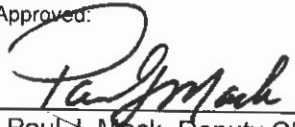


To: MODIFIED BY EI 02-001 EFFECTIVE 7/11/02 SUPERSEDED ^{TSY} _{EB 02-024} EFFECTIVE 7/11/02		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 00-031
Title: Requirements for Use of Specification Item 407- Tack Coat Between All Lifts of HMA			
Distribution: ☐ Manufacturers (18) ☐ Surveyors (33) ☒ Main Office (30) ☒ Consultants (34) ☐ Local Govt. (31) ☒ Contractors (39) ☒ Regions/Agencies (32) ☐ _____ ()		Approved:  Paul J. Mack, Deputy Chief Engineer, Technical Services 9/11/00 Date	

ADMINISTRATIVE INFORMATION. This Engineering Instruction (EI) supersedes EI 00-011. This EI is effective immediately.

PURPOSE. This EI reissues the following, with a change having been made regarding the minimum pavement surface temperature at which tack coats may be applied:

1. Revisions to the Standard Specification Section 401-3.11 to now require tack coat to be applied between lifts of new Hot Mix Asphalt(HMA) base, binder, and top courses.
2. Revisions to §401- Plant Mix Pavements - General, §403 - Hot Mix Asphalt Concrete Pavement, and §407 - Tack Coat. §401 and §403 are revised to pay for tack coat separately under §407 - Tack Coat and recommended application rates have been added to §407.

BACKGROUND. In the past, Item 407.01 M was used only when HMA was placed on existing Portland Cement Concrete (PCC), on milled surfaces or on existing HMA pavement. Experience has shown it is also beneficial to use tack coat between lifts of new HMA. Tack coat enhances the bond between HMA lifts. This is particularly important for HMA mixtures which have lower binder contents than previously used.

DESIGN GUIDANCE. Section 401-3.11 now requires tack coat to be applied between all HMA lifts (excluding the surface of permeable base material), therefore, tack coat should be included in the design and shown on the typical section drawings.

IMPLEMENTATION. Because of the immediate need to implement the change in the specification, the following implementation schedule is required:

1. For contracts submitted for the lettings of or after September 7, 2000 and before November 2, 2000, the revised specification will be added by order-on-contract;
2. For Contracts submitted for the lettings of or after November 2, 2000 and before January 11, 2001, the revised specification will be added by amendment;
3. For Contracts submitted for the lettings of January 11, 2001 or later, the revised specifications will be inserted into contract proposals by DQAB.

INSTRUCTIONS TO THE FIELD. For on-going contracts, the Engineer is directed to assess remaining work and determine if it is beneficial to implement this change in consultation with the Materials Engineer, and subject to negotiating a reasonable cost for the order-on-contract with the Contractor.

COST IMPACT. There will be a cost increase of approximately \$0.17 /m² per pavement lift for the additional applications of tack coat.

CONTACT PERSON. Direct questions regarding this EI to Cathy Cowan of the Materials Bureau's Field Engineering II Section at (518) 457-4582.

TACK COAT

Make the following changes to the Standard Specifications of January 2, 1995:

Page 4-5, line 44-45 and page 4-6, line 1-3

Under 401 - 3.01 delete the last two sentences in the fifth paragraph and replace them with the following:

"In addition, any binder course, placed by the Contractor, which will be permanently incorporated into the work and left open to traffic over the winter shall be cleaned in accordance with Section 633 - Conditioning Existing Pavement at no additional expense to the state immediately prior to tack coating and overlaying. Tack coat shall be applied in accordance with Section 407 - Tack Coat immediately prior to overlaying."

Page 4-20, line 15

Under §401 - 3.11 add the following as the first paragraph:

"Contact surfaces between all Hot Mix Asphalt (HMA) pavement lifts shall be tack coated in accordance with Section 407 - Tack Coat prior to placing HMA mixture. Contact surfaces shall be coated regardless of time period between lifts or construction vehicle use. The only exceptions to this are the surface of permeable base courses or when the Engineer determines that a tack coat is not needed. Paving over a tack coat should not commence until the emulsion has broken (goes from brown to black)."

Page 4-30, line 6

Under §407-3.02 delete the entire subsection and replace it with the following:

"407-3.02 Application of Bituminous Material. The tack coat shall be uniformly applied by a pressure distributor to a prepared clean pavement. The tack coat shall be applied as approved by the Engineer to offer the least inconvenience to traffic and to permit the one-way traffic, where practical, to prevent pickup or tracking of the bituminous material.

The tack coat shall not be applied on a wet pavement surface or when the pavement surface temperature is below the temperature requirements outlined in Table 401-2 Temperature and Seasonal Requirements of Section 401 - Plant Mix Pavements - General. The temperature and areas to be treated shall be approved by the Engineer prior to application. The application rate shall be 0.14 to 0.32 liters per square meter as approved by the Engineer. The following table contains recommended application rates for tack coat on various surfaces:

Table 407-1 Tack Coat Application Rates

Surface Type	Application Rate (liters/m ²)
New Hot Mix Asphalt	0.14 - 0.18
Milled Surfaces	0.21 - 0.25
Existing Hot Mix Asphalt	0.21 - 0.25
Portland Cement Concrete	0.17 - 0.30
Vertical Surfaces (curbs, concrete drainage structures and appurtenances)	0.27 - 0.32

TACK COAT

Make the following changes to Addendum No. 2 of the Standard Specifications of January 2, 1995:

Page IV - 15, line 11

Under §403-5 Basis of Payment delete the first sentence and replace it with the following:

"The unit bid price per ton for all pavement courses shall include the cost of furnishing all materials including any cleaning performed pursuant to §401 - 3.01, and all equipment and labor necessary to complete the work."