MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MDOT State Highway Administration

Asphalt Technology Division & Material Clearance 2025

Rebeccah Smith

Source Approval Process

- Receive Task Notification from ??? Material Engineer
  - Includes Contract #
  - Item #
  - Mix #
- Check for Mix Design approval
- Check to assure the mix meets the requirements in the Special Provisions
  - ESAL level
  - Mix Type
  - Band (mix size)
  - Binder Type

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Source Approval Process

- If all conditions meet:
  - Source is approved.
  - Message is sent back to the Material Engineer.
  - Project Engineer can see that it has been approved on MMS. (such an improvement over the old system)

- If all conditions are NOT met, the mix is not sourced and returned to the Material Engineer.

- ATD can attempt to contact the asphalt mix producer to let them know that something needs to be corrected and resubmitted by the prime.

Material Clearance

You Can Help Us Help You

Communication

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You Can Help Us Help You

Pre-Pave Meeting

Before One Drop of Asphalt is Ever Delivered to the Job Site

Why is this so Important?

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Testing Required for “Paving” . . . .

- 10 Random Cores
- 2 Random Box Samples

If all you do is overlay or just shave and pave, that will be all you need to know

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Sampling & Testing / Documentation Required for Everything Else…

504.03.13 Thin Lifts and Wedge/Level Courses. If an asphalt course is determined to be a thin lift in accordance with the "Thin Lift Mix Design Identification Table" in 904.04.03, construct a 400 to 500 ft control strip on the first day of paving to determine optimum pavement density.

(a) Use a thin-lift nuclear or non-nuclear asphalt density gauge in accordance with the manufacturer's recommendations to take readings from the control strip in five random locations to determine roller patterns

When the Pre-pave meeting is not held before "everything else" happens, there's no documentation for material clearance.

(f) Take 2 QA cores daily when production is in excess of 500 tons per location, or when successive days of less than 500 tons production totals 1 000 tons or greater. If the average of the two density gauge readings and the average of the two respective QA core densities are within 3.0 lb/ft^3, the Administration will accept all the daily density gauge readings. If they do not compare within 3.0 lb/ft3, construct a new control strip and recalibrate the density gauge.

(g) Wedge/Level courses placed at variable thicknesses and any area greater than 3/4 in. shall be tested and accepted in accordance with this Thin Lift specification. Incentives are not applicable for Thin Lift or Wedge/Level courses.

5) Sampling and Testing of Small Quantities of Asphalt Materials
   a) Asphalt Paving – Mixture Sampling
      i. Quantities of 200 tons or less of asphalt production will not require random field mix samples unless otherwise directed by the Engineer.
      ii. Random field mix samples must be taken from behind the paver and must not be taken from areas of bridge approaches, entrances, gore areas, handwork, Gradall placed material, paver hoppers and ends of paver augers.
      iii. Daily quantities greater than 200 tons may be considered small tonnage if accumulated through non-continuous paving. For example, bridge approaches, widening areas, turn lanes, entrances, gore areas. This information must be detailed on the OOC-90 QA Project Report – Mixture/Density Samples.
      iii. Daily quantities 200 tons or greater may be considered small tonnage if accumulated through non-continuous paving. For example: bridge approaches, widening areas, turn lanes. Gauge readings must be performed.
      iv. SHA 73.04 – Core Sheets and OOC-90 forms must be submitted daily for all production including low tonnage.

   c) Asphalt Patching – Mixture Sampling
      i. Quantities of 200 tons or less of asphalt may not require daily field mix samples. However, one random sample per mix will be required for every 1000 tons of asphalt or one sample per mix for every five days of patching, whichever yields the greater frequency.
      ii. Patches not placed with a paver or patches less than 1,000 sq. ft. (10' wide x 100' long) will not require a mix sample.

