DECISION DOCUMENT

TO: **ASPHALT TASK GROUP**

TOM PYLE
Chair, Asphalt Task Group

JEREMY PETERSON-SELF
Caltrans Member, Asphalt Task Group

KEN SOLAK
Caltrans Member, Asphalt Task Group

CHU WEI
Federal Highway Administration Member, Asphalt Task Group

PAT IMHOFF
Industry Member, Asphalt Task Group

PHIL READER
Industry Member, Asphalt Task Group

DENNIS MCELROY
Industry Member, Asphalt Task Group

SCOTT DMYTROW
Industry Member, Asphalt Task Group

FROM: **TACK COAT WORKING GROUP**

KEE FOO
Caltrans Chair, Asphalt Sub Task Group
Pavement Program – Office of Asphalt Pavements

TONY LIMAS
Industry Lead, Asphalt Sub Task Group
Granite Construction

PREPARED BY: KEE FOO/TONY LIMAS, Tack Coat Working Group

DATE: February 26, 2021

SUBJECT: **PROPOSED REVISION FOR TACK COAT APPLICATIONS**

ISSUE

The University of California Pavement Research Program (UCPRC)'s Long Life Pavement initiative stresses the need for tack coats between layers of asphalt to assure monolithic

bonding. The absence or insufficient application of tack coat material can lead to pavement distresses such as slippage cracks, delamination and fatigue cracking which results in reduced pavement life. Mechanistic Empirical design calculations show that when there is little or no bonding between layers of asphalt the tensile strain at the bottom of the upper lift results in a calculated reduction in fatigue life of about 40 to 50%.

Proper use of tack coat also serves as a preventative measure to reduce delamination when grinding to achieve a smooth pavement surface.

Current tack coat specifications allow the Engineer to omit the application of tack coat when the pavement surface is fresh, clean, and warm. The Tack Coat Working Group agrees with UCPRC's recommendation that the application of tack coat is a best practice that should be utilized without exception to prevent reductions in pavement performance life.

Consistent Specification Implementation
Removing the Engineer option to omit tack coat under subjective conditions is in alignment with the implementation of consistent statewide specifications which is a major tenet of the Pavement and Materials Partnering Committee.

Opportunities to Improve Tack Coat Specification
Modifying the specification to require the application of tack coat in all cases is a specification improvement that will guard against reductions in pavement performance life.

RECOMMENDATION

Revise section 39-2.01C(3)(f) Tack Coat to read as follows:

If authorized, you may:

1. Change tack coat rates
2. ~~Omit tack coat between layers of new HMA during the same work shift if:~~
   - 2.1. ~~No dust, dirt, or extraneous material is present~~
   - 2.2. ~~Surface is at least 140 degrees F~~

RECOMMENDED BY:

KEE FOO
Caltrans Chair, Asphalt Sub Task Group

02/26/2021
Date

TONY LIMAS
Industry Lead, Asphalt Sub Task Group

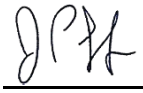
02/26/2021
Date

APPROVED BY:

04/12/2021

TOM PYLE
Asphalt Task Group Chair

Date



04/14/2021

JEREMY PETERSON-SELF
Asphalt Task Group Member

Date

04/12/2021

KEN SOLAK
Asphalt Task Group Member

Date

04/13/2021

PAT IMHOFF
Asphalt Task Group Member

Date

04/12/2021

PHIL READER
Asphalt Task Group Member

Date

04/13/2021

DENNIS MCELROY
Asphalt Task Group Member

Date

04/12/2021

SCOTT DMYTROW
Asphalt Task Group Member

Date