PRESENTED BY:

TXAPA

Texas Asphalt Pavement Association

MATERIALS & ASPHALT PAVEMENT SOLUTIONS

Houston, TX
April 28-29, 2026

Inspection & Testing

Richard Izzo, PE
Hot Mix Asphalt Center
Texas Asphalt Pavement Association

Description
A comprehensive explanation of the meaning and relevance of specific tests in the context of hot mix asphalt in Texas. It highlights the essential tests required establishing a connection with the TXAPA 341M Specification.

Why do we need inspection and testing?

Consistency so each potato chip is nearly the same and they all taste great.

- ✓ *Color, shape, and texture.*
- ✓ *Crispy and crunchy.*
- ✓ *Flavor, not too salty or spicy.*

Why do we need inspection and testing?

- Inspect workmanship.
- Test for material quality.
- Provides confidence that the mix and roadway meets specification.
- Results relate to performance to construct durable and long-lasting asphalt pavements.

Presentation will reference Specification Item 341M - Municipal Dense-Graded Hot-Mix Asphalt.

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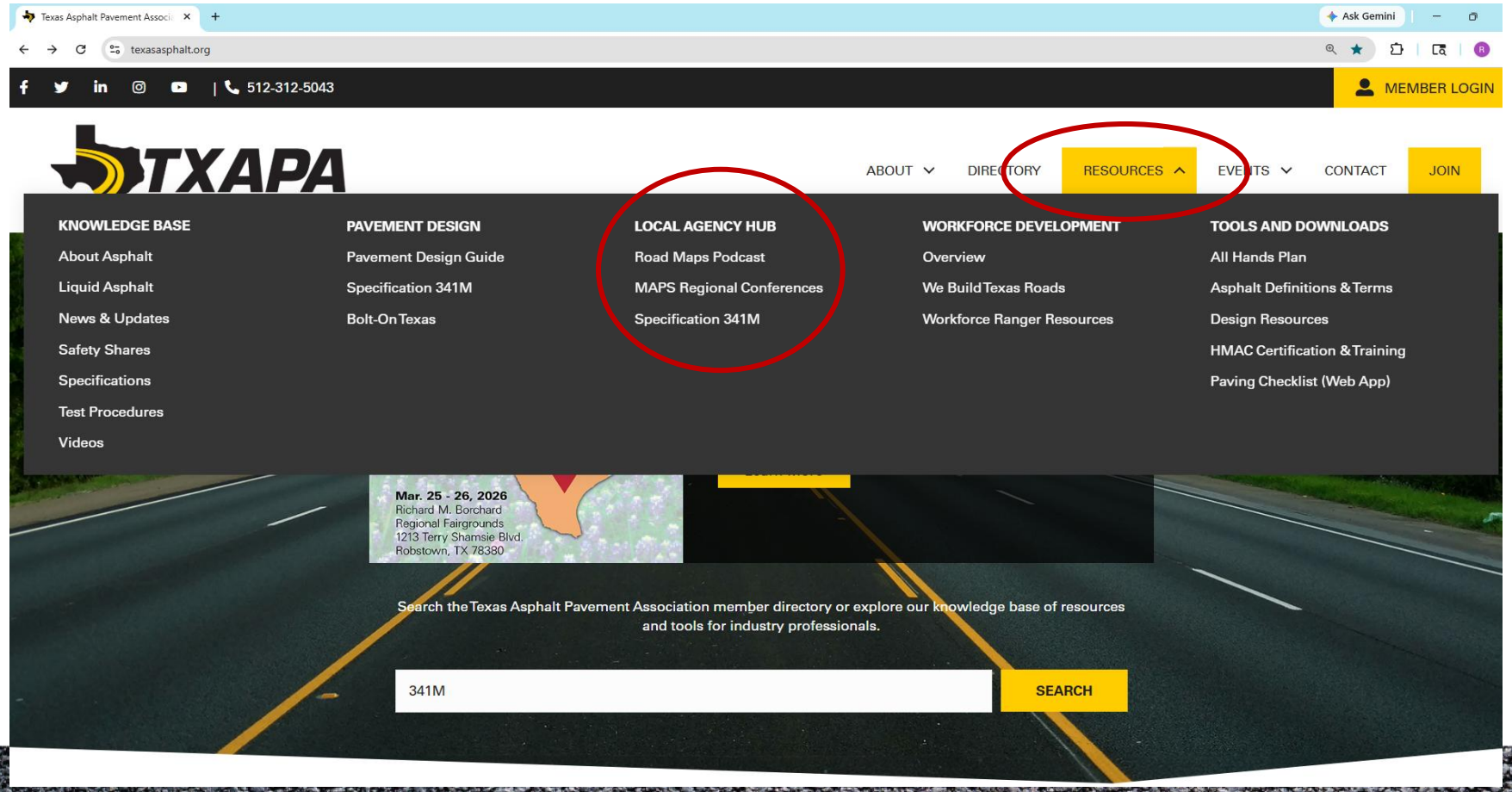

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

Item 341M Municipal Dense-Graded Hot-Mix Asphalt

** First Page*

1. DESCRIPTION

Construct a hot-mix asphalt (HMA) pavement layer composed of a compacted, dense-graded mixture of aggregate, asphalt binder, and additives mixed hot in a mixing plant.

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

2. MATERIALS

Notify the Engineer of all material sources and before changing any material source or formulation. The Engineer will verify that the specification requirements are met and document all material source changes when the Contractor makes a source or formulation change. The Engineer may sample and test project materials anytime during the project to verify specification compliance.

