications
2. Surface Preparation
3. Mix Delivery and Placement
4. Joint Construction
5. Percent Within Limitations (PWL)
6. Troubleshooting
7. Compaction Test Procedures
8. Radiation Safety and Nuclear Gauge
9. Test Procedure Problems
10. Testing Forms

~~9.2.1.~~ This certification has two options: With or without gauge endorsement. Only the applicants for the option with gauge must complete an apprentice Hands-On Training cycle, please refer to section 1918.2. For the option without the gauge, participants will take a written exam. For the option with the gauge, after After successful completion of the written examination, the applicant will be required to pass the practical examination. The technician must be able to perform the routine tests associated with asphalt compaction quality assurance.

~~10.2.1.9.2.2.~~ Without gauge endorsement participants will only take a written exam.

~~10.3.9.3.~~ APPRENTICESHIP HANDS-ON-TRAINING REQUIREMENTS

~~10.3.1.9.3.1.~~ Each participant shall complete a minimum 40 hours of Hands-On Training for the following tests under the supervision of a WVDOH-certified Responsible Person in the two Asphalt Field and Compaction Technician tests on which the participant will be tested. The tests to be trained in are:

1. AASHTO T 355 Standard Method of Test for In-Place Density of Asphalt Mixtures by Nuclear Methods
2. Specification 401 Gauge Comparison

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³ <https://transportation.wv.gov/highways/mcst/Pages/AsphaltFieldTech.aspx>

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~~Once the participant has completed the minimum 40 hours of training, the WVDOH certified Asphalt and Field Compaction Technician who performed the training will complete the Apprenticeship Log Sheet and include their written name, signature and certification number with the date of completion. The Log Sheet shall then be submitted to the QA Program Administrator electronically.~~

~~10.3.2.9.3.2. The participant will be contacted by the MCS&T Pavement Analysis and Evaluation Section to schedule the practical exam. The practical exam may be attempted prior to the completion of the apprenticeship Hands-On-Training cycle (All Practical Examinations must be completed within 90 days from the date of the original written test date.) If the participant fails, they will be denied the Certification.~~

~~10.4.9.4. A technician that does not demonstrate proper radiation safety training shall not be allowed to continue testing on a WVDOH Project. They must be replaced by another qualified technician. Anyone who does not meet the applicable safety standards must provide proof of additional WVDOH approved radiation safety training before another evaluation will be conducted.~~

~~11.10. ASPHALT PLANT TECHNICIAN~~

~~11.1.10.1. Certification of the Asphalt Technician qualifies the employee technician 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.~~

~~11.1.1.10.1.1. Details of this class are available on the MCS&T Webpage⁴~~

~~11.2.10.2. The written examination for this class consists of the following areas:~~

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

~~11.2.1.10.2.1. The applicant shall must complete an apprentice Hands-On-Training cycle, please refer to section 189.2. After successful completion of the written examination, the applicant will be required to pass the practical examination. The technician must be able to perform the routine tests associated with asphalt plant quality assurance.~~

~~11.3.10.3. APPRENTICESHIP HANDS-ON-TRAINING REQUIREMENTS~~

~~11.3.1.10.3.1. Each participant shall complete a minimum 40 hours of Hands-On Training under the supervision of a WVDOH Certified Asphalt Plant Technician Responsible Person in the nine tests on which the participant will be tested. The tests to be trained in are:~~

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⁴ <https://transportation.wv.gov/highways/mcst/Pages/hotHands-On-Trainingmix.aspx>

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1. ~~ASTM D6926~~AASHTO R68 - Preparation of Asphalt Mixtures by Means of the Marshall Apparatus
2. AASHTO T 312 - Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor
3. AASHTO T 166 - Bulk Specific Gravity (GMB) of Compacted ~~Hot~~Hot-Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens
4. AASHTO T 331 - Bulk Specific Gravity (GMB) and Density of Compacted ~~Hot~~Hot-Mix Asphalt (HMA) Using Automatic Vacuum Sealing Method
5. AASHTO T 209 – Theoretical Maximum Specific Gravity (GMM) and Density of ~~Hot~~Hot-Mix Asphalt (HMA)
6. ASTM D6927 – Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus
7. AASHTO T 308 – Determining the Asphalt Binder Content of ~~Hot~~Hot-Mix Asphalt (HMA) By the Ignition Method, (Method A)
8. AASHTO T 30 – Mechanical Analysis of Extracted Aggregate
9. AASHTO T 269 Standard Method of Test for Percent Air Voids in Compacted Dense and Open Asphalt Mixtures

~~Once the participant has completed the minimum 40 hours of training, the WVDOH Certified Asphalt Plant Technician who performed the training will complete the Apprenticeship Log Sheet and include their written name, signature and certification number with the date of completion. The Log Sheet shall then be submitted to the QA Program Administrator electronically.~~

~~11.3.2.10.3.2. The participant will be contacted by the MCS&T Asphalt Section to schedule the practical exam. The practical exam may be attempted prior to the completion of the apprenticeship Hands-On-Training cycle. (All Practical Examinations must be completed within 90 days from the date of the original written test date.) If the participant fails, they will be denied the Certification.~~

12.11. ASPHALT PRESERVATION TECHNICIAN

~~12.1.1.11.1.1.~~ Certification of the Asphalt Preservation Technician is currently optional. This certification is for technicians who want to be more prepared for asphalt preservation style projects.

~~12.1.2.11.1.2.~~ Details of this certification are available on the [MCS&T Webpage](#)⁵

~~12.2.11.2.~~ This exam is based on web-based training found in the ~~AASHTO Technical Training Solutions~~ courses https://store.transportation.org/Trainings?/C_PPAASHTO ~~Technical Training Solutions courses.~~

~~12.2.1.11.2.1.~~ The required courses are as follows:

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⁵ <https://transportation.wv.gov/highways/mcst/Pages/Asphalt-Preservation-Technician.aspx>

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1. Flexible Pavement Preservation Treatment Introduction (1 PDH)
2. Flexible Pavement Preservation Treatment Selecting the Right Treatment (0.5 PDH)
3. Flexible Pavement Preservation Treatment Materials (2 PDH)
4. Flexible Pavement Preservation Treatment Localized Pavement Repairs (1.5 PDH)
5. Flexible Pavement Preservation Treatment Crack Sealing and Fillings (1.5 PDH)
6. Flexible Pavement Preservation Treatment Fog Seals (1 PDH)
7. Flexible Pavement Preservation Treatment Chip Seals (1.5 PDH)
8. Flexible Pavement Preservation Treatment Slurry Seals (1.5 PDH)
9. Flexible Pavement Preservation Treatment Micro-Surfacing (1.5 PDH)
10. Flexible Pavement Preservation Treatment Thin Functional HMA Overlay (2 PDH)

~~12.2.2.11.2.2.~~ A printed copy of the Certificates of Training from these courses is required to be presented for registration on the day of the exam.

~~12.3.11.3.~~ The written examination for an Asphalt Preservation Technician consists of the following areas regarding chip seals, micro surfacing, thin overlays, and crack sealing

1. Fundamentals of Preservation
2. Pavement Conditions and Treatment Selection
3. Performance Characteristics
4. Inspection and Best Practices

~~12.3.1.11.3.1.~~ No practical examination nor ~~apprenticeship~~ Hands-On-Training is required for this certification.

~~13.12.~~ INERTIAL PROFILER OPERATOR

~~13.1.12.1.~~ This certification allows a technician to operate a lightweight/low-speed and high-speed inertial profiler.

~~13.2.12.2.~~ This certification does not have class, nor does the test need to be proctored by the WVDOH. The exam is provided upon request. Details ~~of this certification~~ are in MP 720.10.01 - Guide for Using a High-Speed Inertial Profiler to Measure the Longitudinal Profile of Pavement

~~13.3.12.3.~~ The written examination for the inertial profiler operator ~~covers of covers~~ the following areas:

1. WVDOH Specifications
2. AASHTO and ASTM Specifications
3. Knowledge of operation and analysis of collected data.

~~13.3.1.12.3.1.~~ No practical examination nor ~~apprenticeship~~ Hands-On-Training is required for this certification.

~~14.13.~~ PORTLAND CEMENT CONCRETE INSPECTOR

~~14.1.13.1.~~ Certification as a Concrete Inspector qualifies the technician to perform sampling and/or testing of concrete for Quality Control and/or Quality Acceptance.

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~~14.1.1.13.1.1. Details of this class are available on the MCS&T Webpage⁶~~

~~14.2.13.2.~~ The written examination for this class consists of the following areas:

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

~~14.2.1.13.2.1.~~ The applicant must complete ~~an apprentice Hands-On Training~~eyele, please refer to section ~~1918.2~~. After successful completion of the written examination, the applicant will be required to pass the practical examination. The technician must be able to perform the routine tests associated with Portland Cement Concrete quality assurance.

~~14.3.13.3.~~ American Concrete Institute (ACI) Field Testing Grade I certification will be accepted as ~~a the practical~~ 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 is issued. Refer to MP 106.03.51. Documented 40 hours of work experience shall be submitted for certification, but a practical exam is not required.~~

~~14.4.13.4. APPRENTICESHIP HANDS-ON-TRAINING~~ REQUIREMENTS

~~14.4.1.13.4.1.~~ Each participant shall complete a ~~minimum 40 hours of~~ Hands-On Training under the supervision of a ~~WVDOH Certified PCC Inspector~~ Responsible Person in the ~~seven~~ tests on which the participant will be tested. The tests to be trained in are:

1. AASHTO R60 Standard Practice for Sampling Freshly Mixed Concrete
2. ASTM C1064 Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
3. AASHTO T119 Standard Method of Test for Slump of Hydraulic Cement Concrete
4. AASHTO T196 Standard Method of Test for Air Content of Freshly Mixed Concrete by the Volumetric Method
5. AASHTO T152 Standard Method of Test for Air Content of Freshly Mixed Concrete by the Pressure Method
6. AASHTO T121 Standard Method of Test for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
7. AASHTO R100 Standard Method of Making and Curing Concrete Test Specimens in the Field
- ~~8. AASHTO T22 Standard Method of Test for Compressive Strength of Cylindrical Concrete Specimens~~

~~Once the participant has completed the minimum 40 hours of training, the WVDOH Certified PCC Inspector who performed the training will complete the Apprenticeship Log Sheet and include their written name, signature and certification number with the date of completion. The Log Sheet shall then be submitted to the QA Program Administrator electronically.~~

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⁶ <https://transportation.wv.gov/highways/mcst/Pages/concreteinspector.aspx>

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~~14.4.2, 13.4.2. The participant will be contacted by the MCS&T Concrete Section to schedule the practical exam. The practical exam may be attempted prior to the completion of the apprenticeship Hands-On-Training cycle. (All Practical Examinations must be completed within 90 days from the date of the original written test date.) If the participant fails, they will be denied the Certification.~~

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15.14. PORTLAND CEMENT CONCRETE TECHNICIAN

~~15.1.14.1.~~ Certification of the Concrete Technician qualifies the technician to make plant and mix adjustments, proportioning, and other concrete related duties.

~~15.1.1.14.1.1.~~ Details of this class are available on the MCS&T Webpage⁷

~~15.2.14.2.~~ The written examination for this class consists of the following areas:

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

~~15.2.1.14.2.1.~~ The Concrete Technician requires only the successful completion of the written examination; no practical examination test is required.

~~15.3.14.3.~~ National Ready Mixed Concrete Association (NRMCA) Concrete Technologist Certification Course, "Short Course," will be accepted as a portion of the West Virginia PCC Technician training. However, the applicant must pass the online West Virginia PCC Technician written certification test before a certification ~~will be~~ issued. Refer to MP 106.03.51.

15.4.14.4. APPRENTICESHIP HANDS-ON-TRAINING REQUIREMENTS

~~15.4.1.14.4.1.~~ PCC Inspector certification is a required prerequisite for the PCC Technician certification, and the NRMCA reciprocal certification. However, a participant may take the PCC Technician class, and exam prior to completing the required 40 hours of Hands-On-Training, and or the PCC Inspector practical if they have passed the PCC Inspector written exam, but the PCC Technician Certification will not be granted until the participant has obtained the PCC Inspector Certification.

16.15. RADIATION SAFETY

~~16.1.15.1.~~ 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 percent is required to pass 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

⁷ <https://transportation.wv.gov/highways/mcst/Pages/concretetech.aspx>

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3. Personal safety while operating a portable nuclear gauge.

~~16.2.15.2.~~ No practical examination ~~nor apprenticeship~~ Hands-On-Training is required for this certification.

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~~16.3.15.3.~~ This certification expires three years from the date of certification. This is regulated by the NRC.

~~17.16.~~ **SOILS AND AGGREGATE COMPACTION TECHNICIAN**

~~17.1.16.1.~~ Certification of the Soils and Aggregate Compaction Technician qualifies the technician to conduct tests on all Soil and Aggregate construction materials that require compaction testing.

~~17.1.1.16.1.1.~~ ~~Details of this class are available on the MCS&T Webpage~~⁸

~~17.2.16.2.~~ The written examination for this class consists of the following areas:

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

~~17.2.1.16.2.1.~~ The applicant must complete ~~an apprentice-Hands-On-Training~~~~eyele~~, please refer to section ~~19~~~~18~~.2. After successful completion of the written examination, the applicant will be required to pass the practical examination. The technician must be able to perform the routine tests associated with soil and aggregate compaction quality assurance.