   d) Asphalt Patching – Cores

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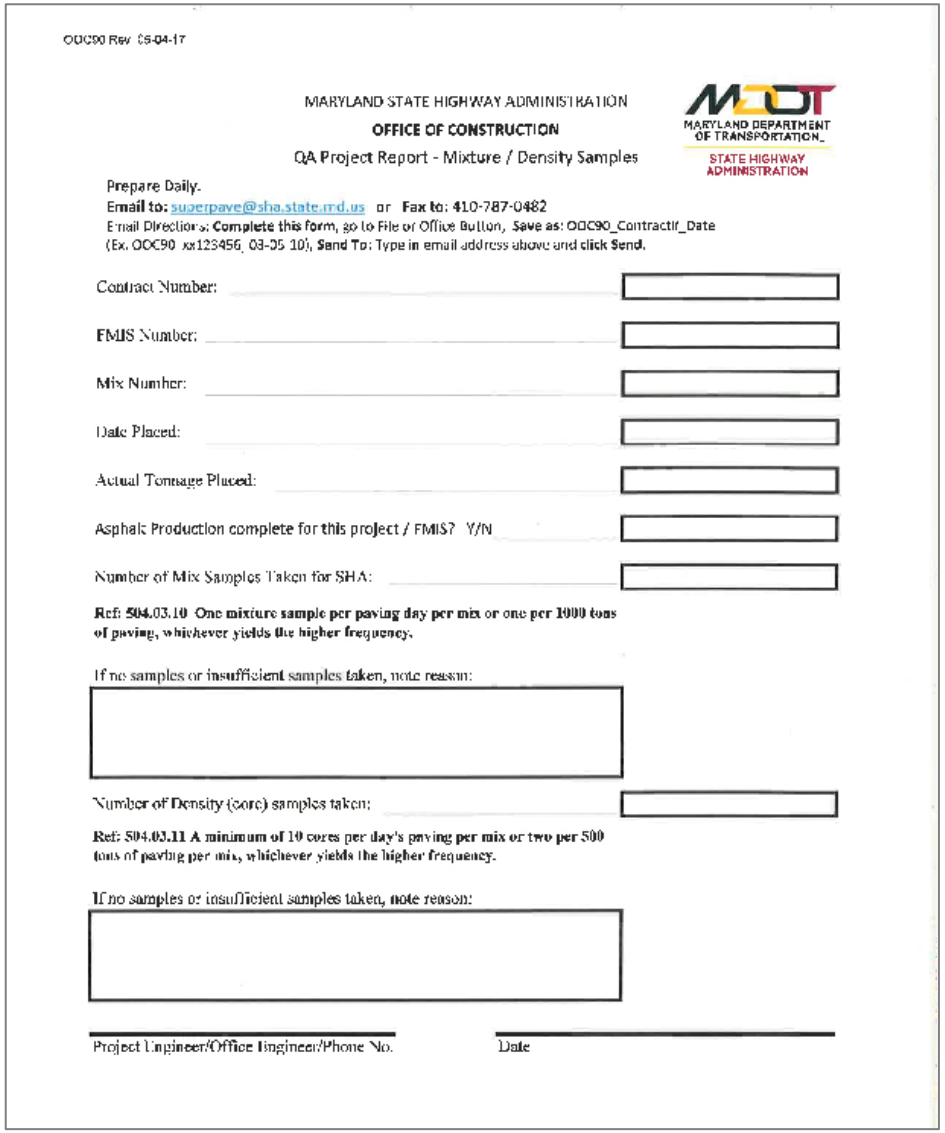
Daily Communication between the project and ATD

- FMIS # (especially important for area-wide contracts)
- Date
- # of Samples taken
- Tonnage accepted for payment
- Is project complete?
- PE's name

- Most importantly – Written explanation for exceptions to the sampling requirements

- Independent from Contractor's Input

OOC-90



OOC90 Rev 05-04-17

MARYLAND STATE HIGHWAY ADMINISTRATION
OFFICE OF CONSTRUCTION
QA Project Report - Mixture / Density Samples

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Prepare Daily.
Email to: superpave@sha.state.md.us or Fax to: 410-787-0482
Email Directions: Complete this form, go to File or Office Button, Save as: OOC90_ContractId_Date
(Ex. OOC90_xx123456_03-05-10), Send To: Type in email address above and click Send.

Contract Number:
FMIS Number:
Mix Number:
Date Placed:
Actual Tonnage Placed:
Asphalt Production complete for this project / FMIS? Y/N
Number of Mix Samples Taken for SHA:

Ref: 504.03.10 One mixture sample per paving day per mix or one per 1000 tons of paving, whichever yields the higher frequency.

If no samples or insufficient samples taken, note reason:

Number of Density (core) samples taken:

Ref: 504.03.11 A minimum of 10 cores per day's paving per mix or two per 500 tons of paving per mix, whichever yields the higher frequency.

If no samples or insufficient samples taken, note reason:

Project Engineer/Office Engineer/Phone No.
Date

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Samples Must Be Identified;

Samples were received that could not be Tested

Missing Contract Numbers
Missing Dates
No Material Identification

A Few Examples:

