Materials sampling and testing methods and documentation procedures prescribed in chapter 8 of the CMM are mobilized into the contract by standard spec 106.3.4.1 and standard spec 106.3.4.3.1.

Section was rewritten for better organization.

8-45.1 General

The guidance provided herein is for personnel engaged in the inspection, sampling, testing, approval, documentation and reporting of materials to be incorporated in highway construction work performed under the jurisdiction of the Wisconsin Department of Transportation. Requirements of the independent assurance sampling and testing program are not included in this section.

Consult the department regional materials representative regarding any doubts pertaining to compliance of source inspected materials, field inspection reports, waiver of testing, unlisted items, evaluation of certifications, or other questions regarding acceptance procedures.

8-45.1.1 Materials Requirements

All materials must meet contract specifications. Approval of materials is primarily based on test results that demonstrate that the materials conform to the contract. Testing is performed by the department, by the contractor under the Quality Management Program (QMP), and/or by the manufacturer. Some testing is performed on-site during construction operations while others are performed in advance at the source or manufacturer. The testing specifics vary based on the type of material. So does the method of acceptance and documentation requirements of each. The methods of acceptance and reporting/documentation requirements of each are all discussed in greater detail herein. However, project staff should refer to CMM 8-50 and the standard specifications to ensure all sampling, testing, reporting, and documentation requirements for all the specific materials are covered.

8-45.1.1.1 Materials Testing and Acceptance Guide

The Materials Testing and Acceptance Guide, CMM 8-50, details many of the sampling, testing, and documentation requirements for various materials, and is supplemental to the contract documents. The information provided are the recommended minimum requirements for the different materials. In many cases, it may be appropriate to increase the frequency and scope of certain testing and acceptance activities in order to properly administer the material specifications. In all cases, it is appropriate to closely observe produced materials for visual evidence of changes in quality and then adjust testing frequencies, as required, to adequately evaluate their quality. The Materials Testing and Acceptance Guide also provides directions for certain materials that are found to be nonconforming based on testing.

8-45.1.1.2 E-Guide

E-Guide is an automated system that produces a handy sampling, testing and documentation guide for material requirements on a project. The program generates guidance automatically based on the bid items included in a project and it also allows for manual input of non-standard special provision (SPV) items. The documents that are input into the E-Guide system are created by an E-Guide committee. The committee reviews the standard specs and CMM 8-50 to compile the information into a succinct guide of specific material requirements.

The WisDOT project material coordinator prepares an E-Guide and provides a copy to the contractor's material coordinator. Consult the department's regional materials representative for guidance when developing the E-Guide. CMM 8-50 should be cross-referenced with the E-Guide since it contains detailed information for specific materials. Contact the regional materials engineer if any information within the documents is inconsistent. The materials engineers will work with BTS, Quality Assurance Unit to resolve any issues. The E-Guide program can be accessed through the 'Links' tab on Atwood Systems website at:

http://www.atwoodsystems.com/

The E-Guide does not supersede material requirements in the Standard Spec, CMM, or contract special provisions.

8-45.1.1 Material Inspection & Documentation

All manufactured products, including conditionally approved products that have been previously inspected and tested at the source, must be inspected as soon as possible after delivery to the job site for any evidence of damage or noncompliance.

Documentation and reporting for material acceptance is essential and required on all WisDOT projects. All material documentation and reporting must be completed and entered into the department's material reporting

software no more than 60 working days after the work completion date.

The engineer should follow these steps as a minimum for documentation of all materials delivered to the project.

1. Inspect all manufactured and pre-qualified products as soon as possible after delivery.
   1.1 Including materials on approved lists, from certified sources, and conditionally approved products
   1.2 Record relevant inspection information in the material record.
2. Verify that products delivered match the certifications, approved lists, etc.
3. Review all certifications of compliance and certified reports of test and analysis. As part of the review process, assure the documents are dated within two years of the project LET date. Ensure the manufacturer/supplier name, product name, and appropriate ASTM/AASHTO reference, and signature and title of the person certifying the product for the company is included. Reviewer initials and date certificates. Refer to 8-45.2.4 in this chapter for additional details. Ensure that a DT1349, Source of Materials Report, is in the project file before incorporating any out-of-region or out-of-state materials into a project (see CMM 8-40.6).
4. Assign a document ID to all external material acceptance documents for tracking and reference purposes. For MIT/MTS reports, use the unique prefix report number as the document ID.
5. Document the inspection in the Inspector's Daily Report (IDR) and with a diary entry in a MIT/MTS prefix 905 report as a basis for acceptance (BFA). Reference all certifications, shop inspection reports, Buy America documentation, specific test prefix report(s), and other external documents in the 905 report.

8-45.1.3 Materials Electronics Reporting Software

The department has three software programs and a website that are used for electronically reporting and documenting.

1. Materials Reporting System (MRS)
2. Materials Information Tracking (MIT)
3. Materials Tracking System (MTS)
4. Highway Quality Management System (HQMS) website.

MRS is only used by contractors to report QC sampling and testing. Data input into MRS can only be seen on the HQMS after the report has been verified and sent.

MIT is used by department field staff to report QV test results, inspections, or other material reporting requirements. Data input into MIT can only be seen on the HQMS after the report has been verified and sent.

MTS is the largest of the three programs and is used by department central office laboratory and regional personnel. MTS has a direct network connection so that all data that is entered and saved is directly stored in the department's database.

Most project data can be viewed through the Highway Quality Management System website. This is also where department-authorized personnel review materials data and make pay adjustments if needed. Materials reporting is explained in greater detail in Table 1 of CMM 8-46 .That chapter provides a list of all the MIT/MTS prefix reports.

8-45.2 Materials Approval Methods

Table 1 on the following page summarizes the documentation requirements and the reporting means for the different material acceptance methods.

The department approves materials based on the following methods:

1. Field Sampling and Testing
2. Conditionally Preapproved Products
3. Approved Product/Source List
4. Approval by Certification

Note: Standard spec 106.3.2 stipulates that the department reserves the right to retest or re-inspect plant-inspected and other pre-approved materials after delivery to the project site and to reject materials that are found not to comply with the contract requirements.

If a material fails to meet specification requirements of the contract, document the specifics including disposition of the material within the remarks box of the applicable MIT/MTS prefix report and in the DT1310.