~~17.3.16.3.~~ **APPRENTICESHIP-HANDS-ON-TRAINING** REQUIRMENTS

~~17.3.1.16.3.1.~~ Before scheduling for the Practical Exam, each Participant shall complete ~~a minimum 40 hours of~~ Hands-On Training for the following tests under the supervision of a ~~WVDOH certified Soil and Aggregate Compaction technician~~ Responsible Person in the three different tests on which the participant will be tested. The tests to be trained in are:-

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1. MP 700.00.24 Nuclear Density Test by Roller Pass Method
2. MP 712.21.26 Procedure for Determining Random Location of Compaction Lots
3. MP 207.07.20 Nuclear Field Density/Moisture Test for Random Material Having Less than 40% + 3/4-inch Material

~~Once the Participant has completed the minimum 40 hours of training, the WVDOH certified Technician who performed the training will complete the Apprenticeship Log Sheet and include their written name, signature and certification number with the date of completion. The Log Sheet shall then be submitted to the QA Program Administrator electronically.~~

⁸ <https://transportation.wv.gov/highways/mcst/Pages/compactioninspector.aspx>

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~~17.3.2, 16.3.2.~~ Once the Training Log has been received and verified by the QA Program Administrator, the participant will be contacted by the MCS&T Soil and Aggregate Compaction Section to schedule the practical exam. (All Practical Examinations must be completed within 90 days from the date of the original written test date.) If the participant fails, they will be denied the Certification. A technician that does not demonstrate proper radiation safety shall not be allowed to continue testing on a WVDOH Project. They must be replaced by another qualified technician. Anyone who does not meet the applicable safety standards must provide proof of additional WVDOH approved radiation safety training before another evaluation will be conducted.

~~18.17.~~ TESTING PROTOCOL

~~18.1.17.1.~~ 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.

~~18.2.~~ CLASS SUPPLY LIST

~~18.2.1.~~ 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.⁹~~
- ~~4. Hand held calculator (No electronic devices other than a Hand held calculators are allowed to be used during testing.)~~
- ~~5. Highlighters~~
- ~~6. Sticky Notes~~
- ~~7. Ruler / Straight edge~~

~~18.3.17.2.~~ SPECIAL NEEDS AND REQUESTS

~~18.3.1.17.2.1.~~ Applicants with special needs should notify the QA Program Administrator prior to the class to ensure that the training location is prepared to accommodate their needs.

~~19.18.~~ CERTIFICATION, ~~APPRENTICESHIP~~ HANDS-ON-TRAINING, AND RE-CERTIFICATION

~~19.1.18.1.~~ CERTIFICATION

~~19.1.1.18.1.1.~~ An individual must pass the written examination in each level for which they are requesting certification. Unless otherwise noted, to pass the written examinations, the applicant must obtain a minimum score of 70 percent.

⁹~~<https://transportation.wv.gov/highways/contractadmin/specifications/Pages/default.aspx>~~

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~~19.1.2, 18.1.2.~~ If an applicant fails to receive a minimum score of 70% on the first written exam, they will be given another attempt at a later date to score 70%. This second attempt shall be a subsequent, scheduled make-up written exam. Failure to attend any scheduled written examination, practical examination, or to bring the Hands-On-Training form to the practical counts as a failed exam.

~~18.1.2.1.~~ If the applicant fails the second written exam, they may not attempt the written examination again until they retake the class or wait one calendar year.

~~18.1.2.2.~~ If an applicant seeking any certification disagrees with a certification decision, they may file a written appeal with the Certification Board.

~~19.1.2.1, 18.1.2.3.~~

~~19.1.3, 18.1.3.~~ If required by the certification, a practical exam must be successfully completed. Specific requirements for the practical exam are included in the respective sections. If a participant fails the practical exam, they may not retake the practical exam until they have attended the respective class and successfully passed the written examination again. An exception may be made at the discretion of the section head and the QA Program Administrator.

~~19.1.4, 18.1.4.~~ Upon successfully completing the requirements for certification, applicants may view print their certification information eard from on the Division's Webpage. <http://dotftp.wv.gov/materialsdir/> Materials Certification Directory

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~~19.1.5, 18.1.5.~~ This certification is not transferable. A certification is valid for 5 years and expires December 31, of the 5th year of certification. For example, if a technician is certified in January of 2026, it will expire on December 31, 2031. Radiation Safety must be renewed every 3 years from the certification date. For example, if a technician is certified on January 15, 2026, it will expire on January 15, 2029.

~~19.1.6, 18.1.6.~~ Anyone who teaches during the certification classes shall have their certification extended 1 year per calendar year per certification taught. This does not apply to Radiation Safety. Instructors who participate in certification classes shall have their certification extended by one year for each unique certification. This only applies once per calendar year. This does not apply to Radiation Safety.

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~~19.2, 18.2.~~ APPRENTICESHIP HANDS-ON-TRAINING

~~19.2.1, 18.2.1.~~ For the initial certification of an applicant technician, an apprenticeship HANDS-ON-TRAINING is required which consists of three tasks; pass a written exam, hands-on experience, and pass a hands-on practical exam. For the initial certification of an applicant technician, the Technician must pass a written exam, participate in and verify hands-on training, and pass a hands-on practical exam. The Technician shall work as an apprentice complete the tests outlined in each certification under the supervision of a certified technician Responsible Person for a minimum of 40 hours of the Apprenticeship Hands-On-Training Cycle. This must be completed up to one year before and ninety days ninety days after the written exam and verified by a signed letter on company letter head from a Responsible Person. This requirement shall not apply to a technician who has let their certification expire with proof of previous certification. The Hands-On-Training requirement shall not apply to a technician who has previously

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been certified, if the technician can provide proof of prior certification

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An applicant who seeks certification via reciprocity ~~must~~ shall provide a minimum of 40 hours of experience verified documented by a Responsible Person the company's QC Manager or applicant's Supervisor on the Apprenticeship Log Sheet by submitting a signed letter of verification on company letter head. The apprentice shall keep a work log that is signed by the supervising technician. (an example is on The verification letter can be downloaded from the the WVDOH MCST Webpage Toolbox¹⁰). The work log shall record the number of hours performing the specified testing as outlined in the respective section. Hours spent shadowing or observing others does not count. The work log shall signed Hands-On-Training verification letter shall be submitted to the QA Program Administrator at qaschoolscoordinator@wv.gov and must be reviewed and approved by the appropriate MCS&T Section.

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~~19.2.2; 18.2.2.~~ Apprenticeship Hands-On-Training requirements vary between certifications. See the respective section for details of the apprenticeship requirements.

~~19.3.~~ APPRENTICE CYCLE

~~18.2.3.~~ The Apprentice Cycle is the number of hours for specific tests which must be performed by the applicant and documented by a certified technician. For each of the certification schools, the hours of testing are listed in the respective section. All Practical Examinations must be completed within 90 days from the date of the original written test date. If the participant fails, they will be denied the Certification. The practical exam dates are set at the discretion of the appropriate Section Supervisor and are based on the availability of the Lab. Hands-On-Training verification letters must be submitted before certification is granted.

~~19.3.1; 18.2.4.~~

~~19.4.18.3.~~ RE-CERTIFICATION

~~19.4.1; 18.3.1.~~ The responsibility for obtaining re-certification shall lie with the certified individual.

~~19.4.2; 18.3.2.~~ Certification holders are responsible for ensuring that their certifications stay current. The WVDOH will no longer mail reminder letters to certification holders.

~~19.4.3; 18.3.3.~~ The renewal of all certifications shall require a written exam and a hands-on practical exam, where applicable.

~~19.4.4; 18.3.4.~~ Independent Assurance (IA) test scores of 3 or better can be used in place of the hands-on practical for the following re-~~certifications; certifications.~~

¹⁰ <https://transportation.wv.gov/highways/mcst/Pages/tbox.aspx>

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1. PCC Inspector – Air and Slump tests

2. Soil and Aggregate Compaction – Moisture/Density Test, and pass the 1-point proctor

2.3. Asphalt Field and Compaction With Gauge -

~~19.4.5, 18.3.5.~~ Applicants will be given two scheduled attempts to pass the written 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 MCS&T.

~~19.4.6, 18.3.6.~~ 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.

~~19.4.7, 18.3.7.~~ The certification holder is responsible for updating their personal information on the [online learning website](#)¹¹.

~~19.4.8, 18.3.8.~~ If an applicant seeking recertification disagrees with a recertification decision, they may file a written appeal with the Certification Board.

~~19.4.9, 18.3.9.~~ If certification is not renewed by December 31, the Technician should take the class and shall take the full exam and practical at the next available offering.

20.19. RECIPROCAL CERTIFICATIONS

~~19.1.~~ Acceptance of WVDOH Certifications by other state agencies is at the sole discretion of the other agency. Refer to MP 106.03.51

~~20.1, 19.2.~~ ACI and NRMCA certifications are accepted as the practical portion of the West Virginia Aggregate Technician, PCC Inspector, and PCC Technician training. However, the applicant must pass a supplemental online West Virginia written certification test and complete a minimum of 40 hours of Hands-On-Training before a certification is issued. Refer to MP 106.03.51

24.20. TRAINING CODE OF CONDUCT

20.1. The purpose of this Code of Conduct establishes expectations for behavior throughout the training course and during the end-of-course written exam. Its goal is to create a respectful productive, and fair learning environment for all participants.

20.2. Professional behavior is always expected. Participants are expected to treat instructors and fellow learners with courtesy and respect. Disruptive behavior, harassment, or discrimination of any kind will not be tolerated. Active participation is encouraged, but learners should allow others the opportunity to contribute.

¹¹ <http://www.onlinelearning.wv.gov/student/home.html>

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- 20.3. Attendance and engagement are important to successful completion of the course. Arrive on time for all sessions and return promptly from breaks. Stay engaged during instruction, group work and activities. If you anticipate an absence, notify the instructor when possible.
- 20.4. Use of technology during training is encouraged. Laptops, tablets, and phones may be used for documentation, note taking, taking pictures, and searching documents. Please keep devices on silent ring during class, and if you must take a call, please excuse yourself from class to complete the conversation.
- 20.5. Academic integrity during exams is taken seriously. Cell phones, spreadsheets, and AI tools are prohibited during the written exam. Only approved materials may be used during the exam. These materials include notes taken during class, course manuals, MPs, current Specification book, and the WVDOH Website. Talking, sharing answers, or attempting to access unauthorized resources will result in disciplinary action, which may include exam failure or removal from the course.
- 20.6. Confidentiality must be observed. Course materials, discussions, and assessments may contain sensitive or proprietary information. Participants must not share or distribute course content without permission.
- 20.7. Safety must always be observed. Follow all safety guidelines provided by the instructor of facility. Report any unsafe conditions or concerns immediately.
- 20.8. Failure to follow this Code of Conduct may result in the following disciplinary actions: a verbal warning, removal from the classroom, disqualification from the exam, and dismissal from the course. Consequences will be applied at the instructor's discretion based on the severity of the violation.
- 20.9.
- ~~21.1.20.10. Training – The Division of Highways, contractors, and producers may sponsor courses of 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.~~
- 20.11. The purpose of the schools is to provide helpful information and instruction for people preparing to take the WVDOH Technician/Inspector examinations. These courses are designed to provide instruction for people with a basic foundation in the subject matter. Work experience in the subject matter is encouraged before attending classes.
- 21.2.

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22.21. REVOCATION OF CERTIFICATION

- 22.1. If at any time a WVDOH, contractor's, producer's, or supplier's Technician or Inspector is found to have altered or falsified test reports or is found to have improperly performed tests or reported their results, the individual's certification may be rendered

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~~invalid by the State Highway Engineer upon recommendation of the Certification Board.~~

~~22.2.21.1.~~ 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:

1. Deliberate falsification of field or quality control test results or records.
2. Deliberate falsification of calculations, test results or materials
3. Cheating on certification/re-certification exams.
4. Submittal of false information on certification applications.
5. 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.

~~22.3.21.2.~~ 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 Certification Board will notify the individual in writing of intent to revoke certification(s).

~~23.22.~~ APPEALING A DECISION

~~23.1.22.1.~~ 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.

Appeals should be mailed to:
Certification Board
ATTN: Quality Assurance Program Administrator
West Virginia Division of Highways
190 Dry Branch Dr.
Charleston, WV 25306

~~23.2.22.2.~~ If the individual fails to respond within 10 days of receipt of the original notification of revocation letter, the revocation becomes final.

~~23.3.22.3.~~ 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 believes 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

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decision of the State Highway Engineer to the appellant. The decision by the State Highway Engineer is final.

24.23. THE LENGTH OF REVOCATION:

23.1. First Offense: Revocation of all certifications for one (1) year

23.2. Second Offense: Revocation of all certifications for 5 (five) years

23.3. Third Offense: Revocations of all certifications for life.

24.1. First Offense

24.1.1. 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.

24.2. Second Offense

24.2.1. This may include revocation of all certifications for up to 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 the 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.

24.3. Third Offense

24.3.1. This may include revocation of all certifications for life. There is also the possibility of disciplinary actions for WVDOH employees.