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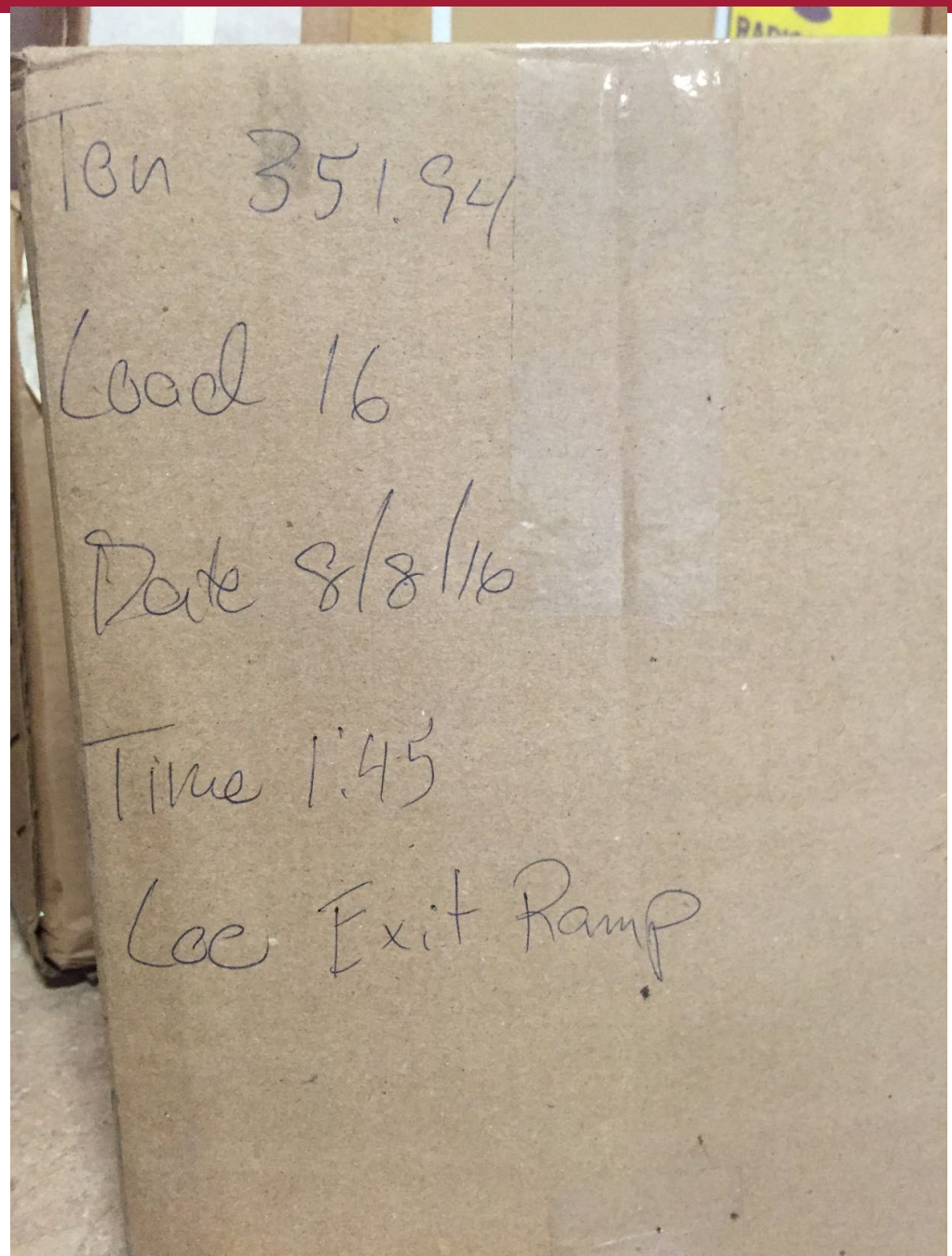

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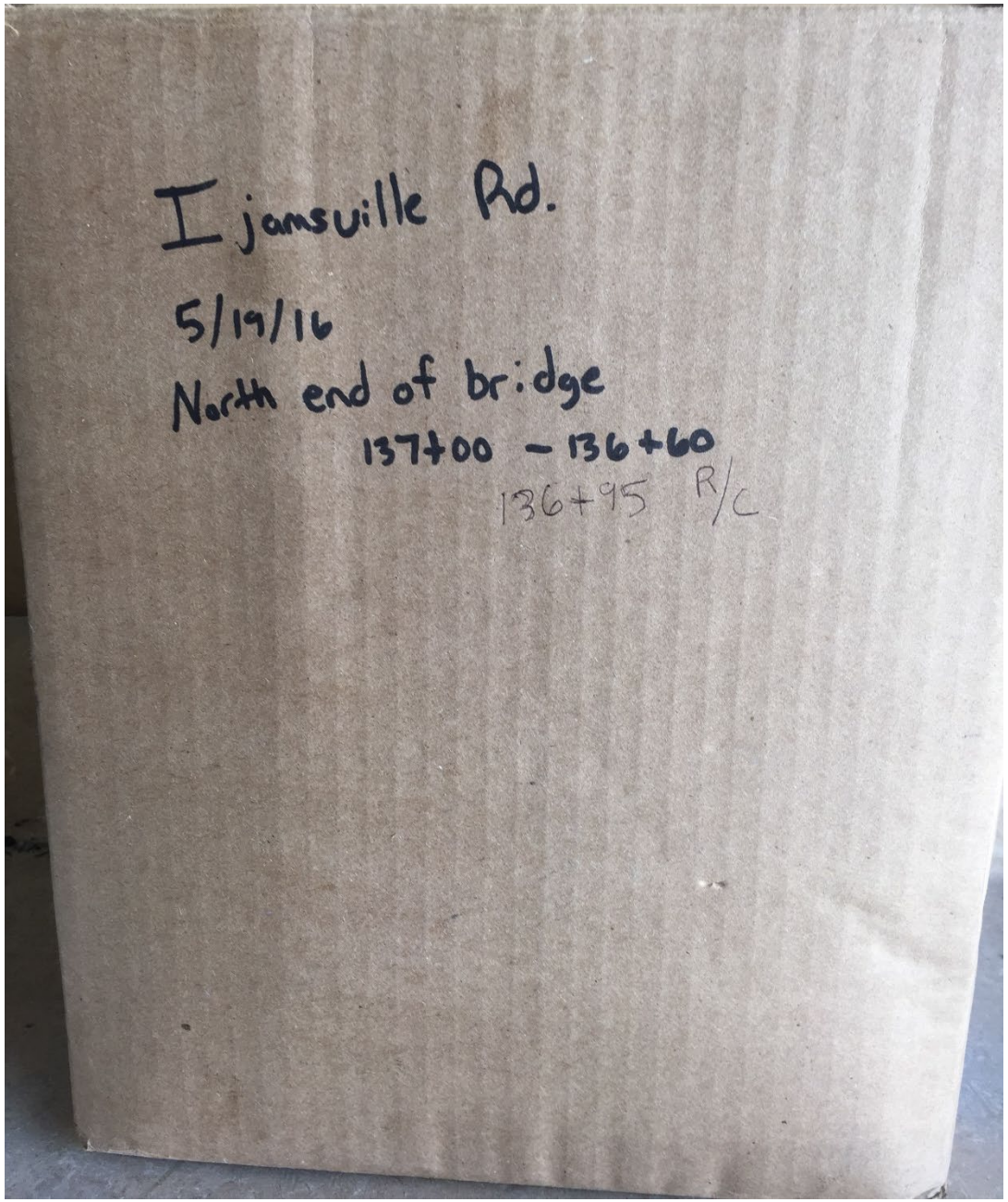