Substitution: An TxDOT approved existing dense graded (341/3076) or Superpave (344/3077) mix design is considered an equal or better substitution and may be substituted for this item.

2.1 **Aggregate**. Furnish aggregates from sources that conform to the requirements shown in Table 1 and this Section. Aggregate requirements in this Section, including those shown in Table 1, may be modified or eliminated when shown on the plans. Additional aggregate requirements may be specified when shown on the plans. Provide aggregate stockpiles that meet the definitions in this Section for coarse, intermediate, or fine aggregate. Aggregate from reclaimed asphalt pavement (RAP) is not required to meet Table 1 requirements unless otherwise shown on the plans. Supply aggregates that meet the definitions in Tex-100-E for crushed gravel or crushed stone. The Engineer will designate the plant or the quarry as the sampling location. Provide samples from materials produced for the project. The Engineer will establish the Surface Aggregate Classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests shown in Table 1. Document all test results in the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis in accordance with Tex-200-F, Part II.

2.1.0. **Coarse Aggregate**. Coarse aggregate stockpiles must have no more than 20% material passing the No. 8 sieve. Aggregates from sources listed in the TxDOT's Department's *Bituminous Rated Source Quality Catalog* (BRSQC) are preapproved for use. Use only the rated values for HMA listed in the BRSQC. Rated values for surface treatment (ST) do not apply to coarse aggregate sources used in HMA.

For sources not listed in the TxDOT's BRSQC:

- build an individual stockpile for each material;
- test the stockpile for specification compliance;
- use only when tested and approved; and
- once approved, do not add additional material to the stockpile unless otherwise allowed by the Engineer.

Provide coarse aggregate with at least the minimum SAC shown on the plans. SAC requirements apply only to aggregates used on the surface of travel lanes, unless otherwise shown on the plans. The SAC for sources in the TxDOT's *Aggregate Quality Monitoring Program* (AQMP) (Tex-499-A) is listed in the BRSQC.

Item 341M Municipal Dense-Graded Hot-Mix Asphalt

** Sections*

1. DESCRIPTION

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Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

2. MATERIALS

Notify the Engineer of all material sources and before changing any material source or formulation. The Engineer will verify that the specification requirements are met and document all material source changes when the Contractor makes a source or formulation change. The Engineer may sample and test project materials anytime during the project to verify specification compliance.

3. EQUIPMENT

Provide required or necessary equipment in accordance with TxDOT Item 320, "Equipment for Asphalt Concrete Pavement."

4. CONSTRUCTION

Produce, haul, place, and compact the specified paving mixture. **In addition to tests required in accordance with the Specification, the Contractor may perform other QC tests as necessary. Anytime during the project, the Engineer may perform production and placement tests as necessary.** Schedule and participate in a mandatory pre-paving meeting with the Engineer on or before the first day of paving unless otherwise shown on the plans.

** Inspection and Testing*

5. MEASUREMENT

Dense-Graded HMA. Hot mix will be measured by the ton of composite hot mix, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with TxDOT Item 520, "Weighing and Measuring Equipment."

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under Section 341.5.1., "Dense-Graded HMA," will be paid for at the unit price bid for "341M Municipal Dense-Graded Hot-Mix Asphalt" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, materials, placement, equipment, labor, tools, and incidentals.

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

Section 4. CONSTRUCTION

Table 6
Test Methods, Test Responsibility, and Min Certification Levels

Test Description	Test Method	Contractor	Engineer	Level
Production Testing				
Selecting production random numbers	Tex-225-F, Part I		✓	1A
Mixture sampling	Tex-222-F	✓	✓	1A/1B
Molding (SGC)	Tex-241-F	✓	✓	1A
Laboratory-molded density	Tex-207-F, Part I and Part VI	✓	✓	1A
Rice gravity	Tex-227-F, Part II	✓	✓	1A
Gradation and asphalt binder content	**Tex-236-F, Part I**	✓	✓	**1A**
Control charts	Tex-233-F	✓	✓	1A
Moisture content	Tex-212-F, Part II	✓	✓	1A/AGG101
Hamburg wheel test	Tex-242-F	✓	✓	1A
Micro-Deval abrasion	Tex-461-A		✓	AGG101
Abson recovery	Tex-211-F		✓	Engineer
Placement Testing				
Selecting placement random numbers	Tex-225-F, Part II		✓	1B
Trimming roadway cores	Tex-251-F, Part I and Part II	✓	✓	1A/1B
In-place air voids	**Tex-207-F, Part I and Part VI**	✓	✓	**1A**
In-place density (gauge method)	Tex-207-F, Part III	✓		1B
Establish rolling pattern	Tex-207-F, Part IV	✓		1B
Control charts	Tex-233-F	✓	✓	1A
Ride quality measurement	Tex-1001-S	✓	✓	Note[2]

- Production testing - laboratory at the asphalt plant.
- Placement testing - at the road.
- TxDOT test procedures only.
  - ✓ *No reference to AASHTO or ASTM procedures.*
- Level refers to certification from the Hot Mix Asphalt Center (HMAC).

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

4.1 Certification. **Personnel certified by the TxDOT-approved HMA certification program (www.TXHMAC.org) must conduct all mixture designs, sampling, and testing** in accordance with Table 6. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2-certified specialist. **Provide Level 1A-certified specialists at the plant during production operations. Provide Level 1B-certified specialists to conduct placement tests.** Provide Level AGG101-certified specialists for aggregate testing.

Why certification, it validates a person's knowledge, skill, and ability to perform inspection and testing according to the applicable test procedures and methods.

- Everyone must test using the same procedure to produce accurate and repeatable test results.

Everyone must prepare the sample the same way for testing.

