

DOT District Materials

Who are we?

- Engineers and Technicians tasked with verifying compliance of all materials used on Federal Aid projects.
- Handout contains contact info by District for current Materials Office Personnel as well as the other links we will use in this presentation.
- Please contact Materials staff in your District with invites to pre-construction meetings.
- Current District Materials Information can be found here:

<https://iowadot.gov/districts/District-contacts>



DOT District Materials

What can we do?

- While we MUST verify compliance with all materials that are used on Federal Aid highway projects, we MAY provide assistance on Federal Aid non-highway projects and on select non-Federal Aid projects.
- Instructional Memorandum 103 describes four project categories and District Materials' involvement in each of them.
- Instructional Memorandum 204 states materials acceptance methods and the appendices to this IM contain sampling and testing regimens for common types of construction. These regimens include S&T frequency, the responsible parties, source document references, and other information.

Category:

1. Federally Funded County and City Road, Street, and Bridge Projects.
 - Surface Transportation Program (STP-S, STP-U, STP-A, CS-TS-STP-U, STP-S-TS)
 - Highway Bridge Program (BROS, BHOS, BRM, BHM, BRS, BHS, BR-RP)
2. Federally Funded County and City Non-highway Projects.
 - Transportation Enhancement (STP-E, STP-ES, STP-ES-E)
3. State-assisted projects or cooperative projects involving through traffic lanes on primary roads, including turn lanes and other work within the primary right-of-way that will be owned and maintained by the Department.
 - U-STEP/C-STEP (UST, CST)
 - RISE (RC, RM, RFM, RP, RPX, RCX, RFMX, RP-M)
 - Traffic Safety Improvement Program (CS-TSF, FM-TSF)
4. Farm-to-Market, Local, or State-assisted projects on county roads or city streets that do not involve any work on primary highway through traffic lanes or turn lanes that will be owned and maintained by the Department.
 - Farm-to-Market (FM, LFM)
 - Federal-aid Swap (BHM-SWAP, BHOS-SWAP, BHS-SWAP, BRM-SWAP, BROS-SWAP, BRS-SWAP, STBG-SWAP, ICAAP-SWAP, HSIP-SWAP)
 - 100% Locally funded city or county projects let at the Department (L, CS). Note: 100% locally funded city or county projects that are let locally have no Department involvement in any aspect of the project development or construction.

IM 103

Step 1 – Find your Project Category

Check with Local Systems if your project prefix is not listed.

Some prefixes are similar:

- BROS or BROS-SWAP?
- FM or FM-TSF?



<https://www.iowadot.gov/erl/current/IM/content/103.htm>

D. Project Inspection

1. For Category 1 Projects, the inspection requirements of [IM 205](#) and [IM 204](#) will be followed.
2. For Category 2 Projects, the DME, when requested, will perform the DME tasks in [IM 204](#).
3. For Category 3 Projects except FM, the DME, when requested, will perform the DME tasks in [IM 204](#).
4. For Category 4 Projects (FM and Federal-aid Swap projects only), the DME, when requested, will perform limited testing.
 - a) HMA mix design paper review or evaluation of test strip results.
 - b) Verification testing of un-compacted mixture will be done the first day and then one test per week maximum.
 - c) Verification testing of asphalt binder will be done the first day and then one test per week maximum.
 - d) Verification testing of loose cold in place recycling will be done at a rate of one test per day maximum.
 - e) Verification testing of stabilizing agent will be done at a rate of one sample per week maximum.
 - f) Verification testing of smoothness may be done at the rate in [IM 204](#).
 - g) QMC, BR, HPC-D or C-SUD mix design paper review

IM 103

Step 2 – Determine if District Materials involvement is required, provided upon request, or not available.

Note: Services provided upon request may be limited to paper reviews, intermittent advisory or informational testing, and other less-than-full involvement.