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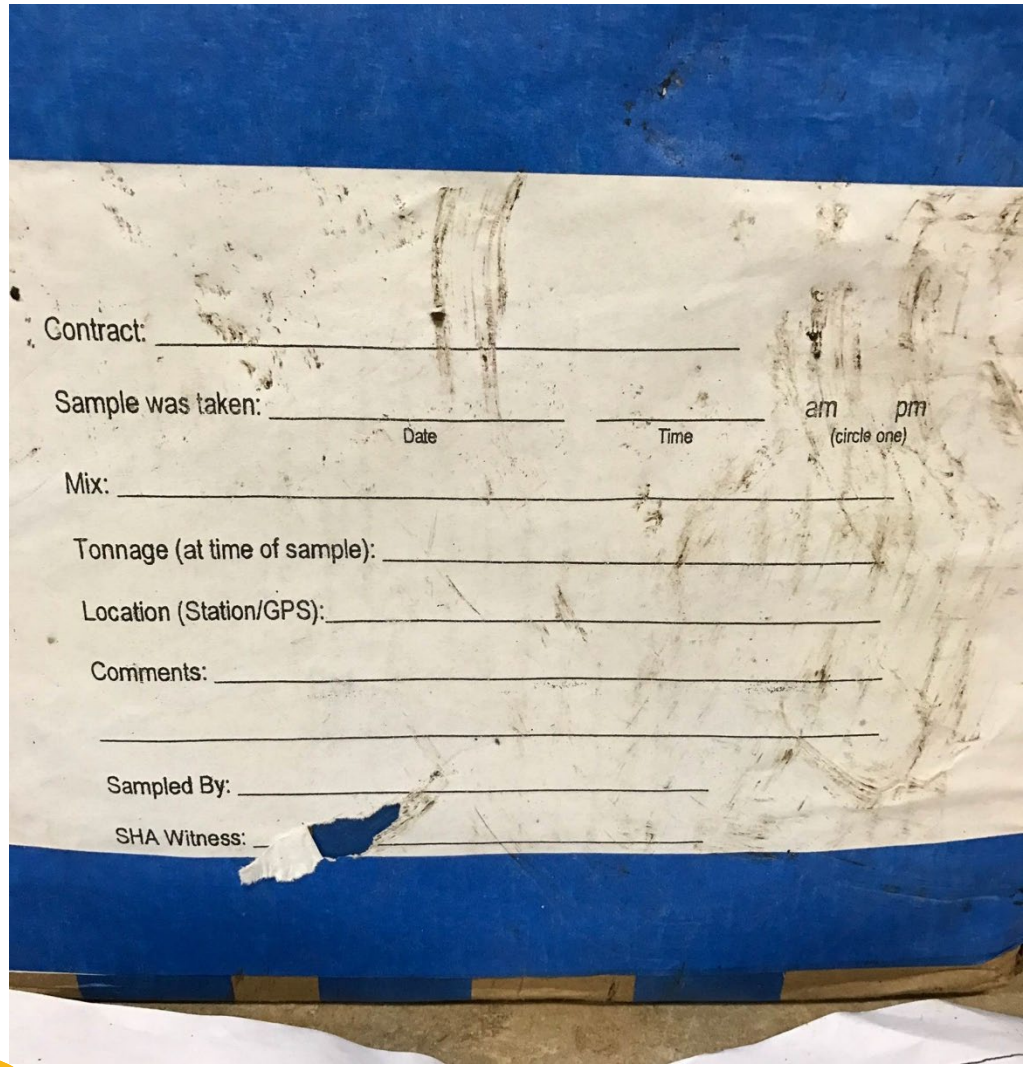
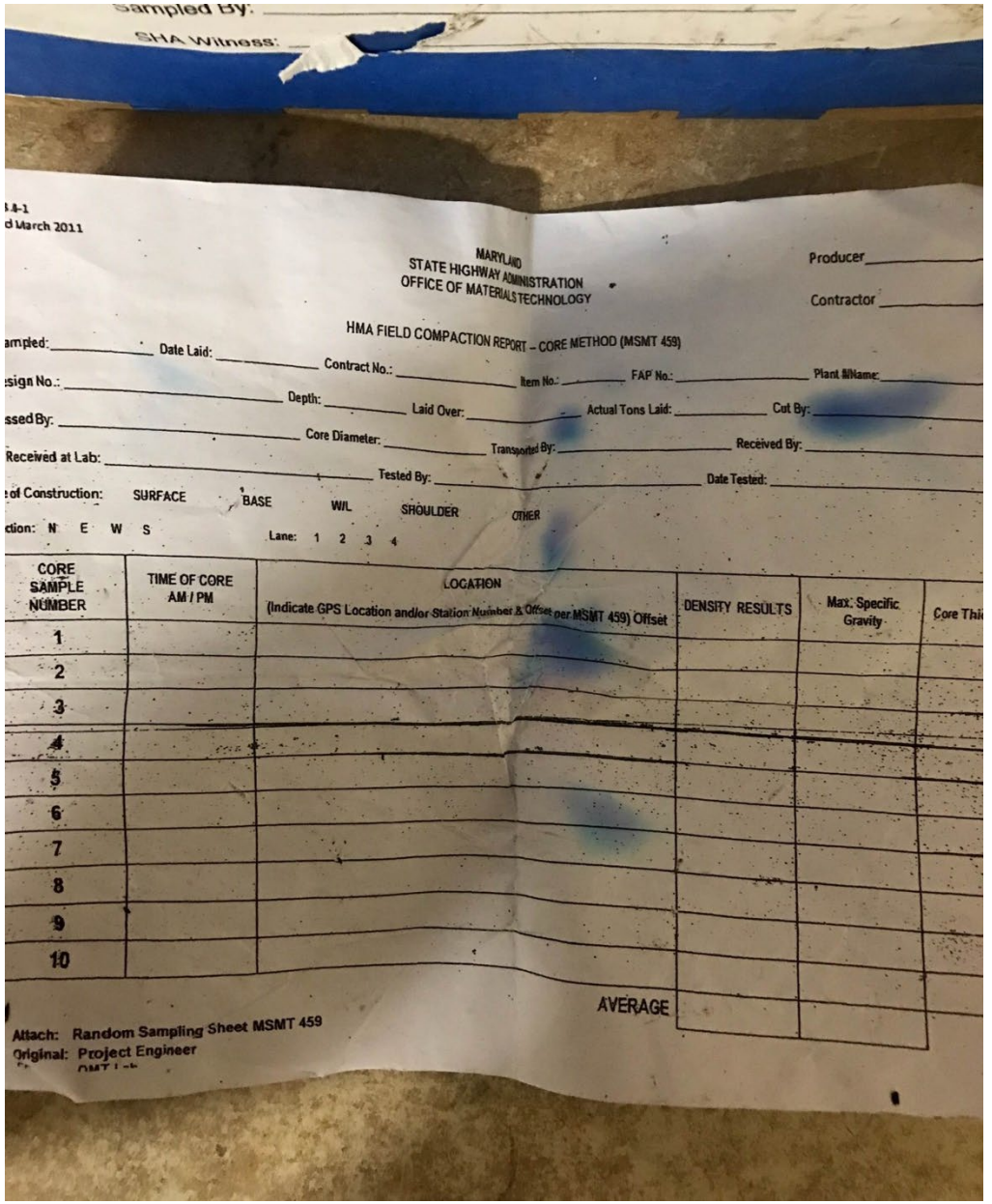