TxDOT Test Procedure Format

Procedures are concise, detailed, and prescriptive so everyone runs tests the same way.

Test Procedure for

DETERMINING ASPHALT CONTENT FROM ASPHALT PAVING MIXTURES BY THE IGNITION METHOD

Texas Department of Transportation

TxDOT Designation: Tex-236-F

***Effective Date*: June 2024**

1. SCOPE

1.1 Use Part I of this test method to determine the asphalt content of hot mix asphalt (HMA) paving mixtures, reclaimed asphalt pavement (RAP) stockpiles, and recycled asphalt shingles (RAS) stockpiles using an ignition oven. Use the remaining aggregate for sieve analysis in accordance with Tex-200-F.

2. APPARATUS

2.1 *Ignition oven,* capable of:

2.1.1 Maintaining a temperature to cause combustion with an internal balance thermally isolated from the chamber accurate to 0.1 g. The balance must be capable of weighing a 4,000 g sample in addition to the sample baskets.

3. SAFETY EQUIPMENT

3.1 Safety glasses or face shield.

4. MISCELLANEOUS EQUIPMENT

4.1 Pan for transferring samples after ignition.

5. REPORT FORMAT

5.1 The Correction Factor Calculation Report is an Excel template containing the following worksheets:

- Asphalt Content and Combined Aggregate Gradation (Tx236) and
- Summary Sheet (Summary).

6. SAMPLE PREPARATION

6.1 Asphalt Paving Mixtures:

PART I—DETERMINE ASPHALT CONTENT BY IGNITION METHOD

7. SCOPE

7.1 Use this procedure to determine the asphalt content of HMA paving mixtures using an ignition oven. Use the remaining aggregate for sieve analysis in accordance with Tex-200-F.

8. PROCEDURE

8.1 Pre-heat the ignition oven according to the manufacturer's recommendations.

8.2 Determine and record the weight of the basket assembly to the nearest 0.1 g.

8.3 Place the loose mixture directly into the sample baskets.

PART II—DETERMINE CORRECTION FACTORS

9. SCOPE

10. PROCEDURE

PART III—WITNESS THE BATCHING AND MIXING OF MATERIAL FOR DETERMINATION OF CORRECTION FACTORS

11. SCOPE

12. PROCEDURE

13. CALCULATIONS

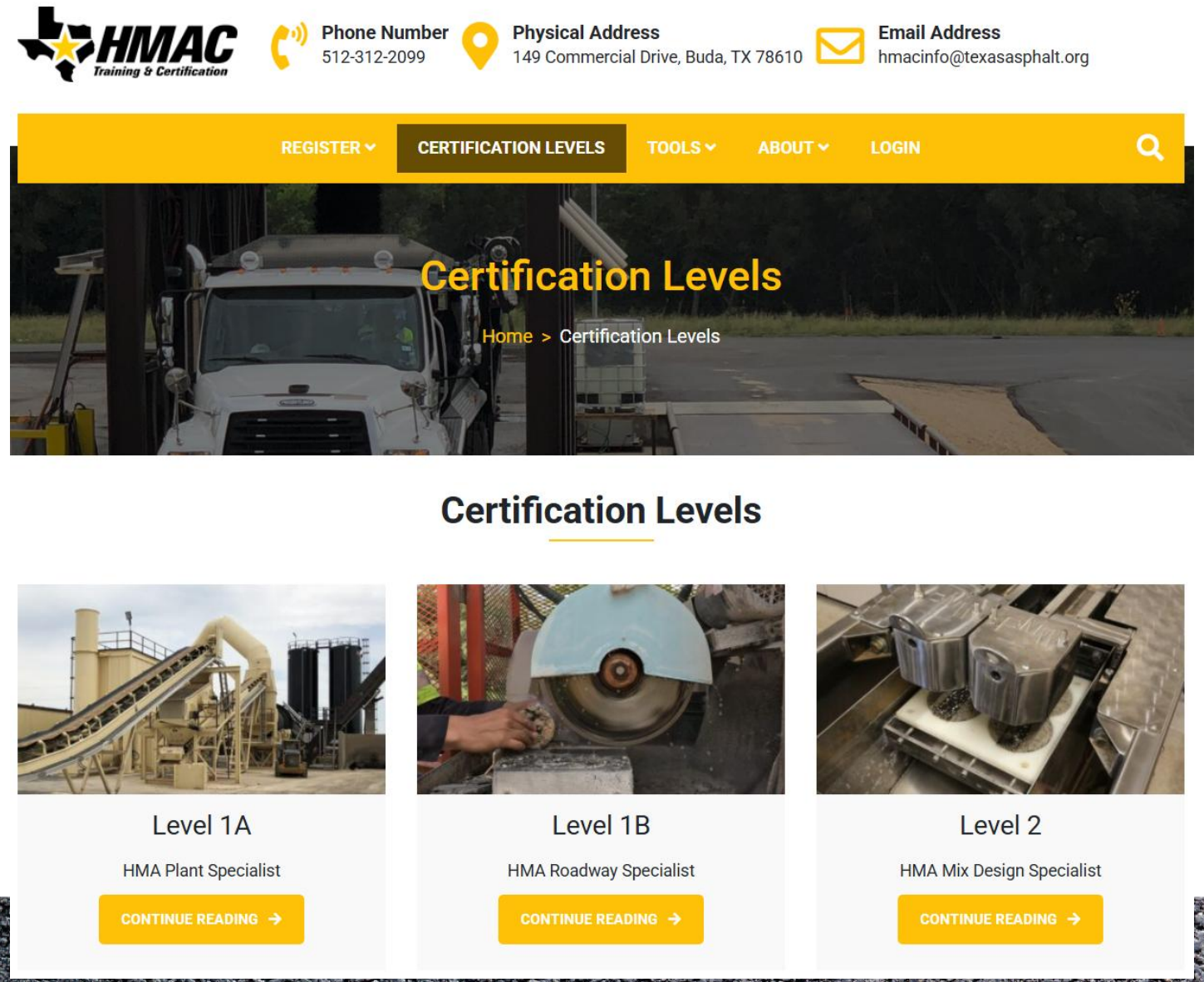
13.1 Calculate the asphalt binder content of the sample.

