

## Materials Procedures Committee Regular Meeting

**Meeting Time/Date:** June 18th, 1:00 PM

**Meeting Location:** MCS&T (Conference Rm.) - 190 Dry Branch Drive, Charleston, WV 25306  
Charleston WV, 25301

**Online Meeting:** Google Meet Video Conference

Online Link - ( <https://meet.google.com/apa-rvti-ndx?authuser=0> )

Files Available on ProjectWise for DOT users – See Invite or Follow P/W path:

[WVDOH ORGS\MCS&T \(0077\) - FM\Materials Procedure Committee\MP Committee Meeting Files\2024\2024 06 18 MP Meeting](#)

Files Available on Webpage:

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

### Materials Procedures – Approved at Last Meeting

1. 109.00.21 - Basis For Charges for Non-Submittal of Sampling & Testing Documentation by The Established Deadline

### Materials Procedures - Old Business

\*Note – Going Forward MCS&T will be using either SI units or Combined English and SI Units. Guidelines are established in the pending updates to MP 100.00.00.

Number	Champion	Title	Description
1#- 106.00.02	Brayack	Procedure for Evaluating Products for Use in Highway Construction	Adds the ability to accept material for purchase order materials. Removes “No APL” letter.
2x- 106.10.51 Deferred to Next meeting	Brayack	WVDOH Buy America Waiver Guidelines	Splitting out from 106.10.50 due to length and complexity. Outlines waiver process for Buy America Materials. Pending incorporation of updates from FHWA
3x- 106.03.50 Deferred to Next meeting	Brayack	General Information Guide for Technician and Inspector Certification Program (TICP)	Updating board members, removing the Implementation Committee and removing the Attachment (incorporating into the MP itself). Pending comments from previous meeting.

### Materials Procedures – Editorial Edits

1#- 603.02.10	Guide For Approval of Component and Ship Loose Materials Pertaining to Precast and Prestressed Concrete Items	Replace NTPEP references with APEAS: AASHTO Product Evaluation and Audit Solutions
2#- 709.01.55	Criteria To Approve Plain Reinforcing Steel Bars Used in Concrete	Replace NTPEP references with APEAS: AASHTO Product Evaluation and Audit Solutions

3# 709.04.22	Acceptance Criteria for Steel Wire Reinforcement Used in Concrete	Replace NTPEP references with APEAS: AASHTO Product Evaluation and Audit Solutions
4# 711.00.22	Quality Assurance Testing of Coating Products Listed on WVDOH Approved Product Lists (APLs)	Replace NTPEP references with APEAS: AASHTO Product Evaluation and Audit Solutions
5# 712.04.50	Criteria To Approve Fabricators of Guardrail Beams, Steel Guardrail Posts and Hardware	Replace NTPEP references with APEAS: AASHTO Product Evaluation and Audit Solutions

**Materials Procedures - New Business with Significant or Process Updates**

1&- 717.04.21	Jack	Guide For Quality Control of Compaction	Table D - Lift Thickness Measurements
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**Note 1:** # Denotes this MP is up for Vote

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

**Comments**

Comments due June 17<sup>th</sup>, so the Champion may review and address them. Submit comments to Adam Nester ([Adam.W.Nester@wv.gov](mailto:Adam.W.Nester@wv.gov))

**Next Meeting**

**New or Updated MPs due to the MP Chair 2-weeks before the next meeting:** July 3<sup>rd</sup>

**Meeting Time/Date:** 10:00 AM, July 17, 2024

**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 2024:**

August 21, September 18, October 16

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

MATERIALS PROCEDURE

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PROCEDURE FOR EVALUATING PRODUCTS FOR USE  
IN HIGHWAY CONSTRUCTION

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**1. SCOPE**

1.1 New products are frequently presented to the Division by various manufacturers, suppliers and/or producers (MS&Ps) with a request that they be considered for use in our highway program. To facilitate handling of such requests in a uniform and expeditious manner, this Materials Procedure outlines the steps necessary for such product submittal and evaluation. This Procedure covers the addition of approved submitted products to the Division's Approved Product List (APL).

1.1.2 This Materials Procedure outlines the review of materials for use outside of standard bid contract work. This applies to District Purchase Order Projects and outlines a path for the addition of materials to the Division's Qualified Purchase Order Materials (QPOMs).

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**2. REFERENCE DOCUMENTS**

2.1 MP 106.00.03: Guidelines for Establishing and Maintaining Approved Product Lists of Materials, Systems and Sources.

2.2 MP 106.10.50: WVDOH Buy America Acceptance Guidelines.

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**3. DEFINITIONS**

3.1 MCS&T Reviewing Entity: The applicable Section Supervisor at MCS&T who is responsible for the review and acceptance of a new product.

3.2 Non-MCS&T Reviewing Entity: A subject matter expert at a WVDOH division separate from MCS&T.

3.3 Project: For this Materials Procedure, this term means a traditional bid contract.

3.4 APL: Approved Product List.

3.5 MS&Ps: Material Supplier and/or Producer.

3.6 QPOM: Qualified Purchase Order Material.

3.7 QPOS: Qualified Purchase Order Submittal.

3.23.8 PO Project: Purchase Order Project.

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**4. SUBMISSION OF PRODUCT**

4.1 Consideration for ~~new~~ product evaluation shall be requested through completion by the MS&Ps of WVDOH Form HL-468, "Preliminary Information for New Product

Evaluation”. Once completed, DOH Form HL-468 shall be submitted to the MCS&T) via email to the New Products Evaluation email address: [DOHNewProducts@wv.gov](mailto:DOHNewProducts@wv.gov).

4.1.1 The HL-468 Form can be found on the MCS&T Division’s Materials Procedures [Webpage](#)<sup>1</sup>. A sample of this form is shown in Attachment 1. An online form may also be used to meet this requirement.

4.2 ~~When submitting a product, the MS&P shall indicate whether the product is being submitted for either an APL or QPOM.~~

4.1.14.2.1 ~~If a MS&P wishes the product to be submitted for both the APL and QPOM, they must complete two separate HL-468s. These may be sent together.~~

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## 5. REVIEW OF SUBMITTED PRODUCT

5.1 Upon receipt of the completed Form HL-468, the MCS&T Division shall distribute to applicable MCS&T Reviewing Entity for preliminary evaluation.

5.1.1 Within 30 calendar days of receipt, the MCS&T Reviewing Entity shall review the submittal in accordance with the applicable material requirements and decide if the product is acceptable.

5.1.2 This MCS&T entity shall ultimately be responsible for ~~the approving the review~~ of the new product, though they may reach out to Non-MCS&T Reviewing Entities for additional approving criteria.

5.1.3 A Non-MCS&T Reviewing Entity shall be given 7 calendar days to review the submission before making a final decision. If the entity does not respond within that time, their affirmation for the approval will be assumed by the MCS&T Entity.

5.2 If the preliminary review indicates that additional information is needed, the MS&P shall be notified to submit additional information. This may include but not be limited to: samples, product specifications, certified test data, or product demonstrations. Product testing shall be coordinated by the MCS&T Division with the results of any further testing/evaluation being submitted to all appropriate evaluating parties. In the case where additional information has been requested or additional testing is required, the 30-day timeframe shall be reset to the date when the additional information is provided, or the testing has been completed.

5.3 If the MS&P fails to submit the request information within 30-days, the reviewing entity may reject the request. Discretion may be given if the information request requires testing or evaluation that would exceed this time frame.

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## 6. APPROVED PRODUCT LIST

6.1 If the ~~preliminary~~ review indicates that the product ~~meets the specifications, it may be accepted without further evaluation, the Product~~ shall be considered accepted and added to the APL. ~~The MS&P shall be notified via letter.~~

6.2 If the reviewing entity determines that the WVDOH does not currently have any specifications for the submitted product, ~~the WVDOH shall notify the MS&P via~~

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<sup>1</sup> <https://transportation.wv.gov/highways/mcst/Pages/MP-100s.aspx>

email that there is no specification; the MS&P may choose to submit the product for consideration as a QPOS (see Section 7.)

- 6.2.1 If the MS&P indicates that they do not wish to be considered a QPOS, a non-approval letter shall be sent.
- 6.2.2 If, after 14 calendar days, the MS&P does not respond to the email, a follow email shall be sent. If the MS&P does not respond after 7 days from the follow-up email, a non-approval letter will be issued.
- 6.2.3 If the MS&P indicates they wish the product to be evaluated as a QPOS, the original submission will be re-classified as a QPOS. The submission and review date will be reset to the email date from the MS&P.
- 6.2.3.1 For the purposes of performance tracking, the product will be considered a new submission. The previous submission shall be considered “completed” on the above mentioned email date and the final status be indicated as “reclassified”.
- 6.26.3 If the evaluation indicates that the product is not acceptable, the ~~Manufacturer/Supplier~~MS&P shall be notified by MCS&T via letter. The MS&P shall not submit the same product for evaluation ~~during the same calendar year~~within a six-month period.
- 6.4 In the instance where a product has significant approved usage, the Director (or their Designee) of MCS&T may add a product to either a new or existing APL as per MP 106.00.03. If a product is a candidate for being added to the APL in this manner, the MCS&T Lab Coordinator shall contact the MS&P prior to the addition of the product to the APL to request completion of the required HL-468.

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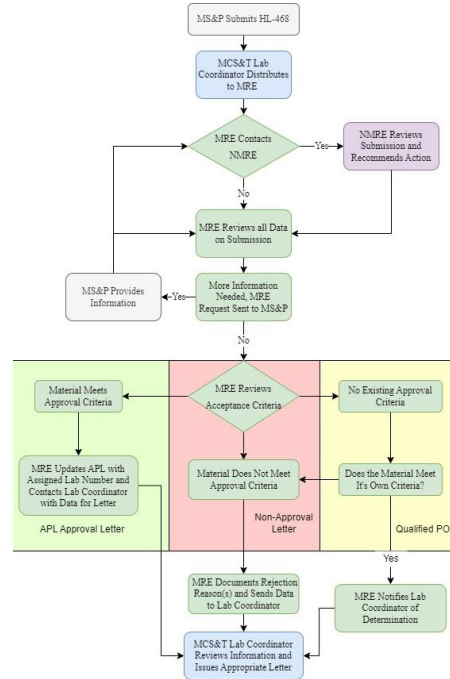
## 7. QUALIFIED PURCHASE ORDER MATERIALS

- 7.1 All products which appear on the Division’s APL are approved for use on PO Projects. Under no circumstances shall an approved QPOM be accepted on a project without further testing and approval.
- 7.2 The reviewing entity shall determine if the QPOS performs as specified by the manufacturer. If this product meets those criteria, a QPOM acceptance letter shall be issued.
- 6.37.3 If the evaluation indicates that the product is not acceptable, the MS&P shall be notified by MCS&T via letter. The MS&P shall not submit the same product for evaluation within a six-month period.

## 8. PROCESS FLOW CHART

6.48.1 A flow chart for the process is provided in Figure 1

Figure 1: Flow Chart for Approved Products List Process.



Key:

MRE: MCS&T Reviewing Entity  
NMRE: Non-MCS&T, WVDOH Reviewing Entity  
MS&P: Manufacturers, Suppliers and/or Producers

## 9. NOTIFICATION LETTERS

6.59.1 Sample language for submission responses is shown in Attachment 2.

## 7.10. DOCUMENTATION OF REVIEWED PRODUCTS

7.10.1 MCS&T shall maintain a directory on the [Division's APL Webpage](#)<sup>2</sup> listing all the current approved products.

10.1.1 Additionally, MCS&T may evaluate the product listing after one year to determine if the performance or functionality of the product/process meets the desired results, goals, or intentions of the DOH. Any such evaluation may result in the product being removed from the **Approved Product List** APL.

<sup>2</sup> [https://transportation.wv.gov/highways/mcst/Pages/APL\\_By\\_Number.aspx](https://transportation.wv.gov/highways/mcst/Pages/APL_By_Number.aspx)

10.2 MCS&T shall maintain a directory on the Division's QPOM Webpage<sup>3</sup> listing all products in this category.

10.2.1 Additionally, MCS&T may evaluate the QPOM listing after one year to determine if the performance or functionality of the product/process meets the desired results, goals, or intentions of the DOH. Any such evaluation may result in the product being removed from the list.

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8.11. **REMOVAL OF PRODUCTS FROM APL OR QPOM**

8.11.1 If, at any time the reviewing entity determines that a previously approved product no longer meets the specifications, the product shall be removed from the ~~MCS&T approved product~~respective list.