Contract:
Sample was taken:
Date
Time
am pm
(circle one)
Mix:
Tonnage (at time of sample):
Location (Station/GPS):
Comments:
Sampled By:
SHA Witness:


Sampled By:
SHA Witness:
March 2011
MARYLAND
STATE HIGHWAY ADMINISTRATION
OFFICE OF MATERIALS TECHNOLOGY
Producer
Contractor
HMA FIELD COMPACTION REPORT – CORE METHOD (MSMT 459)
Date Laid:
Contract No.:
Item No.:
FAP No.:
Depth:
Laid Over:
Actual Tons Laid:
Core Diameter:
Transported By:
Received By:
Tested By:
Date Tested:
SURFACE
BASE
W/L
SHOULDER
OTHER
Lane: 1 2 3 4
CORE SAMPLE NUMBER
TIME OF CORE AM / PM
LOCATION
(Indicate GPS Location and/or Station Number & Offset per MSMT 459) Offset
DENSITY RESULTS
Max. Specific Gravity
1
2
3
4
5
6
7
8
9
10
AVERAGE
Attach: Random Sampling Sheet MSMT 459
Original: Project Engineer

Density and Mix Pay Factor Distribution

Comes from ATD lab team

Project personnel changes so rapidly that OOC's Assignment List and MMS postings can't keep up.

Need a secure, central location to post and store pay factors

Ride Pay Factor Distribution

Comes from ATD field team

Factors that affect amount of time to produce pay factor

- Obtaining the ride tolerance calculation form (PD-11) from PE on AW contracts
- Defect section consideration partnering
- Waiting on contractor's QC data
- Notification that the project is ready for ATD (OOC-116)

Tack

- Do not sample buckets.
- Call us to pick up if freezing overnight.