24.4.23.4. In the event of a serious violation as determined by the Division, the case may be referred to the Department of Justice.

25.24. CONTACT INFORMATION

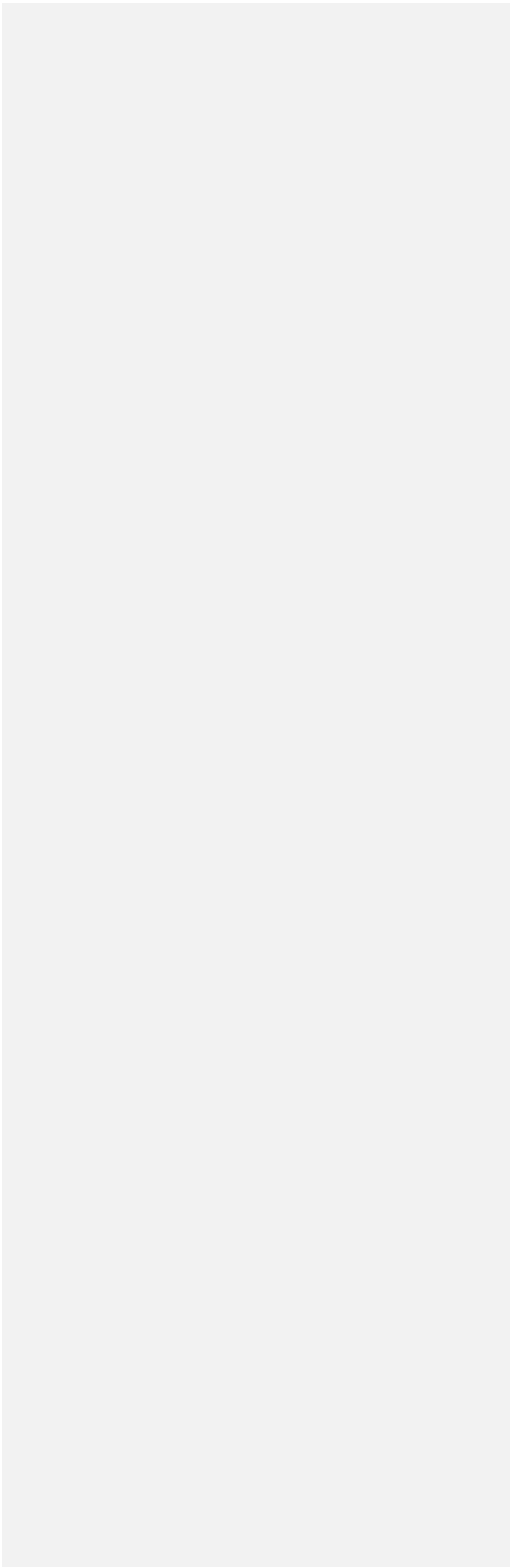
25.1.24.1. If an applicant/technician/appellant has any questions about the DOH program or needs more information. Please contact: Qaschoolscoordinator@wv.gov

Michael A Mance, PE
Director
Materials Control, Soils & Testing Division

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MP 106.03.50 Steward – Technician Certification Section
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SIGNATURE DATE
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Example

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways
1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Michael J. DeMers
Deputy Secretary of Transportation
Deputy Commissioner of Highways

DATE

Stephen T. Rumbaugh, P.E.
Secretary of Transportation
Commissioner of Highways

Quality Assurance Program Administrator
190 Dry Branch Dr.
Charleston, WV 25306

Mr. Harper,

I am a Responsible Person representing _____ (company) .
I am familiar with WVDOH, AASHTO and ASTM procedures related to the
(Certification) Certification. I hereby authorize and verify that 40 hours of
Hands-On-Training was completed by _____ (name of technician in training) _____
according to WVDOH, AASHTO and ASTM procedures.

Sincerely,

Signature _____
Printed Name _____
Job Title _____
Date _____

Company Letterhead

Quality Assurance Program Administrator
190 Dry Branch Dr.
Charleston, WV 25306

Mr. Harper,

I am a Responsible Person representing (company).
I am familiar with WVDOH, AASHTO and ASTM procedures related to the
(Certification) Certification. I hereby authorize and verify that
40 hours of Hands-On-Training was completed by
(name of technician in training) according to WVDOH,
AASHTO and ASTM procedures.

Sincerely,

Signature

Printed Name

Job Title

Date



West Virginia Division of Highways

Training Course Code of Conduct

Summary of MP 106.30.50 Section 20

Purpose

This Code of Conduct outlines expectations for all participants throughout the training course and during the end-of-course written exam. The goal is to maintain a respectful, productive, and fair learning environment.

Professional Behavior

- Treat instructors and fellow participants with courtesy and respect.
- Avoid disruptive behavior, harassment, or discrimination.
- Participate actively while allowing others the opportunity to contribute.

Attendance and Engagement

- Arrive on time for all sessions and return promptly from breaks.
- Stay attentive and engaged during instruction and activities.
- Notify the instructor if you must step out or anticipate an absence.

Use of Technology During Training

- Laptops, tablets, and phones may be used only for course-related purposes unless otherwise approved.
- Personal calls, texting, and unrelated browsing should be avoided during class.

Academic Integrity

All participants are expected to uphold the highest standards of honesty.

End of Course Written Exam Rules

- **Cell phones are not permitted.**
- **Spreadsheets or any external digital tools are not permitted.**
- **AI tools, including chatbots, language models, or automated assistants, are strictly prohibited.**
- Only instructor-approved materials may be used.
- Talking, sharing answers, or accessing unauthorized resources will result in disciplinary action, which may include exam failure or removal from the course.

Confidentiality

- Course materials and discussions may include sensitive or proprietary information.
- Do not share or distribute course content without authorization.

Safety and Conduct

- Follow all safety guidelines provided by the instructor or facility.
- Report unsafe conditions or concerns immediately.

Consequences of Violations

Violations of this Code of Conduct may result in:

- Verbal or written warnings
- Removal from the classroom
- Disqualification from the exam
- Dismissal from the course

Consequences will be applied at the discretion of the instructor based on the severity of the violation.

Training course Code of Conduct Statement of Acknowledgment

I, the undersigned, hereby acknowledge that I have read, understood, and agree to the terms and conditions set forth in this document.

Signature: _____

Printed Name: _____

Date: _____

DELETE THE ENTIRE CONTENTS OF MP 688.02.20 AND REPLACE WITH THE FOLLOWING:

~~WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION~~

~~MATERIALS PROCEDURE~~

~~GUIDE FOR CONTRACTOR'S AND FABRICATOR'S
QUALITY CONTROL PLAN FOR PAINTING~~

~~1. SCOPE~~

- ~~1.1. This materials procedure shall serve as a guide for the design of the Prime Contractor's or Fabricator's Quality Control (QC) Plan for surface preparation, application of coatings, and inspection procedures.~~
- ~~1.1.1. This procedure shall be applicable to all structures that include, but are not limited to those being fabricated, erected, fully repainted, and/or zone painted.~~
-

~~2. REFERENCED DOCUMENTS~~

- ~~2.1. WVDOT Specifications:~~
- ~~a. 107 Legal Relations and Responsibility to Public~~
 - ~~b. 601 Structural Concrete~~
 - ~~c. 685 Bridge Cleaning~~
 - ~~d. 688 Field Painting of Metal Structures~~
- ~~2.2. Society for Protective Coatings (SSPC):~~
- ~~a. Monitoring and Controlling Ambient Conditions during Coating Operations.~~
 - ~~b. PA 1 Shop, Field and Maintenance Coating of Metals~~
 - ~~c. PA 2 Procedure for Determining Conformance to Dry Coating Thickness Requirements~~
 - ~~d. PA 17 Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements.~~
 - ~~e. SP 13 Surface Preparation of Concrete~~
 - ~~f. SP 14 Industrial Blast Cleaning~~
 - ~~g. The Fundamentals of Cleaning and Coating Concrete 2001~~
 - ~~h. Technology Guide 6: Guide for Containing Debris Generated During Paint Removal Operations.~~
 - ~~i. Technology Guide 7: Guide to the Disposal of Lead Contaminated Surface Preparation Debris~~
 - ~~j. Technology Guide 16: Guide to Specifying and Selecting Dust Collectors~~

~~2.3. International Organization for Standardization:~~

~~a. 8501 Preparation of Steel Substrates before Application of Paints and Related Products—Visual Assessment of Surface Cleanliness.~~

~~2.4. Other SSPC, ASTM, ISO, or WVDOT Documents that may be applicable to the application, surface preparation or inspection of applied coatings on any substrate, concrete or steel, not mentioned above.~~

~~3. REQUIREMENTS AND GUIDELINES~~

~~3.1. General Requirements:~~

~~3.1.1. The Contractor or Fabricator shall provide and maintain a Quality Control System that will give reasonable assurance that the paints have been applied in accordance with the specification requirements.~~

~~3.1.2. The Contractor or Fabricator shall conduct or have conducted inspections and tests required to substantiate that the paints have been applied in accordance with the specification requirements.~~

~~3.1.3. The Contractor's or Fabricator's Quality Control inspections and testing shall be documented daily and provided to the Engineer for review at the end of the work day. These documents shall be maintained for the life of the contract.~~

~~3.2. Quality Control Plan:~~

~~3.2.1. The QC Plan shall follow Specification 688, Section 688.2.5 Submittals, and 601.13.3.7.1 Quality Control Plan for Painting.~~

~~4. PROCEDURE APPROVAL~~

~~4.1. Approved Coating Product Quality Control Document requirements:~~

~~4.1.1. If the coating contractor's paint system is already on the Coating approved product list, the following documents shall be required with the Quality Control (QC) Paint Plan Form:~~

- ~~1) Paint System Technical Data Sheets~~
- ~~2) Contractor's Quality Control Manual~~
- ~~3) Coater's AMPP QP1 and QP2 Certifications~~

~~5. FORMAT~~

~~5.1. The Contractor/Fabricator shall complete the form: "688.03.20 WVDOT QC Plan for Environmental Monitoring." A sample of this document is provided with this MP in the Attachment, however the live document is available on the WVDOT MCS&T Webpage under the "Tool Box".[†]~~

[†] <https://transportation.wv.gov/highways/mest/Pages/tbox.aspx>

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MP 688.02.20

Effective Date

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~~5.1.1. This form is a fillable PDF form and shall be submitted electronically. The plan will be submitted to DOHQCPaintEnvMonPlan@wv.gov². All form fields in RED shall be completed at a minimum. Once completed the submit button may be activated and an e-mail will generate with the form attached and the e-mail address populated. At this time the supporting documentation shall be added and submitted with the plan.~~

~~Michael A Mance, PE~~

~~Director~~

~~Materials Control, Soils & Testing Division~~

~~MP 688.03.20 Steward—Environmental and Coatings Section~~

~~MM:Bf~~

~~ATTACHMENT~~

² ~~DOHQCPaintEnvMonPlan@wv.gov~~

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

GUIDE FOR CONTRACTOR'S AND FABRICATOR'S
QUALITY CONTROL PLAN FOR PAINTING

1. SCOPE

- 1.1. This materials procedure shall serve as a guide for the design of the Prime Contractor's or Fabricator's (Submitter's) Quality Control (QC) Plan for surface preparation, application of coatings, and inspection procedures.
 - 1.1.1. This procedure shall be applicable to all structures that include, but are not limited to those being fabricated, erected, fully repainted, and/or zone painted.
-

2. REFERENCED DOCUMENTS

- 2.1. MP 110.00.40 - Preparing Material Inspection Reports
- 2.2. The Association for Materials Protection and Performance (AMPP) / Society for Protective Coatings (SSPC):
 - 1) Monitoring and Controlling Ambient Conditions during Coating Operations.
 - 2) PA 1-Shop, Field and Maintenance Coating of Metals
 - 3) PA-2 Procedure for Determining Conformance to Dry Coating Thickness Requirements
 - 4) PA 17-Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements.
 - 5) SP 13-Surface Preparation of Concrete
 - 6) SP 14-Industrial Blast Cleaning
 - 7) The Fundamentals of Cleaning and Coating Concrete 2001
 - 8) Technology Guide 6: Guide for Containing Debris Generated During Paint Removal Operations.
 - 9) Technology Guide 7: Guide to the Disposal of Lead-Contaminated Surface Preparation Debris
 - 10) Technology Guide 16: Guide to Specifying and Selecting Dust Collectors
- 2.3. International Organization for Standardization:
 - 1) 8501- Preparation of Steel Substrates before Application of Paints and Related Products - Visual Assessment of Surface Cleanliness.
- 2.4. Other *SSPC*, *ASTM*, *ISO*, or *WVDOH* Documents that may be applicable to the application, surface preparation or inspection of applied coatings on any substrate, concrete or steel, not mentioned above.

3. REQUIREMENTS AND GUIDELINES

3.1. General Requirements:

- 3.1.1. The Submitter shall provide and maintain a QC System that will assure that the coatings have been applied in accordance with the Specification.
- 3.1.2. The Submitter shall conduct or have conducted inspections and tests required to substantiate that the coatings have been applied in accordance with the specification requirements.
- 3.1.3. The Submitter's QC inspections and testing shall be documented daily and provided to the Engineer for review at end of each workday. These documents shall be maintained for the life of the contract.

