



Illinois Department of Transportation

Memorandum

To: Studies and Plans Squads PPM 40-07
From: P. A. Tegeler Revised: Scott Neihart
Subject: Hot-Mix Asphalt Mixtures
Date: September 30, 1993 Revision Date: April 1, 2016

PLAN PREPARATION MEMORANDUM 40-07

This memorandum supplements the BDE Manual, Chapter 53-4 in providing uniformity of district preference concerning the use of Hot-Mix Asphalt Mixtures.

Early in the development of a project the Squad Leader should contact the Bureau of Materials to find out if there are any job specific requirements or suggestions. The Squad Leader should be prepared to provide information on job location, traffic forecast (current ADT w/S.U. & M.U. %'s.), scheduling, proposed resurfacing thicknesses, existing base materials and conditions (rutting, raveling, slag mixes, etc.).

When the project has an omission for existing resurfaced sections, the existing resurfacing will be removed to allow for a butt joint rather than a rundown. Also use butt joints at the ends of the section, Overlap the previous butt joint from the omission section to maintain the profile grade and to eliminate a dip in the profile.

On the typical cross sections, only the target application rates (pounds per square yard) should be shown. Do not show thicknesses of proposed resurfacing on typical cross sections unless thickness controls as when matching a curb. In such cases, show thickness but not pounds per square yards.

The Ndes (N30, 50, 70, 90, 105) of a mix relates to the stability of the bituminous concrete, and the Mixture (C, D, E, or F) relates only to skid resistance

Calculation of Quantities: Plan quantities should be calculated to provide plan thickness plus any specifically intended super elevation or crown corrections within the scope of the job.

The following should be taken into consideration when calculating quantities using current resurfacing policies (2¼", 2½", and 3¾" resurfacing):

1. If additional Leveling Binder is required to correct the existing crown, show the weight needed on the typical cross sections. Do not just use 84 pounds per square yard ($\frac{3}{4}$ inch) if more is needed.
2. If cold-milling is used, this should correct the crown in most cases.
3. Whether the widening is to be level or is to be sloped $\frac{3}{16}$ " per foot (same as the crown), indicate it on the typical cross sections.
4. If the existing profile is irregular, we may want to have a profilograph run on the section, or part of the section, to better estimate the quantity of Leveling Binder required.
5. If the existing crown is irregular, too steep or too flat, verify cross sections in the field to help define the milling scheme and intent as well as to identify any areas where additional leveling binder is needed.
6. Leveling Binder and/or Binder should not be rounded up by any arbitrary percentage. The Standard Specifications allow 3% overrun.

Hot-Mix Asphalt Widening or Patching: Binder mix shall be specified for HMA Base Course, HMA Base Course Widening, or Class D Patching. This will also apply for shoulder detours and for Interstate shoulders where truck parking is a problem. The binder mix shall be the same "Ndes" as used for the resurfacing on the job.

Consult with the Materials Engineer to obtain the correct information for General Note 406H.