$$AC\% = \left[\frac{W_S - W_A}{W_S}\right] \times 100$$

13.2 **Report ignition oven test results to the nearest 0.1%.**

14. ARCHIVED VERSIONS

TxDOT-Approved HMA Certification Program



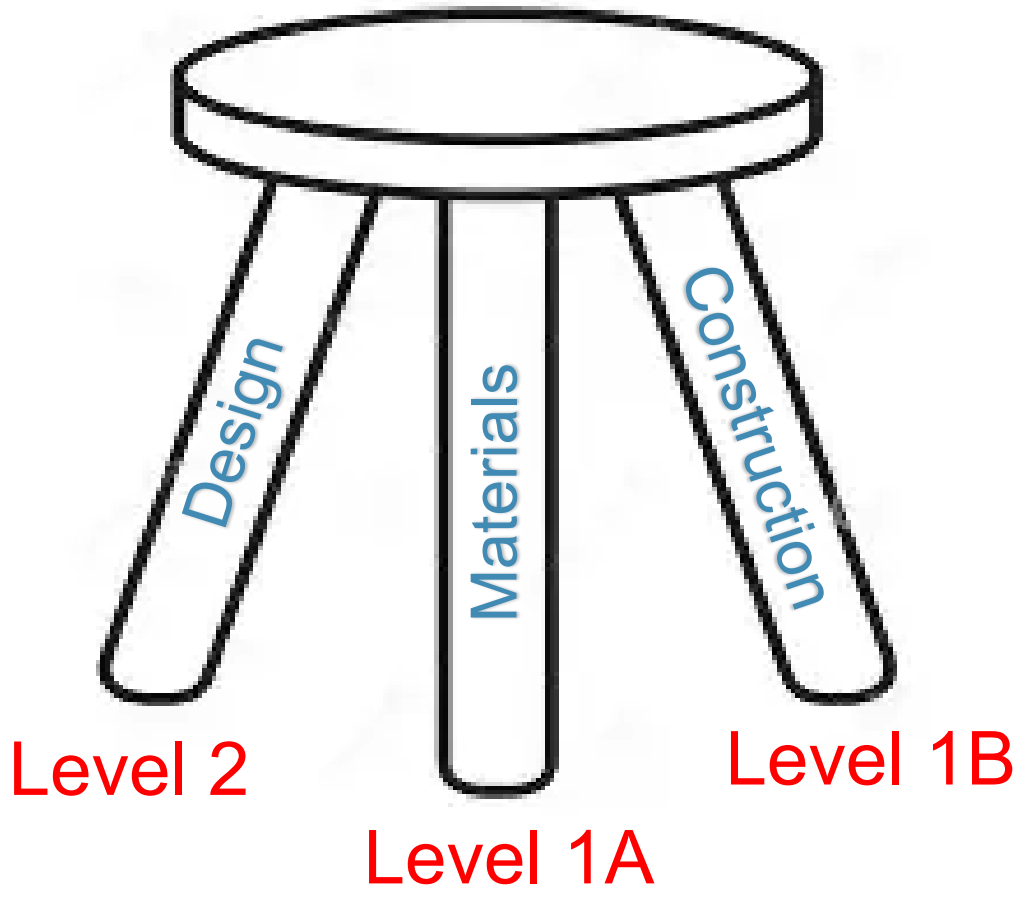
WWW.TXHMAC.ORG

- Hot Mix Asphalt Center (HMAC)
- Training & Certification
- Tools for success.

Building Successful Pavements

Certification levels required by 341M.

- Level 1A – HMA Plant Specialist
- Level 1B – HMA Roadway Specialist
- Level 2 – HMA Mix Design Specialist



Inspection and Testing

Associated with Quality Control and Quality Assurance (QC/QA).