8.211.2 In this instance, the reviewing entity shall notify the MS&P via letter.

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9.12. **BUY AMERICA**

9.12.1 Each HL-468 submission must include whether the product meets the Federal and State Buy America requirements of Section 106.1 of the Specifications. If the MS&P indicates that their product meets Buy America requirements, the company shall produce a notarized Certificate of Compliance (CoC) signed by a company official with knowledge and authority to certify the product is compliant with applicable Buy America requirements.

9.1.12.1.1 In the event where the source of materials is changed and is no longer Buy America compliant, the MS&P must notify MCS&T in writing.

9.1.212.1.2 Under no circumstance shall the CoC described above be used for Buy America compliance on a project. Each project must submit a CoC as described in MP 106.10.50 "WVDOH Buy America Acceptance Guidelines."

9.212.2 A notarized CoC shall contain the following information:

9.2.12.2.1 Title: Certification of Buy America compliance for Source Approval.

9.2.212.2.2 The Name, Address and Contact Information for the Company.

9.2.312.2.3 The date of the application

9.2.412.2.4 A company statement that demonstrates compliance with Buy America.

9.2.512.2.5 The name of the material and/or material code reference in the CoC. This material name shall be a clear, common name of the material that is comparable to the AWP Material Name<sup>4</sup>. Part Numbers etc. may also be on the document if the company wishes.

9.2.612.2.6 Signature of the Company Official and date.

9.312.3 The document must be notarized.

9.412.4 A sample of this CoC document is provided in Attachment 3.

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<sup>3</sup> [https://transportation.wv.gov/highways/mcst/Pages/APL\\_By\\_Number.aspx](https://transportation.wv.gov/highways/mcst/Pages/APL_By_Number.aspx)

<sup>4</sup> See "AWP Material Codes" at <https://transportation.wv.gov/highways/mcst/Pages/tbox.aspx>

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

MP 106.00.02 Steward – Lab Support Section

RLSMM:B

ATTACHMENTS



ATTACHMENT 1 - SAMPLE HL-468 FORM

FOR COMMITTEE SHOWN AFTER ATTACHMENT 2

## Attachment 2: Sample APL Response Language

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**1. APL APPROVAL RESPONSE**

West Virginia Division of Highways (WVDOH) Laboratory Approval Numbers 2XXXXXX has been issued to your company <Name of Company>, for the above-mentioned product. The approval number, effective Date Month Day, 20XX, must appear on all shipping documentation for said product supplied to the Division of Highways projects.

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**2. NO APL RESPONSE:**

The West Virginia Division of Highways (WVDOH) has evaluated your submittal of <Product Name>, <Product Material> as per Materials Procedure MP 106.00.02. This Division is not approving your material at this time for the Approved Product List; the WVDOH does not currently have a Specification or Materials Procedure which applies to your product.

This material may be evaluated for the Division’s Quality Purchase Order Material List as specified in MP 106.00.02.

The inclusion of the material into a contract project’s designs does not rest with this Division, though it may be specified at the discretion of WVDOH Designers or requested to be used by Contractors. If a contractor would propose to use it on a WVDOH project, or if the product is specified in Contract Documents, this product may be used, pending an individual evaluation on that project.

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**3. NON-APPROVAL RESPONSE (APL)**

This material was submitted to the West Virginia Division of Highways for consideration in accordance with Materials Procedure 106.00.02.

This letter is to notify you that the Division has elected to not approve this product currently. As per Section <XXX> of the Standard Specifications Roads and Bridges, “<Description of Non-Approval Reason>.”

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**4. OPOM ACCEPTANCE**

The West Virginia Division of Highways (WVDOH) has evaluated your submittal of <Product Name>, <Product Material> as per Materials Procedure MP 106.00.02.

West Virginia Division of Highways (WVDOH) Laboratory Approval Numbers Q2XXXXXX has been issued to your company <Name of Company>, for the above-mentioned product. This number, effective Date

Month Day, 20XX, must appear on all shipping documentation for said product.

This product has been evaluated and meets the provided criteria. This material has been added to the Qualified Purchase Order Material List, which is available on the Division's Webpage. This material has not been added to the Division's Approved Product List.

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**5. NON-APPROVAL RESPONSE (QPOM)**

This material was submitted to the West Virginia Division of Highways for consideration in accordance with Materials Procedure 106.00.02.

This letter is to notify you that the Division has elected to not approve this product currently. As per the provided criteria, this material <description of failure>.”

ATTACHMENT 3: SAMPLE COMPLIANCE FORM  
**Certification of Buy America, Build America Compliance  
For Source Approval**

Acme Manufacturing Company  
123 Main Street  
Charleston, WV  
25302

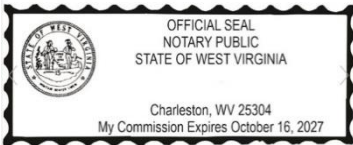
**HL 468 Submission Date:** 10/31/2022

The below listed materials and products meets all the requirements of all Federal and State Laws for Buy America, including but not limited to: Chapter 5, Article 19 and Chapter 5A, Article 3 Section 56 of the West Virginia Code; 23 U.S.C. 313 Buy America, 23 CFR 635.410 Buy America Requirements, and Build America, Buy America Act, Section 70914.

**This Certification of Compliance is for the material listed below:**

- 526.003.004 - Widget, Part Qi
- 596.003.004 - Widget, Part Hr

\_\_\_\_\_  
Jonathan Doe, Quality Assurance Manager



WVDOH Use Only

Reviewed by:                      Reviewed Date:                      Status:

WEST VIRGINIA DIVISION OF HIGHWAYS  
PRELIMINARY INFORMATION FOR TECHNOLOGY/PRODUCT EVALUATION

1 TRADE NAME \_\_\_\_\_

MANUFACTURER \_\_\_\_\_

ADDRESS \_\_\_\_\_ APPLIED FOR? \_\_\_\_\_  
City State Zip

2 REPRESENTATIVE \_\_\_\_\_

ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_  
City State Zip

3 PRODUCT CATEGORY \_\_\_\_\_

4 EXISTING MATERIAL CODE: \_\_\_\_\_

5 BUY AMERICA BUILD AMERICA COMPLIANT? \_\_\_\_\_ NO \_\_\_\_\_ YES

5A IF 5 IS YES, SIGNED AND NOTARIZED CERTIFICATE OF COMPLIANCE  
PROVIDED IN ACCORDANCE WITH MP 106.00.02 \_\_\_\_\_ YES

6 RECOMMENDED USE - PRIMARY

7 RECOMMENDED USE - ALTERNATE

8 ANY KNOWN OR PROBABLE ADVERSE AFFECT ON PRESENTLY USED OR  
INSTALLED MATERIALS, STRUCTURES OR EQUIPMENT

9 PLAN DRAWING, PICTURE, OR SKETCH FURNISHED BY MANUFACTURER?  
\_\_\_\_\_ YES \_\_\_\_\_ NO

10 MEETS REQUIREMENTS OF FOLLOWING SPECIFICATIONS

           <-AASHTO                      <-ASTM                      <-FHWA                      <-OTHER

11 APPROVED FOR PROPOSED USE BY HIGHWAY AUTHORITIES OR OTHER AGENCIES IN THE FOLLOWING STATES

\_\_\_\_\_

12 ARE INSTRUCTIONS OR DIRECTIONS FOR INSTALLATION, APPLICATION OR USE AVAILABLE?

           YES                                 NO  
COPY ATTACHED:            YES                                 NO

13 WILL DEMONSTRATION BE PROVIDED? \_\_\_\_\_

14 ARE EDUCATIONAL COURSES OR VIDEOS AVAILABLE?            YES                                 NO

15 AVAILABILITY                      SEASONAL                                 NON-SEASONAL  
DELIVERY AT SITE                                

AFTER RECEIPT OF ORDER.  
ARE QUANTITIES LIMITED?            YES                                 NO

16 WILL FREE SAMPLE BE FURNISHED?            YES                                 NO

17 NEW MARKET?            YES                                 NO

ALTERNATE FOR WHICH EXISTING PRODUCT? \_\_\_\_\_

18 IS PRODUCT GUARANTEED?            YES                                 NO

CONDITIONS?

19 BACKGROUND DESCRIPTION OF COMPANY AND ITS PRODUCT

20 ADDITIONAL INFORMATION

PAGE 3 OF 3

21 THE FOREGOING INFORMATION IS FURNISHED BY

NAME/TITLE: \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_

EMAIL COMPLETED FORMS TO:

[DOHNewProducts@wv.gov](mailto:DOHNewProducts@wv.gov)

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

MATERIALS PROCEDURE

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WVDOH BUY AMERICA WAIVER GUIDELINES

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**1. PURPOSE**

1.1 To set forth instructions for Waivers for Buy America Materials.

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**2. REFERENCED DOCUMENTS**

- 2.1 PUBLIC LAW 117–58—NOV. 15, 2021, Infrastructure Investment and Jobs Act.
- 2.2 23 U.S.C. 313 and 23 CFR 635.410 Buy America Requirements.
- 2.3 Build America, Buy America Act (BABA).
- 2.4 2 CFR part 184 Buy America Preferences for Infrastructure Projects.
- 2.5 M-22-11 Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure.
- 2.6 M-24-02 Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure.
- 2.7 Chapter 5, Article 19 and Chapter 5A, Article 3, Section 56 of the West Virginia Code, entitled “West Virginia American Steel Act of 2001.”
- 2.8 MP 106.10.50 – WVDOH Buy America Acceptance Guidelines.
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**3. OVERVIEW OF BUY AMERICA WAIVERS**

- 3.1 In certain circumstances, waivers may be applied to materials exempting them from both Federal and State Buy America requirements.
- 3.2 For each type of material as described in MP 106.10.50, a separate process is described.
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**4. BUY AMERICA WAIVERS AND EXCEPTIONS FOR STEEL AND IRON**

4.1 Both Federal and State laws require waivers for Buy America. These waivers are independent of each other. Compliance and acceptance of one waiver does not in any way shape or form demonstrate compliance with the other waiver.

4.1.1 As provided for in 23 CFR 635.410(c)(1), WVDOH may request a waiver from Federal Buy America requirements for steel and iron materials if:

(1) the application of Buy America requirements would be inconsistent with the public interest; or

(2) steel and iron materials/products are not produced in the United States in sufficient and reasonably available quantities which are of a satisfactory quality.

4.2 Federal Minimal Use Waiver: Steel and Iron Materials.



4.2.1 As provided for in 23 CFR 635.410(b)(4), an exception from Federal Buy America requirements exists for the minimal use of steel and iron materials “if the cost of such materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. For the purposes of this paragraph, the cost is that shown to be the value of the steel and iron products as they are delivered to the project”.

~~4.2.2 Authority for determining applicability and issuance of a minimal use exception for steel and iron materials has been delegated to the West Virginia Department of Transportation through its Stewardship and Oversight Agreement with the FHWA West Virginia Division Office.~~

~~4.2.3 Procedure for granting a minimal use exception from Federal Buy America requirements for the minimal use of steel and iron materials:~~

~~4.2.3.1 The Contractor shall submit a letter to the District Construction Engineer requesting a minimal use exception for the use of foreign steel or iron materials. The letter shall demonstrate that the cost of the foreign steel or iron materials to be incorporated into the project do not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. Attached to the letter shall be documentation (e.g., invoices) which demonstrates that the cost of the foreign steel or iron materials requested to be used is the cost of the materials as they are delivered to the project.~~

~~4.2.3.2 If the District Construction Engineer determines a minimal use exception is applicable and appropriate, they will respond to the Contractor via letter granting a minimal use exception.~~

~~4.2.3.3 All documentation related to the granting of a minimal use exception shall be maintained in the project files.~~

4.3 State Minimal Use Waiver: Steel Products.

4.3.1 As provided for in Chapter 5A, Article 3 Section 56 of the West Virginia Code, an exception from West Virginia domestic steel preference requirements exists for the minimal use of foreign steel products, when authorized in writing by the director of Purchasing Division, if “The cost for each contract item used does not exceed one tenth of one percent of the total contract cost or \$2,500, whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project.”

4.3.2 Procedure for granting a minimal use exception from West Virginia domestic steel requirements:

4.3.2.1 The Contractor shall submit a letter to the District Construction Engineer requesting a minimal use exception for the use of foreign steel products. The letter shall demonstrate that the cost of the foreign steel products to be incorporated into the project do not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. Attached to the letter shall be documentation (e.g., invoices) which demonstrates that the cost of the foreign steel products requested to be used is the cost of the materials as they are delivered to the project.

