WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

MATERIALS CONTROL, SOILS AND TESTING DIVISION
MATERIALS PROCEDURE

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

1. PURPOSE

1.1 To provide a unit cost per test to be assessed to the Contractor when testing documentation or samples are ~~is~~ not submitted by the ~~contractor~~ Contractor ~~in a timely manner~~by the established deadline. ~~Documentation not submitted is not limited to those tests listed in Attachment 1 of this procedure, but applicable to any material test required by the Standard Specifications and/or Materials Procedures..~~Periodic updates of this Attachment shall be the responsibility of the Director of Materials Control, Soils and Testing Division or their designee (Director).

2. SCOPE

2.1 This procedure is applicable to circumstances where a construction item's testing documentation or samples are~~is~~ not ~~completed and/or~~ submitted ~~as per specification and/or Materials Procedure in a timely manner~~by the deadline established in this document. In the case of a general item, this timeframe is seven (7) days from the sampling date. ~~-~~The timeframe for special-case items such as gradations and cylinder breaks ~~are~~ is noted in Attachment 1.

2.2 The penalty for an infraction as described in Section 2.1 is $700 per test. In the instance where a single test comprises of a prescribed series of sub-tests (typically 5), the cost of each infraction will be the standard rate divided by the total number of required sub-tests. This is only applicable in the certain circumstances as noted in Attachment 1.

2.2.1 This procedure is not limited to those tests listed in Attachment 1, but applicable to any material test required by the Standard Specifications and/or Materials Procedures. For this case, the rate and frequency shall be the general rate mentioned above unless otherwise determined by the Director.

3. ~~GENERAL~~ABSENT TESTING DOCUMENTATION OR FAILURE TO TEST

~~3.1~~ In no case shall this Materials Procedure allow for the acceptance of non-tested material. ~~As stated in Section 106.3.1.2 of the Specifications, it is the intent of the specifications that lots and sublots of materials, products, items of construction or completed construction meet testing specification requirements at the time of submission. In this case submission refers to the time when the contractor has completed the work and offers the finished 'product' to the Division for final acceptance testing.~~

~~3.2~~ In the case where no testing was performed, or no documentation was submitted for material ~~placed according to the required quality control per specifications~~, the ~~price~~

resolution for the ~~absent test/documentation will be assessed in accordance~~acceptance of the material shall be in accordance ~~with Attachment 1~~with the applicable section(s) of the Standard Specifications and Materials Procedures. Additionally, and regardless of the outcomes of this resolution, a price assessment in accordance with Attachment 1 shall also be assessed. ~~The penalty will also include the cost of the material placed that the absent test/documentation was to represent if the material was left in place.~~

3.1

~~3.3 Test results must be emailed to the District Material Supervisor as a PDF that has been signed in blue. This must be submitted in the time frame stated above in Section 2.1. The original document shall be mailed to the District Materials Supervisor following the email.~~

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

RLS:B
ATTACHMENT

Attachment 1 - Cost Penalties Per Test

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

*T - Standard timeframe as described in Section 2.1
*Rate - Standard rate as described in Section 2.2
#Cost/Ea - Unless there is rate in this column, each infraction results in the full rate

Note: Any material test that is not listed, but is required by Materials Procedures, Specifications or Contract Documents shall be subject to the rates listed above.

MP 709.01.51
SUPERCEDES JANUARY 1995
ISSUED: MARCH 2022

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

MATERIALS PROCEDURE

ACCEPTANCE CRITERIA FOR EPOXY COATED REINFORCING STEEL

1. SCOPE

1.1 To establish a procedure to qualify approved and non-approved coating manufacturers of epoxy coated reinforcement steel bars 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 to contractors of WVDOH projects.

1.4 This procedure shall apply to epoxy coated steel furnished to West Virginia Division of Highways (WVDOH) projects and purchase orders. The Division may elect to use other control procedures when special conditions dictate.

2. APPLICABLE DOCUMENTS

a. *AASHTO M31 Standard Specification for Deformed and Plain Carbon and Low-Alloy Steel Bars for Concrete Reinforcement, most recent edition.*

b. *ASTM A775 Standard Specification for Epoxy-Coated Steel Reinforcing Bars, most recent edition.*

c. ~~*AASHTO MP18 Standard Specifications for Uncoated, Corrosion-Resistant, Deformed and Plain Chromium Alloyed, Billet-Steel Bars for Concrete Reinforcement and Dowel, most recent edition.*~~ *WVDOH Form HL-468 – Preliminary Information for Technology/Product Evaluation.*

Commented [PCG1]: Delete AASTHO MP18 and replace with new product form

3. ACCEPTANCE PROCEDURE

3.1 With each shipment, the coating manufacturer shall provide shipping documents which contain either the coating manufacturer's "Approved Source" number or the approval number that was assigned ~~to the material as per Section 6~~.

4. ACCEPTANCE PROCEDURE FOR APPROVED SOURCE

4.1 For a manufacturer to be considered as a source of epoxy coated reinforcing steel bars, the manufacturer must submit a certification statement indicating their intention to be

included on the WVDOH approved source list as an approved source of epoxy coated reinforcing steel.

4.2 The prospective source shall submit a certified statement that all material shipped to Division projects will conform to WVDOH specifications. This certified statement shall be signed by a representative of the coating manufacturer who has the authority to bind the company.

~~4.2.4~~4.2.1 ~~4.2.1~~ The manufacturer is to complete form HL-468 attainable from the website[1]: ~~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 epoxy coated reinforcing steel bars.

~~4.3~~ ~~The prospective source shall have an acceptable historical record of compliance with WVDOH Specifications.~~

~~4.4~~4.3 All plain steel reinforcement to be coated shall be selected from an approved source list of plain reinforcement steel maintained by the WVDOH.

~~4.5~~4.4 All epoxy powders used shall be selected from an approved source list of epoxy powders maintained by the WVDOH.

~~4.6~~4.5 A copy of the coating manufacturer's Concrete Reinforcing Steel Institute (CRSI) certificate must be submitted indicating conformance to CRSI specifications.

~~4.7~~4.6 Samples of epoxy coated reinforcement steel shall be obtained by WVDOH Division authorized personnel and shall have the epoxy component tested to ASTM A775 in WVDOH laboratories, unless other methods of verification such as material certifications are used should unforeseen circumstances arise.

~~4.8~~4.7 An inspection of the coating facility may be conducted at any time to reinforce confidence in the ability of the facility to produce a quality product.

~~4.9~~4.8 Once the above requirements are met, a laboratory approval number will be assigned to the coating facility to indicate WVDOH requirement conformance. This approval number shall be active for up to two years. Acceptance of a coater's facility can be verified by accessing the WVDOH online approved source lists.

4.9 Revocation of approved source status may result from revocation or expiration of CRSI Certification or furnishing material that does not comply with Specifications.

4.10 ~~4.11~~ The ~~WVDOH~~ Division will annually obtain three ~~(3)~~ rebar samples ~~yearly~~ from different production lots at each manufacturer on the WVDOH APL. These samples will be tested by the Division and used to evaluate whether the manufacturer will remain on the APL.

4.10.1 If all three ~~none~~ of the samples meet specification requirements~~fail~~, the manufacturer will remain on the APL.

4.11.2 If one ~~(1)~~ of the three samples fails to meet specification requirements, the Division will obtain three additional rebar samples from the manufacturer~~resample~~. The Division will then test those

[1] https://transportation.wv.gov/highways/mcst/Pages/newproduct_evaluationprocedure.aspx

Commented [PCG2]: Insert section 4.2.1 to introduce the New Product Procedure to this MP.