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- Identify your sample
  - Label the side of the jug
  - Completed Form 88 including truck tag number
  - Include a Certificate Of Analysis
- Don’t sample buckets
- Don’t put sample in drop box if it’s going to be real cold
  - No daily pickup December – March
  - Notify OMT for pickup or deliver directly to OMT Hanover

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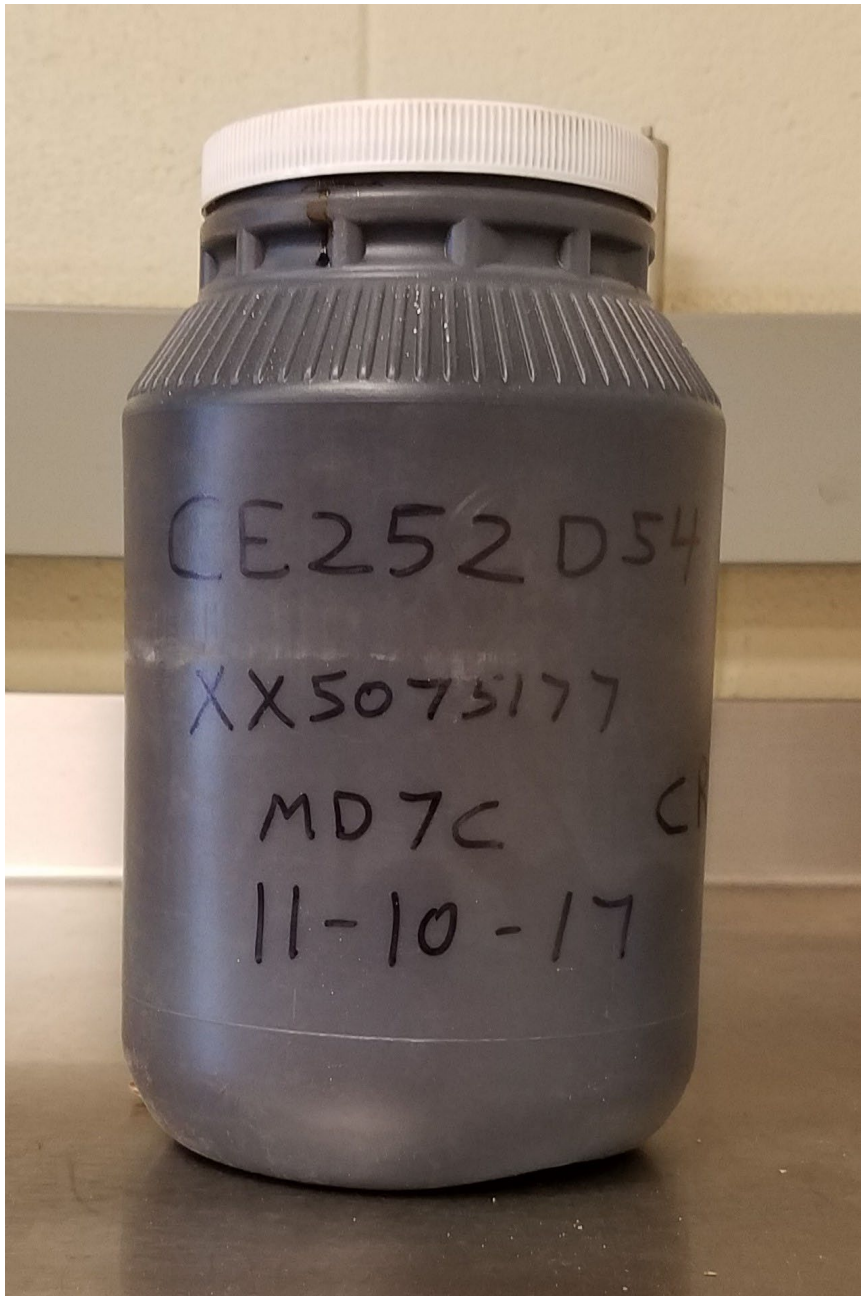
Form 88 and Certificate of Analysis in an envelope taped to jug