3.2. Quality Control Plan:

- 3.2.1. The Plan shall follow Section 688.5 -Submittals, Section 688 and 601.13.3.7.1-Quality Control Plan for Painting of the Specification.

4. SUBMISSION OF QC PLAN

- 4.1. The Submitter shall complete the form: "688.02.20 – West Virginia Division of Highways QC Plan for Painting." A sample of this document is provided with this MP in the Attachment; the live document is available on the WVDOH MCS&T Webpage under the "[Tool Box](#)¹."
- 4.1.1. This form is a fillable PDF form and shall be submitted electronically. This PDF must be downloaded; it cannot be submitted from the webpage browser. The plan will be submitted to DOHQCPaintEnvMonPlan@wv.gov². All form fields in RED shall be completed at a minimum. Once completed the submit button may be activated and an e-mail will generate with the form attached and the e-mail address populated. At this time the supporting documentation shall be added and submitted with the plan.
- 4.1.2. Alternatively, the Submitter may use the webpage application: "Quality Control Plan for Painting" linked on the WVDOH MCS&T Toolbox. This is a standalone application that submits the requisite data to MCS&T with no email required.
- 4.1.3. The submission must include all the applicable information on the form, including:

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

² DOHQCPaintEnvMonPlan@wv.gov

- 1) The name of each coating product of the paint system.
- 2) The manufacturer of the paint system coatings.
- 3) The APL number for the paint system to be used
- 4) The color of the topcoat, including the five-digit AMS Standard Color number.
- 5) The name of the concrete coating to be used
- 6) The manufacturer of the concrete coating
- 7) The APL number for the concrete coating
- 8) The color of the concrete coating, including the five-digit AMS Standard Color number.
- 9) Quantities to be applied

4.1.4. The Submitter shall also include the following data for their paint or paint systems:

- 1) Paint System Technical Data Sheets
- 2) Contractor's Quality Control Manual
- 3) Coater's AMPP QP1 and QP2 Certifications (If area to be coated is 1000 square feet or more)

4.1.5. For painting jobs completed in a controlled environment including but not limited to the contractor's own workshop, the contractor does not need to include their quality control manual.

5. APPROVAL

5.1. If the Quality Control plan is found acceptable, a MIR shall be issued to the District. The MIR shall follow the format as described in MP 110.00.40.

5.2. The MIR shall include the following information in the provided format:

Bridge Number	
Primer Coat Product	
Intermediate Coat Product	
Topcoat Product	
Topcoat Color (Name and 5-digit number)	
Paint System APL Number	
Concrete Coating Name	
Concrete Coating APL Number	
Concrete Coating Color (Name and 5-digit number)	
Dry Film Thickness Determination	

5.3. The MIR shall also indicate the letting date, and if the QC plan has been approved

5.4. The MIR shall be signed by the approving entity.

Michael A Mance, PE

Director

Materials Control, Soils & Testing Division

MP 688.02.20 Steward – Environmental and Coatings Section

MAM:BFr

ATTACHMENTS

DELETE THE ENTIRE CONTENTS OF MP 688.03.20 AND REPLACE WITH THE FOLLOWING:

~~WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION~~

~~MATERIALS PROCEDURE~~

~~GUIDE FOR DEVELOPMENT OF THE CONTRACTOR'S ENVIRONMENTAL CONTROL
PLAN FOR SPENT MATERIAL PRIOR TO PAINTING EXISTING STRUCTURES~~

~~1. SCOPE~~

- ~~1.1 This materials procedure shall be used as guidance for the development of the Contractor's Environmental Control Plan for "Spent Material" prior to painting existing structures. This procedure is applicable for all structures having a coating system removed prior to field painting.~~
- ~~1.2 Spent Material: This shall include material generated by surface preparation operations and shall be sampled and tested in accordance with the current revision of SSPC Guide 7, Guide to the Disposal of Lead Contaminated Surface Preparation Debris, available at the [SSPC.org Webpage](http://www.sspc.org)[†]. The Contractor shall, at the Contractor's expense, select a laboratory that will sample and analyze the Spent Materials. The laboratory must be certified by the WVDEP, EPA, or by another state's DEP equivalent. Certification will be provided to the Engineer prior to the beginning of work. The waste transporter for both hazardous and non-hazardous waste will be listed on the Contractor's Environmental Control Plan.~~
- ~~1.2.1 The hazardous waste transporter named within the plan shall have a US EPA Identification Number.~~
-

~~2. REFERENCED DOCUMENTS~~

- ~~2.1 Reference to standard specifications and other standard procedures shall be the latest edition of the published document.~~
- ~~2.1.1 West Virginia Department of Transportation, Division of Highways Standard Specifications Road and Bridges:~~
- ~~a. 107 Legal Relations and Responsibility to Public~~
 - ~~b. 601 Structural Concrete~~
 - ~~c. 685 Bridge Cleaning~~
 - ~~d. 688 Field Painting of Metal Structures~~

[†] ~~<http://www.sspc.org/>~~

~~2.1.2 Society for Protective Coatings (SSPC) Technology Guides:~~

- ~~a. Technology Guide 6: Guide for Containing Debris Generated During Paint Removal Operations.~~
- ~~b. SSPC Technology Guide 7: Guide to the Disposal of Lead-Contaminated Surface Preparation Debris~~
- ~~c. SSPC Technology Guide 16: Guide to Specifying and Selecting Dust Collectors~~

~~2.2 Any SSPC, ASTM, ISO, AASHTO or WVDOT documents that may be applicable, not previously mentioned.~~

~~3. ENVIRONMENTAL CONTROL PLAN~~

~~3.1 As stated in Specification 688, Section 688.2.5 Submittals and 601.13.3.7.1 Quality Control Plan for Painting, a Quality Control Plan shall be designed by the Contractor and submitted for acceptance/approval by the Engineer prior to commencement of the subject work. The plan shall clearly describe the methods by which the Contractor's Environmental Control Plan will be implemented. An acceptable plan should include the following:~~

~~3.2 Procedure Approval~~

~~3.3 Field Painting:~~

~~3.4 Approved Environmental Monitoring Plan Quality Control document requirements~~

~~3.4.1 The coating contractor is required to submit Quality Control Environmental Monitoring Plan form for coating containment blast removal and spray coating applications. The following supporting documents shall be required:~~

- ~~1) Quality Control Plan set that includes the containment design drawings and plan notes~~
- ~~2) Containment calculations that include load design requirements that support the workers and scaffolding~~
- ~~3) Contractor's Environmental Protection and Work Plan~~

~~3.5 Shop Painting:~~

~~3.5.1 No supporting containment documentations are required~~

~~4. FORMAT~~

~~4.1 The Contractor/Fabricator shall complete the form: "688.03.20 - WVDOT QC Plan for Environmental Monitoring." A sample of this document is provided with this MP, however the live document is available on the WVDOT MCS&T Webpage under the "Tool Box"².~~

² <https://transportation.wv.gov/highways/mest/Pages/tbox.aspx>

~~4.1.1 This form is a fillable PDF form and shall be submitted electronically. The plan will be submitted to the Paint QC E-mail Address³. All form fields in RED shall be completed at a minimum. Once completed the submit button may be activated and an e-mail will generate with the form attached and the e-mail address populated. Additional information shall be provided as separate documents attached to the Environmental Control Plan.~~

Michael A Mance, PE

Director

Materials Control, Soils & Testing Division

MP 688.03.20 Steward—Environmental and Coatings Section

MM:Br

³ ~~DOHQCPaintEnvMonPlan@wv.gov~~

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

GUIDE FOR DEVELOPMENT OF THE CONTRACTOR'S ENVIRONMENTAL CONTROL
PLAN FOR SPENT MATERIAL PRIOR TO PAINTING EXISTING STRUCTURES

1. SCOPE

- 1.1. This materials procedure shall be used as guidance for the development of the Contractor's (Submitter's) Environmental Control Plan for "Spent Material" prior to painting existing structures. This procedure is applicable for all structures having a coating system removed prior to field painting.
- 1.2. Spent Material: This shall include material generated by surface preparation operations and shall be sampled and tested in accordance with the current revision of SSPC Guide 7, Guide to the Disposal of Lead-Contaminated Surface Preparation Debris, available at the [SSPC.org Webpage](http://www.sspc.org)¹. The Contractor shall, at the Contractor's expense, select a laboratory that will sample and analyze the Spent Materials. The laboratory must be certified by the WVDEP, EPA, or by another state's DEP-equivalent. Certification will be provided to the Engineer prior to the beginning of work. The waste transporter for both hazardous and non-hazardous waste will be listed on the Contractor's Environmental Control Plan.
- 1.2.1. The hazardous waste transporter named within the plan shall have a US EPA Identification Number.

2. REFERENCED DOCUMENTS

- 2.1. MP 110.00.40 - Preparing Material Inspection Reports
- 2.1.1. Society for Protective Coatings (SSPC) Technology Guides:
 - 1) Technology Guide 6: Guide for Containing Debris Generated During Paint Removal Operations.
 - 2) SSPC Technology Guide 7: Guide to the Disposal of Lead-Contaminated Surface Preparation Debris
 - 3) SSPC Technology Guide 16: Guide to Specifying and Selecting Dust Collectors
- 2.2. Any SSPC, ASTM, ISO, AASHTO or WVDOH documents that may be applicable, not previously mentioned.

3. REQUIRMENTS AND GUIDELINES

- 3.1. General Requirements

¹ <http://www.sspc.org/>

- 3.1.1. The Submitter shall provide and maintain a Quality Control System that will assure that the environmental monitoring have been applied in accordance with the Specification.
- 3.2. Environmental Control Plan:
 - 3.2.1. The Plan shall follow Section 688.2.5-Submittals and 688.2.5.2 – Containment/Disposal Control Plan for Existing Steel Structures of the Specification, as well as Section 601.13.3.7—Submittals and 601.13.3.7.2—Containment/Disposal Environmental Control Plan for Existing Concrete Structures.
 - 3.2.2. A Quality Control Plan shall be designed by the Contractor and submitted for acceptance/approval by the Engineer prior to the commencement of the subject work.
 - 3.2.3. The plan shall clearly describe the methods by which the Contractor’s Environmental Control Plan will be implemented.

4. SUBMISSION OF ENVIRONMENTAL CONTROL PLAN

- 4.1. The Submitter shall complete the form “688.03.20 – West Virginia Division of Highways QC Plan for Environmental Monitoring.” A sample of this document is provided with this MP in the Attachment; the live document is available on the WVDOH MCS&T Webpage under the “Tool Box”².
 - 4.1.1. This form is a fillable PDF form and shall be submitted electronically. This PDF must be downloaded; it cannot be submitted from the webpage browser. The plan will be submitted to DOHQCPaintEnvMonPlan@wv.gov³. All form fields in RED shall be completed at a minimum. Once completed the submit button may be activated and an email will generate with the form attached and the e-mail address populated. At this time the supporting documentation shall be added and submitted with the plan.
 - 4.1.2. Alternatively, the Submitter may use the webpage application: “Quality Control Plan for Environmental Monitoring” linked on the WVDOH MCS&T Toolbox. This is a standalone application that submits the requisite data to MCS&T with no email required.
 - 4.1.3. The submission for Field Painting must include all the applicable information on the form, including:
 - 1) Trade Name of Abrasive
 - 2) Manufacturer of Abrasive
 - 3) Environmental Containment per Plans
 - 4) Environmental Monitoring Methods per Plans
 - 5) Hazardous waste disposal information
 - 4.1.4. The Submitter shall also include the following attachments for their Environmental Monitoring plan:

² <https://transportation.wv.gov/highways/mcst/Pages/tbox.aspx>

³ DOHQCPaintEnvMonPlan@wv.gov

- 1) QC Plan set that includes the containment design drawings and plan notes.
 - 2) Containment calculations that include load design requirements that support the workers and scaffolding.
 - 3) Contractor's Environmental Protection and Work Plan.
- 4.2. Shop Painting:
- 4.2.1. No supporting containment documentation is required.

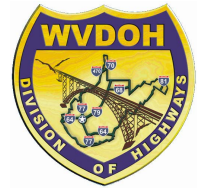
5. APPROVAL

- 5.1. If the Quality Control Environmental Plan is found acceptable, a MIR shall be issued to the District. The MIR shall follow the format as described in MP 110.00.40.
- 5.2. The MIR shall include the following information in the provided format:
- | | |
|---------------------------------|--|
| Abrasive Used | |
| Abrasive Manufacturer | |
| Environmental Containment | |
| Environmental Monitoring Method | |
- 5.3. The MIR shall also indicate the letting date, and if the QC plan has been approved.
- 5.4. The MIR shall be signed by the approving entity.