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Commented [PCG4]: Delete Section 4.3. Check Section 4 numbering after this is deleted.

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Commented [BDA6]: From MP Committee: Clarify circumstances when second is going to be applicable or used.

Commented [PCG7]: Add Section 4.11. This is our section to do yearly QA sampling and testing to make sure the product should remain on the APL.

Commented [PCG8]: Look at this language again. Not sure if I like the way it sounds.

three samples, and if any of those three additional samples fail to meet specification requirements, the manufacturer will be removed from the APL.

~~4.10~~ 4.11.3 If more than one of the three annual ~~(1) two (2) or more~~ samples ~~fails~~ to meet specification requirements, the manufacturer will ~~need recertification or~~ be removed from the APL.

5. ACCEPTANCE PROCEDURE FOR NON-APPROVED SOURCE

5.1 Epoxy coated steel bars that have been coated by a non-approved coating manufacturer shall require evaluation on a ~~lot by lot~~lot-by-lot basis under direct coverage, provided the material meets the following requirements.

5.2 A copy of the coating manufacturer's CRSI certificate must be submitted indicating current conformance to CRSI specifications.

5.3 Samples of epoxy coated reinforcement steel shall be obtained by WVDOH Division authorized personnel to be tested in WVDOH laboratories, unless other methods of verification such as material certifications are used.

5.4 The metallic component of epoxy coated steel bars shall be … ~~from an approved source as stated in Section 4.4.tested to conform to the requirements of AASHTO M31 or AASHTO MP18.~~

5.5 The epoxy component of epoxy coated steel bars shall be tested to conform to the requirement~~-~~s of ASTM A775.

5.6 If the results of the testing reveal that the material is in full compliance with Specifications, an approval number will be issued by the Division that shall be affixed to the shipping documents.

~~5.6~~

6. DOCUMENTATION REPORT

6.1 An updated approved list of approved epoxy coated reinforcing steel bars, shall be issued once a year, but no longer than two. The list ~~, and~~ may~~can~~ be updated at any time with the addition of a new facility~~,~~ or with a removal of a facility.

6.2 A current approved list of epoxy coated reinforcing steel shall be available to all contractors, fabricators, and suppliers by accessing the West Virginia Department of Transportation Approved Source.[2]

[2] http://transportation.wv.gov/highways/mcst/Pages/Listings_Sorted.aspx

Commented [PCG9]: correction

Commented [BDA10]: MP Committee comment: Submitted to whom

Commented [BDA11]: MP Committee - Talk about how these are to be accepted - another MP? Apl? Etc, be more specific. Difference between epoxy coating and steel bar,

Commented [PCG12]: language to read better since we already have section 4.4 tell us what these bars should be from an APL source.

Commented [PCG13]: Delte extra space between word and letter "s"

Commented [PCG14]: Make sentence read better

Ron L. Stanevich, P.E.
Director
Materials Control, Soils and Testing Division

RLS:Mp
~~RLS:Prl~~

Commented [PCG15]: Make sure to check all the spacing and numbers to make sure everything flows well once we accept the corrections.

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

MATERIALS PROCEDURE

PORTLAND CEMENT AND BLENDED HYDRAULIC CEMENT MILL CERTIFICATION

1. PURPOSE

1.1 To provide the Division's acceptance procedures for portland cement and blended hydraulic cements.

2. SCOPE

2.1 This procedure shall apply to all portland cement and blended hydraulic cement production mills which furnish cement to Division projects, except that the Division may elect to use other control procedures when special conditions dictate the need for more stringent control.

3. APPLICABLE SPECIFICATIONS

3.1 All items under this procedure shall meet the requirements of Section 701 of the WVDOH Standard Specifications for Roads and Bridges. This section specifically includes ASTM ~~Specification~~ C150 for portland cement and ASTM C595 for blended hydraulic cements. In addition, samples will be obtained in accordance with ASTM C183.

4. PROCEDURE

Cement mills which produce cement for use in Division projects shall be identified as Certified or Non-Certified, as outlined below.

4.1 CERTIFIED

To be considered for certification, the manufacturer shall do the following:

4.1.1 Submit a certified statement to Materials Control, Soils and Testing Division that all cement shipped to Division projects will conform to the specification requirements. The certified statement shall be signed by a representative of the manufacturer having legal authority to bind the company.

4.1.2 Maintain records of production control tests, for each type of cement which may be supplied to WVDOH projects, for a period of at least five years and make them available to the Division upon request.

4.1.3 Have mill laboratory facilities periodically inspected by the Bureau of Standards Cement and Concrete Reference Laboratory (CCRL). A copy of the CCRL report on the mill laboratory inspection shall be provided to the Division, accompanied by documentation of resolution of any discrepancies noted in the CCRL report.

4.1.4 Submit to the Materials Division test data developed on the type(s) of cement to be certified. This data must consist of test results developed from each day's production over the most recent fifty production days. The required tests are for all the standard chemical and physical requirements listed in ASTM C150 and/or ASTM C595. Each complete battery of tests shall represent not more than twenty-four hours of continuous production per finish mill.

4.1.4.1 In the case of Type III cement, blended hydraulic cement, or other cement ~~-~~which is not produced on a regular basis, if there are not fifty production days for that type of cement in the previous two-year period, then the data for that type of cement shall consist of test results from ~~each day's~~ at least twenty-six production days during the last two-year period.

Commented [BDA1]: Approval Process is already very slow, in everyone's best interest to have this as fast an efficient as possible.

4.1.5 The quality history of a cement plant seeking certification will be determined using the data submitted by the manufacturer as specified in 4.1.4 or 4.1.4.1. Statistical limits, as defined in ASTM C183, will be developed from this data from this data. When an acceptable quality history has been determined, the Division will compare test data developed on production grab samples taken by Division representatives, to the statistical limits established by the mill's production data.

4.1.6 When a cement mill has met the above criteria and has been designated by the Division as Certified, the manufacturer will be required to submit test data on a monthly basis in the same manner as described in 4.1.4.

4.1.6.1 As required in Section 4.1.4, all Certified cement mills shall submit test results, for all tests, developed from each day's production, to Materials Division, except for the results for the Insoluble Residue test. Once a cement mill has been Certified, and if, during the previous three-month period, none of the Insoluble Residue test results from that Certified cement mill exceed 0.75%, then that Certified cement mill may reduce the frequency of Insoluble Residue test result submittal to one test per week of production, instead of one test per day of production. If any Insoluble Residue test result from that Certified cement mill (including results from samples obtained by the Division), is greater than 0.75%, then the frequency of Insoluble Residue test result submittal from that Certified cement mill shall immediately be increased back to one test per day of production, until another three-month period has elapsed, with no Insoluble Residue test results greater than 0.75% from that Certified cement mill.

4.1.6.2 When ASTM C1038 testing is performed due to higher SO_s content, as outlined in Table 1 of ASTM C150 and/or Table 1 of ASTM C595, the Certified cement mill performing that testing shall perform a minimum of one test per month on the sample with the highest SO_s content for that month.

4.1.6.3 In the case of Type III cement, blended hydraulic cement, or other cement, which is not produced on a regular basis, if no cement of this type was produced in a particular month(s), then the Cement Manufacturer shall submit a written statement noting this to Materials Division.

4.1.7 Division representatives will take paired samples from a certified plant's production at a frequency dependent upon the variability of test data. The frequency will generally be such that the sampling is accomplished at least once a quarter.