Table 1 Documentation Requirements for Different Acceptance Methods

Acceptance Type	Documentation Required & Reporting Software	MIT/MTS Document	MTS Documentation Time Line	Remarks
Central office (CO) laboratory validation testing	MTS report	Various MTS prefixes as appropriate. See CMM 8-46 Table 1 for a list of prefixes	No later than one week after completion of test.	Testing & data entry by CO Lab personnel
QV Sampling and Testing	QV lab testing – MTS report QV field testing – MIT/MTS report	Aggregates - 162, 217 Soils & Agg Density 232 MSE Wall Backfill - 230 HMA - 254 HMA Density - 262 Concrete strength – 130, 133 Concrete Thickness - 136	Comply with QMP specs. for reporting time. If not specified, report within one week of completing the test. 155 - No later than 60 days after contract work completion date.	Laboratory testing for concrete strength & HMA mixtures and data entry by the qualified lab personnel performing the test Field QV testing and data entry by QV personnel
QC Sampling and Testing	QC test results - MRS applicable module - MRS IRI (Ride) - MRS HMA= - MRS PCC (Structures & Pavements) - MRS Soils & Aggregates	MTS - 155 QMP Summary report	Comply with QMP specs. for reporting time. If not specified, report within one week of completing the test.	QC testing & data entry by contractor QC personnel Department creates QMP summaries. Figure 4, Figure 5, Figure 6, and Figure 7 are examples of prefix 155 reports for QMP testing
Conditionally Approved Materials [2]	Materials diary entry MIT/MTS reference report	MIT/MTS 905 reference report & diary entry	No later than 60 days after contract work completion date.	Data entry by project personnel;
Approved Product/Source Lists [2]	Materials diary entry MIT/MTS reference report	MIT/MTS 905 reference report & diary entry	No later than 60 days after contract work completion date.	Data entry by project personnel;
Approval by Certification [2]	Cert. of Compliance or Certified Report of Test or Analysis MIT/MTS reference report Materials Diary entry	MIT/MTS 905 reference report & diary entry	No later than 60 days after contract work completion date.	See note below [1].
Source or Shop Inspection [2]	DT1823 Form Report of shop inspection MIT/MTS 905 reference report & diary entry	MIT/MTS 905 reference report & diary entry	No later than 60 days after contract work completion date	Test entry by project personnel. Source sampled materials tested and reported by CO personnel (see CO Lab testing above).

[1] Certifications must be evaluated promptly upon delivery for adequacy, completeness, and compliance with the specifications. The certification reviewer must make appropriate notations, initial and date the document when the review is completed.

[2] Obtain Buy America certificates for applicable iron and steel products.

8-45.2.1 Field Sampling and Testing

Some materials are sampled and/or tested onsite during production and placement. Others are sampled at the source or during placement and tested in a laboratory. All sampling and testing personnel must be qualified under a department-accepted program for the materials they are working with and testing is performed in qualified laboratories. Test types and frequencies are in accordance with the governing specification or the department recognized common practices. Sampling and testing procedures are performed as prescribed in

CMM Chapter 8.

Under QMP specifications, materials are approved based on the contractor's quality control (QC) sampling and testing when they conform to specifications and when the results are validated by department quality verification (QV) sampling and testing. Contractor QC test results are reported in MRS. Department QV test results are documented in the appropriate MIT/MTS prefix report. QV testers must compare their test results to the appropriate QC test results to validate the material quality. Approval is based on acceptable QC and QV test results.

Some materials and/or products require testing by the department's central office. Acceptance of these materials are typically reserved pending satisfactory laboratory test results. Obtain representative samples of the materials from the job site or at the source of supply. Package and/or bind the material appropriately and securely attach an appropriate label that includes all pertinent or required information. Prompt submittal of properly bound and labeled samples will help ensure timely test results. Laboratory testers document the test results in the pertinent MIT/MTS prefix report and reference in the 905. Test results are available to the engineer in HQMS.

When the testing frequency of a material is determined by the quantity used, it is necessary to report the actual quantity used. When testing and subsequent acceptance requirements of a material do not depend upon quantity, it is necessary to provide detailed information within the remarks section of the applicable MIT/MTS report that will confirm that all of the materials incorporated into the work were thoroughly tested and within the specification requirements.

8-45.2.2 Conditionally Preapproved—Shop or Source Inspected

Certain materials are conditionally preapproved at the manufacturing plant or source of supply based on inspection and review of relevant test results. Those materials will typically bear tags, stamps, or other markings that indicate that they have been preapproved. Documentation of the markings, stamps and physical condition should be included in the material diary entry under the BFA. These materials may be incorporated into the work if the materials appear to be in acceptable condition based on a job-site examination.

If materials that require inspections and preapproval at the source are delivered to a project site without any appropriate markings indicating preapproval, they may be rejected by the engineer. Or, the materials can be approved and incorporated into the work based on satisfactory job-site examination and/or testing. Contact the department's regional materials representative to verify acceptance of the material.

A shop inspection report or a laboratory report that documents the original inspections or testing is required. Include documentation of material acceptance and reference the shop inspection or laboratory report in the IDR and electronically in a MIT/MTS prefix 905 report.

8-45.2.3 Approved Product/Supplier/Manufacturer/Plant Lists

Some products are approved for use based on previous testing and a satisfactory performance history within the department. These products are included on WisDOT's approved products list located at:

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/default.aspx

The approved lists are maintained and updated regularly by the Bureau of Technical Services. Certain materials including, but not limited to—asphalt binder, Portland cement, prestressed concrete, precast concrete, bridge metal secondary fabrication items, beamguard, and proprietary retaining walls--must come from a certified supplier, manufacturer or plant.

These materials may be accepted after project staff verifies that the products and/or suppliers are included in the appropriate approved list and inspection upon delivery. Document the material acceptance and relevant inspection information in the IDR and electronically in a MIT/MTS prefix 905 report. Reference any applicable test reports or certifications.

If products or materials from an approved list exhibit lower than expected performance when placed in service, or if project-level testing indicates non-conformance of an approved product with the relevant specification, field staff should immediately contact the technical sponsor identified on the applicable published list for that material.

8-45.2.4 Approval by Certification

Manufactured products or assemblies may be approved based on tests performed by the manufacturer when certified. Some products only need a product certification, while others require a product certification and a production plant certification.

Manufactured products may be accepted by a certification of compliance or a certified report of test or analysis either as sole documentation for acceptance or as supplemental documentation (see standard spec 106.3). Maintain a material file with all certifications.

Products that are from certified sources, as previously discussed, are approved by verifying that the source, manufacturer, or plant is on the appropriate approved list and provides a certification of product compliance showing that the product meets the pertinent specification and contract requirements. Or, by submittal of test results in meeting the same spec requirements.