4.3.2.2 If the District Construction Engineer determines a minimal use exception is applicable and appropriate, they will draft a letter to the director of Purchasing

Division requesting the minimal use exception. The letter shall demonstrate that the cost of the foreign steel products to be incorporated into the project does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. Attached to the letter shall be documentation (e.g., invoices) which demonstrates that the cost of the foreign steel products requested to be used is the cost of the materials as they are delivered to the project.

- 4.3.2.3 If approved by the director of Purchasing Division, the District Construction Engineer will respond to the Contractor via letter granting a minimal use exception.
- 4.3.2.4 All documentation related to the granting of a minimal use exception shall be maintained in the project files.

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**5. BUY AMERICA WAIVERS AND EXCEPTIONS FOR MANUFACTURED PRODUCTS**

- 5.1 There is a long-standing, historic waiver for Manufactured Products.
- 5.2 There are currently no additional exceptions for Federal Buy America Requirements for Manufactured Products.

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**6. BUY AMERICA WAIVERS AND EXCEPTIONS FOR CONSTRUCTION MATERIALS.**

- 6.1 There are currently no additional exceptions for Federal Buy America Requirements for Construction Materials.

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**7. BUY AMERICA WAIVERS**

- 7.1 Pursuant to Section 70914(b) of BABA and 2 CFR 184.7, the head of a Federal agency may waive the application of a Buy America preference under an infrastructure program in any case in which the head of the Federal agency finds that:
  - 1. Applying the Buy America preference would be inconsistent with the public interest (a “public interest waiver”);
  - 2. Types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (a “nonavailability waiver”); or
  - 3. The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent (an “unreasonable cost waiver”).

7.2 Federal agencies are responsible for processing and approving all waivers, including waivers requested by recipients and on behalf of subrecipients consistent with the procedures in 2 CFR 184.7. Every waiver must be reviewed by the OMB’s Made in America Office (MIAO). To the greatest extent practicable, waivers should be targeted to specific products and projects.16

7.3 Before issuing a final waiver, the Federal awarding agency must make the proposed waiver and the detailed written explanation publicly available in an easily accessible location on a website designated by the Federal awarding agency and OMB. The

Federal agency must also provide a period of not less than 15 calendar days for public comment on the proposed waiver.

7.3.1 General applicability waivers are subject to a minimum 30-day public comment period when reviewed for modification or renewal.18 The MIAO may request that Federal agencies use a 30-day comment period for other waivers on a case-by-case basis when circumstances warrant.

7.27.4 Federal Agencies are required to provide the website address where they will be posting proposed waivers for public comment to OMB at MBX.OMB.MadeInAmerica@omb.eop.gov.

7.3

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Ronald L. Stanevich, P.E.  
Director  
Materials Control, Soils & Testing Division

MP 106.10.51 Steward – Materials Control Section  
RLS:B

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

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

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**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 embankments, subgrades, base course, asphalt and Portland cement concrete by the certification of industry and WVDOH. This procedure is to establish guidelines for this purpose.
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**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.
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**3. SCOPE**

- 3.1 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.
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**4. POLICIES AND ADMINISTRATION**

- 4.1 ~~Board of Certification~~ Board - The Certification Program will be carried out in accordance with general policy guidelines established or approved by the Chief Engineer. They will be advised by a Board composed of the following members:

1. Chief Engineer
2. ~~Human Resources Director~~ Deputy General Counsel
3. Materials Control Soils and Testing (MCS&T)'s Director
4. Quality Assurance Training Program Administrator
5. Applicable MCS&T Supervisors

- 4.1.1 The Certification Board will meet upon call of the MCS&T's Director.

~~4.2 Administration - The program will be administered by the Director of the MCS&T (hereafter referred to as "Director"), or their Designee. The Director will have the assistance of an Implementation Committee appointed by the Chief Engineer as follows:~~

~~4.3 Quality Assurance Training Program Administrator~~

~~4.4 Applicable MCS&T Supervisors~~

~~4.5 A representative of the WVD OH Human Resources Division.~~

~~4.5.1 In addition, the Certification Board may jointly select representatives of producers and contractors to work with the Implementation Committee at such times and on such matters as the Director and the representatives mutually agree. These representatives shall not be candidates for certification.~~

~~4.5.2 The Implementation Committee will meet upon call of the Director, or person authorized by the Director. The board shall have a minimum of three (3) members in order to form a quorum for a meeting.~~

~~4.5.34.1.2 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 WVD OH directives.~~

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## 5. REQUIREMENTS

5.1 Where applicable, quality control representatives of a contractor or producer will be certified in one (or more) of the certifications listed in ~~Section 6.0 below~~, depending upon the individual's duties or responsibilities. Responsibilities and qualification requirements are listed in appropriate support documents such as Materials Procedures, Quality Control Plans and others.

5.2 For purposes of the WVD OH Quality Assurance Program, a non- WVD OH certified technician/Inspector represents the company of which he/she is a full-time employee on the WVD OH 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 Chief Engineer makes an exception. Exceptions will be granted only when it can be proven that the certified Technician/Inspector actually performs the duties of the technician/inspector for all of the subsidiary or affiliated organizations.

5.3 Designated WVD OH personnel will be certified where applicable in one (or more) of the certifications listed in ~~Section 6.0 in this document~~ depending upon the individual's duties and responsibilities.

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## 6. CERTIFICATION CLASSES

6.1 The TICP offers certification classes in the following disciplines:

1. Aggregate Technician
2. Aggregate Sampling Inspector
3. Soils & Aggregate Compaction Technician
4. Portland Cement Concrete Technician
5. Portland Cement Concrete Inspector
6. Asphalt Plant Technician
7. Asphalt Field Technician
8. Asphalt Field & Compaction Technician
9. Radiation safety

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

5.46.2 All certifications listed in the sections below require written examinations. Some of the listed certifications require a practical examination after successful completion of the written examination. It is the responsibility of the applicant to determine which certification is applicable to his/her/their assignment. Following is a description of the certifications listing relevant information about each:

5.56.3 Aggregate Certifications

5.5.16.3.1 Aggregate Sampling Inspector - 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. Gradations
5. T11 Wash Test

5.66.4 The Aggregate Sampling Inspector requires the successful completion of an online examination. Certification as an Aggregate Sampling Inspector qualifies the employee, either Industry or Division, to perform sampling of aggregates relevant to the Quality Control Program or Acceptance Program respectively.

5.6.16.4.1 Aggregate Technician - 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

5.6.26.4.2 After successful completion of the written examination, the applicant will be required to pass a practical examination consisting of his/her/their demonstration of testing common to normal aggregate quality requirements. Certification as an Aggregate Inspector qualifies the employee, either Industry or Division, to perform sampling

and/or testing of aggregates relevant to the Quality Control Program or Acceptance Program respectively.

5.76.5 Compaction Certifications

5.7.16.5.1 Soils and Aggregate Compaction Inspector - The written examination for this class ~~Soils and Aggregate Compaction Inspector~~ consists of the following areas:

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

5.7.26.5.2 After successful completion of the written examination, the applicant will be required to pass a practical examination demonstrating his/her/their proficiency in using the testing equipment. Certification of the Soils and Aggregate Compaction Inspector qualifies the employee, either Industry or Division, to conduct tests on all Soil and Aggregate construction materials that require compaction testing.

5.86.6 Concrete Certifications

5.8.16.6.1 Concrete Technician - The written examination this class for a Concrete Technician consists of the following areas:

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

5.8.26.6.2 The Concrete Technician requires only the successful completion of the written examination; no practical examination test is required. Certification of the Concrete Technician qualifies the employee, either Industry or Division, to make plant and mix adjustments, proportioning, and other duties.

5.8.36.6.3 Concrete Inspector - The written examination for this class a Concrete Inspector consists of the following areas:

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

6.6.4 After successful completion of the written examination, the applicant will be required to pass a practical examination demonstrating his/her/their proficiency in conducting tests common to concrete quality control. Certification as a Concrete Inspector qualifies the employee, either Industry or Division, to perform sampling and/or testing of concrete relevant to the Quality Control Program or Acceptance Program respectively.

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

pass the online West Virginia PCC Inspector written certification test before a certification will be issued.

5.96.7 Asphalt Mixture Certifications

5.9.16.7.1 Asphalt Plant Technician - The written examination for ~~an Asphalt Plant Technician~~this class consists of the following areas:

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

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

6.7.3 Asphalt Field Technician (AFT) Asphalt Field Technician – The written examination for an Asphalt Field Technician. This class consists of the following areas:

1. Specifications
2. Surface Preparation
3. Mix Delivery and Placement
4. Joint Construction
5. Asphalt Compaction
6. PWL
7. Troubleshooting

6.7.4 Successful completion of the written examination is required. Certification as an Asphalt Field Technician qualifies the employee, either Industry or Division, 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.

5.9.36.7.5 Asphalt Field and Compaction Technician (AFCT) Asphalt Field Technician – The written examination for an Asphalt Field Technicianthis class consists of the following areas:

1. Specifications
2. Surface Preparation
3. Mix Delivery and Placement
4. Joint Construction
5. PWL



- 8. Troubleshooting
- 9. Compaction Test Procedures
- 10. Radiation Safety and Nuclear Gauge
- 11. Test Procedure Problems
- 12. Testing Forms

- ~~1. Specifications~~
- ~~2. Surface Preparation~~
- ~~3. Mix Delivery and Placement~~
- ~~4. Joint Construction~~
- ~~5. PWL~~
- ~~6. Asphalt Compaction~~

~~5.9.46.7.6~~ Successful completion of the written examination and a practical examination test is required. Certification as an Asphalt Field [and Compaction](#) Technician qualifies the employee, either Industry or Division, 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.

~~5.9.4.1~~ Asphalt Field [and Compaction](#) Technicians must also be evaluated by qualified District personnel on the first WVDOH paving project in which they perform this testing. The District personnel will make the decision as to whether or not the technician is correctly conducting the nuclear density tests in accordance with the Specifications. The District will also complete an evaluation form and send it to the MCS&T for processing. A technician that does not demonstrate proper nuclear density testing techniques shall not be allowed to continue testing on the WVDOH project. They must be replaced by another qualified technician. Anyone who does not meet the evaluation standards must provide proof of additional WVDOH approved radiation safety training before another evaluation will be conducted.

~~5.9.56.7.7~~ Inertial Profiler Operator- The written examination for the inertial profiler operator covers of the following areas:

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

~~5.9.66.7.8~~ This certification covers an employee of either a contractor, consultant, or DOH staff to operate a lightweight/low-speed and high-speed inertial profiler.

~~5.106.8~~ Radiation Safety

~~5.10.16.8.1~~ 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 for passing the course. The course and exam will cover the following areas:

1. Proper storage and security of portable nuclear gauges

2. Transportation of portable nuclear gauges
3. Personal safety while operating a portable nuclear gauge.

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## 7. TESTING PROTOCOL

### 7.1 TESTING PROTOCOL

7.1.1 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.

### 7.2 CLASS SUPPLY LIST

7.2.1 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.<sup>1</sup>
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

5.11.7.3 Special needs and requests:

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

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## 8. CERTIFICATION AND RE-CERTIFICATION

### 8.1 Certification

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

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

8.1.3 Upon successfully completing the requirements for certification, applicants may print their certification card from the divisions Webpage. <http://dotftp.wv.gov/materialsdir/>

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<sup>1</sup> <https://transportation.wv.gov/highways/contractadmin/specifications/Pages/default.aspx>

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

8.2 Re-Certification

8.2.1 The responsibility for obtaining re-certification shall lie with the certified individual.

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

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

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

8.2.4 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.

8.2.5 The certification holder is responsible updating their personal information on the online learning website<sup>2</sup>.

8.2.6 If an applicant seeking recertification disagrees with a recertification decision, they may file a written appeal with the board.

8.3 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.

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**9. RECIPROCAL CERTIFICATIONS**

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

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**6.10. TRAINING**

6.10.1 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.

6.210.2 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

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<sup>2</sup> <http://www.onlinelearning.wv.gov/student/home.html>

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.