Michael A Mance, PE
Director
Materials Control, Soils & Testing Division



Old Business
West Virginia Division of Highways
Quality Control Plan for Environmental Monitoring



I. Project Information

Project Name

Contract ID

State/Federal Project Number

Bridge Number

District

County

II. Contractor Information

Contractor Name

Contractor Phone Number

Contractor Address

Contractor Contact Person

Official Responsible for Quality Control

Liaison With Division of Highways Personnel

III. Abrasives/Additives

Trade Name of Abrasive

Recycable

Manufacturer of Abrasive

Size of Abrasive

Abrasive Additive (If any)

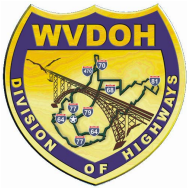
Trade Name of Additive (If any)

Manufacturer of Additive (If any)

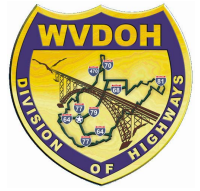
IV. Environmental Controls

Environmental Containment as Per Plans

Environmental Monitoring Methods as Per Plans



Old Business
West Virginia Division of Highways
Quality Control Plan for Environmental Monitoring



V. Hazardous Waste/Non Hazardous Waste Disposal

Hazardous Waste Disposal Company

Contact Person for Hazardous Waste Disposal Company

Address of Hazardous Waste Disposal Company

Hazardous Waste Transporter Company

Contact Person for Hazardous Waste Transporter Company

Address of Hazardous Waste Transport Company

Hazardous Waste Disposal Site

Non-Hazardous Waste Material Company

Contact Person for Non-Hazardous Waste

Address of Non-Hazardous Waste Material Company

Upon completion of this form, please submit to the West Virginia Division of Highways, Materials Control, Soils and Testing through the electronic submit button below. An e-mail will be generated with the plan attached and the address populated for sending. Please attach any supporting documentation at this time.

Person Completing Form

Date of Form Completion

Old Business
MATERIALS INSPECTION REPORT

MIR REPORT NUMBER: 2601808
SUBJECT: QC ENVIRONMENTAL MONITORING PLAN
PROJECT NAME: STEVEN WAYNE SMITH MEMORIAL BRIDGE
STATE PROJECT NUMBER: S320-119-6.64 00
FEDERAL PROJECT NUMBER: NHPP-0119(540)D
CONTRACT ID: 2023200038
COUNTY: KANAWHA
DISTRICT: ONE
DATE OF REQUEST: JUNE 5, 2026
DATE OF REPORT: JUNE 23, 2026

1.0 INTRODUCTION

- 1.1** Pursuant to West Virginia Department of Transportation, Division of Highways (WVDOH) Specifications, Sections 685, 687, 688, 711 and MP 688.03.20, the QC Environmental Monitoring Plan for the referenced project has been reviewed for approval.

2.0 INVESTIGATION

- 2.1** The Division shall only approve the environmental monitoring information.

2.2

Abrasive Used	
Abrasive Manufacturer	
Environmental Containment	
Environmental Monitoring Method	

- 2.3** The Division shall not approve any aspects of containment design.

- 2.4** All aspects of containment design shall be performed and stamped by a licensed Professional Engineer.

3.0 RECOMMENDATION

- 3.1** The QC Environmental Monitoring Plan meets the requirements set forth in the WVDOH Specifications and MP 688.03.20. **Therefore, the QC Environmental Monitoring Plan is approved.**

Reviewed by
Name - Title
Environmental & Coatings Group

Approved by
Name
Environmental & Coatings Section
Supervisor, MCS&T

MAM:Bph
Attachments

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

BASIS FOR CHARGES FOR NON-SUBMITTAL OF SAMPLING &
TESTING DOCUMENTATION BY THE ESTABLISHED DEADLINE

1. PURPOSE

- 1.1 To provide a unit cost per test to be assessed to the Contractor when testing documentation or samples are not submitted by the Contractor by the established deadline. Periodic updates of this Attachment shall be the responsibility of the Director of Materials Control, Soils and Testing Division or their designee (Director).
-

2. REFERENCED DOCUMENTS

- 2.1 MP 109.00.22 – Procedure for the Submission and Documentation of Test Results
-

3. SCOPE

- 3.1 This procedure is applicable to circumstances where a construction item's testing documentation or samples are not submitted by the deadline established in this document. In the case of a general item, this timeframe is seven (7) days from the sampling date. The timeframe for special-case items such as gradations and cylinder breaks is noted in Attachment 1.
- 3.1.1 All of the following requirements shall be met to meet the above-defined timeframe:
- 3.1.1.1 Documentation submission includes: (A) generating the sample in the Division Approved Sampling and Testing software (SiteManager, AASHTOWare Projects, etc.), (B) entering all data into this system, (C) presenting the data to the District for review and (D) providing all testing documentation. The process for the submittal of test results is documented in MP 109.00.22.
- 3.2 The penalty for an infraction as described in Section 3.1 is \$700 per test. In the instance where a single test comprises of a prescribed series of sub-tests (typically 5), the cost of each infraction will be the standard rate divided by the total number of required sub-tests. This is only applicable in the certain circumstances as noted in Attachment 1.
- 3.2.1 This procedure is not limited to tests listed in Attachment 1, but applicable to any material test required by the Standard Specifications and/or Materials Procedures. For this case, the Director will establish the timeframe for the test or may utilize the standard timeframe as described in Section 3.1. The rate shall follow Section 3.2.

4. ABSENT TESTING DOCUMENTATION OR FAILURE TO TEST

- 4.1 In no case shall this Materials Procedure allow for the acceptance of non-tested material. In the case where no testing was performed, or no documentation was submitted for the material, the resolution for the acceptance of the material shall be in accordance with the applicable section(s) of the Standard Specifications and Materials Procedures. Additionally, and regardless of the outcomes of this resolution, a price assessment in accordance with Attachment 1 shall also be assessed.

Michael A. Mance, PE
Director
Materials Control, Soils & Testing
Division

MP 109.00.21 Steward – Materials Control Section
MAM:Bhs
ATTACHMENT

Cost Penalties Per Test

Material Category	Test and Rate	Testing Time Frame (Days)	#Cost/Sub Test Cost
Soil and Aggregate	In-Place Density (5 tests)	*T	*Rate 0.2 (*Rate)
	Gradation (Each Test)	14	*Rate
	Liquid and Plastic Limits	*T	*Rate
	Crushed Particle Analysis	14	*Rate
Asphalt	Asphalt Mixture Test	*T	*Rate
	In-Field Density Testing	*T	*Rate 0.2 (*Rate)
Chip Seal	Gradation (Each Test)	*T	*Rate
Concrete	Abar	14	*Rate
	Optimized Gradation	14	*Rate
	Cylinder Test	35	*Rate
	Surface Resistivity	*T	*Rate
	Air and Slump (1 test)	*T	*Rate
Grout	Grout Break Report (Each Test)	*T	*Rate
	Grout Strength Report	*T	*Rate
CLSM	Cylinder Test	35	*Rate
	Flow Test	35	*Rate

*T - Standard timeframe as described in Section 3.1

*Rate - Standard rate as described in Section 3.2

#Cost/Ea - Unless there is rate in this column, each infraction results in the full rate

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

PROCEDURE FOR THE INDEPENDENT ASSURANCE PROGRAM

1. PURPOSE

- 1.1 To provide a procedure for the WVDOH to meet FHWA's requirements for the Independent Assurance (IA) program.

2. SCOPE

- 2.1 This procedure applies to the following IA Materials:
- 2.1.1 Portland Cement Concrete (PCC)
- 2.1.2 Asphalt
- 2.1.3 Aggregate
- 2.1.4 Compacted Soil, Aggregate and Asphalt Materials
- 2.1.4.1 The WVDOH is in the process of evaluating the method to incorporate this testing into the IA program.

3. REFERENCED DOCUMENTS

- 3.1 Office of Pavement Technology Publication No. [FHWA-HIF-12-001](#)¹, October 2011. Included as Attachment 2.
- 3.2 23 CFR - [PART 637—CONSTRUCTION INSPECTION AND APPROVAL](#)²
- 3.3 MP 106.03.50 - General Information Guide for Technician and Inspector Certification Program (TICP).
- 3.4 MP 700.00.54 - Procedure for Evaluating Quality Control Sample Test Results with Verification Sample Test Results
- 3.5 AASHTO R44-07.

4. DEFINITIONS

- 4.1 QA – Quality Acceptance: The Division test used for the acceptance of material on a project.
- 4.2 IA Sampler: The employee(s) at MCS&T Division who oversees the IA program. This person may perform 1:X testing when the population (X) is not large enough to compare samples statistically or comparing samples statistically is not practical. The IA Sampler may, at the discretion of the Director of MCS&T, delegate this task to a qualified Division employee.

¹ <https://www.fhwa.dot.gov/pavement/materials/hif12001.pdf>

² <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-G/part-637>

- 4.3 Evaluation Period: The calendar year in which the IA program is evaluated. This begins on January 1st and ends on December 31st of the same year.
- 4.4 IA Material: Each unique material that is evaluated by the IA program. These materials are listed in Section 2.1 of this document.
- 4.5 IA Test: A test that is performed by a QA Tester which is evaluated either directly or indirectly by the IA sampler to demonstrate both the QA Tester and their QA Testing Equipment's proficiency.
- 4.6 QA Tester: Each individual who performs an IA Test on an IA Material for QA, during the Evaluation Period. Each unique instance of these must be evaluated based on the frequency noted in Section 5.
- 4.7 QA Testing Equipment: Each primary piece of equipment used to perform an IA Test on an IA Material for QA, during the Evaluation Period. This equipment is noted in the respective sections of this document. Each unique instance of these must be evaluated based on the frequency noted in Section 5.
- 4.8 AASHTO: The American Association of State Highway and Transportation Officials, a nonprofit organization that sets technical standards for highway systems and acts as a liaison between state and federal transportation departments.
- 4.9 [AASHTO re:source](https://aashtoresource.org/)³: A technical services program that provides audits and accreditation to material testing laboratories. This program distributes proficiency samples nationally and evaluates the results. The WVDOT uses the evaluations from this program for both asphalt and aggregate IA Tests.
- 4.10 Proficiency Sample: A single (homogeneous) sample that is distributed by an agency or designated agent to be tested at multiple laboratories. The distributing agency will provide a "score", which statistically compares results amongst the laboratories.
- 4.11 Split Sample: A single sample taken by a single entity that is divided into two or more separate sub-samples for subsequent laboratory analysis. The division shall be done such that these sub-samples are equivalent.
- 4.12 Satisfactory Evaluation: If the results of a test fall within the guidelines established in Section 13 of this document, the test will be considered satisfactory.
- 4.13 Non-Satisfactory Evaluation: If the results of a test do not fall within the guidelines established in Section 13 of this document, the test will be considered non-satisfactory.
- 4.14 Corrective Action Report (CAR): An action report identifying the probable source of a Non-Satisfactory Evaluation. This report identifies the non-conformance, explains issues which lead to this non-conformance, and explains corrective actions to address this non-conformance.

5. SYSTEM APPROACH FOR IA SAMPLING AND TESTING

- 5.1 The WVDOT IA program shall operate under the system approach as described in Office of Pavement Technology Publication No. [FHWA-HIF-12-001 and AASHTO R44-07](#).

³ <https://aashtoresource.org/>

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- 5.2 Each QA Test Equipment and each QA Tester shall be evaluated for each Evaluation Period. Redundant testing shall be avoided unless a failure or faulty testing is reported during the testing.
- 5.2.1 If a QA Tester is testing and the equipment fails, they shall complete the test on another piece of equipment. If this occurs, it shall be noted in a corrective action report.
- 5.3 The goal of the IA program is to meet a 90% evaluation threshold for each QA Tester and QA Test Equipment. Each of these entities is considered separate and independent of each other.
- 5.3.1 QA Testers shall be evaluated for each unique IA Material they test during the evaluation period. If a person tests multiple IA Materials during the evaluation period, they will be required to be evaluated for each material independently.
- 5.3.2 The evaluation procedure for tests is described in Section 13 of this document.
- 5.4 If the 90% evaluation threshold is not met, a corrective action summary shall be included in the IA report.

6. POPULATION OF QUALITY ACCEPTANCE TESTERS AND EQUIPMENT

- 6.1 Once per year, before any work is performed by District QA Testers, a signed letter stating the names of each of their QA Testers shall be submitted by the District Construction Engineer to the Director of MCS&T Division. In lieu of this letter, Districts may utilize an MCS&T provided online form.
- 6.2 If, during the calendar year, additional QA Testers are added to the District's roster, the District Construction Engineer shall submit an amended list to the Director of MCS&T Division. This shall be done before any quality assurance work is performed by the tester.
- 6.3 In the event where a project incorporates non-DOH QA Testers and/or QA Testing Labs, the District Construction Engineer shall submit to the Director of MCS&T a signed letter stating the names of each of the QA Testers. As part of their duties, this person must participate in the IA program for each evaluation period.
- 6.4 All QA Testing Equipment shall be inventoried yearly and entered into the Division's approved equipment tracking system. If additional testing equipment is acquired, it shall be added to this system.