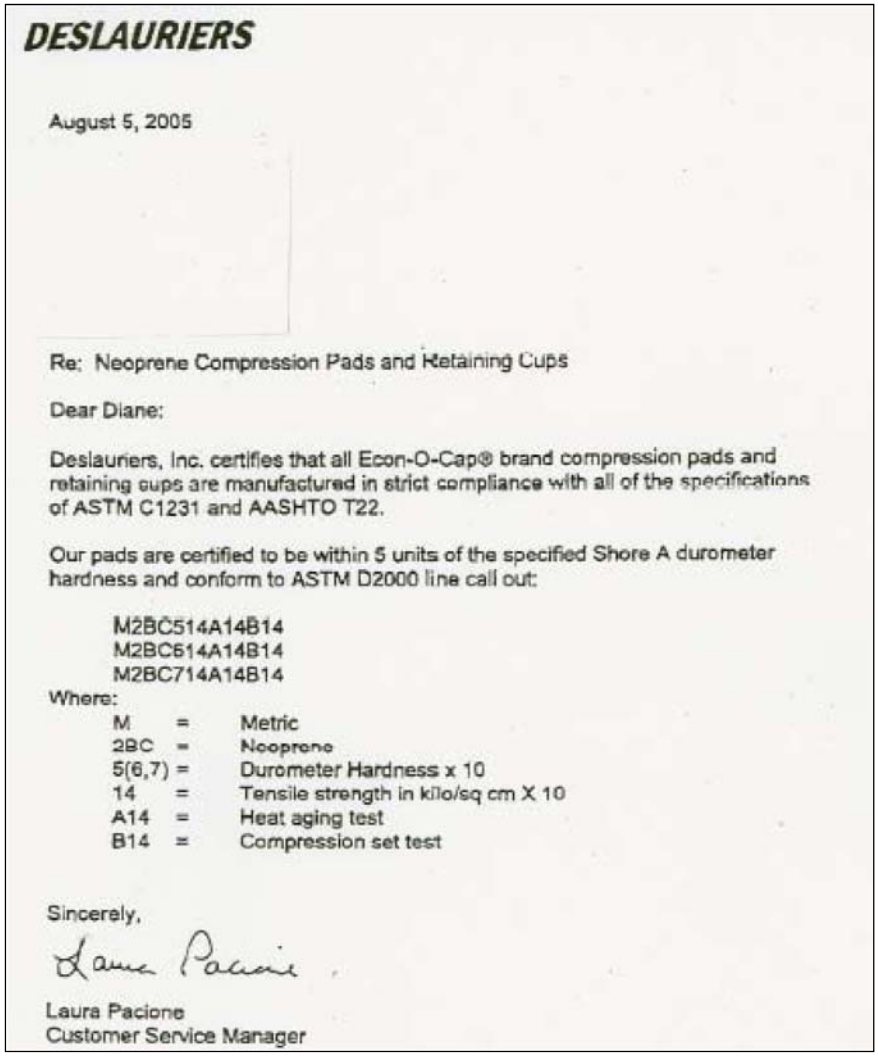
8-45.2.4.1 Certification of Compliance

A manufacturer's certification of compliance must include:

1. Name of the manufacturer or of the supplier.
2. Name and use of the product.
3. Statement of the specification that the product meets, such as AASHTO and/or ASTM and the specification number, or when applicable, the contract special provisions. In some cases it may be the manufacturer's specifications.
4. Signature and title of a person in responsible charge of certifying the product who can bind the company and the signer's job title.

An example of a correct certification of compliance is shown in Figure 1. Project staff should be reminded to, upon review, sign and date the certificate.

Figure 1 Example of a Correct Certification of Compliance



DESLAURIERS

August 5, 2005

Re: Neoprene Compression Pads and Retaining Cups

Dear Diane:

Deslauriers, Inc. certifies that all Econ-O-Cap® brand compression pads and retaining cups are manufactured in strict compliance with all of the specifications of ASTM C1231 and AASHTO T22.

Our pads are certified to be within 5 units of the specified Shore A durometer hardness and conform to ASTM D2000 line call out:

M2BC514A14B14
M2BC614A14B14
M2BC714A14B14

Where:

M	=	Metric
2BC	=	Neoprene
5(6,7)	=	Durometer Hardness x 10
14	=	Tensile strength in kilo/sq cm X 10
A14	=	Heat aging test
B14	=	Compression set test

Sincerely,

Laura Pacione

Laura Pacione
Customer Service Manager

Note: ASTM D2000 line call out must be cited for the Durometer hardness of pads used. 50 Durometer pads are suitable for use for strengths 1500- 6000 psi. 60 Durometer pads are for strengths 2500- 7000 psi. 70 Durometer pads are used for 4000-7000 psi. The above document should cite or be accompanied by an invoice showing the lot or batch of the pads used.

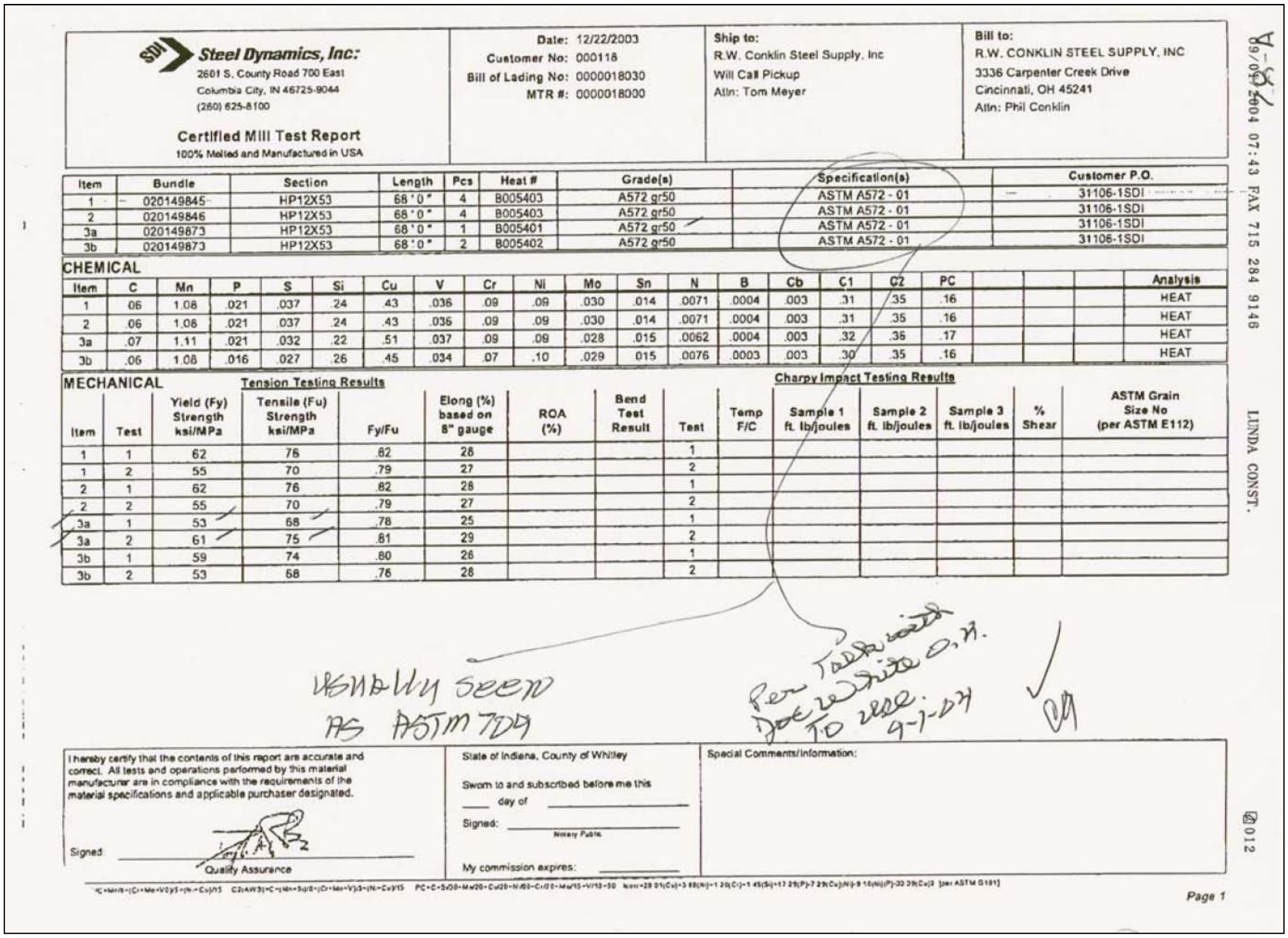
8-45.2.4.2 Certified Report of Test or Analysis

A manufacturer's certified report of test or analysis must include the following:

1. Name of the manufacturer or of the supplier.
2. Name and use of the product.
3. Statement of the specification that the product meets such as AASHTO and/or ASTM and the specification number, or when applicable, the contract special provisions. In some cases it may be the manufacturer's specifications.
4. Lot, batch, heat numbers, etc., applicable to the material delivered.
5. Test results for both physical and chemical test requirements as specified.
6. Signature and title of a person in responsible charge of the testing facility.