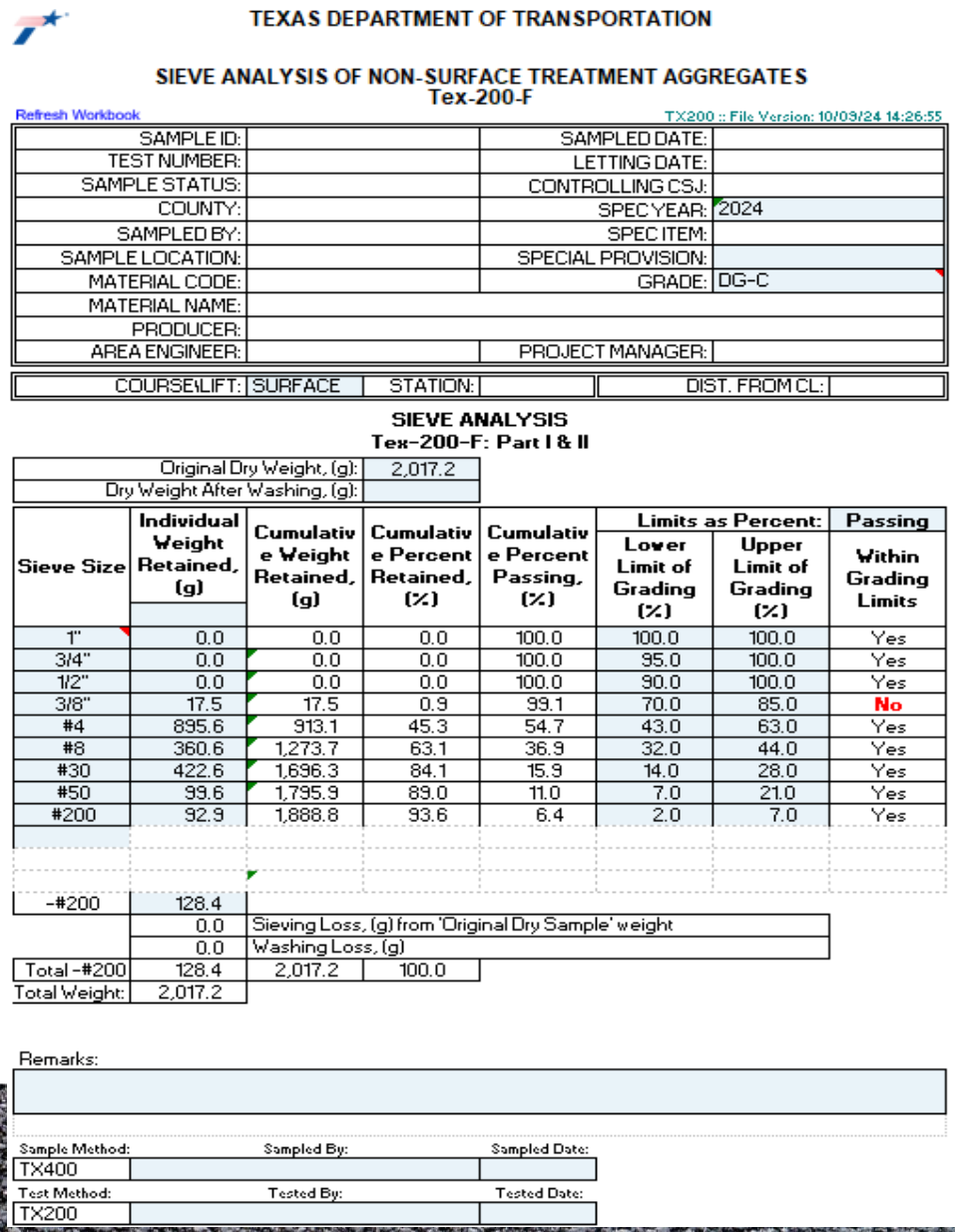
- **Quality Control (QC)**
  - ✓ *Contractor monitors and adjusts their production and placement practices to meet specification requirements.*
- **Quality Assurance (QA)**
  - ✓ *Agency performs independent inspection, monitoring, and random sampling and testing for acceptance and payment.*
- **Referee Testing**
  - ✓ *Resolve testing differences with the Engineer. Referee testing process shall be agreed to by Contractor and Engineer resolve testing differences with the Engineer. Referee testing process shall be agreed to by Contractor and Engineer.*

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

4.2. Reporting and Responsibilities. **Use TxDOT-provided or approved templates to record and calculate all test data,** including mixture design, **production and placement QC and QA**, control charts. The Engineer and the Contractor will provide any available test results to the other party when requested. The maximum allowable time for the Contractor and Engineer to exchange test data is as shown in Table 7, unless otherwise approved. The Engineer and the Contractor will immediately report to the other party any test result that requires suspension of production or placement, or that fails to meet the specification requirements. **Record and electronically submit all test results and pertinent information on TxDOT-provided templates**.

Not only test data.

- Project information.
- Who sampled the material.
- Who performed the test.
- When sampled and tested.
- Did results meet specification.



TEXAS DEPARTMENT OF TRANSPORTATION

SIEVE ANALYSIS OF NON-SURFACE TREATMENT AGGREGATES
Tex-200-F

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SAMPLE ID:		SAMPLED DATE:	
TEST NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2024
SAMPLED BY:		SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:		GRADE:	DG-C
MATERIAL NAME:			
PRODUCER:			
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	SURFACE	STATION:		DIST. FROM CL:	

SIEVE ANALYSIS
Tex-200-F: Part I & II

Original Dry Weight, (g):	2,017.2
Dry Weight After Washing, (g):	

Sieve Size	Individual Weight Retained, (g)	Cumulative Weight Retained, (g)	Cumulative Percent Retained, (%)	Cumulative Percent Passing, (%)	Limits as Percent: Lower Limit of Grading (%)	Limits as Percent: Upper Limit of Grading (%)	Passing Within Grading Limits
1"	0.0	0.0	0.0	100.0	100.0	100.0	Yes
3/4"	0.0	0.0	0.0	100.0	95.0	100.0	Yes
1/2"	0.0	0.0	0.0	100.0	90.0	100.0	Yes
3/8"	17.5	17.5	0.9	99.1	70.0	85.0	No
#4	895.6	913.1	45.3	54.7	43.0	63.0	Yes
#8	360.6	1,273.7	63.1	36.9	32.0	44.0	Yes
#30	422.6	1,696.3	84.1	15.9	14.0	28.0	Yes
#50	99.6	1,795.9	89.0	11.0	7.0	21.0	Yes
#200	92.9	1,888.8	93.6	6.4	2.0	7.0	Yes
-#200	128.4						
	0.0	Sieving Loss, (g) from 'Original Dry Sample' weight					
	0.0	Washing Loss, (g)					
Total -#200	128.4	2,017.2	100.0				
Total Weight:	2,017.2						

Remarks:

Sample Method:	Sampled By:	Sampled Date:
TX400		
Test Method:	Tested By:	Tested Date:
TX200		

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

4.2. Reporting and Responsibilities. Use TxDOT-provided or approved templates to record and calculate all test data, including mixture design, production and placement QC and QA, control charts. The Engineer and the Contractor will provide any available test results to the other party when requested. **The maximum allowable time for the Contractor and Engineer to exchange test data is as shown in Table 7, unless otherwise approved.** The Engineer and the Contractor will immediately report to the other party any test result that requires suspension of production or placement, or that fails to meet the specification requirements. Record and electronically submit all test results and pertinent information on TxDOT-provided templates.