4.1.7.1 In the case of Type III cement, blended hydraulic cement, or other cement, which is not produced on a regular basis, if no cement of this type was produced in a quarter, then the Cement Manufacturer shall submit a written statement noting this to Materials Division, and Division representatives will not be required to take paired samples thatquarter.

4.1.7.2 The paired samples will be obtained, tested, and evaluated in accordance with applicable ASTM procedures.

4.1.7.3 Two consecutive pairs of test values failing to meet the statistical control criteria may be considered cause to remove the mill from the certified group.

4.1.7.4 If any individual sample fails to meet the requirements of the applicable ASTM Specification, the mill may be removed from the certified group.

4.1.7.5 If a certification is removed, it may be reinstated at the discretion of the Division when sufficient sampling and testing has been conducted to ensure statisticalcontrol.

4.1.8 When all requirements for certification have been met, the manufacturer may ship cement of the type certified to Division projects. Records of quantities of cement shipped to West Virginia projects must be maintained by the manufacturer for a minimum of three years and made available to the Division upon request.

4.1.9 The manufacturer and the Division's District Materials offices will be notified of all changes in the status of amill's certification.

4.1.10 Once each quarter, or anytime the list is updated, the Materials Division will provide the District with a list of all currently certified cement mills.

4.2 Non-Certified

A cement mill defined as non-certified may supply cement to the Division projects from approved LOTs.

4.2.1 The Division will sample, test, approve, and seal LOTs of cement for use in Division projects. Samples will be obtained in accordance with ASTM C183 except that one grab sample shall be secured for each 400 tons (360 Mg) in the sampling of bulk storage at points of discharge, while the cement is flowing through the openings. All of the

applicable chemical and physical tests noted in ASTM C150 and/or ASTM C595 will be conducted by the Division laboratories.

4.2.1.1 Any individual sample failing to meet all of the applicable ASTM requirements will result in rejection of the entire LOT of cement.

4.2.2 When a LOT of cement has been sampled, tested, and found to meet all specification requirements, the Division will notify the manufacturer of approval and a WVDOH approval number will be assigned to the LOT.

4.2.3 A manufacturer may make shipments from approved LOTs upon notification of Division approval. When such shipments are made, the manufacturer shall provide documentation as follows:

a) Project to which material is shipped (if available)
b) Silo number from which material drawn
c) Location of shipping origin
d) Contractor (i.e. consignee)
e) WVDOH approval number assigned to silo
f) Identification of carrier
g) Quantity of material in shipment
h) Type of material

4.2.3.1 This documentation may be provided in the form of bills of lading and shall have the following distribution:

a) 1 copy sent to Materials Control, Soils and Testing Division
b) 1 copy sent to accompany shipment and to be left at the destination to become the property of the Division

4.2.3.2 Records of quantities of cement shipped to West Virginia projects must be maintained by the manufacturer for a minimum of three years and made available to the Division upon request.

4.2.3.3 A balance sheet shall be maintained by the manufacturer for each LOT of cement approved for shipment to West Virginia projects. This balance sheet shall provide the following information:

a) The silo number
b) The Division approval number assigned to the silo
c) The test quantity
d) Separate entries for each shipment made from the silo showing bill of lading number and quantity.
e) The balance left in the test quantity after each shipment

The manufacturer may not ship material in excess of the test quantity plus five percent (5%).

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

RLS:~~Me~~Td

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

MATERIALS PROCEDURE

PREPARING MATERIALS INSPECTION REPORTS

Commented [BDA1]: Include how this is going to be conveyed to FHWA.

1. PURPOSE

1.1 To set forth a Standard Materials Inspection Report Format

2. SCOPE

2.1 To establish a standard format in the style, form, substance, and frequency of Materials Inspection Reports

3. INSTRUCTIONS

3.1 Format - All Materials Inspection Reports shall conform to the format used herein. See attachments for templates for each section.

4. MEMORANDUM

4.1 A memorandum conforming to the format contained herein (attachment 1) shall accompany all Materials Inspection Reports

4.1.1 The memorandum shall be sent to the attention of the District Engineer or District Manager with a CC to the District Materials Supervisor and the District Construction Engineer.

4.1.2 The memorandum shall summarize the findings, observations, and deficiencies (if any) of the Inspection.

5. REPORT

Commented [BDA2]: FHWA suggestion - add an annual report - Matics to work on developing this process and to work with MD on this.

5.1 A report conforming to the format contained herein shall accompany all Materials Inspection Reports. (See attached Template for relevant section.)

6. FREQUENCY

6.1 Materials Inspections shall be conducted bi-annually in conformance with Federal Regulations (Federal Highways Administration's (FHWA's) Testing Program to Control Materials and Construction, section IV, Part 2A).

7. RESPONSE

7.1 The District Materials Supervisor shall respond within thirty (30) days of receipt of the Materials Inspection Report detailing what corrective action, if any will be taken to ensure compliance with testing procedures.

Signature Block

A

RLS:JhA
ATTACHMENTS

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

D. Alan Reed, P.E.
State Highway Engineer

Jimmy Wriston, P. E.
Secretary of Transportation
Commissioner of Highways

DATE of MEMO

M E M O R A N D U M

TO: NAME OF DISTRICT ENGINEER/SUPERVISOR
DISTRICT NUMBER, TITLE OF ABOVE PERSON

FROM: RONALD L. STANEVICH, P.E.
DIRECTOR
MATERIALS CONTROL, SOILS AND TESTING DIVISION

SUBJECT: INSPECTION OF DISTRICT (#) AGGREGATE LABORATORY

Attached is Materials Inspection Report (MIR) Number XXXXXX pertaining to the subject inspection. It is our intent to perform such inspections at least once every other year in each district.

The (GROUP) Laboratory testing apparatus inspection resulted in XX recommendations as noted in section X and X. It was recommended that (explain deficiencies and what was done to fix them).

The (GROUP) Laboratory testing procedures inspection resulted in X deficiencies (explain deficiencies and what was done to fix them). The AASHTO re:source proficiency samples had X deficiencies (if applicable - explain deficiencies and what was done to fix them - The corrective action reports are attached to the end of this MIR, detailing the ratings and what has been done to mitigate the deficiencies). The District Materials Supervisor is asked to write a response to this Division within 30 days of receipt stating how the deficiencies were or will be corrected.

If you have any questions or need additional information, please feel free to contact Mr. David Matics of this Division at (304) 414-6634.

RLS:Md

Attachment

cc: MCS&T Group Supervisor
District Construction Engineer, District Materials Supervisor

REPORT NUMBER:	XXXXXXX
MATERIALS INSPECTION REPORT	
SUBJECT:	Inspection of Aggregate Laboratory
LOCATION	Choose an item.
INSPECTED BY:	Inspector's Name
TECHNICIAN:	Technician's Name
DATE OF INPSECTION:	Click or tap to enter a date.
DATE OF REPORT:	Click or tap to enter a date.

1. OBJECTIVE

1.1. To inspect the laboratory testing equipment, test procedures, operator technique, reporting and documentation of test data, and to verify compliance with standard methods of testing.