An example of a correct certified report of test and analysis is shown in Figure 2.

Figure 2 Example of Certified Report of Test and Analysis



Steel Dynamics, Inc.
2601 S. County Road 700 East
Columbia City, IN 46725-9044
(260) 625-8100

Certified Mill Test Report
100% Melted and Manufactured in USA

Date: 12/22/2003
Customer No: 000118
Bill of Lading No: 0000018030
MTR #: 0000018000

Ship to:
R.W. Conklin Steel Supply, Inc
Will Call Pickup
Attn: Tom Meyer

Bill to:
R.W. CONKLIN STEEL SUPPLY, INC
3336 Carpenter Creek Drive
Cincinnati, OH 45241
Attn: Phil Conklin

Item	Bundle	Section	Length	Pcs	Heat #	Grade(s)	Specification(s)	Customer P.O.
1	020149845	HP12X53	68 ' 0 "	4	B005403	A572 gr50	ASTM A572 - 01	31106-1SDI
2	020149846	HP12X53	68 ' 0 "	4	B005403	A572 gr50	ASTM A572 - 01	31106-1SDI
3a	020149873	HP12X53	68 ' 0 "	1	B005401	A572 gr50	ASTM A572 - 01	31106-1SDI
3b	020149873	HP12X53	68 ' 0 "	2	B005402	A572 gr50	ASTM A572 - 01	31106-1SDI

CHEMICAL

Item	C	Mn	P	S	Si	Cu	V	Cr	Ni	Mo	Sn	N	B	Cb	C1	C2	PC				Analysis
1	.06	1.08	.021	.037	.24	.43	.036	.09	.09	.030	.014	.0071	.0004	.003	.31	.35	.16				HEAT
2	.06	1.08	.021	.037	.24	.43	.036	.09	.09	.030	.014	.0071	.0004	.003	.31	.35	.16				HEAT
3a	.07	1.11	.021	.032	.22	.51	.037	.09	.09	.028	.015	.0062	.0004	.003	.32	.36	.17				HEAT
3b	.06	1.08	.016	.027	.26	.45	.034	.07	.10	.029	.015	.0076	.0003	.003	.30	.35	.16				HEAT

MECHANICAL

		Tension Testing Results							Charpy Impact Testing Results					
Item	Test	Yield (Fy) Strength ksi/MPa	Tensile (Fu) Strength ksi/MPa	Fy/Fu	Elong (%) based on 8" gauge	ROA (%)	Bend Test Result	Test	Temp F/C	Sample 1 ft. lb/joules	Sample 2 ft. lb/joules	Sample 3 ft. lb/joules	% Shear	ASTM Grain Size No (per ASTM E112)
1	1	62	76	.82	28			1						
1	2	55	70	.79	27			2						
2	1	62	76	.82	28			1						
2	2	55	70	.79	27			2						
3a	1	53	68	.78	25			1						
3a	2	61	75	.81	29			2						
3b	1	59	74	.80	26			1						
3b	2	53	68	.76	28			2						

Usually seen as ASTM 709

Per Talk with Joe White O.H. To use 9-1-04

I hereby certify that the contents of this report are accurate and correct. All tests and operations performed by this material manufacturer are in compliance with the requirements of the material specifications and applicable purchaser designated.

Signed: ____________________
Quality Assurance

State of Indiana, County of Whitley

Sworn to and subscribed before me this ____ day of ____________

Signed: ____________________
Notary Public

My commission expires: ____________

Special Comments/Information:

Page 1

FAX 715 284 9146 LUNDA CONST.

Certifications of compliance and certified reports of test and analysis must be provided to the engineer in order for material to be accepted.

Copies of certifications must be included in the material records, except:

1. In the case of manufacturer's certificate of compliance and certified report of test or analysis for prefabricated structural steel members and associated items received directly from the manufacturer, documents must be reviewed promptly by the region person responsible for this area and proper notation must be made on the certifications.
2. In the case of electrical material requiring certificates of compliance and/or shop drawings see standard spec 657.2.1. This is the typical and only acceptable method of complying with the procedure as outlined, whether for poles or any other required item as stated in other sections of the standard specifications.

   2.1. One copy of the certificate of compliance and one copy of the accompanying shop drawing for any structural material (arms, poles) should be sent to the Electrical Engineer, Central Office Traffic. This paperwork is for informational review of structure compliance by the bridge office on a random basis in

the future, and not for product review and/or approval.

2.2. The engineer reviews the materials acceptance documents submitted by contractor. This includes poles, arms, and other items requiring certificates of compliance. This method of review is for timesaving reasons. Should the engineer or region electrical personnel wish to send catalog sheets, shop drawings, and certificates of compliance to the Bureau of Highway Operations - System Operations and Electrical Engineering, for review as in the past, that procedure is entirely acceptable..

2.3. Material catalog sheets, shop drawings, and certificates of compliance that are questionable, or items submitted for “equal” status should be sent to the Bureau of Highway Operations - System Operations and Electrical Engineering section for review.

8-45.3 Diary Documentation and Visual Inspection

Certain materials used on department projects require visual field inspection or acceptance without a formal report. Documentation for these types of materials must be in the inspector’s material diary and must include manufacturer, brand, model, source, lot/batch, heat number, application rate, markings, type, size, system, species, etc. Information related to the basis of acceptance, compliance with requirements, visual job site inspection, product data sheets/labels, etc. must be included when they are applicable and made available when considered to be appropriate.

Diary entries must include the following:

- Description: brand, model, type, dimensions, lot, heat etc.
- Quantity.
- Manufacturer, source and vendor.
- Evaluation and basis for acceptance - visual inspection remarks, product condition, compliance to specifications, etc.

The results of tests and inspections must be documented on reports of field inspection or in MIT/MTS. Several similar materials may be included on a single report entry when appropriate. An example of the format for diary entries is shown below in Table 2.

Note: In special cases, when field inspection is specifically requested by the Bureau of Structures, Bridge Fabrication Unit, a copy of the report must be sent to them immediately after inspection. Copies of all reports of field inspection of material must be included with the Test Report Record when the project is completed.