Table 7
Reporting Schedule

Description	Reported By	Reported To	To Be Reported Within
Quality Control			
Gradation Asphalt binder content Laboratory-molded density In-place air voids 	Contractor	Engineer	1 working day of completion of the lot
Quality Assurance			
Gradation Asphalt binder content Laboratory-molded density In-place air voids Hamburg wheel test[1] 	Engineer	Contractor	1 working day of completion of the lot

When do you report your test results?

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

4.9.1.2.2. Mixture Sampling. **The Contractor will perform the sampling of production lots from trucks at the plant in accordance with Tex-222-F.** The sampler will split each sample into three equal portions in accordance with Tex-200-F and label these portions as “Contractor,” “Engineer,” and “Referee.” The Engineer may witness the sample splitting and may take immediate possession of the samples labeled “Engineer” and “Referee.

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

4.9.1.3 Production Testing. **The Contractor will perform production tests on each lot as shown in Table 16.** Determine compliance with operational tolerances shown in Table 11 for all lots. The Engineer may use the Contractor's test results as acceptance tests, in lieu or performing tests. No testing is required when less than 100 tons per day is produced.

Table 16
Production and Placement Testing Frequency

Description	Test Method	Min Contractor Testing Frequency	Min Engineer Testing Frequency
Individual % retained on #8 sieve and larger	Tex-200-F or Tex-236-F	1 per lot	1 per day
Individual % retained on sieves smaller than #8 and larger than #200			
% passing #200 sieve			
Laboratory-molded density	Tex-207-F	1 per lot	1 day
Laboratory-molded bulk specific gravity			
In-place air voids[3]			
VMA	Tex-204-F		
Theoretical maximum specific (Rice) gravity	Tex-227-F	1 per lot	1 per day
Asphalt binder content	Tex-236-F	**1 per lot**	**1 per day**
Hamburg wheel test	Tex-242-F	–	
Asphalt binder sampling and testing[1,2]	Tex-500-C, Part II	–	
Tack coat sampling and testing	Tex-500-C, Part III	–	

When, how often do you run tests?

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

4.9.1.3 Production Testing. The Contractor will perform production tests on each lot as shown in Table 16. Determine compliance with operational tolerances shown in Table 11 for all lots. **The Engineer may use the Contractor's test results as acceptance tests, in lieu or performing tests.** No testing is required when less than 100 tons per day is produced.

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Production and Placement Testing Frequency

Description	Test Method	Min Contractor Testing Frequency	Min Engineer Testing Frequency
Individual % retained on #8 sieve and larger	Tex-200-F or Tex-236-F	1 per lot	1 per day
Individual % retained on sieves smaller than #8 and larger than #200			
% passing #200 sieve			
Laboratory-molded density	Tex-207-F	1 per lot	1 day
Laboratory-molded bulk specific gravity			
In-place air voids[3]			
VMA	Tex-204-F		
Theoretical maximum specific (Rice) gravity	Tex-227-F	1 per lot	1 per day
Asphalt binder content	Tex-236-F	**1 per lot**	**1 per day**
Hamburg wheel test	Tex-242-F	–	
Asphalt binder sampling and testing[1,2]	Tex-500-C, Part II	–	
Tack coat sampling and testing	Tex-500-C, Part III	–	

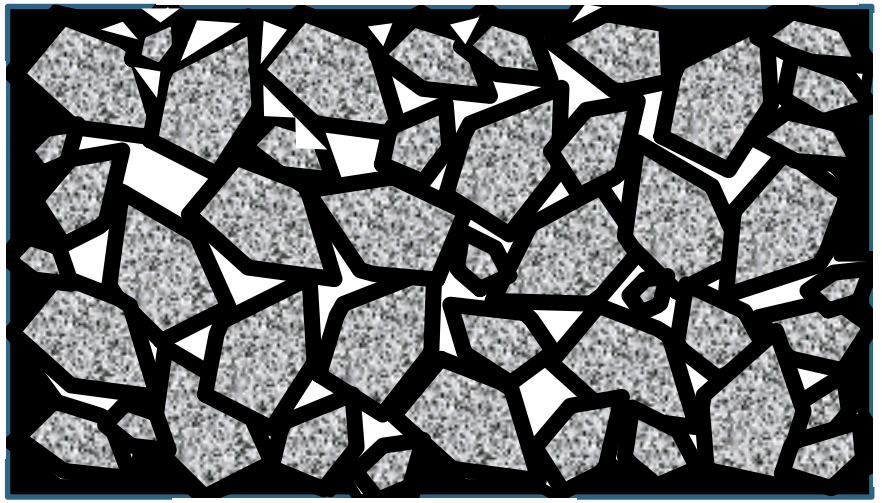
Generally, 1 per lot is the same as 1 per day.