There Is a Specification For the Containers
AASHTO R66



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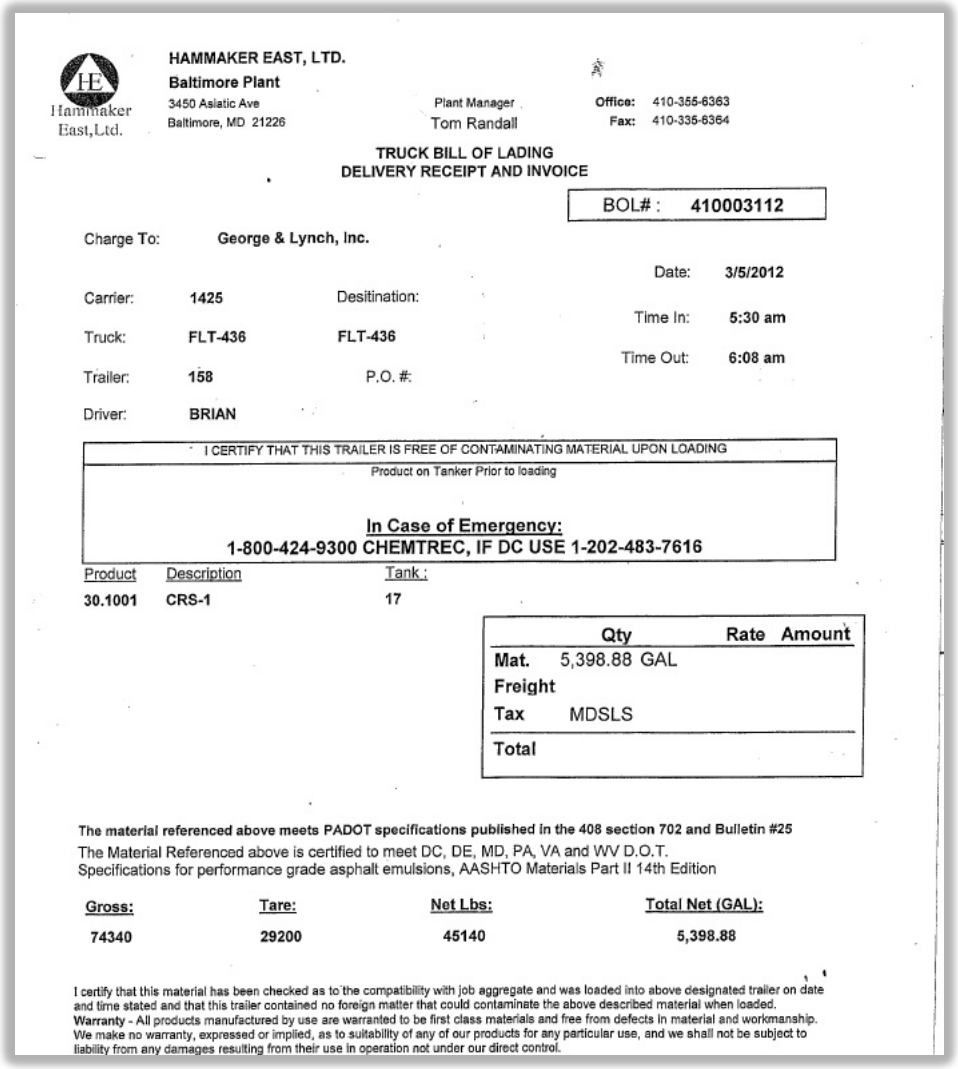
Bill Of Lading



HAMMAKER EAST, LTD.
Baltimore Plant
3450 Asiatic Ave
Baltimore, MD 21226

Plant Manager
Tom Randall

Office: 410-355-6363
Fax: 410-335-6364

TRUCK BILL OF LADING
DELIVERY RECEIPT AND INVOICE

BOL# : 410003112

Charge To: George & Lynch, Inc.

Date: 3/5/2012
Time In: 5:30 am
Time Out: 6:08 am

Carrier: 1425 Desitination:
Truck: FLT-436 FLT-436
Trailer: 158 P.O. #:
Driver: BRIAN

I CERTIFY THAT THIS TRAILER IS FREE OF CONTAMINATING MATERIAL UPON LOADING
Product on Tanker Prior to loading