Table 2 Example of Materials Diary Inspection Entries

Date	Description	Manufacturer	Evaluation and Basis for Acceptance
3/11/2006	CSS-1 Asph. Emulsion for tack coat, diluted with 50% water, 2300 Gallons	Koch- Dubuque	Type acceptable per specifications. Performed well at application rate of 0.055 gals/SY. See truck invoice in project record.
3/12/2006	Reinf. Conc. Pipe 18”-120 LF 24”- 224 LF 36”- 608 LF	Madison Conc. Pipe, Madison, WI	Pipe was new and undamaged shipped from a pre-qualified source, cert. statement on shipping invoice.
4/1/2006	High Strength Bolts, nuts, washers, ¾”X 3” galvanized Type A325, Lot 4321, RC Lot #5678 400 units each	Uny-Tite Fasteners Fort Bolt, Missouri	All shipped in same drum, drums were well marked & undamaged. Label matches Cert Report of Tests. Material was clean and well lubricated. Mill certs. Manuf. Rotational capacity tests and Contractor reports of field Rotational Capacity tests are on file.
5/1/2006	Steel Plate Beam Guard panels Heat #708-12.5 foot, 50 panels Heat #699-25 foot, 140 panels	Gregory Steel supplied thru Arbor Green, Portage	Material was new and undamaged as installed, free from defects and white rust. Ht nos. supplied listed for pre-qualified shipment B.O.L #9999, Gregory- Arbor Green- 2006 tested and approved Beam Guard shipments list.

8-45.4 Prefix 155 Miscellaneous Materials--QMP Summary

Prefix 155 reports are used to report activities and test results that aren't covered by other standard prefix-numbered reports. Prefix 155 is also used for QMP Summary reports to summarize QMP activities that were performed for each individual QMP specification involved in a project. Department personnel create a 155 report in MIT or MTS and use the appropriate QMP summary template(s).

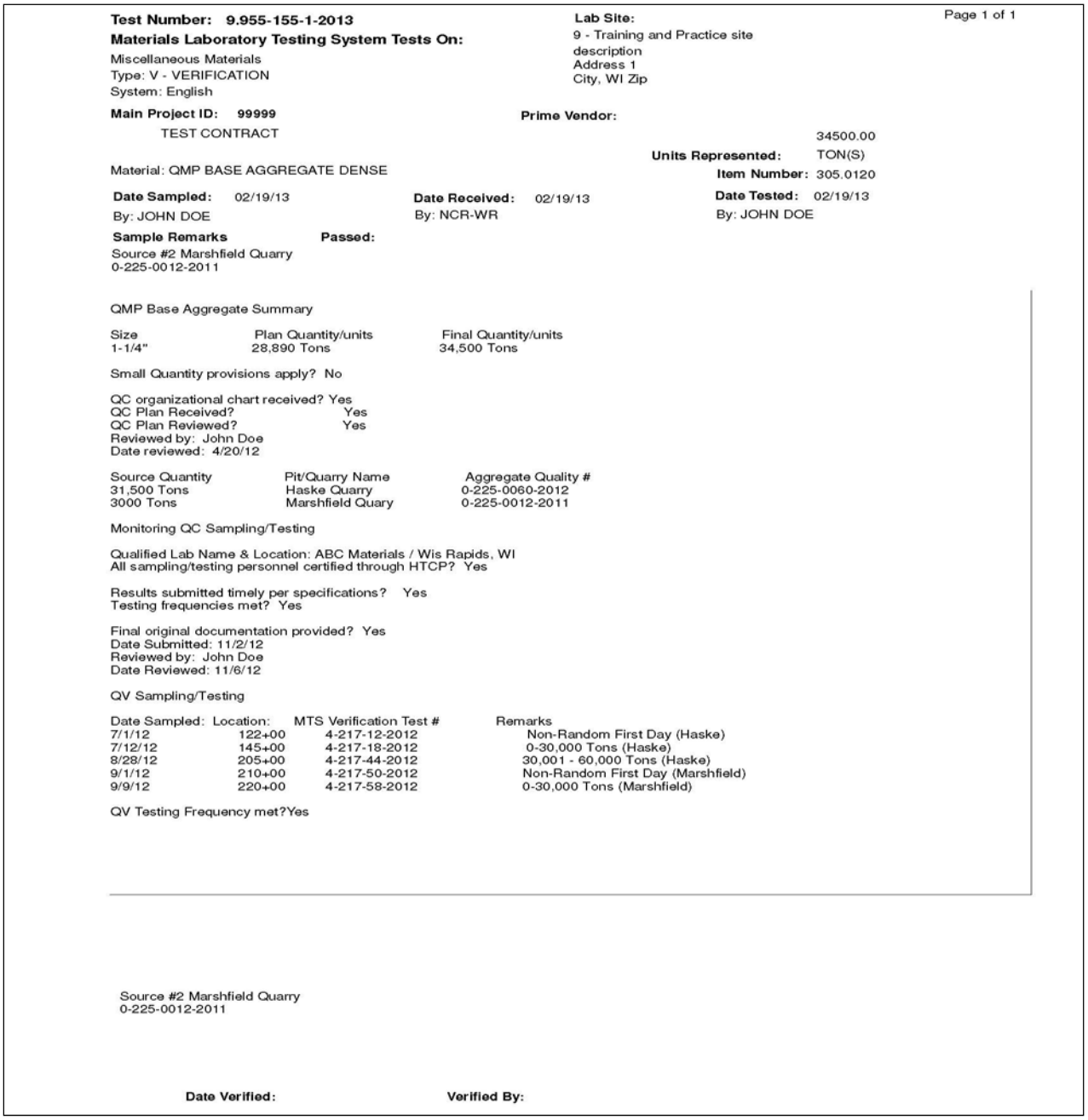
QMP Summary templates are available for most QMP specifications to help standardize reporting and to ensure that all relevant information is captured. QMP Summary templates are located in the WisDOT Statewide Forms Pantry which can be accessed by all department personnel at:

\\mad00fph\n4public\AASHTOWareProject\ACMApplications\Pantry2016\StatewideForms\QMPFormTemplates.

Due to the format of the QMP Summary templates, more than one QMP summary report may be required for a certain QMP specification. For example, the QMP Base Aggregate special provision requires a QMP Summary for each nominal size aggregate—¾", 1 ¼", and 3".

Figure 3, Figure 4, Figure 5 and Figure 6 are examples of QMP Base Aggregate Dense 1¼", Ancillary Concrete, HMA and IRI Summaries, respectively.