1.2. To evaluate apparatus and procedures used in performing the tests for aggregate and soil as described in:

AASHTO R 18	Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
AASHTO M 92	Wire-Cloth Sieves for Testing Purposes
AASHTO M 231	Weighing Devices Used in the Testing of Materials
AASHTO T 11	Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
AASHTO T 19	Bulk Density ("Unit Weight") and Voids in Aggregate
AASHTO T 27	Sieve Analysis of Fine and Coarse Aggregates
AASHTO T 84	Specific Gravity and Absorption of Fine Aggregate
AASHTO T 85	Specific Gravity and Absorption of Coarse Aggregate
AASHTO T 89	Determining the Liquid Limit of Soils
AASHTO T 90	Determining the Plastic Limit and Plasticity Index of Soils
AASHTO T 265	Laboratory Determination of Moisture Content of Soils
ML-25	Procedure for Monitoring the Activities Related to Sieve Analysis of Fine and Coarse Aggregate

MP 700.00.54	Procedure for Evaluating Quality Control Sample Test Results with Verification Sample Test Results
MP 703.00.21	Standard Method of Test for Percent Crushed Particles

1.3. To determine if any deficiencies exist, a Division developed procedure checklist is used. This checklist is based on the AASHTO and Division accepted procedures for the applicable tests.

2. DISCUSSION

2.1. The subject laboratory inspection is part of this Division's overall Aggregate Quality Assurance Program. It was developed to evaluate the District's proficiency in performing those tests common to project Quality Control. In addition to apparatus and testing inspection, reporting and documentation was also reviewed to ensure adequate handling of the test data.

3. APPARATUS

3.1. The laboratory workroom was checked for compliance with the acceptable range for room temperature, 68°F to 86°F (20°C to 30°C). The temperature at the time of inspection was Click or tap here to enter text.°F (Click or tap here to enter text.°C).

3.2. The temperature of the oven used for aggregate testing was checked for compliance within the specified limits of 230 ± 9°F (110 ± 5°C). The oven temperature was Click or tap here to enter text.°F (Click or tap here to enter text.°C).

3.3. The coarse and fine aggregate splitters used in separating samples for testing purposes were examined and found to be in good physical condition.

3.4. The thermometers in use at the time of inspection were checked to determine compliance with applicable requirements. All thermometers were within the acceptable range of 1°F (0.5°C).

3.5. The mechanical shaking devices and their respective timers used for sieve analysis of aggregates in use at the time of inspection were examined and found to comply with the requirements of AASHTO T 11 and AASHTO T 27.

3.6. The laboratory's balances used for aggregate listed below were examined:

Adam Equipment CPWplus 75	Direct Read – Top Load Digital Balance 0.02kg to 75kg
Mettler PM200	Direct Read – Top Load Digital Balance 0.001 g to 200 g
Mettler PE16	Direct Read – Top Load Digital Balance to 16,000 g
Mettler Toledo XS16001L	Direct Read - Top Load Digital Balance 0.1 g to 16,000 g

The laboratory's balances were found to be in good working order.

3.7. The equipment used for the determination of the minus No. 200 material in aggregate was examined and found to conform to the requirements of AASHTO T 11.

3.8. Sieves used in determining the particle size of aggregate were examined and found to conform to the specifications in AASHTO M 92 with one exception:

a) EXAMPLE: The No.8 sieve exhibited corrosion and minor deformations in the wire cloth. The sieve was replaced during the inspection.

3.9. All equipment and measures used in determining the unit weight of aggregate were checked and found to conform to the requirements of AASHTO T 19, with the following exception:

a) EXAMPLE: The 1/3 measure's calibration date was past the yearly calibration deadline. The measure was properly re-calibrated during the inspection. The new calibration date was updated on the measure.

3.10. All equipment used in determining the fine aggregate specific gravity were checked and found to conform to the requirements of AASHTO T 84.

3.11. The water tank and basket used for holding samples of coarse aggregate for specific gravity were examined and were found to conform to the requirements of AASHTO T 85.

3.12. The equipment used for the determination of the liquid limit and plastic limit was examined and found to conform to the requirements of AASHTO T 89 and AASHTO T 90.

4. PROCEDURES

4.1. The procedure used in determining the percent crushed particles was observed and was found to conform to the procedure described in MP 703.00.21.

4.2. The procedure used in determining the amount of material in aggregate finer than a No. 200 sieve was observed and found to conform to the procedure described in AASHTO T 11.

4.3. The procedure used in determining the unit weight of aggregate was observed and found to conform to the procedure described in AASHTO T 19.

4.4. The procedure used in determining the sieve analysis of coarse and fine aggregate was observed and found to conform to the procedure described in AASHTO T 27.

4.5. The procedures used in determining the specific gravity and absorption of fine and coarse aggregates were observed and found to conform to the procedures described in AASHTO T 84 and AASHTO T 85, respectively.

4.6. The procedures used in determining the liquid limit of soils (3-point method) and plastic limit of soils were observed and found to conform to the procedures described in AASHTO T 89 and AASHTO T 90, respectively.

5. AASHTO RE:SOURCE PROFICIENCY SAMPLES

5.1. AASHTO re:source proficiency samples are provided, at a cost, to all Districts twice a year. Included with the samples are directions for preparation and a scope of tests to be performed. Once testing has been completed and results obtained each District submits these results via the AASHTO re:source website. AASHTO re:source then compiles the results from all participating laboratories across the nation and calculates a standard deviation that is used to rate each lab on a scale form 0-5, 5 being the best. If a District has a rating less than 3 on any individual test MCS&T requires them to submit a Proficiency Sample Corrective Action Report and the reports are to be kept on record. Corrective action reports are independent to the response from the materials supervisor at the conclusion of the laboratory inspection.

5.2. The AASHTO re:source Fine Aggregate Proficiency Samples #Click or tap here to enter text. resulted in zero ratings less than 3.

5.3. The AASHTO re:source Fine Aggregate Proficiency Samples #Click or tap here to enter text. resulted in zero ratings less than 3.

5.4. The AASHTO re:source Fine Aggregate Proficiency Samples #Click or tap here to enter text. resulted in zero ratings less than 3.

5.5. The AASHTO re:source Coarse Aggregate Proficiency Samples #Click or tap here to enter text. resulted in zero ratings less than 3.

6. REPORTING AND DOCUMENTATION OF TEST DATA

6.1. Reporting and documentation of completed laboratory results were reviewed and found to be acceptable.

7. CONCLUSIONS

7.1. The verification of test equipment and procedures and their conformance to the applicable specification requirements are documented in the preceding sections.

7.2. The Aggregate Laboratory testing apparatus inspection resulted in two (EXAMPLES) deficiencies as noted in section 3.8 and 3.9. To correct these deficiencies the technician re-calibrated the measure prior to performing the AASHTO T 85 procedure and replaced one No 8 sieve to comply with AASHTO M92.

7.3. The Aggregate Laboratory testing procedures inspection resulted in zero deficiencies.

7.4. Deficiencies noted in this report were discussed with laboratory personnel at the time of inspection. The Materials Supervisor is asked to write a response to this Division, stating how any deficiencies were, or will be corrected. There were no AASHTO re:source corrective actions to attach to the Materials Inspection Report, since the scores on the assessment were all satisfactory.

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Click or tap here to enter text.
Aggregate and Soils Group Supervisor

RLS: Me

REPORT NUMBER:	XXXXXXX
MATERIALS INSPECTION REPORT	
SUBJECT:	Inspection of Asphalt Laboratory
LOCATION	Choose an item.
INSPECTED BY:	Inspector's Name
TECHNICIAN:	Technician's Name
DATE OF INPSECTION:	Click or tap to enter a date.
DATE OF REPORT:	Click or tap to enter a date.

1.0 OBJECTIVE

1.1. To inspect the laboratory testing equipment, test procedures, operator technique, reporting and documentation of test data, and to verify compliance with standard methods of testing.