In Case of Emergency:
1-800-424-9300 CHEMTREC, IF DC USE 1-202-483-7616

Product	Description	Tank :
30.1001	CRS-1	17

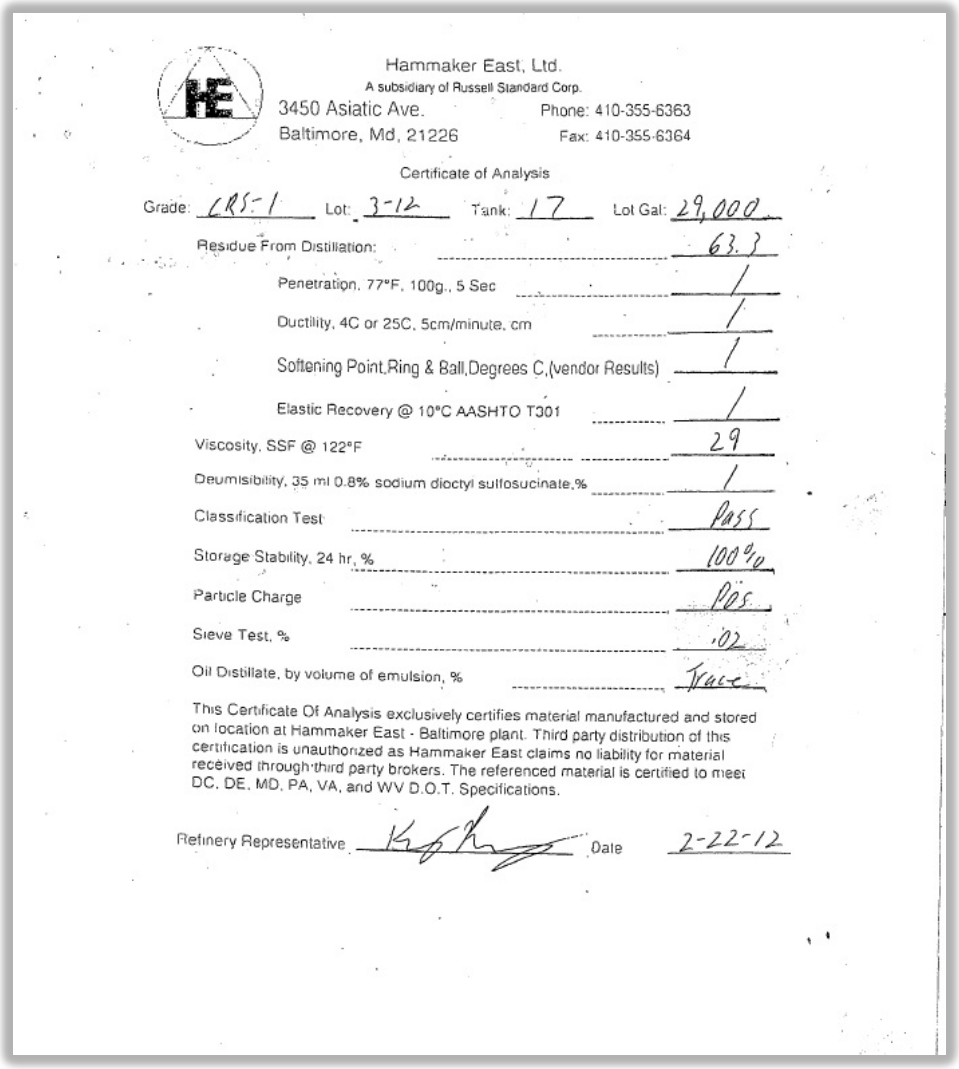
	Qty	Rate	Amount
Mat.	5,398.88 GAL		
Freight			
Tax	MDSLS		
Total			

The material referenced above meets PADOT specifications published in the 408 section 702 and Bulletin #25
The Material Referenced above is certified to meet DC, DE, MD, PA, VA and WV D.O.T.
Specifications for performance grade asphalt emulsions, AASHTO Materials Part II 14th Edition

Gross:	Tare:	Net Lbs:	Total Net (GAL):
74340	29200	45140	5,398.88

I certify that this material has been checked as to the compatibility with job aggregate and was loaded into above designated trailer on date and time stated and that this trailer contained no foreign matter that could contaminate the above described material when loaded.
Warranty - All products manufactured by use are warranted to be first class materials and free from defects in material and workmanship. We make no warranty, expressed or implied, as to suitability of any of our products for any particular use, and we shall not be subject to liability from any damages resulting from their use in operation not under our direct control.

Certificate of Analysis



Hammaker East, Ltd.
A subsidiary of Russell Standard Corp.
3450 Asiatic Ave. Phone: 410-355-6363
Baltimore, Md, 21226 Fax: 410-355-6364

Certificate of Analysis

Grade: CRS-1 Lot: 3-12 Tank: 17 Lot Gal: 29,000

Residue From Distillation:	63.3
Penetration, 77°F, 100g., 5 Sec	/
Ductility, 4C or 25C, 5cm/minute, cm	/
Softening Point,Ring & Ball,Degrees C,(vendor Results)	/
Elastic Recovery @ 10°C AASHTO T301	/
Viscosity, SSF @ 122°F	29
Deumisibility, 35 ml 0.8% sodium dioctyl sulfosucinate,%	/
Classification Test	Pass
Storage Stability, 24 hr, %	100%
Particle Charge	Pos
Sieve Test, %	.02
Oil Distillate, by volume of emulsion, %	Trace

This Certificate Of Analysis exclusively certifies material manufactured and stored on location at Hammaker East - Baltimore plant. Third party distribution of this certification is unauthorized as Hammaker East claims no liability for material received through third party brokers. The referenced material is certified to meet DC, DE, MD, PA, VA, and WV D.O.T. Specifications.

Refinery Representative [signature] Date 2-22-12

Will Contain Minimal Test Results (if any)

Technician's Signature

2025 Asphalt Technology Division – Chandra Akisetty, Division Chief

Field Assistant Division Chief
Rebeccah Smith

Paving QA Team Leader
Bonnie Johnson

Plant QA Team Leader
Edward McCarty

Field Engineer
Larry Riggleman

Senior Paving QA Technician
Daniel Green

Senior Field QA Technicians
Brian Clark
Josh McCusker
Ralph Taylor
Thomas "TK" Kasulke
Tom Rousan

Consultant Plant Technicians
Keith Comegys

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2025 Asphalt Technology Division – Chandra Akisetty, Division Chief

Mix Assistant Division Chief
Zhaoxing "George" Xie

Asphalt Mix Team Leader
Rob Ingle

Asphalt Binder Team Leader
Don Provine

Group Leads
Patti Appel
Shanieka Clark
Vinod Vadakoot
Ron Shirk

Lab Engineer
Mohamed Tarawallie

Senior Lab Technician
Kevin Thompson

Lab Technician
Patrick Maurer
Anthony Albert

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