Figure 3 Example QMP Base Aggregate Dense 1¼" Summary, MTS Prefix 155



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Test Number: 9.955-155-1-2013
Materials Laboratory Testing System Tests On:
Miscellaneous Materials
Type: V - VERIFICATION
System: English

Lab Site:
9 - Training and Practice site
description
Address 1
City, WI Zip

Main Project ID: 99999
TEST CONTRACT

Prime Vendor:

34500.00
Units Represented: TON(S)
Item Number: 305.0120

Material: QMP BASE AGGREGATE DENSE

Date Sampled: 02/19/13
By: JOHN DOE

Date Received: 02/19/13
By: NCR-WR

Date Tested: 02/19/13
By: JOHN DOE

Sample Remarks **Passed:**
Source #2 Marshfield Quarry
0-225-0012-2011

QMP Base Aggregate Summary

Size	Plan Quantity/units	Final Quantity/units
1-1/4"	28,890 Tons	34,500 Tons

Small Quantity provisions apply? No

QC organizational chart received? Yes
QC Plan Received? Yes
QC Plan Reviewed? Yes
Reviewed by: John Doe
Date reviewed: 4/20/12

Source Quantity	Pit/Quarry Name	Aggregate Quality #
31,500 Tons	Haske Quarry	0-225-0060-2012
3000 Tons	Marshfield Quary	0-225-0012-2011

Monitoring QC Sampling/Testing

Qualified Lab Name & Location: ABC Materials / Wis Rapids, WI
All sampling/testing personnel certified through HTCP? Yes

Results submitted timely per specifications? Yes
Testing frequencies met? Yes

Final original documentation provided? Yes
Date Submitted: 11/2/12
Reviewed by: John Doe
Date Reviewed: 11/6/12

QV Sampling/Testing

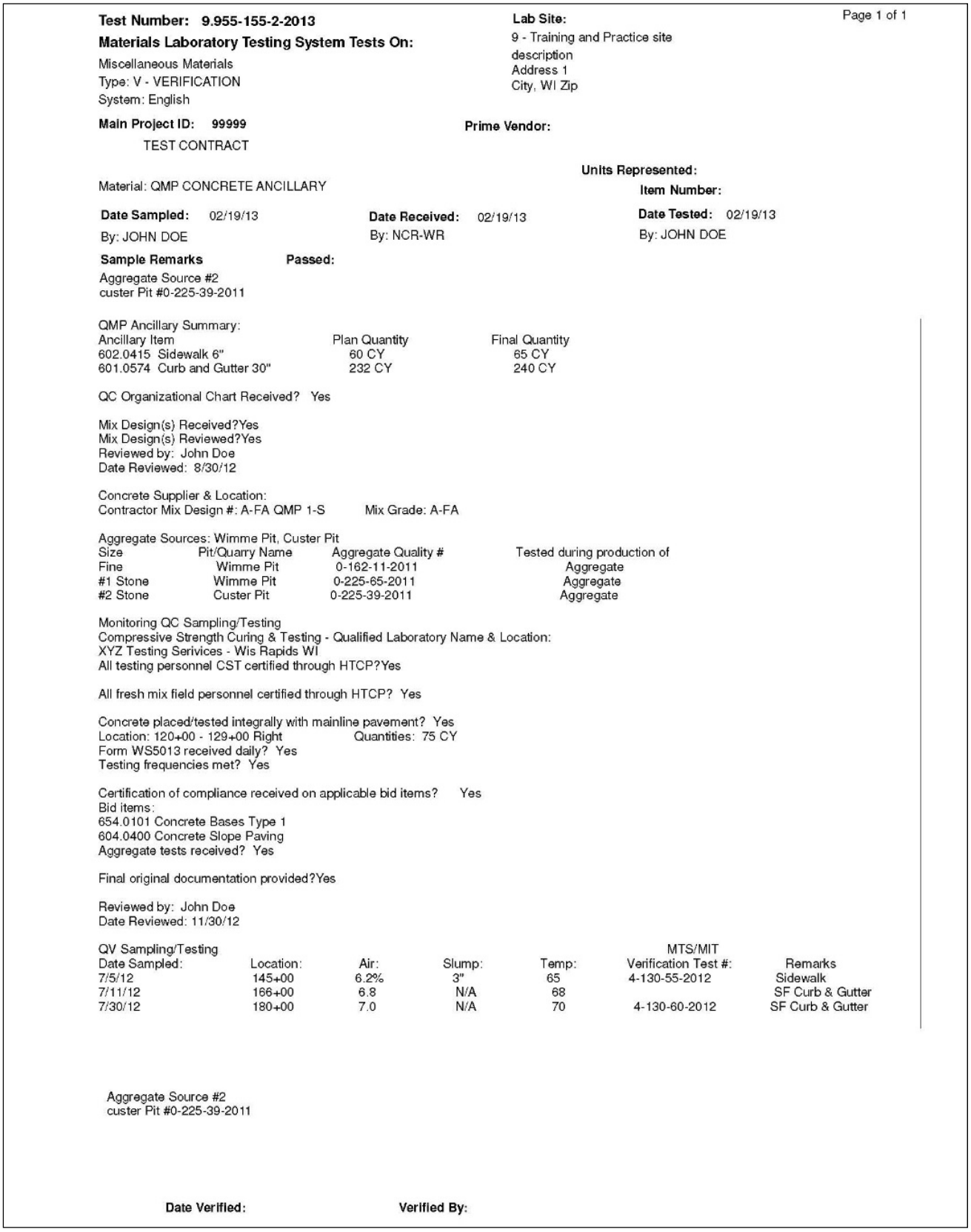
Date Sampled:	Location:	MTS Verification Test #	Remarks
7/1/12	122+00	4-217-12-2012	Non-Random First Day (Haske)
7/12/12	145+00	4-217-18-2012	0-30,000 Tons (Haske)
8/28/12	205+00	4-217-44-2012	30,001 - 60,000 Tons (Haske)
9/1/12	210+00	4-217-50-2012	Non-Random First Day (Marshfield)
9/9/12	220+00	4-217-58-2012	0-30,000 Tons (Marshfield)

QV Testing Frequency met?Yes

Source #2 Marshfield Quarry
0-225-0012-2011

Date Verified: **Verified By:**

Figure 4 Example QMP Ancillary Concrete Summary, MTS Prefix 155



Page 1 of 1

Test Number: 9.955-155-2-2013

Materials Laboratory Testing System Tests On:

Miscellaneous Materials
Type: V - VERIFICATION
System: English

Lab Site:
9 - Training and Practice site
description
Address 1
City, WI Zip

Main Project ID: 99999
TEST CONTRACT

Prime Vendor:

Units Represented:

Material: QMP CONCRETE ANCILLARY

Item Number:

Date Sampled: 02/19/13
By: JOHN DOE

Date Received: 02/19/13
By: NCR-WR

Date Tested: 02/19/13
By: JOHN DOE

Sample Remarks **Passed:**
Aggregate Source #2
custer Pit #0-225-39-2011

QMP Ancillary Summary:

Ancillary Item	Plan Quantity	Final Quantity
602.0415 Sidewalk 6"	60 CY	65 CY
601.0574 Curb and Gutter 30"	232 CY	240 CY

QC Organizational Chart Received? Yes

Mix Design(s) Received?Yes
Mix Design(s) Reviewed?Yes
Reviewed by: John Doe
Date Reviewed: 8/30/12

Concrete Supplier & Location:
Contractor Mix Design #: A-FA QMP 1-S Mix Grade: A-FA

Aggregate Sources: Wimme Pit, Custer Pit

Size	Pit/Quarry Name	Aggregate Quality #	Tested during production of
Fine	Wimme Pit	0-162-11-2011	Aggregate
#1 Stone	Wimme Pit	0-225-65-2011	Aggregate
#2 Stone	Custer Pit	0-225-39-2011	Aggregate

Monitoring QC Sampling/Testing
Compressive Strength Curing & Testing - Qualified Laboratory Name & Location:
XYZ Testing Serivices - Wis Rapids WI
All testing personnel CST certified through HTCP?Yes