1.2. To evaluate laboratory equipment and procedures used to conduct testing for the quality assurance of Asphalt mixture, Superpave mix design and Marshall mix design as described in:

AASHTO R-47	REDUCING SAMPLES OF HMA TO TESTING SIZE (QUARTERING METHOD)
AASHTO R-68	PREPARATION OF ASPHALT MIXTURES BY MEANS OF THE MARSHALL APPARATUS
AASHTO T 312	DETERMINING THE DENSITY OF HOT MIX ASPHALT SPECIMENS BY MEANS OF THE SUPERPAVE GYRATORY COMPACTOR
AASHTO T 166	BULK SPECIFIC GRAVITY OF COMPACTED BITUMINOUS MIXTURES USING SATURATED SURFACE-DRY SPECIMENS
AASHTO T-331	BULK SPECIFIC GRAVITY (GMB) AND DENSITY OF COMPACTED HOT MIX ASPHALT (HMA) USING AUTOMATIC VACUUM SEALING METHOD
AASHTO T 209	MAXIMUM SPECIFIC GRAVITY OF BITUMINOUS PAVING MIXTURES
AASHTO T 245	RESISTANCE TO PLASTIC FLOW OF BITUMINOUS MIXTURES USING MARSHALL APPARATUS AND THE MATERIALS SECTION'S GUIDE FOR REHEATING AN ASPHALT MIX SAMPLE

AASHTO T 308	DETERMINING THE ASPHALT BINDER CONTENT OF HOT-MIX ASPHALT (HMA) BY THE IGNITION METHOD, (METHOD A)
AASHTO T 30	ANALYSIS OF EXTRACTED AGGREGATE

1.3. To determine if any deficiencies exist based on a Division developed procedure checklist. This checklist is based on the AASHTO and Division accepted procedures for the applicable tests.

2.0 DISCUSSION

2.1. The subject laboratory inspection is part of this Division's overall asphalt Quality Assurance Program. It was developed to evaluate the District's proficiency in performing those tests common to project Quality Control. In addition to equipment and testing inspection, reporting and documentation will also be reviewed to ensure adequate handling of the test data.

3.0 APPARATUS

1.1. As specified in AASHTO T 166 and T 209, the laboratory workroom was checked for compliance with the range for standard room temperature, 77±9°F (25±5°C). The temperature at the time of inspection was Click or tap here to enter text.°F (Click or tap here to enter text.°C).

1.2. The thermometers in use at the time of inspection were checked to determine compliance with applicable requirements. All thermometers were within the acceptable range of 1°F (0.5°C).

1.3. The temperature of the oven used for aggregate testing was checked for compliance within the specified limits of 300±15°F (149±8°C). The oven temperature was Click or tap here to enter text.°F (Click or tap here to enter text.°C).

3.1. The balance(s) in use at the time of inspection Choose an item. with the Division's calibrated weights. All balance(s) were within tolerances (0.1g ± 0.1%) set forth in AASHTO M231 for general purpose balances.

3.2. The Sieve shaker(s) in use at the time of inspection were checked for condition and were found to be in good working condition.

3.3. The Hot Plate(s) in use at the time of inspection were checked for condition and were found to be in good working condition.

4.0 PROCEDURES

4.1. The Inspector reviewed procedure AASHTO R-47, to reduce an Asphalt mixture sample to an appropriate testing size. The Technician was not required to demonstrate the procedure however the Technician's equipment used was found to Choose an item. to the AASHTO specification.

4.2. The Inspector reviewed procedure AASHTO R-68, to prepare a Marshall sample. The Technician was required to demonstrate the procedure. The Technicians procedure was found to Choose an item. to the AASHTO procedure. The Technician's equipment used was found to Choose an item. to the AASHTO specification.

4.3. The Inspector reviewed procedure AASHTO T-312, to prepare a Superpave sample. The Technician was required to demonstrate the procedure. The Technicians procedure was found to Choose an item. to the AASHTO procedure The Technician's equipment used was found to Choose an item. to the AASHTO specification.

4.4. The Inspector reviewed procedure AASHTO T-166, to test a pill for Bulk specific gravity. The Technician was required to demonstrate the procedure. The Technicians procedure was found to Choose an item. to the AASHTO procedure. The Technician's equipment used was found to Choose an item. to the AASHTO specification.

4.5. The Inspector reviewed procedure AASHTO T-331, to test a pill for Bulk specific gravity using the Vacuum sealing device. The Technician was required to demonstrate the procedure. The Technicians procedure was found to Choose an item. to the AASHTO procedure. The Technician's equipment used was found to Choose an item. to the AASHTO specification.

a) EXAMPLE OF NON_CONFORMITY: Technician did not engage the retention latch on the CoreLok device

4.6. The Inspector reviewed procedure AASHTO T-209, to test a sample for Theoretical Maximum specific gravity. The Technician was required to demonstrate the procedure. The Technicians procedure was found to Choose an item. to the AASHTO procedure. The Technician's equipment used was found to Choose an item. to the AASHTO specification.

a) EXAMPLE OF NON_CONFORMITY: Sample was cooled to the touch, but not cooled to room temperature.

4.7. The Inspector reviewed procedure AASHTO T-245, to test a pill for stability and flow. The Technician was required to demonstrate the procedure. The Technicians procedure was found to Choose an item. to the AASHTO procedure. The Technician's equipment used was found to Choose an item. to the AASHTO specification.

4.8. The Inspector reviewed procedure AASHTO T-308, to test an asphalt mixture sample for asphalt content. The Technician was required to demonstrate the procedure. The Technicians procedure was found to Choose an item. to the AASHTO procedure. The Technician's equipment used was found to Choose an item. to the AASHTO specification.

4.9. The Inspector reviewed procedure AASHTO T-30, to test an asphalt mixture sample for gradation. The Technician was required to demonstrate the procedure. The Technicians procedure was found to Choose an item. to the AASHTO procedure. The Technician's equipment used was found to Choose an item. to the AASHTO specification.

5.0 REPORTING AND DOCUMENTATION OF TEST DATA

5.1. Several District acceptance/verification samples were reviewed and found accurate and free from errors in calculations and data transfer.

5.2. Several acceptance and verification samples evaluation, using MP 700.00.54 were reviewed and found accurately performed according to the Materials Procedure.

5.3. Several T401 and T407 compaction forms were reviewed and found to be complete and accurately calculated.

5.4. Several JMF field design verifications were reviewed and found to be complete and accurately calculated. Proper targets were selected with appropriate ranges assigned.

6.0 CONCLUSION

6.1. The verification of test equipment and procedures and their conformance to the applicable specification requirements are documented in the preceding sections.

6.2. The asphalt laboratory general testing equipment inspection resulted in zero findings as noted in Section 3.1.

6.3. The asphalt laboratory testing procedure inspection was conducted this year and resulted in two (EXAMPLE) deficiencies as noted in Section 4.5. and 4.6.

6.4. The asphalt laboratory procedural equipment inspection resulted in zero deficiencies, as noted in Section 4.6.

6.5. Any deficiencies noted in equipment and/or procedures were discussed with laboratory personnel at the time of inspection.

6.6. The documentation inspection resulted in no deficiencies, as noted in Section 5.0.

6.7. Any deficiencies noted in reporting and documentation were discussed with district personnel at the time of the inspection.