## 7.11. EXAMINATIONS

- 7.1 — ~~Examinations, both written and practical, will be coordinated by MCS&T. The locations and dates of the examinations will be announced on the MCS&T's Webpage<sup>3</sup>. The examinations may be held on a regional basis when feasible. Most written examinations will be an "open book" type, with a time limit. Practical examinations require performance of the tests required by the Specifications for the material type involved.~~
- 7.2 — ~~To pass the written examinations, the applicant must obtain a score of at least 70 percent. The Inertial Profiler Operator exam requires a minimum of 75 percent to pass. The applicant will be allowed two attempts within a 12-month period to obtain a passing score per each certification class attended.~~
- 7.3 — ~~After the applicant passes the written examination, the applicant will have two attempts within a 12-month period to pass the practical exam. (Where applicable)~~
- 7.4 — ~~Certificate Non-Transferable — The status of the certification for a Technician or an Inspector is not transferable and is valid only for the quality control procedures designated by the bearer's certificate.~~
- 7.5 — ~~Revocation of Certificate — 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 invalid by the Chief Engineer upon recommendation of the Implementation Committee and/or the Board.~~
- 7.611.1 ~~Renewal and Certification — Certifications shall be renewed as required in the Technician Inspector Certification Program (TICP) handbook~~this document. General guidance and information for renewal will be recommended by the Board as required by the Chief Engineer. All certifications shall terminate on December 31st of the year of expiration. There may be written, and practical examination required for recertification where applicable. ~~More recertification information can be found in the Technician Inspector Certification Program (TICP) handbook available on the MCS&T's Webpage.~~
- 7.6.1 — ~~The Implementation Committee or other designated party shall establish internal criteria for renewal. The Technician Certification Handbook with the current rules and requirements shall be posted on the MCS&T's Webpage.~~
- 7.6.211.1.1 ~~Upon obtaining renewal of certification, a renewal card may be printed from the~~MCS&T Webpage.
- 7.711.2 ~~For further information on classes, recertification, schedules, class calendars and other helpful information please visit the~~MCS&T's Webpage.

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<sup>3</sup>~~<http://transportation.wv.gov/highways/mest/Pages/teeheert.aspx>~~

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## 8.12. FUNCTIONS AND RESPONSIBILITIES

~~8.12.1~~ Contractor or Producer - The producer and contractor will be responsible for product control of all materials during the handling, blending, and mixing operations. The contractor and producer also will be responsible for the formulation of a design mix that will be submitted to the Division for approval.

~~8.1.12.1.1~~ Technician/Inspector - A Quality Control representative of a contractor or producer should be a certified Technician/Inspector as outlined in Section 5. and whose responsibilities may include such duties as proportioning and adjusting the mix, sampling and testing the product, and preparing control charts.

~~8.2.12.2~~ The WVDOH - The WVDOH is responsible for all acceptance decisions.

~~8.2.12.2.1~~ District Materials Supervisor - District Materials activities are the responsibility of the District Materials Supervisor.

~~12.2.2~~ Division Technicians and Inspectors – The WVDOH Technicians and Inspectors will be assigned as necessary to carry out the required acceptance decision activities. The WVDOH representatives will not issue instructions to the contractor or producer regarding process control activities. However, the WVDOH representatives have the responsibility to question, and where necessary to reject, any operation or sequence of operations, which are not performed in accordance with the contract documents.

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## 9.13. REVOCATION OF CERTIFICATION

~~13.1~~ 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 invalid by the Chief Engineer upon recommendation of the Board.

~~9.1~~ The Certification Board grants certification upon satisfactory completion and maintenance of certain conditions and may be revoked upon any breach of these conditions.

~~9.2.13.2~~ 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.

**Commented [DB2]:** SJ - What does this mean? What are they referring?

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

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**14. APPEALING A DECISION**

14.1 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.

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

14.3 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 Chief Engineer for review. All information including any letter(s) of explanation from the appellant will accompany the documents submitted to the Chief Engineer. The board will mail the decision of the Chief Engineer to the appellant. The decision by the Chief Engineer is final.

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**15. THE LENGTH OF REVOCATION:**

15.1 First Offense

15.1.1 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.

15.2 Second Offense

15.2.1 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.

15.3 Third Offense

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

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**16. CONTACT INFORMATION**

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

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Ronald L. Stanevich, PE  
Director  
Materials Control, Soils & Testing Division

MP 106.03.50 Steward – Personnel, Payroll Section  
RLS:Eh  
**ATTACHMENT**

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

MATERIALS PROCEDURE

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GUIDE FOR APPROVAL OF COMPONENT AND SHIP LOOSE MATERIALS PERTAINING  
TO PRECAST AND PRESTRESSED CONCRETE ITEMS

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**1. PURPOSE**

- 1.1. To set forth the procedures for the approval of component materials used in the fabrication of precast and prestressed concrete items and ship loose materials incidental to precast and prestressed concrete items.
- 1.2. Ship loose materials are defined as the loose materials that are used in conjunction with various precast or prestressed concrete items. These ship loose materials are normally paid for under the same bid item number as the primary precast or prestressed concrete item.
  - 1.1.1 Materials such as (but not limited to) metal soil reinforcing devices, metal attachment devices, bearing pads, shims, and geotextile fabrics that are used for prestressed concrete beams, and retaining wall systems are classified as ship loose materials.

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**2. SCOPE**

- 2.1. This procedure will apply to all precast concrete fabricators and prestressed concrete fabricators that supply material for use on West Virginia Division of Highways projects. It shall also apply to suppliers of any other precast concrete items (such as retaining wall system suppliers), which require the use of ship loose materials.

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**2. ~~REFERENCED DOCUMENTS~~ DEFINITIONS**

- 2.1 ~~Current WVDOH Standard & Supplemental Specifications~~ APEAS: AASHTO Product Evaluation and Audit Solutions<sup>1</sup>

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**3. SAMPLING**

- 3.1. Approved Sources
  - 3.1.1. With the exception of coarse and fine aggregate, component materials obtained from a West Virginia Division of Highways approved source and component materials pre-tested at the source in a manner set forth in MP 700.00.01 (or other established procedures) may be used at the precast, or prestressed concrete fabricator without further sampling and testing.

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<sup>1</sup> <https://transportation.org/product-evaluation-and-audit-solutions/>



- 3.1.1.1. Any ship loose materials that are obtained from an approved source will not require any further sampling or testing. However, the approved source laboratory number shall be listed on all shipping documents related to that material.
- 3.1.2. All component materials that are not obtained from a Division approved source or otherwise pre-approved shall be sampled at the precast or prestressed concrete fabricator and subsequently tested. Ship loose materials that are not obtained from a Division approved source may be sampled at a variety of locations (material fabricator, precast concrete fabricator, material distributor, or whichever location is most convenient), but they must be sampled, tested, and approved prior to shipment to the project. All materials must meet the requirements of the appropriate section of the Specifications.
  - 3.1.2.1. Certain ship loose materials may, at the discretion of MCS&T Division, be accepted based on certification rather than sampling and testing.
- 3.1.3. When AASHTO M 6 is the applicable specification for fine aggregate, natural sand shall meet the requirements of Class A with respect to material finer than the No. 200 (75  $\mu$ m) sieve. Natural sand shall meet the remainder of the Class B requirements. All other fine aggregate types shall meet all of the requirements of Class B.
- 3.1.4. Mixing water for precast concrete items shall be tested in accordance with the requirements of Section 715.7 of the Specifications.
- 3.2. Frequency of Sampling
  - 3.2.1. Aggregates (both coarse and fine) and other component and ship loose materials not obtained from a Division approved source will be sampled by the Division, at the fabricator (or other location as noted in Section 3.1.2), as shown in Table 1.

TABLE 1

<u>Material</u>	<u>Sampling Frequency</u>	<u>Sample Size</u>
Cement	Semi-Annually	10 lb.
Pozzolanic Additives	Semi-Annually	4 lb.
Fine Aggregate	Semi-Annually	25 lb.
Coarse Aggregate	Semi-Annually	110 lb.
Mixing Water	Semi-Annually	1 quart
Reinforcing Steel		
Epoxy	Annually	5 ft
Black Bar	N/A (Accepted on <del>NTPEP</del> <u>AASHTO PEAS</u> Compliance)	NA
Prestressing Steel	Only Sampled at the Source	N/A
Hot-Poured Elastic Type	Only Sampled at the Source	N/A
Concrete Joint Sealer		
Preformed Expansion	Only Sampled at the Source	N/A
Joint Filler		
Elastomeric Bearing Pads and Shims	Only Sampled at the Source	N/A
Welded Wire Fabric ft x 3 ft	Each Lot (if Not <u>AASHTO PEAS</u> <del>NTPEP</del> Compliant)	1 pc. 3
Bright Wire for Welded Wire Fabric	Reference MP 709.04.40 or in accordance with Q-Cast Certification Requirements	1 pc 5 ft
Concrete Sealant	Only Sampled at the Source	N/A
Steel Inserts & Miscellaneous Steel Hardware	Annually	2 Pieces
Asphalt Plastic Cement	Each Lot or at the Source	N/A
Metal Soil Reinforcing Strips	Each Lot (Either at the Source or At the Point of use Prior to Installation)	N/A (NDT of Random Pieces)
Geotextile Fabric	N/A (Accepted on <u>AASHTO PEAS</u> <del>NTPEP</del> Compliance)	
N/A		
Steel Diaphragms	N/A (Inspected at the Fabricator)	N/A

3.2.2. The fabricator may not use any component material in the fabrication process until the material has been shown to meet specifications. Until otherwise notified by the Division, the fabricator may continue to use materials that are sampled on a semi-annual basis (and that were approved during the prior sampling period) while these materials are being tested during the current sampling period.

3.2.2.1. An approved laboratory reference number shall be issued to each ship loose material that meets specifications. Approved laboratory reference numbers must be issued to

- all ship loose materials that are to be paid for under the same bid item number as a precast or prestressed concrete item before an approved laboratory reference number can be issued to that precast, or prestressed concrete item.
- 3.2.3. At the time of component material sampling, the fabricator shall provide the Division with a current copy of each concrete mix design (and a list of all items that are produced from each mix design) that may be used in production of precast or prestressed concrete items for the Division during the next six months.
- 3.3. Non-Specification Material
- 3.3.1. If a material is removed from the Division's approved list, use of that material shall be immediately discontinued, and the material shall be sampled and tested in the same manner as any other material that is not on the approved list (i.e. it shall be sampled and tested at the frequency shown in Table 1) until it regains status on the Division's approved list.
- 3.3.2. If tests conducted on a component material sample indicate that one or more properties of a material do not meet specification requirements, the Division shall immediately notify the fabricator. Upon receipt of this notification, the fabricator shall discontinue the use of the component material in question until further notice by the Division.
- 3.3.3. If an amount of material finer than the No. 200 (75  $\mu$ m) sieve, greater than what is allowed by Section 703.4 of the Specifications, is present in either the coarse or fine aggregate, then the total amount of material finer than the No. 200 (75  $\mu$ m) sieve for the entire mix shall be evaluated. The fabricator shall have previously provided a copy of all mix designs as outlined in section 3.2.3, and the total amount of material finer than the No. 200 (75  $\mu$ m) sieve for the entire mix will be evaluated as outlined in section 3.3.3.1.
- 3.3.3.1. As long as the total percentage of material finer than the No. 200 (75  $\mu$ m) sieve present in the entire mix does not exceed the total percent of material finer than the No. 200 (75  $\mu$ m) that would exist if both aggregate fractions in the mix contained their specified maximum percentage passing the No. 200 (75  $\mu$ m) sieve, then that combination of aggregates will be considered as meeting Section 703.4 of the Specifications.
- 3.3.4. If it is determined that a ship loose material does not meet Section 703.4 of the Specifications, use of that ship loose material shall not be permitted.
- 3.4. Re-Testing of Non-Specification Component Material
- 3.4.1. When tests of the first sample indicate that one or more properties of a material do not meet specification requirements, the Division shall re-sample the material as soon as possible after the fabricator has taken corrective action, and one of the following two scenarios will occur (section 3.4.1.1 or 3.4.1.2).
- 3.4.1.1. If the second sample meets Section 703 of the Specifications, the Division will immediately notify the fabricator. Upon notification, the fabricator may resume the use of this component material.

