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**Test Procedure for**
**OBTAINING AND TRIMMING CORES FROM BITUMINOUS PAVEMENTS**

**TxDOT Designation: Tex-251-F**
**Effective Date: August 2024**


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**1. SCOPE**

- 1.1 Use Part I of this test method to obtain cores from compacted bituminous pavements.
- 1.2 Use Part II of this test method to trim and prepare pavement cores for laboratory testing.
- 1.3 The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.
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**PART I—OBTAINING CORES FROM BITUMINOUS PAVEMENTS**


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**2. SCOPE**

- 2.1 Use this procedure to obtain cores from compacted bituminous pavements.
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**3. APPARATUS**

- 3.1 *Core Bit*, of hardened steel or other suitable material, diamond-impregnated in cutting edge, of desired diameter.
- 3.2 *Core Drill*, motor-driven with enough horsepower to obtain full-depth cylindrical cores.
- 3.3 *Cooling Agent*, such as water, ice, or dry ice.
- 3.4 *Retrieval Device*, for removing cores, such as a steel rod, thin wire loop, or mallet.
- 3.5 *Security Bags*, Department-provided.
- 3.6 *Repair material*, for filling in core holes.
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**4. PROCEDURE**

- 4.1 Ensure the pavement surface is sufficiently cool to prevent damage to the core.  
**Note 1**—A maximum surface temperature of 160°F is recommended to prevent damage to the core.  
**Note 2**—A cooling agent can be used to decrease the surface temperature before coring.
- 4.2 Obtain pavement cores of the diameter required by the specification.
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- 4.3 Remove a minimum of two pavement cores at each location.
- 4.4 Place the core bit directly above the desired sampling location.
- 4.5 Provide water to aid in the removal of cuttings and to minimize the generation of heat caused by friction between the core bit and the pavement.
- 4.6 Maintain the core bit perpendicular to the pavement while applying constant downward pressure until the desired depth is achieved.  
**Note 3**—Failure to apply constant pressure or applying excessive pressure may cause the core bit to bind or the core to distort.
- 4.7 Use retrieval device to take the pavement core out of the core bit. Avoid distorting, bending, or cracking the cores.
- 4.8 Mark cores for identification in accordance with the specification.
- 4.9 Place cores in Department-provided security bags and store in a cool place.
- 4.10 Remove water from core hole.
- 4.11 Repair the core hole by filling with approved patch material or hot mix and compacting until top is flush with the pavement surface.

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## PART II—TRIMMING CORES FROM BITUMINOUS PAVEMENTS

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### 5. SCOPE

- 5.1 Use this procedure to trim and prepare pavement cores for laboratory testing.

### 6. APPARATUS

- 6.1 *Masonry Saw*, with diamond or silicon-carbide cutting edge, and capable of cutting pavement cores without introducing cracks or dislodging aggregate particles.
- 6.2 *Marker*, such as paint pen or permanent marker.
- 6.3 *Measuring Device*, such as a ruler, calipers, or measuring tape.

### 7. PROCEDURE

- 7.1 Measure the untrimmed core height to the nearest 1/16 in.  
**Note 4**—When measuring the untrimmed core height, do not include foreign matter. Foreign matter is material extraneous to the pavement layer being tested; examples include another paving layer, such as hot mix, surface treatment, subgrade, or base material.
- 7.2 On the top surface of the core, mark the apparent thinnest location with a marker.
- 7.3 Make three more marks around the perimeter of the core at 90, 180, and 270° from the mark made in Section 7.2.

- 7.4 Measure the height of the core at the marked locations. Refer to Note 4.
  - 7.5 Take additional measurements around the core if the measurements taken in Section 7.4 vary by more than 1/4 in. Mark the location of the additional measurements.
  - 7.6 Average the measurements and record the untrimmed core height to the nearest 1/16 in.
  - 7.7 Remove visually evident foreign matter and tack material from the core with a saw to ensure a level and smooth surface for testing.
  - 7.8 Trim the minimum amount of core necessary, but no more than 1/2 in.
  - 7.9 Measure and record the trimmed core height to the nearest 1/16 in.
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**8. ARCHIVED VERSIONS**

- 8.1 Archived versions are available.