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Asphalt Group Supervisor

REPORT NUMBER:	XXXXXXX
MATERIALS INSPECTION REPORT	
SUBJECT:	Inspection of Concrete Laboratory
LOCATION	District 6 - Moundsville, WV
INSPECTED BY:	Inspector's Name
TECHNICIAN:	Technician's Name
DATE OF INPSECTION:	Click or tap to enter a date.
DATE OF REPORT:	Click or tap to enter a date.

1. OBJECTIVE

1.1. To inspect the laboratory testing equipment, test procedures, calibration of equipment, documentation of test data, and to verify compliance with standard methods of testing.

1.2. To evaluate apparatus and procedures used in performing the tests for concrete as described in:

AASHTO M 201	Curing Facilities
AASHTO R 18	Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
AASHTO T 22	Determining Compressive Strength of Cylindrical Concrete Specimens
AASHTO T 23	Making and Curing Concrete Test Specimens in the field
AASHTO T 119	Slump of Hydraulic Cement Concrete
AASHTO T 121	Unit Weight of Concrete
AASHTO T 152	Air Content of Freshly Mixed Concrete by the Pressure Method
AASHTO T 196	Air Content of Freshly Mixed Concrete by the Volumetric Method
AASHTO T 309	Standardization of thermometer
ASTM C39	Standard Test Method for Compressive Strength of Cylinders Concrete Specimens

ASTM C 1231	Use of Unbonded Caps in Determination of Compressive Strength of Hardened Cylindrical Concrete Specimens

1.3. To determine if any deficiencies exist by a Division developed procedure checklist. This checklist is based on the AASHTO, ASTM, and Division accepted procedures for the applicable tests.

2. DISCUSSION

2.1. The subject laboratory inspection is part of this Division's overall Concrete Quality Assurance Program. It was developed to evaluate the District's proficiency in performing those tests common to project Quality Control. In addition to testing and inspection, calibration of apparatus and recordkeeping were also reviewed to ensure that apparatus meet the specifications.

3. APPARATUS

3.1. The laboratory water storage tank was checked for compliance with the acceptable range for water temperature, 69.8°F to 77.0°F. The temperature at the time of inspection was °F.

3.2. The water in the storage tank was saturated with lime to comply with the requirement of AASHTO M 201.

3.3. The specimens were fully immersed in the tank storage water.

3.4. The laboratory was keeping temperature record of water storage tank.

3.5. The water in the storage tank is being thoroughly stirred more than once a month.

3.6. The tank is being cleaned and refilled with water containing 3 g/L of calcium hydroxide every two-year period.

3.7. The field thermometer was standardized to comply with the requirement of AASHTO T 309.

3.8. The apparatus and testing accessories used in the test for slump for hydraulic cement concrete were examined and found to conform to the requirements of AASHTO T 119. The critical dimensions of equipment were checked by the district on Click or tap to enter a date..

3.9. The standardization records and equipment for volumetric air content test were not checked during this inspection because the district noted that this test has not been performed in a long time (more than 10 years). The equipment and standardization for this test method will be verified if a project, requiring this test, arises in this district. does this need to stay in here since they don't seem to do it?

3.10. The apparatus and testing accessories used in the test for air content of freshly mixed concrete by pressure method was examined and found to conform to the requirements of AASHTO T 152. The standardization record of apparatus was maintained by the district (date of standardization - Click or tap to enter a date.).

3.11. The apparatus and testing accessories used in the test for unit weight of cement concrete was examined and found to conform to the requirements of AASHTO T 121. The calibration record of apparatus was maintained by the district (date of calibration - Click or tap to enter a date.).

3.12. The scale used for measuring the weight in the test for unit weight was examined for the standardization and found to comply with the requirements of AASHTO M 231.

3.13. The Unbonded caps and Retaining Rings for determination of compressive strength of hardened cylindrical concrete specimens were examined and found to comply with the requirements of ASTM C 1231. The record of caps usages was maintained by the district.

3.14. Molds for concrete test specimens were examined and found to comply with the requirements of AASHTO T 23.

3.15. The method of transportation of Specimens from field to laboratory was discussed with the district, and the response was found to comply with the requirements of AASHTO T 23.

3.16. The apparatus for testing compressive strength of cylindrical concrete specimens was examined and found to comply with the requirements of AASHTO T 22. The calibration record of testing machine was maintained by the district (calibrated date - Click or tap to enter a date.).

4. PROCEDURES

4.1. The Technician was asked to demonstrate the procedure to determine the compressive strength of cylindrical concrete specimen and was found to comply with the requirements of AASHTO T22 (ASTM C39) with the following exception:

a) Technician did not recheck perpendicularity of specimen before reaching 10% of anticipated load was applied as per ASTM C39 (Section 8.4.2).

5. CONCLUSIONS

5.1. The concrete laboratory testing apparatus inspection resulted in no deficiencies.

5.2. The laboratory testing procedures inspection resulted in one deficiency and is noted in section 4.1a.

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Click here to enter text.

Concrete Supervisor's Name
Cement and Concrete Group Acting Supervisor

RLS: Mtwd

Attachment

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

MATERIALS PROCEDURE

CRITERIA TO APPROVE FINISHED ALUMINUM ROADWAY SIGNS.

1. PURPOSE

1.1 To establish procedures for approving finished aluminum roadway signs or project markers 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 all fabricators who assemble and produce aluminum roadway signs "*henceforth referred to as Fabricator*" either flat sheet or extruded and related hardware used in installation.

3. APPLICABLE DOCUMENTS

3.1 *WVDOH Specifications for roads and bridge section 661*

3.2 *WVDOH Sign Fabrication Manual.*

3.3 *WVDOH Design Guide for Signing.*

3.4 *WVDOH Approved products list "APL" for Aluminum Sheeting for traffic signs.*

3.5 *WVDOH Approved products list "APL" for retroreflective sign sheeting.*

Commented [BDA1]: Look into contract usage of temporary signs. Review 636. Dave L to check to see if this is applicable.

4. ACCEPTANCE PROCEDURE

4.1 With each shipment, of aluminum signs or sign hardware to a WVDOH project, the sign Fabricator shall provide shipping documents which contain a laboratory approval number reflecting materials have been inspected meeting quality specified by the WVDOH.

5. ACCEPTANCE PROCEDURE

5.1 For sign materials to be evaluated for acceptance, the Fabricator must comply with the following requirements.

5.2 An on-site investigation and evaluation will be conducted by a WVDOH Inspector at the Fabricator's distribution location prior to materials being shipped.

5.3 All bare aluminum blank sign material shall be obtained from the WVDOH APL for aluminum sheeting for traffic signs.

5.4 All retroreflective materials shall be obtained from the WVDOH APL for retroreflective sign sheeting.

Commented [BDA2]: Verify process for getting these on the APLs (reference the MP)

5.5 The Inspector shall verify the finished sign to be free of any visible defects to the reflective sheeting in the form of bubbling or misaligned borders or any defect in relation to the WVDOH Sign Fabrication Manual or the Design Guide for Signing issued by the WVDOH Traffic Engineering Division.

5.6 The Inspector is to verify that the finished sign matches the approved shop drawings from Traffic Engineering Division of the WVDOH

5.7 The Inspector will examine the workorder or invoice to verify items and quantities are correctly listed, and the Inspector will verify the document has listed the contract ID number to which the materials will be delivered.

5.8 The Inspector will examine the work order or invoice to verify APL numbers used for aluminum sheeting and retroreflective sheeting are listed, plus for tracking purposes the workorder or invoice must have a unique date or invoice number from the Fabricator.