- 3.4.1.2. If the second sample does not meet Section 703 of the Specifications, the Division will immediately notify the fabricator, but the Division will not re-sample the material in question (from the particular source that did not meet specifications) until the next sampling period specified in Table 1 only after corrective action has been taken by the fabricator. Until a sample is obtained that meets specifications component material may not be used.
- 3.4.2. Once a component material in question has been shown to not meet specifications by more than one sample and test, the Division will only re-sample that component material once during the next sampling period (as set forth in Table 1), and one of the following two scenarios will occur (section 3.4.2.1 or 3.4.2.2).
  - 3.4.2.1. The material is sampled again during the next sampling period, and it meets specifications. The use of this component material may be resumed.
  - 3.4.2.2. The material in question is sampled again during the next sampling period, and again it does not meet specifications. The Division will not re-sample the material in question again until the next sampling period specified in Table 1 (see section 3.4.2). Until a sample is obtained that meets specifications the component material may not be used.
- 3.4.3. For an aggregate in which an excessive amount of material finer than the No. 200 (75  $\mu$ m) sieve is the only reason for not meeting specifications, there are two possible scenarios. When the first scenario, given in section 3.3.3.1, occurs, that particular combination of fine and coarse aggregate will be considered as meeting specifications. The second scenario is if the total percentage of material finer than the No. 200 (75  $\mu$ m) sieve present in the entire mix exceeds the total percent of material finer than the No. 200 (75  $\mu$ m) sieve that would exist if both aggregate fractions in the mix contained their specified maximum percentage passing the No. 200 (75  $\mu$ m) sieve. In this case, that particular combination of fine and coarse aggregate will be considered as not meeting Section 703.4 of the Specifications. When this second scenario occurs, the Division shall immediately notify the fabricator. Upon receipt of this notification, the fabricator shall discontinue the use of this combination of material until further notice by the Division. Situations in which the second scenario occurs will be handled as outlined in section 3.4.4.
- 3.4.4. During any re-sampling of a failing combination of aggregates, both the fine and coarse aggregate shall be re-sampled (so that a current evaluation of the total amount of material finer than the No. 200 (75  $\mu$ m) sieve present in the entire mix may be performed). The Division will re-sample both the fine and coarse aggregate as soon as possible, and one of the following two scenarios will occur (section 3.4.4.1 or 3.4.4.2).
  - 3.4.4.1. If the second sample meets Section 703.4 of the Specifications, the Division will immediately notify the fabricator and the fabricator may resume the use of this combination of fine and coarse aggregate.
  - 3.4.4.2. If the second sample does not meet specifications (as outlined in section 3.3.3.1), the Division will immediately notify the fabricator, but the Division will not re-sample that combination of fine and coarse aggregate until the next sampling period specified in Table 1 (see section 3.4.2). Until a sample is obtained that meets Section 703.4 of the

Specifications, this non-specification combination of fine and coarse aggregate may not be used.

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**4. ALTERNATE MATERIALS**

- 4.1. The prestressed or precast concrete fabricator may use a different source of material if the current material has been shown to not meet specifications.
- 4.1.1. This new material shall be sampled as set forth in section 3.0 or 3.2 (whichever is applicable).
- 4.1.2. In the case of component materials, new concrete mix design (in the case of prestressed items) containing this material shall be approved by the Division prior to the use of this new material. In the case of precast items, a new mix design containing this material shall be provided to the Division at the time of sampling.
- 4.2. If either a new source of coarse or fine aggregate is used because of an inability of the former combination of material to meet specifications due to an excessive amount of material finer than the No. 200 (75  $\mu$ m) sieve, both the coarse aggregate and fine aggregate portions of this new combination shall be re-sampled and evaluated as set forth in section 3.4.3.

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

MATERIALS PROCEDURE

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CRITERIA TO APPROVE PLAIN REINFORCING STEEL BARS USED IN CONCRETE

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**1. PURPOSE**

- 1.1. To establish procedures for qualifying manufactures of plain steel reinforcing bars acceptable for use on ~~West Virginia Division of Highways (WVDOH)~~ projects.
  - 1.2. To establish a procedure for maintaining a record of such information.
  - 1.3. To establish a procedure for transmitting such information to the WVDOH Personnel and contractors on ~~WVDOH~~ projects.
- 

**2. SCOPE**

- 2.1. This procedure shall apply to all manufacturers who produce plain uncoated reinforcing steel bars.
- 

**3. APPLICABLE DOCUMENTS AND DEFINITIONS**

- 3.1. WVDOH Specifications ~~for Roads and Bridges~~, Section 709.1
  - ~~3.2. National Transportation Product Evaluation Program "NTPEP"~~
  - ~~3.2.~~ American Association of State Highway and Transportation Officials [~~("AASHTO")~~ Section M31
  - 3.3. AASHTO Product Evaluation and Audit Solutions (APEAS)<sup>1</sup>.
  - ~~3.4.~~ MP 106.00.02 - Procedure for Evaluation of New Products for Use in Highway Construction<sup>2</sup>
  - ~~3.4.~~ ~~WVDOH Form HL-468~~
- 

**4. ACCEPTANCE PROCEDURE**

- 4.1. With each shipment, of plain rebar material to a ~~WVDOH~~ project, the rebar manufacturer or distributor shall provide shipping documents which contain an Approved Source List (APL) source lab number reflecting materials meeting quality specified by the WVDOH.
- 

**5. ACCEPTANCE PROCEDURE (APPROVED SOURCE)**

- 5.1. For a new manufacturer to be considered as an approved source of plain rebar, the manufacturer must comply with the following requirements.

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<sup>1</sup> <https://transportation.org/product-evaluation-and-audit-solutions/>

<sup>2</sup> <https://transportation.wv.gov/highways/mcst/Pages/MP-100s.aspx>

- 5.2. The manufacturer is to complete form HL-468 attainable from the ~~WVDOH~~ [websitewebpage<sup>3</sup>](https://transportation.wv.gov/highways/mcst/Pages/newproduct_evaluationprocedure.aspx) ~~https://transportation.wv.gov/highways/mcst/Pages/newproduct\_evaluationprocedure.aspx~~ and submit it to the ~~WVDOH~~ Materials Control, Soils and Testing (MCS&T) Division new products email address, indicating intention to be included on the ~~WVDOH~~ APL as an approved source manufacturer of plain rebar.
- 5.3. A current certificate indicating membership and compliance with the National Transportation Product Evaluation Program “~~NTPEP~~~~APEAS~~” requirements.
- 5.4. After the ~~NTPEP~~~~APEAS~~ compliance documents have been evaluated, the Division will conduct quality assurance (QA) sampling at the source to verify compliance to AASHTO M31. This Division QA sampling and testing shall be performed prior to source approval and once a year thereafter. Division QA sampling shall consist of 3 bars with a minimum length of three feet, from 5 separate heats, all sampling shall be unbiased and sampled randomly from the most recent stocks or straight from production. Sampling may also be done from a ~~WVDOH~~ project location, should material be available at the project site.
- 5.5. If laboratory testing meets or exceeds the requirements of AASHTO M31, the manufacturer will be assigned a seven-digit approved source number and be placed on the APL for plain rebar. This approval will be active for one year.
- 5.6. If testing outlined in Section 5.4 is performed on material supplied by a manufacturer who is not on the APL, and the testing does not meet the requirements of AASHTO M31, or the manufacturer is not in compliance with ~~NTPEP~~~~APEAS~~ requirements, the manufacturer will not be added to the APL.
  - 5.6.1. If testing outlined in Section 5.4 is performed on material supplied by a manufacturer who is on the APL, and the testing does not meet the requirements of AASHTO M31, or the manufacturer is not in compliance with ~~NTPEP~~~~APEAS~~ requirements, the manufacturer will be removed from the APL. Also, any material from that manufacturer that is supplied to ~~WVDOH~~ projects, after the date on which it was determined that the AASHTO M31 or ~~NTPEP~~~~APEAS~~ requirements were not met, will be rejected from those ~~WVDOH~~ projects.
  - 5.6.2. If the manufacturer informs the ~~WVDOH~~ MCS&T Division in writing that issues causing noncompliance with ~~NTPEP~~~~APEAS~~ requirements and/or failure to meet the requirements of AASHTO M31 have been resolved, the manufacturer may request a reevaluation of their facility. That reevaluation shall be in accordance with sections 5.2 thru 5.5. If the results of that reevaluation confirm ~~WVDOH~~ requirements have been met, the manufacturer will be added to the APL.
- 5.7. If a manufacturer is currently listed on the APL for plain rebar, a yearly renewal evaluation of that manufacturer shall be conducted consisting of the above sections 5.3 thru 5.6.

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<sup>3</sup> <https://transportation.wv.gov/highways/mcst/Pages/MP-100s.aspx>

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**6. DOCUMENTATION REPORT**

- 6.1. The APL for “plain” reinforcing steel bars “rebar” used on ~~WVDOH~~ projects may be updated at any time with the addition of a new manufacturer, or with the removal of a manufacturer.
- 6.2. A current APL of reinforcing steel bar manufacturers is available accessing the current West Virginia Department of Transportation approved source list website: [https://transportation.wv.gov/highways/mcst/Pages/APL\\_By\\_Number.aspx](https://transportation.wv.gov/highways/mcst/Pages/APL_By_Number.aspx)

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

---

ACCEPTANCE CRITERIA FOR STEEL WIRE  
REINFORCEMENT USED IN CONCRETE

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**1. PURPOSE**

- 1.1. Establish a procedure to qualify approved and non-approved manufactures that produce drawn bright finish wire reinforcement for use on West Virginia Division of Highways (WVDOH) projects.
  - 1.2. To establish a procedure for maintaining a record of such information.
  - 1.3. To establish a procedure for transmitting such information to the districts and contractors of WVDOH projects.
- 

**2. SCOPE**

- 2.1. This procedure shall apply to all producers who “manufacture” from a rough casted steel rod material to a drawn smooth bright finish wire product, or produce a welded wire reinforcement product “WWR” from smooth bright finish wire.
  - 2.2. This procedure shall apply to all steel wire reinforcement for concrete furnished to WVDOH projects and purchase orders. The WVDOH may elect to use other control procedures when special conditions dictate.
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**3. ~~APPLICABLE DOCUMENTS~~ REFERECES AND DEFINITIONS**

- 3.1. ASTM A1064 Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
  - 3.1.3.2. MP 106.00.02 - Procedure for Evaluation of New Products for Use In Highway Construction<sup>1</sup>
  - 3.2.3.3. NTPEP - AASHTO Product Evaluation and Audit Solutions (APEAS)<sup>2</sup>~~Certificate of conformance from manufacturer.~~
- 

**4. ACCEPTANCE PROCEDURE**

- 4.1. With each shipment, the wire manufacturer shall provide shipping documents which contain either the steel wire approved source number, or the approval number that was assigned to the material as per Section 6.1 of this document.

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<sup>1</sup> <https://transportation.wv.gov/highways/mcst/Pages/MP-100s.aspx>

<sup>2</sup> <https://transportation.org/product-evaluation-and-audit-solutions/>

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**5. ACCEPTANCE PROCEDURE (APPROVED SOURCE LIST)**

- 5.1. For a producer to be considered an approved source manufacturer of steel reinforcement wire, either welded or non-welded, the manufacturer must comply with the following requirements:
- 5.2. The manufacturer must submit a completed HL-468 as per MP 106.00.02. This must include is to submit a statement to the WVDOH Materials Control, Soils and Testing (MCS&T) indicating intention to be included on the WVDOH approved source list (APL) as an approved source of steel wire reinforcement for concrete.
- 5.3. The prospective source shall produce a certificate indicating the prospective source is an active member in compliance with the APEAS program. National Transportation Product Evaluation Program "NTPEP."<sup>1</sup>
- 5.4. The prospective source shall additionally submit a certified statement that all material shipped to the MCS&T will conform to Specification ASTM A1064 by a representative of the manufacturer that has the authority to bind the company shall sign the certified statement.
- 5.5. An evaluation and sampling of the material at the manufacturing facility shall be conducted by MCS&T personnel or by their designee for conformance to ASTM A1064. This shall be to reinforce confidence in the ability of the facility to produce a quality product within ~~WVDOH~~ Specifications.
- 5.5.1. Five samples each, five-foot in length, each of different sizes or lots are to be tested by MCS&T or their designee (as determined by the active date as discussed in Section 5.6) to confirm ~~WVDOH's~~ Specification compliance.
- 5.6. Once the above requirements are met, a laboratory approval number will be assigned to the manufacturer to indicate WVDOH requirement conformance, this approval number shall be active for one year. Acceptance of manufacturers facility can be verified by accessing the MCS&T online approved source list.
- 5.7. Revocation of approved source status may result from non-conformance to NTPEP-APEAS or tested material that does not comply with the specifications listed above.
- 5.8. "Approved Source" approval may be reinstated at the discretion of the MCS&T based on the findings of an investigation. The reinstatement process will commence upon the receipt of a letter of request from the manufacturer to the MCS&T. The letter of request should indicate reasons for reinstatement, and documentation to substantiate such reasons.

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**6. ACCEPTANCE PROCEDURES (NON-APPROVED SOURCE)**

- 6.1. Steel wire used for concrete reinforcement will require testing and evaluation on a lot-by-lot basis by direct coverage, provided the material meets the following requirements:
- 6.2. The wire source shall produce a certificate indicating the manufacturing source of basic bright finish wire is an active member in compliance with the National Transportation Product Evaluation Program "NTPEP".APEAS.