ASPHALT CONTENT & GRADATION

Tex-236-F & Tex-200-F

Voids in the Mineral Aggregate (VMA)

- Space in between the aggregate in a compacted laboratory mold or roadway core that is filled with asphalt and air.
- Higher the VMA, more asphalt in the mix.
- Testing for asphalt content and gradation is to calculate and adjust for the VMA.



Cut Cross Section of Hot-Mix Asphalt

- Grey - Aggregate
- Black – Asphalt
- White – Air

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

Table 8
Master Gradation Limits and Void in Mineral Aggregate (VMA) Requirements

Sieve Size	DG-B Fine Base	DG-C Coarse Surface	DG-D Fine Surface	DG-F Fine Mixture
2"	–	–	–	–
1-1/2"	100.0[1]	–	–	–
1"	98.0–100.0	100.0[1]	–	–
3/4"	84.0–98.0	95.0–100.0	100.0[1]	–
1/2"	–	–	98.0–100.0	100.0[1]
3/8"	60.0–80.0	70.0–85.0	85.0–100.0	98.0–100.0
#4	40.0–60.0	43.0–63.0	50.0–70.0	70.0–90.0
#8	29.0–43.0	32.0–44.0	35.0–46.0	38.0–48.0
#30	13.0–28.0	14.0–28.0	15.0–29.0	12.0–27.0
#50	6.0–20.0	7.0–21.0	7.0–20.0	6.0–19.0
#200	2.0–7.0	2.0–7.0	2.0–7.0	2.0–7.0
Design VMA), % Min				
–	13.0	14.0	15.0	16.0
Production (Plant-Produced) VMA, % Min				
–	12.5	13.5	14.5	15.5

- Sieves required for each mixture type.
- Sieve sizes are listed in descending order with the largest size on top.
- Gradation gets finer as mixture type letter increases.
- VMA increases as mixture type gets finer, so more asphalt in the mix is needed to meet requirement.

Tex-236-F, Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method

Calculate asphalt content from burning samples.

- Specialized equipment.
- Required sample weight.
- Specific way to lay out sample in basket tray.

** Details required by the test procedure.*

Tex-236-F, Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method

Burnt sample is used for a sieve analysis to determine the aggregate gradation.

Tex-236-F, Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method

What are the potential problems with a failing test result?

- What do the results mean?
  - ✓ *VMA results will be low, generally indicating a low asphalt content.*
  - ✓ *Low asphalt content, may lead to stripping (moisture damage), raveling, and cracking.*
  - ✓ *High asphalt content, may lead to bleeding or flushing, and rutting.*

Test results relate to pavement performance.

Not enough asphalt to hold and keep the aggregate in place.

Test results relate to pavement performance.

Too much asphalt filling the space in between the aggregate, it has no place to go but to the surface when under traffic.

Test results relate to pavement performance.

When results meet specifications, we get safe, durable and long-lasting asphalt pavements.

Tex-200-F, Sieve Analysis of Fine and Coarse Aggregates

Sieve Analysis (gradation) measured from the burnt sample.

- Required sieves listed in 341M specification.
- Minimum sample weight.
- Required to shake each sieve by hand to refusal.

** Details required by the test procedure.*

Item 341M - Municipal Dense-Graded Hot-Mix Asphalt

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Master Gradation Limits and Void in Mineral Aggregate (VMA) Requirements

Sieve Size	DG-B Fine Base	DG-C Coarse Surface	DG-D Fine Surface	DG-F Fine Mixture
2"	–	–	–	–
1-1/2"	100.0[1]	–	–	–
1"	98.0–100.0	100.0[1]	–	–
3/4"	84.0–98.0	95.0–100.0	100.0[1]	–
1/2"	–	–	98.0–100.0	100.0[1]
3/8"	60.0–80.0	70.0–85.0	85.0–100.0	98.0–100.0
#4	40.0–60.0	43.0–63.0	50.0–70.0	70.0–90.0
#8	29.0–43.0	32.0–44.0	35.0–46.0	38.0–48.0
#30	13.0–28.0	14.0–28.0	15.0–29.0	12.0–27.0
#50	6.0–20.0	7.0–21.0	7.0–20.0	6.0–19.0
#200	2.0–7.0	2.0–7.0	2.0–7.0	2.0–7.0
Design VMA), % Min				
–	13.0	14.0	15.0	16.0
Production (Plant-Produced) VMA), % Min				
–	12.5	13.5	14.5	15.5

- Each mix type has it's own gradation requirements.
  - ✓ *Different gradation may influence asphalt content and VMA.*
- Pavement thickness generally 3 to 5 times largest nominal sieve size.
  - ✓ *DG-D fine surface mix has ½" largest aggregate size and should be placed 1½ to 2½" thick.*
  - ✓ *Different gradation may influence density/air voids.*

Test results relate to pavement performance.

- Mix is too coarse, may be prone to segregation that may lead to raveling and stripping (moisture damage).
- Mix is too fine, may need more asphalt and may be prone to raveling and stripping.

Test results relate to pavement performance.

When results meet specifications, we get safe, durable and long-lasting asphalt pavements.