All fresh mix field personnel certified through HTCP? Yes

Concrete placed/tested integrally with mainline pavement? Yes
Location: 120+00 - 129+00 Right Quantities: 75 CY
Form WS5013 received daily? Yes
Testing frequencies met? Yes

Certification of compliance received on applicable bid items? Yes
Bid items:
654.0101 Concrete Bases Type 1
604.0400 Concrete Slope Paving
Aggregate tests received? Yes

Final original documentation provided?Yes

Reviewed by: John Doe
Date Reviewed: 11/30/12

QV Sampling/Testing

Date Sampled:	Location:	Air:	Slump:	Temp:	MTS/MIT Verification Test #:	Remarks
7/5/12	145+00	6.2%	3"	65	4-130-55-2012	Sidewalk
7/11/12	166+00	6.8	N/A	68		SF Curb & Gutter
7/30/12	180+00	7.0	N/A	70	4-130-60-2012	SF Curb & Gutter

Aggregate Source #2
custer Pit #0-225-39-2011

Date Verified: **Verified By:**

Figure 5 Example QMP HMA Summary, MTS Prefix 155

Test Number: 9.955-155-3-2013

Materials Laboratory Testing System Tests On:

Miscellaneous Materials
Type: V - VERIFICATION
System: English

Lab Site:
9 - Training and Practice site
description
Address 1
City, WI Zip

Main Project ID: 99999
TEST CONTRACT

Prime Vendor:

12000.00

Units Represented: TON(S)

Material: QMP HMA PAVEMENT

Item Number: 460.1101

Date Sampled: 02/22/13
By: JOHN DOE

Date Received: 02/22/13
By: NCR-WR

Date Tested: 02/22/13
By: JOHN DOE

Passed:

QMP HMA Mixture Summary

HMA Pavement Type	Plan Quantity	Final Quantity
E-1	11,750 Tons	12,000 Tons

QC Organizational Chart Received? Yes

HMA Supplier: American Asphatl

HMA Mix Layer	Department Mix Design #
Lower	0-250-0060-2012
Upper	0-250-0080-2012

Monitoring QC Sampling/Testing
Qualified Laboratory - Name & Location
Mathy Construction Co
Arnot QC Lab - Stevens Point, WI
All personnel certified through HTCP? Yes

Received a copy of all mix designs prior to placement? Yes
Results submitted daily per specifications? Yes
Testing frequencies met? Yes

Final original documentation provided? Yes
Date Submitted: 10/11/12
Reviewed by: John Doe
Date reviewed: 10/12/12

QV Sampling/Testing

Verification Test #: 4-254-21-2012 (0-250-0060-2012)
4-254-26-2012 (0-250-0080-2012)

Date Verified:

Verified By:

Figure 6 Example QMP IRI Summary, MTS Prefix 155

Test Number: 9.955-155-5-2013

Materials Laboratory Testing System Tests On:

Miscellaneous Materials
Type: V - VERIFICATION
System: English

Lab Site:
9 - Training and Practice site
description
Address 1
City, WI Zip

Main Project ID: 99999
TEST CONTRACT

Prime Vendor:

Material: QMP IRI

Units Represented:

Item Number: 440.4410.S

Date Sampled: 02/25/13
By: JOHN DOE

Date Received: 02/25/13
By: NCR-WR

Date Tested: 02/25/13
By: JOHN DOE

Passed:

QMP IRI Summary

Pavement Type? HMA

QC Plan Received? Yes
QC Plan Reviewed? Yes
Reviewed by: John Doe
Date Reviewed: 6/20/12

Monitoring QC Testing
Qualified Equipment (from WisDOT approved list): SSI, Inertial Profiler, Ro-Line Laser, Dual Sensor
Profiling contractor: Mathy Construction Company

Personnel certified through HTCP? Yes

Project Staff notified prior to calibration verification? Yes

Electronic project file reference documents submitted in MRS?Yes

MRS entry completed? Yes
Department reviewed? Yes

QV Testing

Was QV testing performed? No

Date Verified:

Verified By:

8-45.5 Prefix 905--Materials Diary Inspection

Many materials require a visual inspection for acceptance; these are documented with a diary entry in a MIT/MTS prefix 905 report as a basis for acceptance (BFA). CMM 8-45.1.2 provided a list of steps that should be performed for all materials delivered to a project. One of the steps include assigning a document ID to all external material acceptance documents. Reference all certifications, product data sheets, Buy America statements, shop inspection reports, etc. shop inspections reports by the assigned document ID. Reference all MIT/MTS reports using the unique MIT/ MTS test report number

Thus, the 905 report serves as a single point of reference for all materials acceptance documentation.

8-45.6 Test Report Record

A Test Report Record is a summary of all major sampling, testing and materials inspections that were accomplished on a project and entered into the MIT/MTS. A Test Report Record is to be kept for all contracts let to bid or entered into with the counties.

The regional materials representative creates a materials Test Report Record in MTS. An example of a Test Report Record is shown in Figure 7.

Draft copies of the Test Report Record should be completed during the progress of a project for the following purposes:

To serve as documentation that all materials have been and are being adequately tested and inspected.

- Concerned personnel can review project materials control quickly and easily.
- If the engineer is reassigned elsewhere on another contract, that person's successor will have adequate records available.
- To help ensure the prompt submittal of the final test record report after completion of the project.

Figure 7 Example Test Report Record

Test Report Record — Date Printed: 11/07/2016

PROJECT: 1170-01-70 (Wausau - Merrill)

Test Number	Test Type	Description	Material	Manufacturer	Satisfactory	Tested	Verified	Verified By
22 0-123-25-2013	Verification	Tension Wire for Chain Link Fence	TENSION WIRE FOR CHAIN-LINKED FENCE	MERCHANTS METALS	Yes	09/30/13	12/18/13	Thomas Brokaw
23 0-123-26-2013	Verification	Tension Wire for Chain Link Fence	TENSION WIRE FOR CHAIN-LINKED FENCE	MERCHANTS METALS	Yes	09/30/13	12/18/13	Thomas Brokaw
24 0-123-27-2013	Verification	Tension Wire for Chain Link Fence	TENSION WIRE FOR CHAIN-LINKED FENCE	MERCHANTS METALS	Yes	09/30/13	12/18/13	Thomas Brokaw
25 0-123-28-2013	Verification	Tension Wire for Chain Link Fence	TENSION WIRE FOR CHAIN-LINKED FENCE	MERCHANTS METALS	Yes	09/30/13	12/18/13	Thomas Brokaw
26 0-131-24-2013	Verification	Water for Concrete	NC RUBY QUARRY POND		Yes	08/06/13	08/06/13	PATRICK FITZGIBBON
27 0-150-28-2013	Verification	Portland Cement	NC LAFARGE GREENBAY TERMINAL TYPE 1	LAFARGE GREENBAY TERMINAL	Yes	09/04/13	09/04/13	PATRICK FITZGIBBON
28 0-152-44-2013	Verification	Fly Ash	NC LAFARGE WESTON	LAFARGE	Yes	07/31/13	07/31/13	PATRICK FITZGIBBON
29 0-152-55-2013	Verification	Fly Ash	NC LAFARGE WESSTON PLANT MICHELS RUSH	LAFARGE WESSTON PLANT	Yes	08/28/13	08/28/13	PATRICK FITZGIBBON
30 0-162-6-2013	Verification	Fine & Coarse Aggregate for Concrete			Yes	01/25/13	01/25/13	ROBERT DOWNING
31 0-170-38-2013	Verification	Geotextiles	TYPE DF SCHEDULE A GEOTEXTILE FABRIC	WILLACOOCHEE INDUSTRIAL FABRICS	Yes	10/10/13	04/01/14	Thomas Brokaw
32 0-172-42-2013	Verification	Geogrid	GEOGRID REINFORCEMENT	TENSAR	Yes	06/18/13	06/18/13	Thomas Brokaw
33 0-172-84-2013	Verification	Geogrid	GEOGRID REINFORCEMENT	TENSAR	Yes	08/20/13	08/20/13	Thomas Brokaw
34 0-225-130-2013	Contractor Data Entry	Aggregate Source Certification Approval			N/A	05/10/13	05/13/13	ROBERT DOWNING
35 0-330-76-2013	Verification	Performance Graded Binder	PG 64-34 ASPHALT BINDER	MIDWEST INDUSTRIAL ASPHALT-LACROSSE, WI	Yes	07/16/13	07/16/13	RICHARD BARDEN
36 0-330-77-2013	Verification	Performance Graded Binder	PG 64-22 ASPHALT BINDER	FLINT HILLS RESOURCES - ROSEMOUNT, MN	Yes	07/16/13	07/19/13	Thomas Brokaw