<https://www.iowadot.gov/erl/current/IM/content/103.htm>

October 19, 2021
Supersedes October 15, 2019

Sampling & Testing Guide-Minimum Frequency
ASPHALT MIXTURES
[Section 2303 & 2213](#)

IM 204

MATERIAL OR CONSTRUCTION ITEM	TESTS	METHOD OF ACCEPTANCE & RELATED IMs	QUALITY CONTROL					INDEPENDENT ASSURANCE, & VERIFICATION S&T				
			SAMPLE BY	FREQ.	SAMPLE SIZE	TEST BY	REPORT	S&T TYPE	SAMPLE BY	FREQ.	SAMPLE SIZE	TEST BY
GRADE INSPECTION												
Uncompacted Mixture:	Lab Density & Lab Voids	321,322, 350, 325G, 357, 338	RCE/ CONTR	As per 2303	40 lb	CONTR		V IA	RCE/ CONTR	As per 2303 Test 1/day Systems Approach	40 lb	DME
	Moisture Sensitivity	319, 322, 325G Article 2303.02, E.2						V	RCE/ CONTR	Test 1 st Sample at 500 tons then sample 1/10,000 tons per 2303 until 1 st sample accepted (test as needed)	70 lb	CTRL
Compacted Mixture	Mat Density, Thickness & Voids	320, 321, 37						V IA	RCE/ CONTR DME	Lot 1 lot/project*	Min 8/lot	RCE DME
	Joint Density	SS-15004						V	RCE/ CONTR	Lot	3/lot	RCE
	Smoothness	41, 3	CONTR	100%	100%	CONTR		V	DME	10%		DME
AB-Approved Brand AS-Approved Source ASD-Approved Shop Drawing S&T-Sampling & Testing			Cert- Certification Statement				CONTR-Contractor RCE-Resident Construction Engineer/Project Engineer DME-District Materials Engineer CTRL-Central Laboratory			IA-Independent V-Verification		

Step 3a – Federal Aid Category 1 Projects (and Category 2 upon request)

Locate sampling & testing requirements in IM 204 Appendices for your work type to become familiar with how **your agency** will interact with **District** and, through them, **Central Materials**.



<https://www.iowadot.gov/erl/current/IM/content/204.htm>

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AB-Approved Brand AS-Approved Source ASD-Approved Shop Drawing S&T-Sampling & Testing			Cert- Certification Statement			CONTR-Contractor RCE-Resident Construction Engineer/Project Engineer DME-District Materials Engineer CTRL-Central Laboratory			IA-Independ V-Verifi			

IM 204

Step 3b – Select Non-Federal Aid Projects, Category 3 and 4

Locate sampling & testing requirements in IM 204 Appendices for your work type to become familiar with the sampling and testing **your agency** may be responsible for performing.



<https://www.iowadot.gov/erl/current/IM/content/204.htm>

IM 204

NOTE: For Local agency projects with no Federal Funds Independent Assurance, IA, tests are not required.

NOTE: For Local agency projects with no Federal funding, verification samples or monitor samples sampled by the DME are not required. These samples may be sampled by the contracting authority. With prior approval, these samples may be tested by the Iowa Department of Transportation Central Laboratory.

NOTE: For Local agency projects with no Federal funding, smoothness verification testing may be tested and evaluated by the DME.

Step 3b – Select Non-Federal Aid Projects, Category 3 and 4

Notes in the appendix footings may provide alternatives regarding sampling and testing on non-Federal Aid projects.



<https://www.iowadot.gov/erl/current/IM/content/204.htm>

Request for Materials Inspection
See Materials IM 103

Contracting Authority _____

Project Number(s) _____

Requested by _____

Check the boxes below to select the inspection requested.

Plant Calibrations For category 2, 3 and 4 projects (FM & SWAP only). Described in IM 103.

HMA

PCC

Source Inspections For category 2, 3 and 4 projects (FM & SWAP only). Described in IM 103.

Aggregate source – Gradation Testing

Aggregate source – Quality Testing

Steel Fabrication Inspection

Note: For FM & SWAP projects; inspection services will be provided for precast prestressed concrete beams and piles unless otherwise directed by the Contracting Authority.

Source/Description/Instruction

Project Inspection For category 2, 3 and 4 projects (FM & SWAP only). Described in IM 103.

HMA Mix Design, Paper Review

Uncompacted Mix, Lab Testing First Day and then 1 per week

Asphalt Binder, Lab Testing First Day and then 1 per week

Smoothness Testing 10% of Project

CIPR, Lab Testing Max 1 sample per day

Stabilizing Agent First Day and then 1 per week

HPC, CDM, MCM, QMC, BR, C-SUD Mix designs, Paper Review

Contractor/Description/Instruction

Approved by

Cc: File, Lab, Area Insp., Other District(s), Ames

Form 519324

Request for Materials

Inspection

Step 3b – Select Non-Federal
Aid Projects in Categories 3 and
4

- Review testing available.
- Consider risk of not testing, value of test results, and cost of testing.
- If assistance is desired, complete and submit Request form.



<https://iowadot.gov/forms/519324-Request-for-Materials-Inspection.pdf>