7. PORTLAND CEMENT CONCRETE (PCC)

- 7.1 Each QA Tester who tests PCC during the evaluation period shall perform an IA Test corresponding to the test they performed during that evaluation period.
- 7.2 The minimum required IA Sample test frequency for each QA Tester and QA Test Equipment is as follows:

PCC IA Samples Frequency	
Air – AASHTO T 152	1/Year
Compressive Strength Testing - AASHTO T 22	1 Set/Year
Slump – AASHTO T 119	1/Year

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Surface Resistivity AASHTO - T 358

1 Set/Year

- 7.3 For PCC, the Division will host at least one in-house proficiency sample style test of plastic concrete. This event shall be a group event where plastic concrete is provided, and each QA Tester is present. The QA Tester will test the material using the equipment they typically use to test concrete. If a QA Tester cannot attend this event, they shall attend a make-up event or be individually evaluated by the IA sampler.
- 7.4 Plastic Concrete Testing:
- 7.4.1 For plastic concrete testing, each QA Tester, their testing equipment, as well as their results shall be recorded.
- 7.4.2 Plastic concrete testing at a minimum includes AASHTO T 152 (air content) and AASHTO T 119 (slump).
- 7.4.3 During the event described in Section 7.3, the IA Sampler as well as representatives from MCS&T Division will observe the QA Testers to ensure proper testing procedures are followed.
- 7.4.4 If a QA Tester is observed deviating significantly from testing procedures, the IA Sampler or an MCS&T Division representative may note that test as a Non-Satisfactory Evaluation, regardless of the QA Tester's results. In this case, the test shall be considered Non-Satisfactory, and a CAR will be required. Also, the QA Tester's results shall be discarded from the population of results.
- 7.5 Cylinder Testing:
- 7.5.1 For each set of cylinders in cylinder testing, the cylinder fabricator, the Tester, testing equipment, and results shall be recorded and sent to the IA sampler.
- 7.5.2 Cylinder testing at a minimum includes AASHTO T 22 (compressive strength).
- 7.5.3 At the event described in Section 7.3, a standard set of 4"x8" cylinders shall be created for each of the QA Testers who performs the AASHTO T22 test at each District. This set of cylinders shall be fabricated by a tester from that District, if one is present. If a District has more than 1 QA Tester or more than 1 set of testing equipment, additional sets of cylinders shall be fabricated for each instance.
- 7.5.4 In the instance of a non-DOH testing laboratory, a certified individual from the lab's primary District shall fabricate the cylinders as they would for their own District testing laboratory.
- ~~7.5.5~~ If a QA Tester for a particular District does not attend, a set of cylinders shall be fabricated for that District by either the IA Sampler or another District. This set of cylinders will be tested by that District but will only be considered a "back-up" case if that District cannot attend another session.
- 7.6 Surface Resistivity Testing:
- 7.6.1 For each set of cylinders in surface resistivity testing, the cylinder fabricator, the Tester, testing equipment, and results shall be recorded and sent to the IA sampler.

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- 7.6.2 Surface Resistivity testing at a minimum includes AASHTO T 358 (surface resistivity).
- 7.6.3 Curing in accordance with section 601.4.5 of the supplemental specifications.
- 7.6.4 At the event described in Section 7.3, a standard set of 4"x8" cylinders shall be created for each of the QA Testers who performs the AASHTO T358 test at each District. This set of cylinders shall be fabricated by a tester from that District, if one is present. If a District has more than 1 QA Tester or more than 1 set of testing equipment, additional sets of cylinders shall be fabricated for each instance.
- 7.6.5 In the instance of a non-DOH testing laboratory, a certified individual from the lab's primary District shall fabricate the cylinders as they would for their own District testing laboratory.
- 7.7 If a QA Tester for a particular District does not attend, a set of cylinders shall be fabricated for that District by either the IA Sampler or another District. This set of cylinders will be tested by that District but will only be considered a "back-up" case if that District cannot attend another session.
- 7.6.7.8 For PCC the QA Testing Equipment is as follows:
1. Compressive Strength Testing Machine
 2. Type B Pressure Meter
 3. Slump Cone
 - 3-4. Surface Resistivity Meter

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8. ASPHALT CONTENT – IGNITION OVEN – BURN OFF

- 8.1 Each QA Tester who tests for Asphalt Content during the evaluation period shall perform a yearly burn off IA Test.
- 8.2 The minimum required IA Sample test frequency for each QA Tester and QA Test Equipment is as follows:

Asphalt IA Samples	
Asphalt Content by Ignition - AASHTO T 308	1/year
Percent Passing the #200 Sieve - AASHTO T 30	1/year

- 8.3 AASHTO re:source:
- 8.3.1 Each QA Tester shall participate in the AASHTO re:source proficiency program for Asphalt Mixture Ignition Oven (HMI). This shall apply to all the tests listed in Section 8.2.
- 8.3.2 If there are more QA Testers in a District than distributed samples, the District shall request additional AASHTO re:source aggregate samples.
- 8.4 MCS&T Distributed Samples:
- 8.4.1 Since most Districts operate multiple ignition ovens, in addition to the AASHTO re:source samples, MCS&T Division shall obtain and distribute a homogeneously split sample for each of the District's ignition ovens.

- 8.4.2 MCS&T shall also distribute a sample of this material to Non-DOH laboratories for each QA Tester and QA testing equipment.
- 8.5 For AASHTO re:source and MCS&T distributed samples, the QA Tester, QA Testing Equipment, and test results shall be recorded and sent to the IA Sampler. This shall apply to all the tests listed in Section 8.2.
- 8.6 For Ignition Oven Asphalt tests the QA Testing Equipment is as follows:
1. Ignition Oven

Percent Passing the #200 Sieve - AASHTO T 30	1/year

9. SUPERPAVE ASPHALT CONCRETE

- 9.1 Each QA Tester who tests SuperPave Asphalt Concrete during the evaluation period, in addition to the yearly burn off IA test, shall perform an IA Test corresponding to each test they performed during that evaluation period.
- 9.2 The minimum required IA Sample test frequency for each QA Tester and QA Test Equipment is as follows:

SuperPave IA Samples	
Air Voids - AASHTO T 269	1/year
Bulk Specific Gravity, Vacuum - AASHTO T 331	1/year
Bulk Specific Gravity, SSD - AASHTO T 166	1/year
Maximum Specific Gravity - AASHTO T 209	1/year
Asphalt Content by Ignition - AASHTO T 308	1/year*

- 9.3 Each QA Tester shall participate in the AASHTO re:source proficiency program for Asphalt Mixture Gyratory (HMG) for SuperPave Asphalt Material. This shall apply to all the tests listed in Section 9.2.
- 9.3.1 If a District has multiple QA Testers and/or QA Testing Equipment, that District shall request additional AASHTO re:source samples to ensure that all QA Testers and QA Testing Equipment are evaluated.
- 9.4 The QA Tester, QA Testing Equipment, and test results shall be recorded and sent to the IA Sampler. This shall apply to all the tests listed in Section 9.2.
- 9.5 For SuperPave Asphalt Concrete the QA Testing Equipment is as follows:
1. Gyratory Compactor

2. Core Lok - Asphalt Density Measurement System
- 3.

10. MARSHALL ASPHALT CONCRETE

- 10.1 Each QA Tester who tests Marshall Asphalt Concrete during the evaluation period, in addition to the yearly burn off IA test, shall perform an IA Test corresponding to each test they performed during that evaluation period.
- 10.2 The minimum required IA Sample test frequency for each QA Tester and QA Test Equipment is as follows:

Marshall IA Samples	
Bulk Specific Gravity, SSD - AASHTO T166	1/year
Maximum Specific Gravity - AASHTO T209	1/year
Air Voids - AASHTO T 269	1/year
Marshall Stability/Flow - AASHTO T245	1/year

- 10.3 Each QA Tester shall participate in the AASHTO re:source proficiency program for Asphalt Mixture Marshall Design (MAR) for Marshall Asphalt Material. This shall apply to all the tests listed in the Table in Section 10.2.
- 10.3.1 If a District has multiple QA Testers and/or QA Testing Equipment, that District shall request additional AASHTO re:source samples to ensure that all QA Testers and QA Testing Equipment are evaluated.
- 10.4 The QA Tester, QA Testing Equipment, and test results shall be recorded and sent to the IA Sampler. This shall apply to all the tests listed in Section 10.2.
- 10.5 For Marshall Asphalt Concrete the QA Testing Equipment is as follows:
1. Marshall Hammer
 2. Marshall Stabilometer

11. AGGREGATE GRADATION

- 11.1 Each QA Tester who tests Aggregate during the evaluation period shall perform an IA Test corresponding to the test they performed during that evaluation period.
- 11.2 The minimum required IA Sample test frequency for each QA Tester and each piece of QA Testing Equipment is as follows:

Aggregate Gradation Samples	
AASHTO T27 (Sieve Analysis of Aggregates)	1/year
AASHTO T11 (Materials Finers than No. 200 Sieve)	1/year

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- 11.3 AASHTO re:source
- 11.3.1 Each District QA Tester shall participate in the AASHTO re:source proficiency program for Aggregate.
- 11.3.2 If there are more QA Testers in a District than distributed samples, the District shall request additional AASHTO re:source aggregate samples.
- 11.4 MCS&T Distributed Samples:
- 11.4.1 Because the Districts have multiple shakers, in addition to the AASHTO re:source samples, MCS&T shall distribute a homogeneously split sample to each testing lab for each set of QA testing equipment. Any QA Tester in the District may test these samples.
- 11.4.2 MCS&T shall also distribute a sample of this material to Non-DOH laboratories for each QA Tester and QA testing equipment.
- 11.4.3 The specific class and type of material shall be selected by the IA Sampler. The material shall consist of AASHTO specified gradation.
- 11.5 All specified sieves will be evaluated for the material passing. For the AASHTO re:source proficiency sample, all scored sieves will be evaluated.
- 1.1 For AASHTO re:source and MCS&T distributed samples, the QA Tester, QA Testing Equipment, and test results shall be recorded and sent to the IA Sampler. This shall apply to all the tests listed in Section 11.2.
- 11.6 For Aggregate Gradations the QA Testing Equipment is as follows:
 - 2. Aggregate Shaker

12. COMPACTION

- 12.1 The WVDOT is currently evaluating the process of adding Asphalt and/or Aggregate/Soil Compaction to the IA program. The goal is to add this to the program for the 2025 evaluation period.

13. EVALUATION PROCEDURE

- 13.1 IA Samples will be evaluated statistically when the population of results is 5 or greater. If the IA Sample is not provided by AASHTO re:source in the form of a Proficiency Sample, it will be evaluated by the WVDOT IA Sampler. The calculation method used by ASHTO re:source shall be followed. The calculation method is shown in Attachment 3.
- 13.2 If the samples are provided by AASHTO re:source a rating of 3, 4, 5, as assigned by the testing agency, shall be considered satisfactory.
- 13.3 In the event where the population is less than 5, samples will be evaluated by averaging the test results and using the respective AASHTO Precision and Bias Table as the acceptable range of values between the IA Sampler and the QA Tester(s). In this event, the evaluation method will be specifically described in that year's IA report.
- 13.3.1 For example, if the average is 5.0 and the table provides a precision and biased of 1.2, the test values must fall between 3.8 and 6.2 to be considered satisfactory.

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- 13.4 If the results of an evaluation are satisfactory, the evaluation will be considered successful. A successful evaluation will verify both the QA Tester and the QA Testing Equipment used during the IA Test.
- 13.5 If the results of an evaluation are deemed non-satisfactory, the IA Test will be reviewed by the IA Sampler and/or the respective District Materials Supervisor. Within 30 days of notification of the non-satisfactory evaluation, the reviewer shall submit a Corrective Action Report to the Director of Materials Control Soils and Testing Division. This Corrective Action Report will be included in the yearly IA Report. A sample of this Corrective Action Report is provided in Attachment 1. The live version of the file is in the [WVDOH MCS&T Toolbox](#)⁴.
- 13.5.1 If possible, an additional IA Sample will be tested by the QA Tester in that calendar year, using the same QA Testing Equipment. This IA Test will be closely observed by the IA Sampler or their designee to help establish the root cause.
- 13.5.2 If this cannot be accomplished during the calendar year, the process will be followed for the subsequent calendar year's IA Sample.
- 13.5.3 If the QA Tester's evaluation for a given test is non-satisfactory for two or more successive evaluation periods, and is not caused by QA test equipment or sampling methods, then actions outside a CAR shall be taken by the IA Sampler to confirm the Tester's proficiency for the given test.
- 13.6 The evaluation criteria in this section shall be evaluated every three years. The most recent evaluation of this criterion was on :

_____ by _____ (Director of MCS&T)**.

** Note: This document shall be effective as per the signature date at the end of this document. However, the live version of this document will be updated as indicated above. This review date will not affect the signature nor effective date of the procedure, but rather provide documentation of WVDOH's compliance with Federal guidelines.

14. RECIPROCITY OF IA TESTING AND TECHNICIAN CERTIFICATION.

- 14.1 If the practical exam portion of the technician certification program (as described in MP 106.03.50) is equivalent to that of an IA Sample, reciprocity between these tests can be applied if agreed upon by both the Technician Certification Coordinator and the IA Sampler.
- 14.2 At the discretion of the Technician Certification and Training Coordinator, a successful IA sample may be considered the "Practical" portion of a technician's recertification for the respective material.
- 14.3 At the discretion of the IA sampler, the practical portion of either a certification or recertification may be considered a successful IA sample.

15. REPORTING

- 15.1 The evaluation period shall be the calendar year, starting with January 1st and ending December 31st.

