SCOPE

This procedure describes the methods used to test holding bins for Hot Mix Asphalt (HMA) mixtures for standard holding times of 6, 12, 24 and 48 hours. Procurement of all samples and temperature readings required shall be the responsibility of the Producer, as witnessed by a Department representative.

I. GENERAL

A. Use a 19 mm or 25mm mixture produced using a Job Mix Formula (JMF) assigned a "Production Status" by New York State Department of Transportation (NYSDOT) or a similar gradation mix approved by the Regional Materials Engineer.

B. For holding bin models or types that have not been previously tested and approved by NYSDOT, and for extended holding time evaluation of 48 hours, use TEST PROCEDURE I - HOLDING BIN EVALUATION - 6, 12 OR 48 HOUR HOLDING TIMES.

C. For holding time approval for 24 hours, use TEST PROCEDURE II - HOLDING BIN EVALUATION – 24 HOUR HOLDING TIME.

D. Holding bin models from manufacturers that have previously been tested and approved by NYSDOT will not require additional testing for holding times of 6 or 12 hours.

E. The Hot Mix Asphalt mixture used for holding bin testing will not be incorporated into Department work.

II. TEST PROCEDURE I – HOLDING BIN EVALUATION - 6, 12 OR 48 HOUR HOLDING TIMES

A. LOADING OF THE BIN

A sufficiently large quantity of mix (such as obtained in a loader) shall be taken from the 20%, 40%, 60% and 80% points of the bin capacity. From each of these sample points, obtain a mix temperature and two 1-gallon samples of material. Fill the sample cans as full as possible and seal with a lid.
B. UNLOADING THE HOLDING BIN

After the requested holding time has elapsed, obtain samples during the unloading of the bin at the 20%, 40%, 60% and 80% points of the capacity of the holding bin. Samples shall be obtained in a manner similar to that while loading the bin. From each of these sample points, obtain mix temperature and two 1-gallon samples of material. Fill the sample cans as full as possible and seal with a lid.

C. EVALUATION – NYSDOT MATERIALS BUREAU

1. The temperatures obtained from the sample points during loading shall be compared to the temperatures of the sample points obtained during unloading.
2. The mix samples taken during the loading and unloading of the bin will be tested to determine aggregate gradation, asphalt content and recovered asphalt binder properties.

III. TEST PROCEDURE II – HOLDING BIN EVALUATION - 24 HOUR HOLDING TIME

A. LOADING OF THE BIN

Obtain mix temperatures at the 20%, 40%, 60% and 80% points of the bin capacity. Each temperature shall be obtained from a sufficiently large sample (such as a loader bucket or haul truck) so that mix temperature will be retained while temperature is being taken. The average of these four temperatures will be used as the base temperature for this evaluation.

B. UNLOADING OF THE BIN

After 24 hours, obtain one representative mix temperature per truck during the unloading of the bin. Sample a minimum of six (6) trucks. If less than six trucks will unload the bin, obtain multiple readings per truck. Temperature readings in the truck shall represent different portions of the bin as it is being unloaded. Do not use temperature readings from the first or last 10% of the holding bin during unloading.

Obtain two 1-gallon samples of mix from both the 25% point and 75% point of the bin as it is being unloaded. Fill the sample cans as full as possible and seal with a lid.

C. EVALUATION – NYSDOT MATERIALS BUREAU

1. The average of the four temperatures taken during the loading of the bin will be compared against each of the individual truck temperatures obtained during the unloading of the bin.
2. The mix samples taken during the unloading of the bin will be tested to determine aggregate gradation, asphalt content and recovered asphalt binder properties.
IV. SUBMITTALS

A. The following shall be submitted to the Materials Bureau:

1. All temperature information obtained during loading and unloading of the bin.
2. Clearly identified sealed mix samples including:
   a. Facility #
   b. Holding bin time requested (i.e. 24 hour test)
   c. Sample point and number (i.e. 25% during loading, sample 1 of 2)
   d. Silo Identification
   e. Date and time of test
3. Recordation from facility during production of sample mix.
4. Composite gradation results from day of production (BR 154 or BR 157)
5. Superpave Job Mix Formula (JMF) (BR 255 or BR 256) or JMF data from similar gradation mixture approved by the Regional Materials Engineer.

V. APPROVAL

A. In order to obtain NYSDOT approval to hold HMA mixtures for the requested holding time, the test results for the holding bin must conform to the requirements outlined in §401-3.09 Hot Mix Asphalt Holding Bins, of the Standard Specifications.