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8-45.7 DT1310—Certification of Materials

The DT1310 is used to document all deviations from contract specifications for the acceptance of materials and construction operations controlled by sampling and testing. All nonconformance and nonperformance issues are documented in a DT1310. When entering deviations into a report, include detailed explanations by completing all the data fields, as shown in Figure 8. Also, be diligent in ensuring that the issue has not already been entered. The electronic DT1310 can be sorted by any of the columns to help ensure that data information isn't duplicated.

A DT1310 is required for all contracts let to bid or entered into with counties. This form is only available electronically in MIT/MTS software. The project leader enters information electronically in MIT/MTS. The project leader should assure the latest version of the software is being used.

The certification must be approved and signed by the project construction leader or project materials coordinator. Include a copy of the final, signed DT1310 in the material records. After the region reviews the material records, the region material engineer/region material reviewer and region project manager will sign the DT1310. For federal oversight projects, a signed copy of the DT1310 must be sent via email to FHWA at:

Wisconsin.fhwa@dot.gov.

An example of an unsigned cover page of a DT1310 is shown in Figure 9.

Figure 8: Certification of Materials Deviation Data Entry Fields

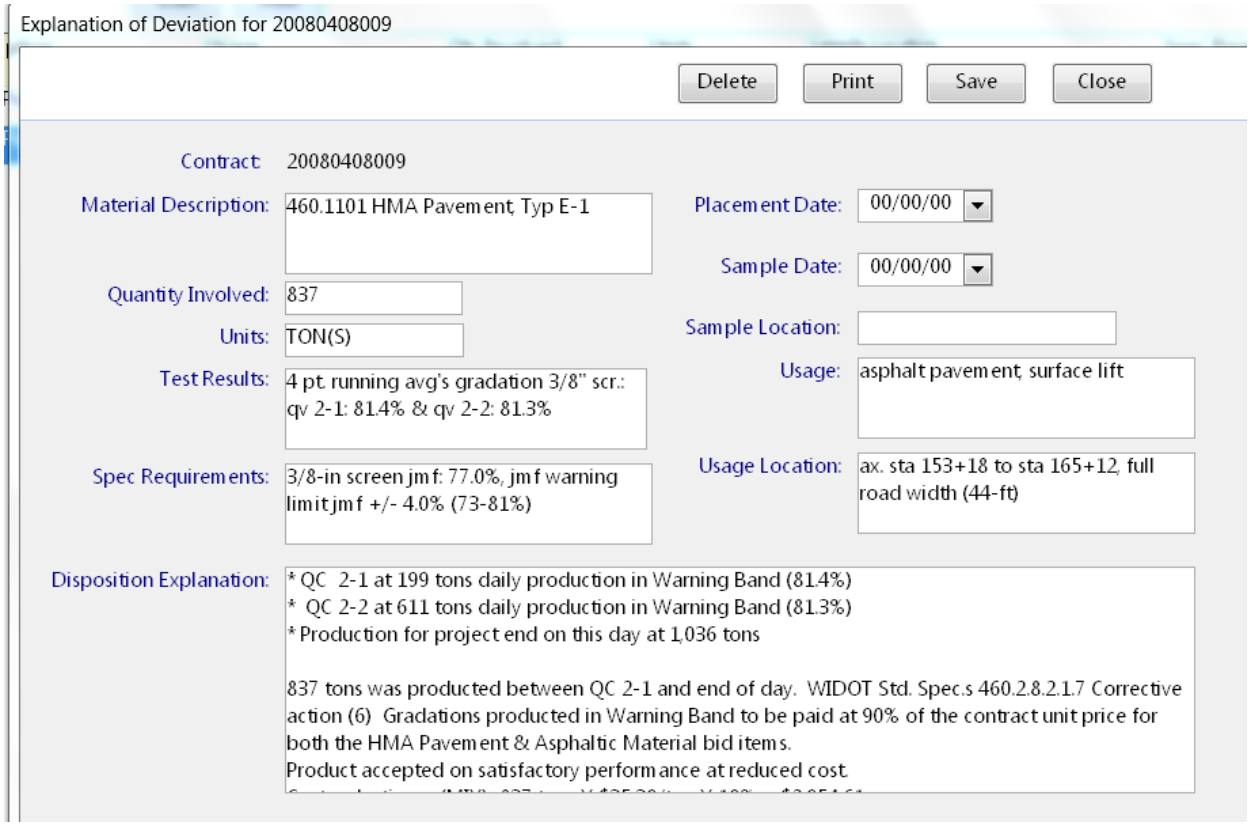

Figure 9 Example DT1310, Certification of Materials Report

Wisconsin Department of Transportation

11/07/2016

Certification of Materials Used on Highway Project

To: Director, Bureau of Technical Services

Contract Id	Federal Project ID	Region	County	Highway / Route	Date Let	Proposal #
20140610017	N/A	NC	Dane Outagamie Waukesha Waushara	Sth 64	06/10/14	017

Contractor

Project Id	Project Description
9000-13-70	Merrill - Antigo

EXCEPTIONS NOTED

Project Leader or WisDOT Project Materials Coordinator (Print): Matt Erial

This is to certifiy that:

The results of the tests on acceptance samples indicate that the materials incorporated in the construction work, and the construction operations controlled by the sampling and testing, were in conformity with the approved plans and specifications; and such results compare favorably with the results of the independent assurance sampling and testing.

Company Name: Ayres Associates

Project Leader or WisDOT Project Materials Coordinator (Signature): _____

Date Signed: _____

Regional Materials Engineer or Materials Specialist (Print):

Regional Materials Engineer or Materials Specialist (Signature): _____

Date Signed: _____

Project Manager (Print):

Project Manager (Signature): _____

Date Signed: _____