⁴ <https://transportation.wv.gov/highways/mcst/Pages/tbox.aspx>

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- 15.2 The annual IA report shall be submitted to FHWA. The due date for the report is April 1st of the year following the evaluation year. The annual report shall include the following information: the number of certified technicians, the number of testing equipment used for QA, the number of active technicians, the number of technicians covered by the IA program, the number of IA Samples that were Non-Satisfactory, and a summary of the Corrective Action Reports along with the potential systematic solutions to reoccurring deficiencies (FHWA-HIF-12-001).
- 15.2.1 The report shall also include a summary of the Division's performance verifying QC samples with QA samples during as per MP 700.00.54. The evaluation shall be for each of the required tests for each material during the evaluation period.

Michael A Mance, PE
Director
Materials Control, Soils & Testing Division

MP 700.00.53 Steward – Materials Control Section
MAM:Bb
ATTACHMENTS

Attachment 1: Sample Corrective Action Report

WVDOH Independent Assurance Corrective Action Report		
Form 2025-IA-CAR		
Date of Occurrence:		
Date Submitted:		
Name of Tester:		
Testing Equipment:		
Material Tested:		
Describe the issue reported:		
Sample		
What was the root cause of the issue?		
What actions have been done to correct this issue?		
Signature of QA Tester		Review: MCST
Signature of District Materials Supervisor		
Signature of District Construction Engineer		

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MP 700.00.53 – ATTACHMENT 2
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Attachment 2: Office of Pavement Technology Publication No. [FHWA-HIF-12-001](#)⁵, October 2011.

⁵ <https://www.fhwa.dot.gov/pavement/materials/hif12001.pdf>

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

PROCEDURE FOR EVALUATING QUALITY CONTROL SAMPLE TEST
RESULTS WITH VERIFICATION QUALITY ASSURANCE SAMPLE TEST RESULTS

1. PURPOSE

- 1.1. To provide a procedure to statistically compare Quality Control (QC) and Quality Assurance (QA) tests to verify the validity of the QC samples.
- 1.2. To ensure adequate QA coverage of QC samples for required materials and tests.

2. REFERENCED DOCUMENTS

- 2.1. MP 700.00.53 - Procedure for Evaluating Independent Assurance Samples with Acceptance Samples
- 2.2. MP 307.00.50 - Guide for Quality Control and Acceptance Plans for Base Course
- 2.3. MP 401.03.50 - Guide for Contractor's Quality Control of Bituminous Concrete
- 2.4. MP 601.03.50 - Guide for Quality Control and Acceptance Requirements for Portland Cement Concrete

3. DEFINITIONS

- 3.1. System: The Division Approved Materials Tracking System.
- 3.2. Sample: The sample record test which has been documented in the System.
- 3.3. Quality Assurance (QA) Sample: Samples performed by the Division to evaluate for acceptance, a material on a Project.
- 3.4. Quality Control (QC) Sample: Samples performed by the Contractor for a material on a Project to demonstrate the material's compliance with the Specifications.
- 3.5. Verification: The process of statistically comparing a QA sample to a series of QC samples. This comparison serves to verify the validity of the QC testing. There are two approaches to this comparison:
 - 3.5.1. Project Approach: A verification Data Set must contain all of the following data. Each of these fields must match. For example, samples from different Projects may not be combined for the Project Approach:
 - 1. Material Source
 - 2. Mix Design (If Applicable)
 - 3. Aggregate Class (If Applicable)
 - 4. Project

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- 3.5.2. System Approach: A verification Data Set must contain all of the following data. Each of these fields must match. For example, samples from different Mix Designs may not be combined for the System Approach:
1. Material Source
 2. Mix Design (If Applicable)
- 3.6. Data Set: The test results in the linked QC and QA sample record tests. This test data must have matching categories as specified in Sections 3.5.1 and 3.5.2. Examples are provided in Attachment 3.
- 3.7. Linked Samples: This is a technical term for a process in the System which creates a data set among joined samples.

4. SCOPE

- 4.1. On all Projects, all QC samples for the following tests must be represented by a QA sample. These are to be evaluated in chronological order by a QA sample. No more than 10 QC samples shall be evaluated by 1 QA sample.
- 4.1.1. All QA samples and linked QC samples must contain matching data for all the fields in Sections 3.5.1 and 3.5.2. Examples are provided in Attachment 3.
- 4.2. The following materials and their respective test(s) and test result(s) are evaluated by the specified approach.
- 4.2.1. Aggregate Gradations – Project Approach
1. Specification Sieves (each)
 2. Pan (if applicable)
- 4.2.2. Marshall Asphalt Mixture – System Approach
1. Asphalt Content
 2. Air Voids
 3. VMA
 4. Stability
 5. Flow
 6. Gradation (each Specification Sieve and Pan if applicable)
- 4.2.3. SuperPave Asphalt Mixture – System Approach
1. Asphalt Content
 2. Air Voids
 3. VMA
 4. Gradation (each Specification Sieve and Pan if applicable)
- 4.2.4. Portland Cement Concrete – Project Approach
1. Air Content
 2. Consistency
 3. Strength
 - 3.4. Surface Resistivity

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5. PROCEDURE

- 5.1. After completion of the QA sample, the test data shall be entered into the System. The QA sample shall be linked to the appropriate QC sample(s) as specified in Section 4.2. Note that all samples being linked must contain all respective test results for the material shown in Section 4 and meet the criteria stated in Sections 3.5.1 and 3.5.2.
- 5.1.1. If a system approach QA sample is performed and it covers multiple Districts, the QA sample shall be performed by the District in which the plant is located.
- 5.2. The samples shall be linked by the person creating the QA sample, based on the total number of QC samples. This will allow the System to create a data set and perform an evaluation (if applicable). For QA samples evaluating QC samples in the system approach, all QC samples taken after the last QA sample and up to the current QA sample shall be evaluated.
- 5.2.1. 1-4 QC Sample(s)
If there are less than five QC samples, they shall be linked, but no calculation shall be performed; The evaluation will be conducted as specified in Section 6.1
- 5.2.2. 5-10 QC Samples
If there are five to ten QC samples, they shall be linked; the data set shall consist of all of the available tests. The evaluation shall be conducted as specified in Section 6.2
- 5.2.3. 11 + Quality Control Samples
If there are eleven or more QC samples available, they shall be organized sequentially by date/time; only the first ten shall be linked. The data set shall consist of these ten samples. The evaluation shall be conducted as specified in Section 6.2.

An additional QA sample shall be completed, and the process shall be restarted independent of the prior evaluation. This extra data set shall be linked and evaluated according to the remaining QC samples.
- 5.2.3.1. For example, if 16 QC samples are taken, there shall be a QA sample for QC samples 1-10 and then another QA sample for QC samples 11-16, which would be evaluated as "5-10" QC samples.

6. EVALUATION

- 6.1. If the data set contains less than 5 linked QC samples, no calculation shall be made. The test data shall be visually evaluated for significant variance. If a significant variance is noted, appropriate action shall be taken by the District as specified in Section 7.3.2.1. If there is no significant variance, the report shall indicate: "This sample, <sample number recorded here> has been reviewed in accordance with MP 700.00.54, and judged to be similar." If it is not similar, it's handled in accordance with Section 7.3.2.1.
- 6.2. If the data set contains 5 or more linked QC samples, they shall be evaluated by the System. No more than 10 QC samples shall be linked; if there are more than 10 QC samples, the System shall return an error.

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- 6.2.1. The calculation and evaluation criteria used in the System are documented in Attachment 1.
- 6.3. Based on the calculation and evaluation criteria, the System shall report as follows:
 - 6.3.1. If all the test results are evaluated as “Similar”, the entire data set shall be judged “Similar”.
 - 6.3.2. If any of the test results in the set are evaluated as “Non-Similar”, the entire data set shall be judged as “Non-Similar”.
 - 6.3.2.1. If the data set is “Non-Similar”, the District Materials Supervisor shall perform and document the following for QC:
 - 1. Review the sampling procedure.
 - 2. Review the testing procedures.
 - 3. Check testing equipment.
 - 4. Review documentation.
 - 5. Perform any additional investigations that may clarify the discrepancy.

7. REPORTING AND SAMPLE SUBMISSION

- 7.1. Once the evaluation is completed, the result shall be noted by the District on the QA sample.
- 7.2. If applicable, the sample shall also be marked by the District as “Pass” or “Fail” along with whether the data is “Similar” or “Non-Similar” as defined in Section 7.2.1 and 7.2.2.
 - 7.2.1. If the data set is found to be “Similar”, the QA Sample shall be marked “Similar” in the System by the District.
 - 7.2.2. If the data set is found to be “Non-Similar” the QA sample shall be marked “Non-Similar” in the System by the District.
 - 7.2.2.1. If the Sample is marked “Non-Similar”, the documentation from Section 6.3.2.1 shall be submitted with the sample by the District, including the corrective action when applicable.
 - 7.2.2.2. In the event that other documentation is needed to resolve the material, that information shall also be provided with the sample by the District.
- 7.3. The sample shall then be submitted by the District to the respective MCS&T Materials Regional Coordinator for final evaluation and approval.
- 7.4. A sample report is shown in Attachment 2.

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ATTACHMENT

Attachment 1: Sample Calculations

To determine the range (R) of the QC samples, subtract the smallest test value from the largest test value.

Compute the interval (I) by substituting the values into the proper equation below.

Number of Samples Used in Calculating the Average	Equation for Computing the Interval (I)
10	$I = \bar{X}_{10} \pm 0.91 \times R$
9	$I = \bar{X}_9 \pm 0.97 \times R$
8	$I = \bar{X}_8 \pm 1.05 \times R$
7	$I = \bar{X}_7 \pm 1.17 \times R$
6	$I = \bar{X}_6 \pm 1.33 \times R$
5	$I = \bar{X}_5 \pm 1.61 \times R$

The interval (I) is determined by first adding the average ($\bar{X}_n$) to the product of the range (R) times the given constant. This determines the upper limit of the interval. If the result obtained is greater than 100%, it will be recorded as 100%. Next, subtract the product of the range (R) times the given constant from the average ($\bar{X}_n$). This determines the lower limit of the interval. If the result is less than zero, it will be recorded as zero.

For aggregate gradations, the average for each sieve must be calculated separately.

All data must fall within the range to be judged "Similar". Otherwise, the data set is "Non-Similar".



West Virginia
Department of Transportation
Marshall Verification Sample Evaluation Computation Sheet

Sample Record: TKraf20241205122921 Laboratory ID: D07-ASP
Material Name: Base 2/Wearing 4 Asphalt Mix, Marshall Sample Date: 10/17/2024
Material Code: 401.002.000.05 Contract ID:
Facility: F-JFA4.02.704 - J.F. Allen Co. - Lorentz

Sample Record Name	% Asphalt	% Air Voids	% VMA	Stability	Flow	Lab Reference Number	Open Sample Record
TKraf20241018080012	5.0	4.5	14.1	11,648	15.0	C7B2440	Click Here
TKraf20241022120955	5.1	2.2	12.3	12,642	15.3	C7B2441	Click Here
TKraf20241022121156	4.8	3.2	12.5	11,529	14.3	C7B2442	Click Here
TKraf20241022121345	5.0	2.0	12.0	11,633	15.5	C7B2444	Click Here
TKraf20241022121524	4.9	2.9	12.5	12,417	14.8	C7B2445	Click Here
TKraf20241108123059	5.3	2.0	12.5	12,337	15.7	C7B2448	Click Here
Average:	5.02	2.8	12.65	12034.33	15.1		
Range:	0.5	2.5	2.1	1113	1.4		
Upper Limit Interval:	5.69	6.13	15.44	13514.62	16.96		
Lower Limit Interval:	4.36	0	9.86	10554.04	13.24		

Records: 6

% Asphalt	% Air Voids	% VMA	Stability	Flow	Lab Reference Number
4.9	2.2	11.8	12,480	12.9	M7B2443
✓	✓	✓	✓	✗	

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Attachment 2: Sample Evaluation Report

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Attachment 3 – Examples of Samples Which Can and Cannot Be Linked:

Project Approach:

All the following must match:

1. Material Source (Enforced by Mix Design for Concrete).
2. Mix Design (If Applicable)
3. Aggregate Class (If Applicable)
4. Project

The following example shows an incorrect data set contains an errant Mix Design and Project.

Lab Number	Contract ID	Project Name	Material	QC/QA	Mix Design
M1N8745	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QA	2406546
C1N2312	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2313	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2314	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2508546
C1N2315	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2316	2024060004	Sharp Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2317	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546

The following example shows a correct data set. All the required fields match.

Lab Number	Contract ID	Project Name	Material	QC/QA	Mix Design
M1N8745	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QA	2406546
C1N2312	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2313	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2314	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2408546
C1N2315	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2316	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2317	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546
C1N2318	2025087334	Knollwood Dr	Class B Concrete with Fly Ash	QC	2406546

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System Approach:

All the following must match:

1. Material Source (Enforced by Mix Design for Asphalt).
2. Mix Design (If Applicable)

The following example shows an incorrect data set containing an errant Material and Mix Design.

Lab Number	Contract ID	Project Name	Material	QC/QA	Mix Design
M1N8745	2025087334	Knollwood Dr	Base 2/Wearing 4 Asphalt Mix, Marshall	QA	2406546
C1N2312	2024034008	University Ave	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2313	2025087334	Knollwood Dr	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2314	2025080008	Dunlap Drive	Wearing 1 Skid Asphalt Mix, Marshall	QC	2508526
C1N2315	2025080008	Dunlap Drive	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2316	2024034008	University Ave	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2317	2024034008	University Ave	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2318	2025087334	Knollwood Dr	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2319	2025087334	Knollwood Dr	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546

The following example shows a correct data set. All the required fields match.

