METHODS OF SAMPLING AND TESTING
MT 331-14
SAMPLING AND EVALUATING
STRIPPING PAVEMENTS
(*Montana Method*)

1 Scope

1.1 This test method describes the procedure for sampling cores. Cores are used to evaluate existing structure, materials, pavement condition, lift thicknesses, and potential milling depth.

2 Sampling Procedure

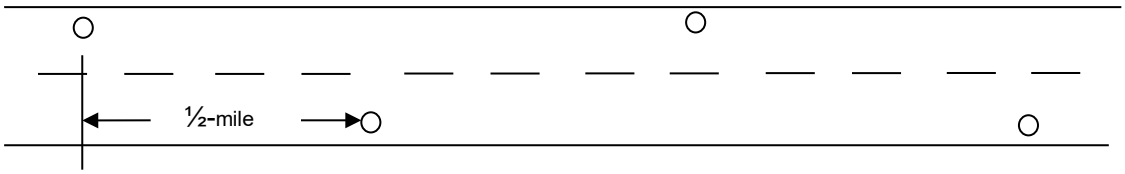
2.1 *4-Lane Roadway*

Take a minimum of one (1) core per ½ mile of roadway in each direction. Alternate cores between the outside wheel path of the driving lane and the outside wheel path of passing lane. Pavement displaying a high extent or severity of cracking or raveling, rutting greater than 1/3 inch, and excessive patches, may require modification to the sampling frequency and location. If available, record the Global Positioning System (GPS) coordinates of core.

2.2 *2-Lane Roadway*

A minimum of one (1) core per ½ mile of roadway, taken in the outside wheel path and in alternating lanes. Pavement displaying a high extent or severity of cracking or raveling, rutting greater than 1/3 inch, and excessive patches, may require modification to the sampling frequency and location. If available, record the GPS coordinates of core.

Example:



3 Sample Containment

3.1 Bag the cores with the bagging system provided by the Department's Helena Materials Bureau. If possible, bag the core in the orientation it was extracted (directly from drill barrel). Keep field notes describing the appearance, location, and total depth of the core. Take pictures to accompany field notes. If a portion or portions of the core are rubble, describe the thickness of the rubble section and where the rubble portion was within the core. Submit the sample for stripping evaluation. Also describe the roadway condition and any other information that would be helpful in evaluating the cores and the in-place pavement.

4 Sample Identification and Submitting of Samples

4.1 Mark core with specimen number using a marker or grease pencil. Each core sample bag must contain a tag including the Sample Record ID number and specimen number. Ensure the Sample Record contains the Sample ID number, specimen number, uniform project number (UPN), and project name if available, location (route number, station, mile post, lane, offset, and GPS), total depth drilled and total length of the core when bagged. Submit the cores to the Materials Bureau for evaluation. Include observations and comments in the Sample Record Remarks.

5 Evaluation of Cores

5.1 Evaluate the **total** core for stripping using the "control photographs" in Annex A. Split cores by indirect tensile loading in a press and record maximum pressure needed to yield the core. Evaluate each lift or distinct layer of plant mix for stripping using the Core Rating Scale (Section 5.2).

5.2 Core Rating Scale

Core Rating	Description
4 (good core)	Face shiny, black, all aggregate particles coated
3 (moisture damaged)	Loss of sheen, dull appearance, some smaller aggregate is uncoated
2 (stripping)	In addition to moisture damage some large aggregate is not coated
1 (severely stripped)	Most of the aggregate is so clean the colors of the rock are easily seen
0 (no core)	Asphalt is mostly gone from all sizes of aggregate. The core has disintegrated.

6 Reporting Results

6.1 At the completion of the evaluation, test results consisting of the extent of stripping, and other test information are entered into AASHTOWare by the Materials Bureau. Each lift or layer is evaluated for stripping in the report.

ANNEX: EXAMPLES OF EVALUATED CORES

A1



GOOD CORE (4)
SHINY, BLACK
ALL AGGREGATE PARTICLES
ARE COATED

A2



MOISTURE DAMAGED (3)
LOSS OF SHEEN, DULL APPEARANCE
SOME SMALLER AGGREGATE (-10 M)
IS UNCOATED

A3



STRIPPING (2)
IN ADDITION TO MOISTURE
DAMAGE SOME LARGE AGGREGATE
IS NOT COATED

A4


SEVERLY STRIPPED (1)
MOST OF THE AGGREGATE IS
SO CLEAN THE COLORS OF THE
ROCKS ARE EASILY SEEN

A5


RUBBLE (NO CORE) (0)
ASPHALT IS MOSTLY GONE
FROM ALL SIZES OF AGGREGATE