5.9 If the evaluation of sign materials meets the above requirements, the Inspector shall approve the work order or invoice and issue a seven-digit Laboratory approval number indicating all sign materials and or hardware have been inspected.

5.10 If the evaluation of sign materials does not meet the above requirements, the Inspector shall issue a failing Laboratory number, plus report the reasons for not meeting specifications, Also, the Inspector shall inform the Fabricator not to ship items until the failing issues have been resolved.

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

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

MATERIALS PROCEDURE

PREPARING MATERIALS PROCEDURES

1. PURPOSE

1.1 To set forth instructions for drafting Materials Procedures (MP) concerning sampling, testing, reporting, and inspection.

1.1.1 To establish a numbering system for MPs.

1.1.2 To establish a styles guideline for MPs.

1.2 To establish a workflow for the creation, acceptance, and approval for MPs.

1.2.1 To setup a reconfirmation schedule for existing MPs.

1.3 To provide further guidance and clarification from that set forth in DD-105.

2. REFERENCED DOCUMENTS

2.1 *AASHTO Publications Style Manual and Process Guide*[1], *current edition.*

2.2 *WVDOH Document DD-105*[2].

3. NUMBERING GUIDELINES

3.1 A MP consists of a sequence of numbers such as 120.20.01.

3.1.1 The first set (three digits) of an MP are taken from the Standard Specifications Roads and Bridges to denote the general area to which the procedure applies.

3.1.2 The second set (two digits) of an MP are taken from the Standard Specifications Roads and Bridges denotes the particular area to which the procedure applies.

3.1.3 The third set (two digits) is defined by this Division thus:

- .00 - .09 Field Sampling
- .10 - .19 Pre-sampling (Source or Intermediate Points)
- .20 - .29 Testing
- .30 - .39 (For future designation)
- .40 - .49 Inspection
- .50 - .59 Quality Assurance System
- .60 - .69 Reporting (laboratory)
- .70 - .79 Reporting (issuance under master control)
- .80 - .89 (For future designation)
- .90 - .99 Miscellaneous

[1] https://materials.transportation.org/
[2] https://transportation.wv.gov/highways/engineering/Pages/Design-Directives.aspx

4. FORMAT GUIDELINES

4.1 The style guides for MPs shall follow the general guidelines established in Section 6.4.3 of "AASHTO Publications Style Manual and Process Guide Typography in Design." These guidelines are further refined in this document.

4.1.1 The font shall be Times New Roman, size 12, fully justified for all text except for the section title. The section title shall be all capital letters, fully justified, Times New Roman, size 12 and bold. There shall also be a horizontal line above this text.

4.1.2 The line numbering shall be as follows: "x." For a section title and "x.x" for a section paragraph. From here, follow the format of "x.x.x…" for additional layers of sub paragraphs. This document provides an example of the formatting.

4.1.3 Links shall be blue and clickable[3]. The link path shall also be included as a footnote. An example of this is demonstrated by the "blue and clickable" text and link above and the footer at the bottom of this page.

4.1.3.1 Any instances of an email address shall also be clickable and adhere the guidelines for a link.

4.1.4 Figure labels shall follow the guidelines of Section 2.1.4 of "AASHTO Publications Style Manual and Process Guide Typography in Design." This section states: "The title should be succinct noun or noun phrase that describes the figure, but does not provide unnecessary background information, nor repeat information found in the text." Do not abbreviate "Figure" and capitalize key words such; an example of this is as follows: "Conditions Determined to Be Pre-Existing."

4.1.4.1 Formatting for labels shall be the same as normal body text, except that "Figure X." shall be bold. All figure text shall be centered and located below the figure.

5. HEADER GUIDELINES

5.1 A standard numbering and indexing system shall appear in the upper right-hand corner shall of pages of all MPs. All header text shall be in "All Caps" format.

5.1.1 The letters MP shall appear first, denoting Materials Procedure. The number of the MP shall follow that text and be in the header of every page. The numbering of the MP shall follow the format as described in this document.

[3] https://transportation.wv.gov/highways/mcst/Pages/default.aspx

5.1.2 All MPs shall contain headers in manner described in this section. There are two instances of a header. If an MP has been reconfirmed, the header will follow the example in Figure 1. This includes the date the latest date the MP was approved, and the date of confirmation.

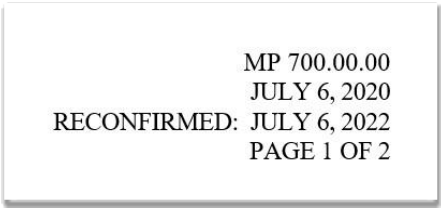


Figure 1 – MP Header with Approval Date and Reconfirmation Date

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

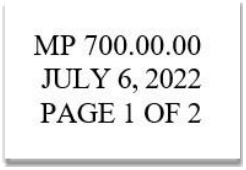


Figure 2 – MP Header With Approval Date

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

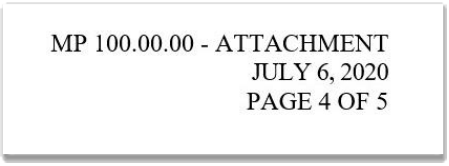


Figure 3 – MP Attachment Header

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

6. MP APPROVAL PROCESS

6.1 In the instance of any MP Committee work, the champion is a person defined as the person who is the primary author, editor and/or liaison for the document. The champion is responsible for introducing and presenting the document. The champion is also responsible for addressing comments on the document.

6.2 Figure 4 provides an overview of the approval process of an MP. A larger version of this figure is provided in Attachment 1. First the document is brought to the MP committee chair (chair) by the champion. The document is distributed by the chair

and discussed at the next MP committee meeting. After the document has been at a minimum of two consecutive MP meetings, the document may be approved by vote. The document is then reviewed, and if approved, signed by the Director of Materials Control, Soils and Testing Division (Director, MCS&T). The signed document is sent through DOH management for review and approval. Once the review is complete, the document is reviewed and affirmed by Federal Highways (FHWA). Once the document is affirmed by FHWA, the document is posted and distributed. If at any step an approving authority makes comments, the document is cycled back to the MP Committee meeting for review and another approval vote.

6.2.1 In the instance where a document has no content changes (editorial changes only), the MP committee may choose to vote to approve the document after one meeting. In this case, any voting member of the MP committee or the FHWA representative may veto this decision.

6.2.2 The details of the MP committee, including the submission process, distribution practices, and current voting members is available for review in Design Directive 105 and available at the WVDOH Engineering Webpage[4]