- 6.3. A five-foot length of basic bright finish steel reinforcement representative of the sizes and heats used in the concrete structure shall be obtained by MCS&T personnel or its designee to be tested in MCS&T laboratories or their designee's laboratories.
- 6.4. The metallic components of the wire shall be tested to conform to the requirements of ASTM A1064 for yield, tensile, and reduction.
- 6.5. If the results of the testing reveal that the material is in compliance with Specifications, an approval number will be issued by the MCS&T that shall be affixed to the shipping documents of the basic bright finish steel reinforcement.

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**7. DOCUMENTATION REPORT**

- 7.1. An updated list of steel wire reinforcement for concrete shall be conducted once a year, but no longer than two, and can be updated at any time with a new facility, or with a removal of a facility.
- 7.2. A current approved list of steel wire reinforcement is available to all contractors, fabricators, and suppliers by accessing the [MCS&T APL Website<sup>23</sup>](#)

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<sup>3</sup> [https://transportation.wv.gov/highways/mcst/Pages/APL\\_By\\_Number.aspx](https://transportation.wv.gov/highways/mcst/Pages/APL_By_Number.aspx)

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

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QUALITY ASSURANCE TESTING OF COATING PRODUCTS  
LISTED ON WVDOH APPROVED PRODUCT LISTS (APLs)

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**1. PURPOSE**

- 1.1 To establish a procedure to perform quality assurance (QA) testing on coatings products listed on MCS&T's approved product lists (APLs).
  - 1.2 To establish a procedure for maintaining a record of such information.
- 

**2. REFERENCED DOCUMENTS**

- 2.1. WVDOH Specifications for Roads and Bridges, Section 711 Protective Coatings, Stains, and Traffic Paints.
  - 2.2. WVDOH Specifications for Roads and Bridges, Section 601.13.3 Concrete Protective Coating.
  - 2.3. WVDOH Specifications for Roads and Bridges, Section 707.16 Concrete Protective Coating Materials.
  - 2.4. [MP 106.00.02 - Procedure for Evaluation of New Products for Use In Highway Construction](#)
  - 2.4.2.5. [MP 711.00.20 Paint Testing Methods](#), most recent edition.
  - 2.5-2.6. [MCS&T Division Approved Product Lists<sup>1</sup>](#) (APLs) for coating products.
  - 2.6-2.7. [AASHTO Product Evaluation and Audit Solutions \(APEAS\) National Transportation Product Evaluation Program \(NTPEP\)](#).
  - 2.7-2.8. [Northeast Protective Coating Committee \(NEPCOAT\)](#).
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**3. QUALITY ASSURANCE TESTING PROCEDURE**

- 3.1. The quality assurance (QA) testing shall be performed on each approved coating listed on any of MCS&T's APLs.

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<sup>1</sup> [https://transportation.wv.gov/highways/mcst/Pages/APL\\_By\\_Number.aspx](https://transportation.wv.gov/highways/mcst/Pages/APL_By_Number.aspx)

- 3.2. The QA testing shall be performed in MCS&T's Paint Laboratory and by MCS&T personnel.
- 3.3. The QA testing shall be performed every calendar year.
- 3.4. MCS&T shall obtain a sample of each approved product from the coating manufacturer.
- 3.5. The coating manufacturer shall supply a sufficient quantity of the product to perform all the required testing.
- 3.6. Each coating product shall be tested in accordance with the appropriate WVDOH Specification.
- 3.7. Each product shall be tested based on the testing requirements in the WVDOH Specifications.
- 3.8. The coating manufacturers will submit Safety Data Sheets (SDS) and Product Data Sheets (PDS) directly to MCS&T.
- 3.9. The coating manufacturers shall submit clearly marked samples, as well as, all required documentation for mixing and application directly to MCS&T.

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#### **4. QUALITY ASSURANCE HISTORICAL DATA**

- 4.1. MCS&T shall maintain a spreadsheet for the purpose of collecting historical data for each coating product tested.
- 4.2. The historical data for each coating product will be analyzed yearly to determine if each product continues to meet the specification requirements necessary to remain on our APLs.
- 4.3. MCS&T will store the spreadsheet in a ProjectWise folder located under the Environmental & Coatings Group's folder.

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#### **5. ~~NTPEP-APEAS~~ TEST DATA**

- 5.1. MCS&T shall obtain ~~NTPEP's-APEAS's~~ test data for each product by using the DataMine function located on the ~~NTPEP-APEAS~~ <https://transportation.org/product-evaluation-and-audit-solutions/COAT> uses test data from ~~NTPEP-APEAS~~ to generate their Qualified Product List. [The NEPCOAT Website](#)<sup>2</sup>
- 5.2. Any product that uses ~~NTPEP's-APEAS's~~ test data to obtain APL approval shall be compared to MCS&T's test data each year.

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#### **6. MCS&T'S QUALITY ASSURANCE TESTING**

- 6.1. MCS&T will use the spreadsheet data, as described in Section 4, to perform QA testing analysis.

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<sup>2</sup> <https://www.nepcoat.org>

- 6.2. The purpose of the QA testing is to determine if each of the coating products listed on our APLs are still satisfying our specification requirements.
- 6.3. Products that meet the specification requirements, based on MCS&T's test data, will remain on the APL.
- 6.4. Products that do not meet the specification requirements, based on MCS&T's test data, shall go through an internal investigation.

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## 7. MCS&T INTERNAL INVESTIGATION

- 7.1. MCS&T shall perform an internal investigation on any coating product that does not meet the specification requirements necessary to remain listed on our APLs.
- 7.2. MCS&T shall run a second test on any sample that fails. If MCS&T's test data from the second test passes, then the product will remain listed on our APLs.
- 7.3. However, if MCS&T's test data from the second test does not pass, then ~~NTPEP~~ APEAS shall run a second test on the sample. If ~~NTPEP's~~ APEAS's test data from the second test passes, then the product will remain on our APLs.
- 7.4. If the second test data from both MCS&T and ~~NTPEP~~ APEAS fails, then the product will be removed from our APLs.
- 7.5. The findings from the internal investigation shall be kept with the historical data spreadsheet, described in Section 4.
- 7.6. MCS&T shall notify the company about the removal of their product from our APLs. The company must wait one-year from the date of the removal before they will be allowed to resubmit their product to MCS&T.
- 7.7. The company must resubmit their product through MP 106.00.02 Procedure for Evaluating Products for use in Highway Construction. MP 106.00.02 requires HL-468 Form to be submitted to MCS&T. This form is available at the WVDOH MCST [Webpage](#)<sup>3</sup>.

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

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

MATERIALS PROCEDURE

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CRITERIA TO APPROVE FABRICATORS OF GUARDRAIL BEAMS,  
STEEL GUARDRAIL POSTS AND HARDWARE

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**1. PURPOSE**

- 1.1 To establish a procedure for approving fabricators of guardrail beams, steel guardrail posts and hardware acceptable for use on West Virginia Division of Highways (WVDOH) projects.
- 1.2 To establish a procedure for maintaining a record of such information.
- 

**2. SCOPE**

- 2.1 This procedure shall apply to the guardrail classes and types as defined in AASHTO M180, Section 3.
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**3. APPLICABLE DOCUMENTS**

- 3.1 WVDOH Specifications: Roads and Bridges, Section 607
- 3.2 AASHTO M180
- ~~3.3 [MP 106.00.02 - Procedure for Evaluation of New Products for Use in Highway Construction](#)~~
- ~~3.2.1 [WVDOH Form HL-468](#)~~
- 

**4. ACCEPTANCE PROCEDURE**

- 4.1 For guardrail and hardware materials to be evaluated for acceptance, the fabricator-must comply with the following requirements.
- 4.2 The fabricator shall complete form HL-468 (attainable from the MCS&T [Webpage](#)<sup>1</sup>) and submit it to the WVDOH MCS&T Division New Products Email Address (DOHNewProducts@wv.gov), indicating intention to be included on the WVDOH APL (Approved Product List) as an approved fabricator-of guardrail materials.
- 4.3 The fabricator shall submit a current certificate indicating membership and conformance with the ~~AASHTO Product Evaluation and Audit Solutions National Transportation Product Evaluation~~ Program (~~APEAS~~)~~"NTPEP"~~ for guardrail. Additionally, audits are to be performed by ~~NTPEP~~ ~~APEAS~~ at the fabricator's facility and encompass a detailed review of the quality management system, production process and testing capabilities.
- 4.4 After ~~NTPEP~~ ~~APEAS~~ documents have been obtained, evaluated, and found to be in compliance, the fabricator will be assigned a seven-digit approved source laboratory approval number and placed on the APL for guardrail fabricators. This approval will remain active unless the fabricator fails to remain compliant with ~~NTPEP~~ ~~APEAS~~.

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



- 4.5 With each shipment of guardrail beams, posts, or hardware to a WVDOH project, the guardrail fabricator shall provide shipping documents which contain a laboratory approval number reflecting that the materials have been approved meeting quality specified by the WVDOH.

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MP 712.04.50 Steward - Metals Section  
~~RLS~~SMM:H

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

MATERIALS PROCEDURE

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GUIDE FOR QUALITY CONTROL OF COMPACTION

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**1. PURPOSE**

- 1.1 This procedure sets forth minimum guidelines for the Contractor's Quality Control (QC) Plan for embankment, subgrade, pipe and random fill used as structure backfill material and aggregate base courses. It is intended that these requirements be used as a procedural guide in detailing the inspection, sampling, and testing necessary to maintain compliance with the specification requirements.
- 1.2 To establish procedural guidelines for approval and documentation of a Master QC Plan.
- 

**2. SCOPE**

- 2.1 This procedure is applicable to all items requiring compaction control except asphalt pavements. This outlines the QC procedures for Compaction items and includes procedures for approving and using Master and/or Project Specific QC Plans. This procedure also aids in documentation and retention of QC Plans in ProjectWise.
- 

**3. REFERENCED DOCUMENTS**

- a) MP 207.07.20 - Nuclear Field Density - Moisture Test for Random Material Having Less Than 40% of +3/4 Inch Material
- b) MP 700.00.24 - Nuclear Density Test By The Roller Pass Methods Revised December 2008
- c) MP 700.00.50 - Procedure for Monitoring the Contractor's Compaction Testing of Bituminous Concrete, Base Course, Embankment, Sub-Grade and Pipe and Structural Backfill
- d) MP 712.21.26 - Procedure for Determining Random Location of Compaction Tests
- e) WV Division of Highways Construction Manual, Current Edition
- f) WV Division of Highways Standard Specifications, Current Edition & Supplementary
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**4. GENERAL REQUIREMENTS**

- 4.1 The Contractor shall provide and maintain a QC system that will provide assurance that all materials submitted to the Division for acceptance will conform to the contract

requirements whether natural, manufactured or processed by the Contractor, or procured from suppliers. The QC Plan should clearly describe the methods by which the QC Program will be conducted. For example, the items to be controlled, tests to be performed, testing frequencies, sampling locations and techniques all should be included etc. Each item should be listed separately.

- 4.1.1 A detailed plan of action regarding disposition of non-specification material shall be included. Such a plan shall provide for immediate notification of the Division in the event of a non-conforming situation or instance.
- 4.2 Inspection and testing records shall be maintained, kept current, and made available for review by the Engineer throughout the life of the contract. All other documentation, such as date of inspections, tests performed, temperature measurements, and any accuracy, calibration, or re-calibration checks performed on production or testing equipment shall be recorded and kept.
- 4.3 The Contractor shall maintain standard calibrated equipment and qualified personnel in accordance with the contract and Specification requirements for the applicable material.

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## 5. QUALITY CONTROL PLAN

- 5.1 The Contractor shall prepare a QC Plan detailing the type and frequency of inspection, sampling, and testing necessary to measure and control the compaction properties of materials and construction governed by the Specifications. As a minimum, the sampling and testing plan should detail sampling location, sampling techniques, and test frequency. QC sampling and testing performed by the Contractor may be utilized by the Division for acceptance.
  - 5.1.1 A QC Plan shall be developed by the Contractor and submitted to the Engineer prior to the start of construction on every project. Acceptance of the QC Plan by the Engineer will be contingent upon its concurrence with these guidelines as listed in section 5.2 ~~through~~ 5.4.5.2.
  - 5.1.2 As work progresses, an addendum(s) may be required to a QC Plan to keep the QC program current. Personnel may be required to show proof of certification for testing.
- 5.2 QC PLAN MINIMUM REQUIREMENTS
  - 5.2.1 The QC Plan should be on Company Letterhead, be addressed to the District which it pertains, and include the items to be controlled. An example/template is provided in Attachment 1.
  - 5.2.2 Provide the name of the Person who is responsible for the Company's QC program and will be liaison with the Division's personnel.
  - 5.2.3 List all inspectors' names performing compaction tests on the project and their date becoming a Certified Soil & Aggregate Compaction Inspector as per WVDOH Specification Section 106, Control of Materials.