Lab Number	Contract ID	Project Name	Material	QC/QA	Mix Design
M1N8745	2025087334	Knollwood Dr	Base 2/Wearing 4 Asphalt Mix, Marshall	QA	2406546
C1N2312	2024034008	University Ave	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2313	2025087334	Knollwood Dr	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2315	2025080008	Dunlap Drive	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2316	2024034008	University Ave	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2317	2024034008	University Ave	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2318	2025087334	Knollwood Dr	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546
C1N2319	2025087334	Knollwood Dr	Base 2/Wearing 4 Asphalt Mix, Marshall	QC	2406546

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION
MATERIALS PROCEDURE

COMMERCIAL AND POTENTIAL SKID RESISTANT
AGGREGATE SOURCE APPROVAL PROCEDURES

1. PURPOSE

- 1.1 To provide a uniform procedure for the following:
 - 1.1.1 Approval of producers/suppliers of aggregates for the West Virginia Department of Transportation's Division of Highways (WVDOH) Approved Material Source/Product List.
 - 1.1.2 Monitoring of producers/supplier's ongoing compliance with the governing specifications for use of their products in WVDOH projects.

2. SCOPE

- 2.1 This procedure shall apply to any aggregate producers/suppliers intending on supplying aggregates to any WVDOH projects.

3. APPLICABLE DOCUMENTS

- 3.1 MP 106.00.02 Procedure for Evaluating Products for Use in Highway Construction
- 3.2 MP 700.00.01 Sampling and Testing of Materials at the Source

4. DEFINITIONS

- 4.1 Commercial Source List: WVDOH List of Approved Commercial and Potential Skid Resistant Aggregate Sources
- 4.2 Specifications – refers to the WV DOH Standard Specifications Roads and Bridges most current revision.
- 4.3 Section – refers to the Section of the WV DOH Standard Specifications Roads and Bridges most current revision.
- 4.4 Producer – An aggregate quarry who is actively producing aggregate.
- 4.5 Production – When a quarry is blasting Rock to be crushed
- 4.6 Crushing – When the quarry is crushing and separating the rock into particle size.

- 4.7 Full Quality – The full battery of aggregate tests which consists of but not limited to the following:
 - 4.7.1 Fine Aggregate
 - 1) Deleterious Substances – Section 702
 - 2) Soundness – Section 702.1.3
 - 3) Organic Impurities – Section 702.1.4
 - 4.7.2 Coarse Aggregate
 - 1) Deleterious Substances – Section 703.1
 - 2) Percent of Wear – Section 703.1.3
 - 3) Soundness – Section 703.1.4

5. CONSIDERATION FOR THE LIST OF COMMERCIAL AND POTENTIAL SKID RESISTANT AGGREGATE SOURCES LIST

- 5.1 If a producer of aggregates wants to be placed on the WV DOH Approved Commercial and Potential Skid Resistant Aggregate Source List and has had no previous dealings with WV DOH, they shall submit a HL-468 New Products Evaluation form to the Materials Control, Soils and Testing Division (MCS&T). The producer shall describe the type of stone they intend to sell, what type of aggregates they intend on supplying, when they intend on starting production and test results from an AASHTO accredited laboratory showing the aggregates to be supplied to WV DOH meet the Full Quality Specifications. The submission, upon review by MCS&T, will be forwarded to the nearest adjacent WV DOH District Materials Supervisor for notification purposes.
 - 5.1.1 Once the HL-468 and documentation have been reviewed by MCS&T for compliance with the Specifications the producer will be contacted to arrange an onsite visit of the production and crushing process. Records of manufacturing ,Core logs, Geological reports and any Historical data concerning the aggregate and test results signifying compliance with Specifications shall be available for review.
- 5.2 Independent testing data from an AASHTO accredited laboratory shall be evaluated by MCS&T to ensure compliance with the Full Quality Specifications. All data submitted shall be reviewed in the approval process and at the discretion of MCS&T may be included in the testing data compiled by MCS&T.
- 5.3 The new Producer shall demonstrate that they can produce an E-Ticket as defined in Section 109.20.1 of the Specifications. A sample ticket shall be provided to MCS&T
- 5.4 To be placed on the commercial source list test data from a minimum of 20 samples shall be tested and evaluated by MCS&T for compliance with the Full Quality Specifications. The 20 samples must be completed within a 12-month period.
 - 5.4.1 During the onsite visit MCS&T will take two samples to be tested for Full Quality. These samples will be one coarse and one fine aggregate sample. At this time MCS&T shall set up a sampling regimen to evaluate the material over the course of production.

- 5.4.2 The Sampling regimen shall be set up in such a manner to obtain samples from different production blasts to ensure the producer is able to consistently produce aggregate that meets Full Quality Specifications. MCS&T or a representative of MCS&T will visit the quarry for observation and sampling purposes. The producer shall give MCS&T a notice of 24 hours before blasting takes place for record keeping and sampling. (Full Quality samples will not be taken less than every 7th day of crushing.)
- 5.4.3 At their discretion, MCS&T may sample stockpiles with no more than 2000 Tons of material for Full Quality. If the material sampled meets the Specifications, the stockpile can be approved for use by WV DOH if no further material has been or will be added to the stockpile from the time of sampling. This data may be included in the required 20 sets of data for source approval at the discretion of MCS&T.
- 5.4.4 After 20 passing full quality samples results have been examined by MCS&T and it has been demonstrated the producer can consistently produce aggregate meeting the Full Quality Specifications the producer will be placed on the Commercial Source List.
- 5.4.5 After being placed on the Commercial Source List the Director of MCS&T shall notify the 10 District Material Supervisors, the Regional Construction Engineers, the Director of Contract Administration, shall be notified of addition of the new producer to the Approved Source List via electronic communication (i.e., email).

6. MAINTENANCE OF THE LIST OF COMMERCIAL AND POTENTIAL SKID RESISTANT AGGREGATE SOURCES

- 6.1 To remain on the WVDOH List of Approved Commercial and Potential Skid Resistant Aggregate Sources, the following criteria shall apply:
- 6.1.1 The Producer shall maintain aggregates in accordance with the Full Quality Specifications of Sections 702, 703, and 704. The producer shall permit random, intermittent sampling and testing for compliance with those Specifications by MCS&T or a representative of MCS&T. This testing will determine if the Producer's approved products meet the WVDOH Specifications. (see MP 106.00.03; Guidelines for Establishing and Maintaining Approved Lists of Materials and Sources, Section 6)
- 6.1.2 The random intermittent sampling and testing shall be done at a minimum rate of one sample of coarse and fine aggregate per year. The random samples will be collected at random times and dates according to the availability of MCS&T.
- 6.1.3 MCS&T or a representative of MCS&T will arrive at the scale house for check-in and onsite training as prescribed by the producer. The onsite representative shall be notified of MCS&T's presence. MCS&T will inform the onsite representative of the reason for the site visit. The onsite representative shall then escort MCS&T for the duration of the site visit.
- 6.1.4 If a Producer has not provided any material to the WVDOH over a period of 3 consecutive years from the same facility, that Facility will be removed from Commercial Sources List. If an inactive Producer re-establishes production and desires to regain admittance to the

Commercial Sources List, Section 5 of this MP shall apply.

**7. REMOVAL FROM LIST OF COMMERCIAL AND POTENTIAL SKID
RESISTANT AGGREGATE SOURCES**

- 7.1 In the event the Producer does not provide materials in compliance with Full Quality Specifications, the following actions shall be taken by the Producer and MCS&T, up to and including removal from the Commercial Sources List.
- 7.1.1 Upon testing of a random aggregate sampled by MCS&T or a representative of MCS&T for full quality from a producer, that fails to meet the minimum WV DOH Specification requirements, the test results and methods of testing shall then be reviewed for accuracy and precision. If no errors are found a second sample will be obtained from the producer.
- 7.1.2 The second field sample shall be obtained by MCS&T within ten working days from the test completion date of the first failing sample. At the time the second field sample is taken, MCS&T shall notify the onsite representative of the Producer in writing of the failing results from the initial field sample and supply the Producer's representative with a copy of the test results. The results from this sample will determine if further action is needed.
- 7.1.3 The second field samples obtained in Section 7.1.2 shall be tested for the failed Specification requirements of the first sample. If the second field sample does not meet the Specification requirements, MCS&T will contact the Producer representative by phone to inform them of the failing test results. An email will follow the phone call to include the failing test results of the second sample.
- 7.1.4 If the Producer has had zero failing test results over the last 3 years (not including the most recent two tests described in Sections 7.1.1 and 7.1.3), the producer will be suspended from supplying aggregate to the WVDOH till such time as a third sample can be obtained and tested for compliance with WVDOH Specifications.
- 7.1.5 If a third field sample shall be obtained by MCS&T it shall be within ten working days from the test completion date of the second failing sample. At the time the second field sample is taken, MCS&T shall notify the onsite representative of the Producer in writing of the failing results from the second field sample and supply the Producer's representative with a copy of the test results. At the time the third field sample is taken, MCS&T shall make a thorough evaluation of the producer's production site, crushing area, and stockpiles of aggregate. Core reports, and any testing performed on the producers material shall be available for review from the producer.
- 7.1.6 The third sample obtained in section 7.1.5 from the Producer by MCS&T shall be tested for the failed Specification requirements of the first two samples. If the third field sample does not meet the WV DOH Specification requirements the producer will be removed from the WVDOH List of Commercial and Potential Skid Resistant Aggregate Sources.
- 7.1.7 In the event the Producer does have failing results during the previous 3 years as

- described in Section 7.1.4, the facility will be contacted with the results and informed they have been removed from the Commercial Source List. Written communication of this removal will be sent to the facilities address on the facilities web page.
- 7.2 Communication of sample information shall be implemented as follows:
- 7.2.1 The Producer shall be notified of what aspect(s) of Full Quality samples did not meet Specification requirements, as prescribed in sections 7.1.2 and 7.1.5.
- 7.2.2 In the event a Producer is removed from the Commercial Source List, the Producer is no longer permitted to ship material to be used in any aspect of the WV DOH. This includes Asphalt and Concrete plants who supply material to WV DOH.
- 7.2.3 When a producer is removed from the Commercial Source List MCS&T shall notify the Producer, Deputy State Highway Engineer, Director of Contract Administration, Regional Construction Engineers, District 1-10 Engineers and Material Supervisors of what aspect(s) of the samples which did not meet Specification requirements via electronic communication (i.e., email).
- 7.3 The Producer of the material in question is then responsible for mitigating the deficiency and improving the production quality to comply with the Specifications to be reinstated to the Commercial Source List. Mitigation of substandard materials is not the responsibility of MCS&T; only the verification of the quality of material provided by the Producer shall be the responsibility of MCS&T.

**8. REINSTATEMENT TO THE LIST OF COMMERCIAL AND POTENTIAL
SKID RESISTANT AGGREGATE SOURCES**

- 8.1 The following procedure shall be used by a Producer desiring to return to the Commercial and Potential Skid Resistant source list:
- 8.2 The Producer shall supply three (3) passing test results with a minimum of five working days between each test. The test shall show the aggregate being produced meet the WV DOH Full Quality Specifications.
- 8.3 All sampling and testing performed in section 8.1.1 must be completed by an AASHTO re:source accredited laboratory. Once the passing tests have been reviewed and verified by MCS&T personnel, a sampling regimen will be implemented by MCS&T to resample the Producer.
- 8.3.1 The sampling regimen will consist of six (6) samples. The Sampling regimen shall be set up in such a manner to obtain samples from different production blasts to ensure the producer is able to once again consistently produce aggregate that meets Full Quality Specifications. MCS&T or a representative of MCS&T will visit the quarry for observation and sampling purposes. The producer shall give MCS&T a notice of 24 hours before blasting takes place for record keeping and sampling. (Full Quality samples will not be taken less than every 7th day of crushing.)

- 8.3.2 If the field samples in Section 8.1.3 all meet the Specification requirements, the Producer shall be notified of compliance, and they shall be reinstated on the WVDOH List of Commercial and Potential Skid Resistant Aggregate.
- 8.3.3 Once the Producer has been placed back on the approved source list a memorandum shall be sent from MCS&T to notify Producer, Deputy State Highway Engineer, Director of Contract Administration, Regional Construction Engineers, District 1-10 Engineers and Material Supervisors of the facilities reinstatement to the List of Commercial and Potential Skid Resistant Aggregate

9. DOCUMENTATION

- 9.1 All samples obtained by MCS&T shall be assigned a corresponding laboratory reference number for record keeping, ensuring proper access by MCS&T personnel to pertinent information regarding the materials provided by the Producers.
- 9.2 In the event of recurring failure to meet WVDOH Specifications, the following procedure shall be implemented:
- 9.2.1 A record of communication between the Division and the Producer's contact shall be retained for future reference, for no more than one year.
- 9.2.2 The sample (or samples) failing to meet Specification requirements shall be packaged and stored for later access by MCS&T personnel for future reference. Such samples will be stored for no longer than one year from the date the material was sampled. The sample containers shall display the lab reference number, the date on which the material was sampled, and the Specification requirements not met.

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