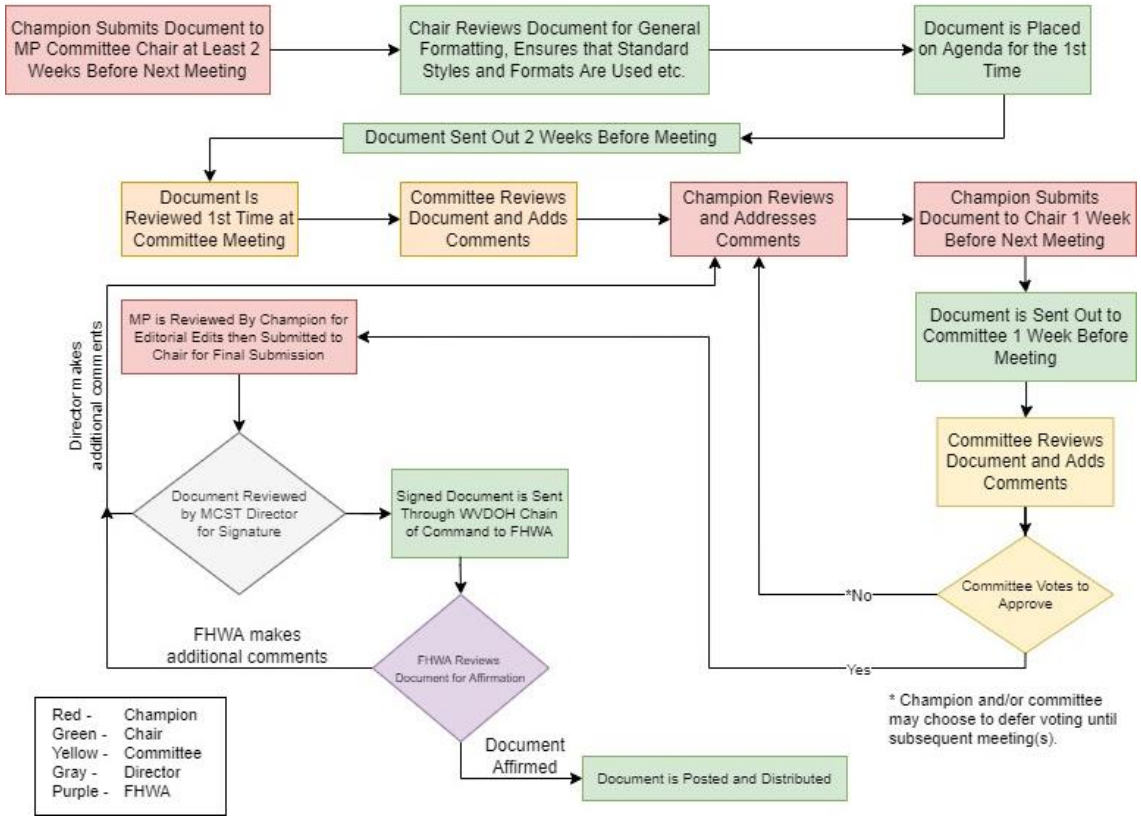


Figure 4 – MP Committee Meeting Flowchart

7. RECONFIRMATION PROCESS

7.1 Each MP shall be periodically reviewed for both relevancy and accuracy. At a minimum frequency, each MP shall be reviewed every 4 years by the applicable

[4] https://transportation.wv.gov/highways/engineering/Pages/Design-Directives.aspx

MCS&T Section Supervisor (Reconfirmation Champion). In the instances where there is no obvious Section Supervisor, the delegation of the review shall be the responsibility of the chair in liaison with the Director of MCS&T.

7.2 After reviewing the document, if the Reconfirmation Champion determines that no changes are required, they will submit the document to chair for reconfirmation. The reconfirmation shall be done by the voting members.

7.3 If approved by the Committee, the MCS&T Director shall review the document and if accepted, sign the document. Because no changes were made to this document, once the document is signed, it shall be posted and distributed.

8. POSTING AND DISTRIBUTION OF MPS

8.1 Active MPs are available on the WVDOH MCST MP Webpage[5]. The webpage shows the MP number, the title of the MP and the latest approval or reconfirmation date.

8.1.1 For each document (if appliable), an archived link is available to provide a documented history of updates. Figure 5 provides an example.

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

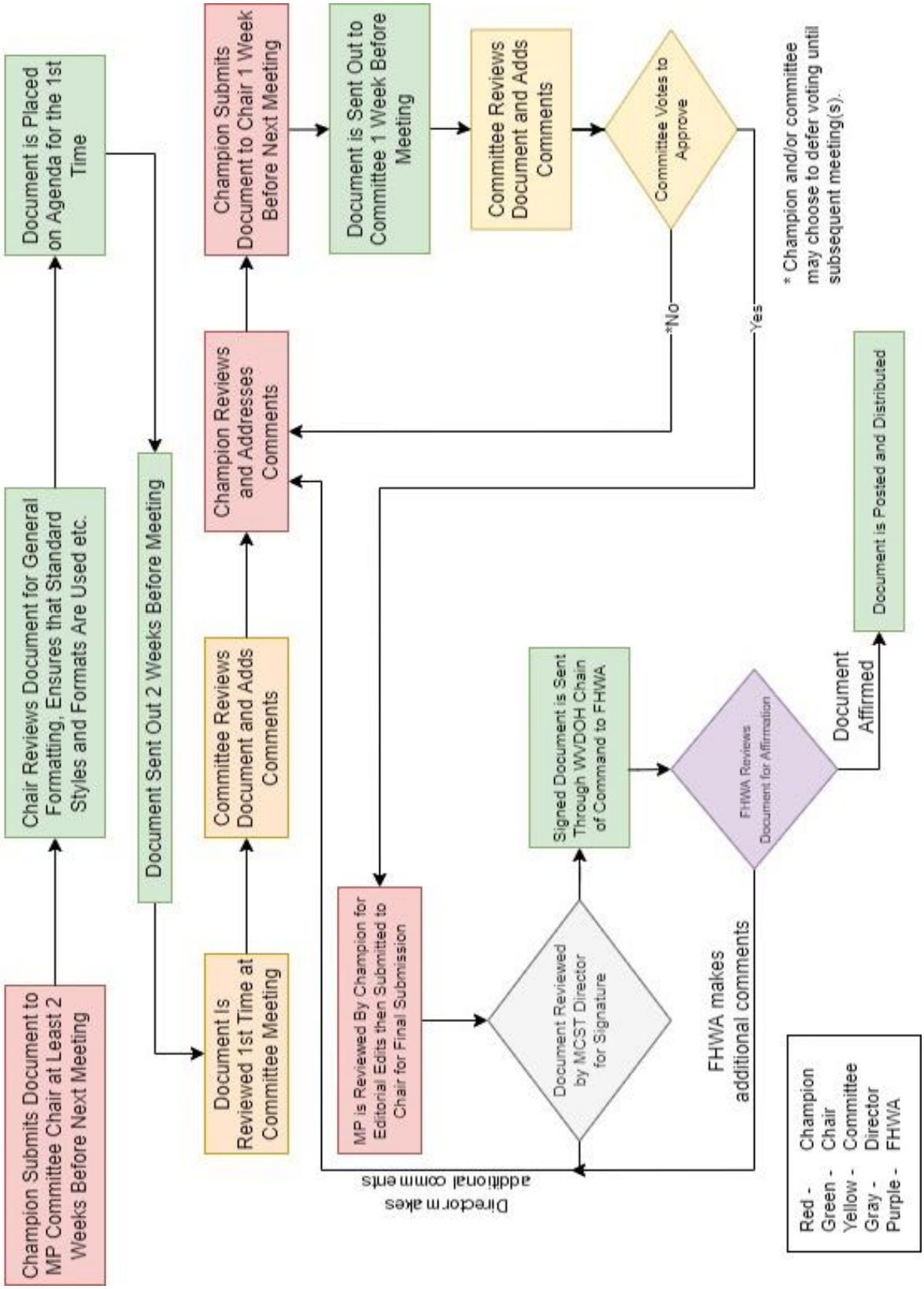
Figure 5 – MP Committee Webpage Example

8.2 When a document is affirmed by FHWA, the documents will be distributed to applicable Division Directors, District Engineer/Managers and District Material Supervisors.

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

RLS:B
Attachment

[5] https://transportation.wv.gov/highways/mcst/Pages/WVDOH-Materials-Procedures.aspx



ATTACHMENT 1 – MP Committee Meeting Flowchart