DENSITY / AIR VOIDS

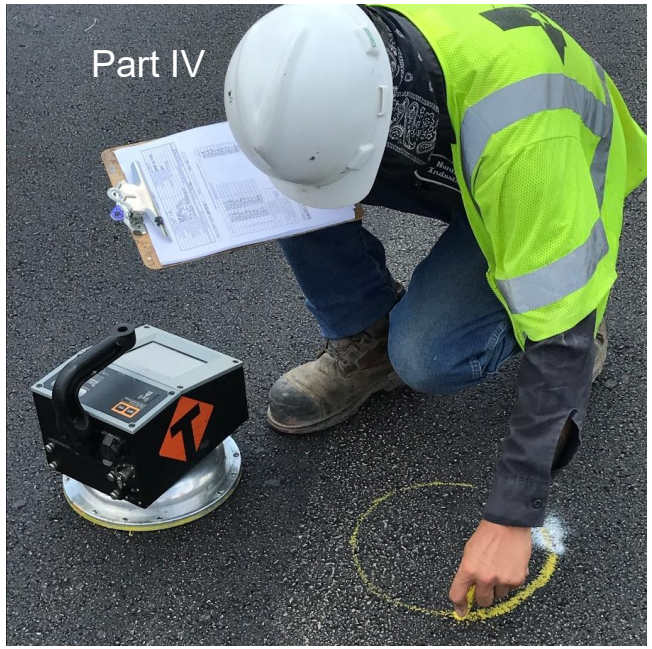
Tex-207-F

Tex-207-F, Determining Density of Compacted Bituminous Mixtures

Part I – Bulk Specific Gravity of Compacted Bituminous Mixtures

Part III – Determining In-Place Density of Compacted Bituminous Mixtures (Nuclear Method)

Part IV – Establishing Roller Patterns



Density / In-Place Air Voids

Determined from roadway cores.

- *Core when pavement temperature is below 160ºF.*
- *Trim no more than ½“ from core.*
- *Measure thickness to the nearest 1/16”.*

** Details required by the test procedure.*

Test results relate to pavement performance.

Low Density / High In-Place Air Voids.

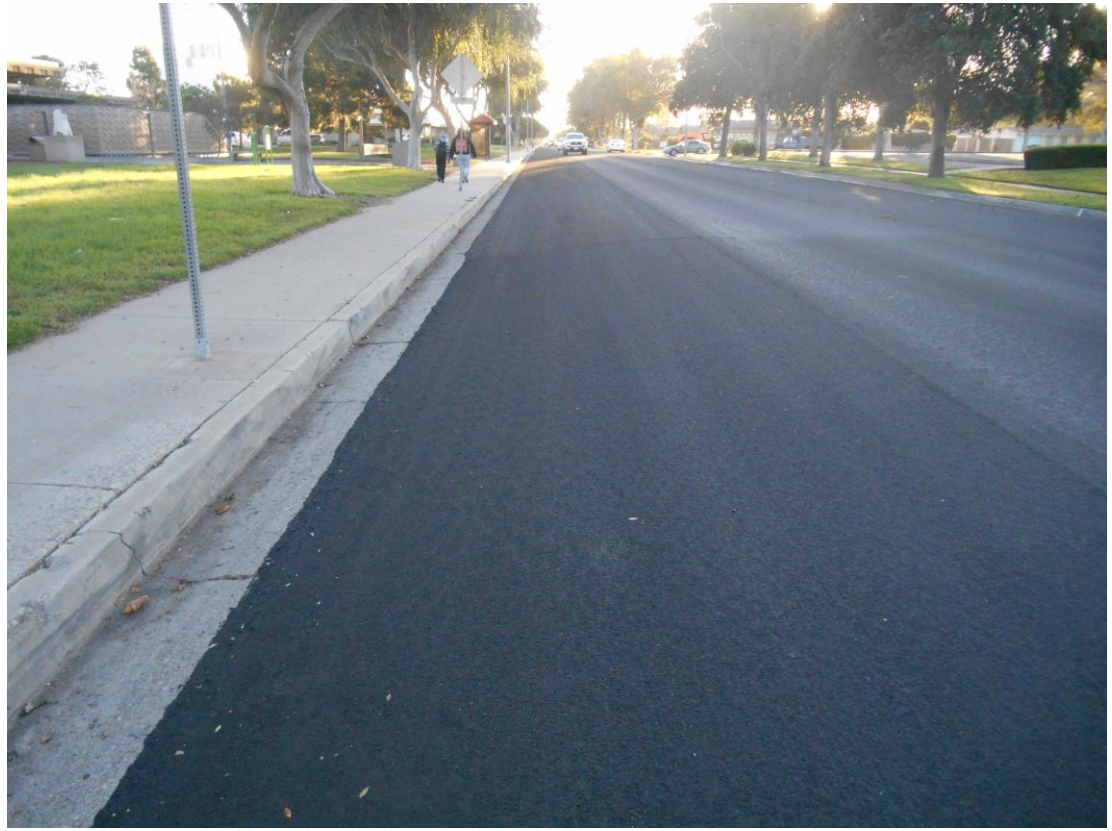
- Surface that is prone to absorb water.
- More susceptible to stripping, raveling, and cracking.

High Density / Low In-Place Air Voids.

- Voids in between the aggregate are filled with asphalt, so the asphalt has no where to go but to the surface under traffic loading.
- More susceptible to bleeding or flushing, and rutting.
- Becomes a safety hazard with the loss of skid and possible hydroplaning.

Test results relate to pavement performance.

When results meet specifications, we get safe, durable and long-lasting asphalt pavements.



Summary

Inspection and Testing

- Who - Only Certified Specialists can perform inspection and testing.
- What, when, where, and how are all dictated by the 341M Specification.
- Test results relate to pavement durability and performance.
- Results meeting specification requirements will give us safe, durable and long-lasting asphalt pavements.

PRESENTED BY:

TXAPA

Texas Asphalt Pavement Association

MATERIALS & ASPHALT PAVEMENT SOLUTIONS

Houston, TX
April 28-29, 2026

Questions?

Richard Izzo, PE
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Description
A comprehensive explanation of the meaning and relevance of specific tests in the context of hot mix asphalt in Texas. It highlights the essential tests required establishing a connection with the TXAPA 341M Specification.