5.2.4 Compaction field tests will be performed according to MP 207.07.20, MP 700.00.24, and Standard Specification 716.32.3

5.2.5 Soft shale tests ~~shall~~ are to be conducted according to ~~done as per~~ Section 716 of the Standard Specifications.

5.2.6 Specify in the plan the methods by which each item will be tested. Table A and Table B summarizes the different materials, minimum frequencies, and the appropriate test procedure or method for controlling each material.

**Table A- COMPACTION CONTROL OF AGGREGATE BASE COURSES**

TEST PROCEDURE	LOT SIZE	NUMBER OF TEST	MATERIAL TYPE			
			PORTLAND CEMENT TREATED AGGREGATE BASE COURSE	CRUSHED AGGREGATE BASES AND SUBBASE COURSES	HOT-MIX HOT-LAID BITUMINOUS TREATED BASE COURSE	SOIL CEMENT BASE COURSE
MP 700.00.24	2000 FEET	1 PER SUBLOT				
		5 PER LOT	X	X	X	
MP 207.07.20	2000 FEET	1 PER SUBLOT				
		5 PER LOT				X

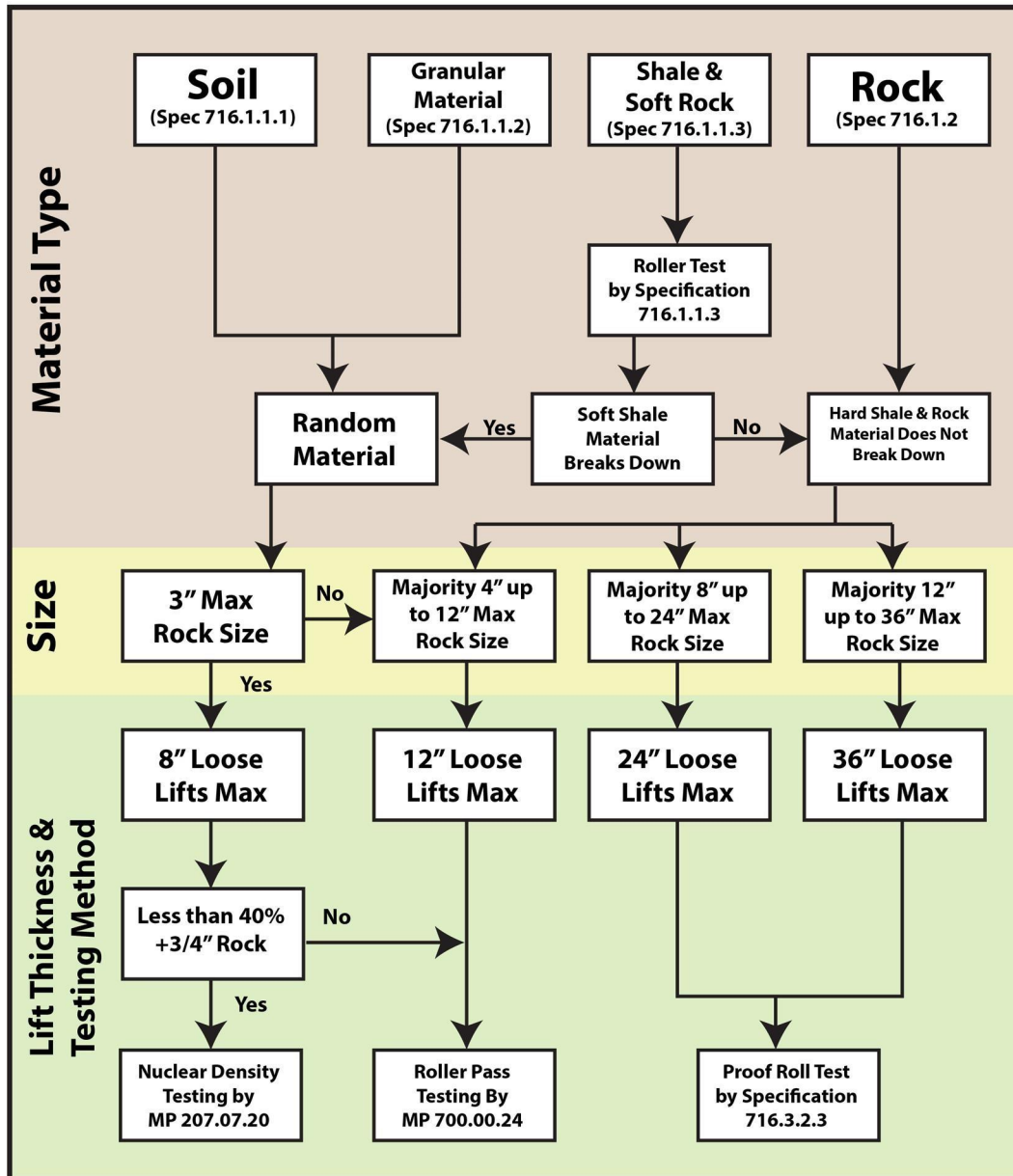
**Table B - COMPACTION CONTROL OF EMBANKMENT BACKFILL AND SUBGRADE**

TEST	LOT SIZE	NUMBER OF TESTS	MATERIAL WITH LESS THAN 40% RETAINED ON 3/4" (19.0 mm) SIEVE	MATERIAL WITH 40% OR MORE RETAINED ON 3/4" (19.0 mm) SIEVE AND CAN BE PLACED IN A 12" (300 mm) LOOSE LIFT OR LESS	MATERIAL THAT CAN BE PLACED IN A LOOSE LIFT GREATER THAN 12"	GRANULAR SUBGRADE	SELECT MATERIAL FOR BACKFILLING AND CLASS I AGGREGATE
				UNIFORM NON-UNIFORM	ROCK HARD SHALE		
MP 207.07.20	SEE STD. SPECS.	1 PER SUBLOT 5 PER LOT	X				
MP 700.00.24	SEE STD. SPECS.	1 PER SUBLOT, 5 PER LOT		X [1] X [1], [2]		X	X
PROOF Rolling		1 REPORT PER LIFT			X X		

1. If a hole for a direct transmission density reading cannot be readily made due to the coarse material, proof roll the lift.
2. If density readings are varying above 105 percent or below 95 percent and the material appears to be non-uniform, proof roll the lift.

5.2.7 A flow chart for embankment material, Table C, shall serve as a guide for identifying material types, maximum rock size, lift thickness and compaction test method. This table shall be included in the QC Plan for making field decisions to ensure that each type of material is properly placed and compacted.

Table C – Guide for Quality Control of Embankment Material



5.2.8 The plan shall include a statement that all necessary testing equipment will be provided to perform the procedures outlined in MP 700.00.24, MP 207.07.20, and Specification 716.3.2. ~~and lists the required testing equipment for compaction tests.~~ The plan shall list the make and model of equipment for proof rolling and its weight per Specification 716.3.2. The plan shall list the make, ~~and~~ model and operating weight of the roller(s) to be used for the soft shale tests outlined in ~~and per~~ Specification 716.1.1.3.

5.2.9 List the type of gauge to be used (...i.e., Troxler 3430, etc). The calibration frequency must be acceptable to the Division. Gauges must be calibrated according to ~~as per~~ the manufacturer’s requirements. This information shall be given to the Division upon their request.

- 5.2.10 If applicable, outline the procedure for performing a stability check on gauges that are not within the tolerance range for standard counts during the interval between calibrations. Standard counts derived during the stability check for stable gauges may be used in lieu of the manufacturer's standards. Gauges found to be unstable cannot be used until repaired and calibrated.
- 5.2.11 Include in the plan the lot and subplot sizes to be used for testing each type of installation. During construction, some flexibility in lot sizes may be made if the situation warrants in order to maintain a workable system. For example, two or more areas containing small quantities of embankment material might be combined into one lot at the Contractor's option and subject to the Division's approval.
- 5.2.12 Specify the maximum time period for completion of a lot of embankment material. As a guide, if the desired lot size cannot be obtained within seven calendar days, then the material placed up to that time would constitute the lot and the specified number of tests for a lot would still be performed.
- 5.2.13 Specify in the plan when quality control tests for base and subgrade will be performed. QC tests are to be performed after the material has been shaped and final rolling has been completed.
- 5.2.14 The Contractor is responsible for the accuracy of individual testing and calculations.
- 5.2.15 List the forms and method of distribution for tests and measurements.
- 5.2.16 Compaction test results are reported on forms specified in MP 207.07.20 and MP 700.00.24. The forms are supplied by the Division and available on the [MCS&T Webpage](#)<sup>1</sup>. ~~Each form consists of an original and one copy.~~ ~~The original of a completed form shall be~~ submitted to the Division's project supervisor, [District Materials Lab](#), and ~~the other~~ copy ~~should be retained~~ for the Contractor's records.
- 5.2.17 Indicate the length of time after tests and measurements are completed that documentation will be provided.
- 5.2.17.1 Test results and measurements ~~shall be~~ made available to project personnel for review on a daily basis. Formal submission of measurements should be made within 24 hours after the measurements are taken and test results within 24 hours after testing of a lot is completed.
- 5.2.17.2 Tests performed in a lot before final rolling is completed should be submitted to the Project Supervisor and retained in the project files. This includes test documents for failing lots and moisture checks.
- 5.2.18 List the compaction equipment giving the quantity, make, model, and weight or applied force at which each roller will be operated. If ballast will be added to a roller, indicate the type and quantity of ballast and the method for verifying the gross weight. Attach the manufacturer's specifications for compaction capabilities

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

for each roller to the plan or state the procedure for verifying the compaction capabilities of each roller in cases where the manufacturer's specifications are not available. This equipment shall meet the requirements ~~of Section~~ ~~as per~~ 207.7.5 of the Standards Specifications.

- 5.2.19 Indicate in the plan that a minimum of a 10-ton (9.07 Mg) roller will be used for testing ~~in accordance with~~ ~~as per~~ MP 700.00.24 for soil and granular material only.
- 5.2.20 Rollers used to breakdown soft shale shall be in accordance with Section 716.1.1.3 of the Standard Specifications and shall have a minimum of 1.5 tons per linear foot of roller ~~or~~ drum width.
- 5.2.21 Specify the method by which proof rolling will be conducted on embankment materials. The materials to be proof rolled are summarized in Table B in Section 5.2.6.
- 5.2.22 List the number of passes to be made and corrective measures if soft areas are detected. Documentation should include the type of material, number of passes, and corrective action if soft areas are detected.
- 5.2.23 For equipment used for proof rolling explain how the gross weight will be determined for any ballast added to the operating weight. For alternate proof rollers, attach to the QC Plan the calculations used to determine that the roller meets specifications. Also, attach the manufacturer's specifications for all proof rollers to the Plan. The following calculation is used to determine if an alternate proof roller meets specifications:

ENGLISH      Metric

$$c = \frac{\pi(ab\pi)}{2} \quad c = \frac{\pi}{50.8} (ab\pi)$$

a = weight (force) on a single tire = pounds (kg x .009807 = kN) b = operating tire pressure = psi (kPa)

c = weight (force) per inch (mm) width of tire = pounds per inch (Nm)

The weight (force) per inch (mm) width of tire must be equal to or greater than 1315 pounds (9.067 kN/mm).

- 5.2.24 Outline the procedure for notifying the Division when the test section in MP 700.00.24 will be performed. The Division ~~shall~~ be notified a minimum of 24 hours in advance unless other arrangements acceptable to the Division can be made.
- 5.2.25 Laboratory testing for random material is not required unless the material has unusual characteristics or differs from the soil and rock data used to develop the design. Testing to develop density curves, specific gravities, organic content, etc. may be required.
- 5.2.26 A list of test procedures is contained in Section 716 of the WVDOH Standard Specifications as a guideline for required testing should the need arise for random material.



- 5.2.27 Design a plan of action for the disposition of non-specification material, such as material with excessive moisture, excessive organic content, etc. These materials shall be stockpiled away from the embankment or fill placement areas. The Project Supervisor should be immediately notified in the event a nonconformance situation is detected.
- 5.2.28 List the method(s) and frequencies per Table DE-(attached) by which lift thickness measurements will be taken. If surveying of compacted lifts is not utilized, then the maximum loose lifts per Table C shall be measured.

**TABLE D - LIFT THICKNESS MEASUREMENTS**

<u>MATERIAL TYPE</u>	<u>NUMBER OF MEASUREMENTS</u>
<u>EMBANKMENT</u>	<u>MINIMUM OF 3 PER LIFT</u>
<u>SUBGRADE</u>	<u>MINIMUM OF ONE PER 1200 FEET PER WORKING WIDTH</u>
<u>PIPE BACKFILL</u>	<u>MINIMUM OF ONE PER SIDE PER LIFT</u>
<u>STRUCTURE BACKFILL</u>	<u>MINIMUM OF ONE PER LIFT</u>

### 5.3 TYPES OF QC PLAN

- 5.3.1 QC Plans which are intended for use on more than one project shall be defined as Master QC Plans. Section 5.4 outlines the procedures for Master QC Plan submittal and approval.
- 5.3.2 QC Plans which are intended for use on a single project shall be defined as Project Specific QC Plans. Project Specific QC Plans shall contain a cover letter which includes the following: project name/description, CID#, Federal and/or State Project Number.
- 5.3.3 A contractor may submit a Master QC Plan for field operations instead of a Project Specific QC Plan.
- 5.3.4 Once any QC Plan is approved for a project, the key date shall be entered in AASSHTOWare software by the appropriate District Materials personnel. The first date entered shall be the date the Project QC Plan letter is received. The second date shall be when the District approves the QC Plan for use on the project.

### 5.4 MASTER QUALITY CONTROL PLAN

- 5.4.1 The intent of Master QC Plans is to facilitate the approval process in a more uniform manner. A Master QC Plan can be submitted to the Division/District by the Contractor when their work in a given District is routinely repetitive for the year. The

Master Quality Control Plan is applicable for only the calendar year for which it has been approved.

- 5.4.2 The Contractor shall submit the Master Compaction QC Plan yearly to each District in which they have work in. If the Contractor does not have work in a given District for the year then no Master QC Plan shall be submitted to that District.
- 5.4.3 The District will review the submitted Master QC Plan and assign a laboratory reference number upon approval for future referencing. The District will acknowledge approval of Master QC Plan to the Contractor by letter (see Attachment #2 for an example), which will include the laboratory reference number and a copy of the approved Master QC Plan attached. This will then be scanned and placed in ProjectWise under the appropriate District's Org for that Contractor.
- 5.4.4 Once a project has been awarded, if a contractor elects to use the approved Master Compaction QC Plan on that project, the Contractor shall submit a letter requesting to use the Master QC Plan for that project. This letter must be on the Contractor's letterhead, be addressed to the District Engineer/Manager or their designee, and contain the following information: project number, CID#, project name/ description, type of Quality Control Plan and the laboratory reference number for the Master QC Plan (See Attachment #3 for an example).
- 5.4.5 The District shall review the referenced Master QC Plan to ensure that it covers all items in the project. If the referenced Master QC Plan is found to be insufficient for some items on the project, the District shall request the Contractor to submit additional information for QC of those items as an addendum on a project specific basis. When the District is satisfied with the QC Plan for this project, a letter shall be sent to the Contractor acknowledging approval (see Attachment #4 for an example), with the following attached: the Contractor's project QC Plan request letter and the Master QCP approval letter. This shall then be placed in the project's incoming-mail mailbox in ProjectWise.
- 5.4.5.1 A Master QC Plan that has been approved for project use shall be acceptable for the duration of that project, even if that project continues into subsequent calendar years, unless otherwise directed by the District.
- 5.4.5. For the use of Division Personnel, the District approval letter for this project must state the ProjectWise link to the referenced Master QC Plan for that Contractor. (i.e., WVDOT ORGS > District Organization #> Materials > Year>Master QC Plans...)

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## 6. CERTIFICATION & ACCEPTANCE SAMPLING AND TESTING

- 6.1 The Contractor shall certify that compaction testing and sampling is in conformance with the approved QC plan, referenced MP's and referenced Standard Specifications in a letter format on the company's letterhead. The certification shall summarize what materials ~~wherewere~~ encountered and the compaction method/lift thickness utilized. The letter shall state whether any deviations from the requirements of the QC plan, MP's, and Standard Specifications exist, and why.

- 6.2 Acceptance sampling and testing is the responsibility of the Division. QC tests by the Contractor may be used for acceptance.
- 6.3 The Division shall sample and test for applicable items completely independent of the contractor at a frequency equal to but not limited to approximately ten (10) percent of the frequency for testing given in the approved Quality Control Plan. Witnessing the contractor's sampling and testing activities may also be a part of the acceptance procedure, but only to the extent that such tests are considered "in addition to" the ten (10) percent independent tests.
- 6.4 MP 700.00.50, MP 207.07.20, and Standard Specifications Section 716.3.2.3 outlines the procedures to be followed for acceptance of compaction testing.

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## 7. ABSENT TESTING OF MATERIAL

- 7.1 If the Contractor fails to perform testing of the material in accordance with the Contractor's Division Approved Quality Control Plan, payment for the portion of the item represented by the absent test shall be withheld, pending the Engineer's decision whether or not to allow the material to remain in place.
- 7.1.1 If the Engineer allows the material to remain in place, the Division shall not pay for the material represented by the absent test. However, the Division shall pay for the cost of the placement of the material, including labor and equipment. The invoice or material supplier cost (if applicable), determined at the time of shipment, shall be used to calculate the cost of material when evaluating the total cost of labor and equipment.
- 7.1.1.1 If there is no material cost, the deduction shall be assessed on the tonnage of material represented by the missing test~~that was failed to be tested~~ via a District Materials Inspection Report (DMIR).

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## 8. MATERIAL TEST DATA

- 8.1 The Contractor's Quality Control Plan shall clearly state the name(s) of the individual(s) entering test data as outlined in MP 109.00.21.

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

Attachments

For Committee – No changes to attachments



**ATTACHMENT 1 - EXAMPLE GUIDE FOR COMPACTION QUALITY CONTROL PLAN**

The Acme Company  
20 First St.  
Somewhere, WV XXXXXXXX

Mr./Ms/Mrs. \_\_\_\_\_  
WV Division of Highways  
District \_\_\_\_ Engineer/Manager  
\_\_\_\_\_, WV

RE: (YEAR) Master Compaction QC Plan  
DISTRICT: \_\_\_\_\_

Dear Mr./Ms/Mrs. \_\_\_\_\_

We are submitting our Compaction Quality Control Plan for field control, developed in accordance with sections 716 and 717 of the (year) WVDOH Standards and Specifications, (year) WVDOH Supplemental specifications, MP 700.0024, MP 207.07.20, MP 712.21.26 and MP 700.00.50.

The Quality Control Program is under the direction of \_\_\_\_\_ . He/She can be contacted by telephone number \_\_\_\_\_, email \_\_\_\_\_ and/or in person.

- 1.) All testing will be performed by qualified personnel as per WVDOH Specification Section 106 Control of Materials. Proof of personnel certification shall be provided to WVDOH inspectors upon request.
- 2.) Specify the methods by which each item will be tested .(IE.. 207,307...etc). Table A and Table B (attached) summarizes the different materials, minimum frequencies, and the appropriate test procedure or method for controlling each material. A flow chart for embankment material, Table C (attached), is intended to serve as a guide for making field decisions to insure that each type of material is properly placed.
- 3.) Testing Equipment used will be as required in MP 700.00.24 and MP 207.07.20.
- 4.) Type of gauge to be used (IE.... Troxler 3430, etc). State that calibration information is available upon request by the Division/District.

- 5.) Outline the procedure for performing a stability check on nuclear gauges which are not within the tolerance range for standard counts during the interval between calibrations. Gauges found to be unstable cannot be used until repaired and calibrated.
- 6.) Include in the plan the lot and subplot sizes to be used for testing each type of installation.
- 7.) Specify the maximum time period for completion of a lot of embankment material.
- 8.) Specify in the plan when quality control tests for base and subgrade will be performed.
- 9.) List the forms and method of distribution for tests and measurements. (The forms are specified in MP 207.02.20 and MP 700.00.24.) State that test results will be made available to WVDOH personnel on a daily basis.
- 10.) List the compaction equipment giving the quantity, make, model, and weight or applied force at which each roller will be operated. If ballast will be added to a roller, indicate the type and quantity of ballast and the method for verifying the gross weight. Attach the manufacturer's specifications for compaction capabilities for each roller to the plan or state the procedure for verifying the compaction capabilities of each roller in cases where the manufacturer's specifications are not available.
- 11.) Indicate in the plan that a minimum of a 10 ton (9.07 Mg) roller will be used for testing as per 700.00.24.
- 12.) Indicate in the plan that when shale materials are encountered, the shale hardness test will be performed to determine if material is a soft shale as per 716.1.1.3 of the WVDOH Standards and Specifications.
- 13.) Specify the method by which proof rolling will be conducted on embankment materials. The materials to be proof rolled are summarized in Table B (attached).
- 14.) Laboratory testing for random material is not required unless the material has unusual characteristics or differs from the soil and rock data used to develop the design. Testing to develop density curves, specific gravities, organic content, etc. may be required. The Yearly Quality Control Plan should state that these additional tests must be performed by qualified Aggregate testing personnel as per as per WVDOH Specification Section 106 Control of Materials.

- 15.) Design a plan of action for the disposition of non-specification material.
- 16.) List the method(s) and frequencies by which the lift thickness measurements will be taken.

Very Truly Yours,

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Title



ATTACHMENT 2 \*\*\*\* WVDOH

LETTERHEAD \*\*\*\*

THE ACME COMPANY INC.  
20 First St.  
Somewhere, WV XXXXX

RE:     Compaction Master QCP  
Description:   20XX Year

Dear Mr./Ms/Mrs. \_\_\_\_\_,

Your Master Quality Control Plan(M# - #####) for Compaction has been reviewed and found to be acceptable for the following items:

- 207001-001 Unclassified Excavation     - 207002-001 Subgrade
- 211-001     - 307001 Items             - 604 items
- 212 Items   - 605 items                 -etc....

As work progresses throughout the season an addendum(s) may be required to this QCP to keep the QC program current. **Please use M# - ##### when corresponding about this QC plan.** Please make sure that all appropriate personnel have a copy of this plan in their possession.

Very Truly Yours,

\_\_\_\_\_

Title

ATTACHMENT 3

The ACME COMPANY  
20 First St.  
Somewhere, WV XXXXX

\*\*\*\*\*

EXAMPLE

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Mr./Ms/Mrs \_\_\_\_\_  
WV Division of Highways  
District \_\_\_\_ Engineer/Manager  
\_\_\_\_\_, WV

RE: Compaction Quality Control plan  
for Field ---- Project

Fed. Project No \_\_\_\_\_ State  
Project No. \_\_\_\_\_  
Contract ID No. \_\_\_\_\_ Description  
\_\_\_\_\_

Dear Mr./Ms/Mrs. \_\_\_\_\_,

We would like to use our approved Yearly Master Quality Control Plan, reference number \_\_\_\_\_ for the project referenced above. All Compaction items on the referenced project are covered by the Master Quality Control Plan.

The QC Plan is under the direction of \_\_\_\_\_, \_\_\_\_\_ (title), and will be the company's contact representative to the Department of Highways District Materials and Construction Departments. He/She can be contacted in person at the project, by telephone \_\_\_\_\_ or at email account \_\_\_\_\_.

Very Truly Yours,

\_\_\_\_\_  
Title

ATTACHMENT 4 \*\*\*\* WVDOH

LETTERHEAD \*\*\*\*

THE ACME COMPANY INC.  
20 First St.  
Somewhere, WV XXXXX

RE: Compaction QC Plan  
Project CID#: #####  
Fed/State Project #: NHPP- ## - #####.##  
Description: Falling Slide  
County : XXXXXXX

Dear Mr./Ms/Mrs. \_\_\_\_\_,

Your request to use Master Quality Control Plan (M# - #####) for compaction on the project referenced above, has been reviewed and found to be acceptable for the following items on the referenced project:

- 207001-001 Unclassified Excavation - 207002-001 Subgrade - 307001 Items
- 604 items - 212 Items -etc....

As work progresses throughout this project an addendum(s) may be required to this QCP to keep the QC program current. **Please use M##### when corresponding about this QC plan.** Please make sure that all appropriate personnel have a copy of this plan in their possession.

**For Division/District**

The Master Quality Control Plan can be reviewed in ProjectWise folder shown below:

WVDOTORG> D0# > year > MASTERQCPLANS > Contractors >Contractor Name > Name of Quality Control Plan

Very Truly Yours,

\_\_\_\_\_  
Title