May 7, 2015

U.S. Department of Transportation
Docket Operations, M-30
West Building Ground Floor, Room W12-140
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Docket No. FHWA-2013-0053

The National Asphalt Pavement Association (NAPA) appreciates the opportunity to provide comments on Docket Number FHWA-2013-0053: “National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program.” NAPA is the only trade association that exclusively represents the interests of the asphalt producer/contractor on the national level with Congress, government agencies, and other national trade and business organizations. NAPA’s membership also includes companies and individuals that support the asphalt pavement industry, such as construction equipment manufacturers and material suppliers. As such, NAPA comments on the proposed rule are limited to pavement issues.

In general, NAPA supports the efforts outlined in the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141) to establish new requirements for performance management to ensure the most efficient investment of Federal transportation funds, and NAPA appreciates FHWA’s efforts and consideration in drafting a rule to implement these requirements as set forth in the Notice of Proposed Rulemaking (NPRM). In response to FHWA’s request for comments, we offer the following comments and concerns:

Economic Feasibility of the Proposed Rulemaking and Data Collection

The increased data requirements associated with implementation of the NPRM place an undue burden on State Departments of Transportation (DOTs) and local agencies in terms of increased cost, administration, and management; however, additional resources or funding are not provided making this NPRM not economically feasible. In addition to data gathering, resources will be required for processing, interpreting, and reporting the data, adding additional burdens for DOTs and agencies. We support collecting sufficient data to ensure a fair and equitable evaluation of the system and subsequent project programming; however, the level of effort needs to be balanced with return on investment of resources.

NAPA has concerns regarding the requirement for full extent collection of data and the frequency of data collection, i.e., the requirement to evaluate 0.1 mile section lengths. NAPA is aware that some State DOTs have already expressed concern regarding the requirement for full extent collection and NAPA echoes these concerns. Recognize that without additional funding, this will result in diverting limited resources to data collection and reporting rather than to addressing actual infrastructure needs.
We are concerned that, due to past, current, and probable future fiscal constraints, State DOTs may not be able to achieve compliance because of a lack of proper funding, yet they may be financially penalized under this rule without ample opportunity for corrective actions. If the current situation of inadequate, short-term Federal funding continues, intermediate steps should be taken to address State DOTs that are unable to meet minimum condition requirements before a penalty is assessed. The proposed performance measures are limited to interstate and non-interstate National Highway System roadways, which, overall, is a small portion of roads eligible for Federal aid. NAPA echoes concerns of other agencies that the non-NHS Federal-aid roads may be less likely to receive Federal-aid funding in order to ensure that NHS roads meet and maintain performance goal standards. This unnecessarily restricts the agencies from optimizing performance results over the entire Federal-aid system. In addition, by imposing penalties, funds may be diverted to maintenance with minimal improvement to overall pavement condition and away from other needs, such as capacity enhancements.

Proposed Metric for Cracking

The NPRM has the following statements on the cracking metric for asphalt pavements:

- “The FHWA proposes in § 490.311(b)(2) that for asphalt sections, the Cracking Percent metric would be computed as the percentage of the total area, to the nearest whole percent, that are exhibiting cracking”
- “For asphalt pavement the Cracking Percent metric considers all cracking present in the section area”
- “The metric calculations of Cracking Percent for different pavements are proposed to align with existing HPMS practices”

Given that the Highway Performance Monitoring System (HPMS) only measures alligator cracking as a percent, while other cracking is measured as meters/square meter, how will transverse and longitudinal cracking be calculated as a percent if the metric is to include “all cracking”? Clarification is needed on what cracking is considered in the NPRM and, if it is only alligator cracking, the reason for this decision.

Cracking Percent is the proposed metric for cracking; however, it appears the NPRM does not account for 1) severity of cracking and 2) different cracking mechanisms. For example, the definition of Cracking Percent in the (HPMS) indicates that all severity levels should be considered for HPMS reporting. How will the NPRM account for severity of cracking? NAPA would appreciate clarification or more details on the proposed metric for cracking.

In choosing Cracking Percent as the metric, NAPA has concerns over the combination of different cracking mechanisms into a single measure especially since the appropriate maintenance and rehabilitation approach for different cracking mechanisms varies based on the severity of cracking, top-down versus bottom-up cracking, and the costs of repair. The FHWA publication, Selecting a Preventive Maintenance Treatment for Flexible Pavements Report IF-00-027 (http://isddc.dot.gov/OLPFiles/FHWA/013551.pdf), provides example decision trees for asphalt pavements based on various cracking (Figures 3.2 and 3.3) and severity levels (Figure 3.2) that illustrate the importance of knowing the cracking type when evaluating treatment and cost.

A performance monitoring system and metric based only on Cracking Percent is inadequate for a state to make complete and appropriate maintenance and rehabilitation decisions. If the Cracking Percent metric is to remain for assessing pavement condition, it should be made clear that this metric is only for
condition assessment and may be inadequate for agencies to make preservation or construction decisions to maintain or improve the condition of roads.

**Definition for Composite Pavements**

The NPRM “considers the pavement type of any composite pavement as the pavement type that exists in the surface of the structure (or the top-most layer).” NAPA vigorously opposes defining composite pavements based on their surface layer alone and strongly suggests a separate definition for composite pavements or not using the term “composite” and creating pavement type categories for asphalt overlay on concrete pavement or concrete overlay over asphalt pavement. By considering only the surface of a composite pavement, the NPRM may not recognize pavement performance or issues related to the structure of the pavement. Furthermore, composite pavements with concrete bases/subsurface layers behave as rigid pavements, not flexible pavements, and produce a different set of distresses on the surface layer that would obscure an accurate accounting of overall performance of asphalt pavements.

FHWA defines and tracks composite pavements for the Highway Statistics Series and Table HM-12 breaks pavements into three groups:

1. Bituminous -- bituminous, asphalt-concrete (AC) overlay over existing AC pavement;
2. Concrete -- JPCP jointed plain concrete pavement, JRCP jointed reinforced concrete pavement, CRCP continuously reinforced concrete pavement; unbonded jointed concrete overlay on PCC pavement, bonded PCC overlay on PCC pavement, other (includes "whitetopping");
3. Composite -- AC overlay over jointed concrete pavement, AC (bituminous overlay over existing CRCP)

Further, the SHRP 2 Report S2-R21-RR-2 *Composite Pavement Systems, Volume 1: HMA/PCC Composite* defines HMA/PCC composite pavement systems as relatively thin HMA layers over a newly placed, but sufficiently hardened, PCC layer. Thus, there may also need to be consideration given to pavement systems designed to be composite systems versus existing pavement structure types overlaid with a different pavement type. NAPA understands that the overall goal of the NPRM is assessing pavement condition; however performance monitoring will generate an extensive and valuable pavement information database that could be very useful for future research and other purposes if the pavement structure is properly identified.

**Pavement Condition Decisions**

NAPA is concerned that the proposed rule could lead to poor decisions (i.e., “worst first”) in order to comply with the NPRM minimum pavement condition, rather than decisions that factor in the long-term preservation and performance of pavements. Agencies should have flexibility to make decisions that balance preserving good/fair pavements with improving and rehabilitating poor pavements. Furthermore, the proposed rule’s penalties may put undue emphasis on pavements in poor condition, forcing agencies to spend money on “quick fixes” that have a limited lifespan when pavements in good or fair condition could have their lifespan extended significantly through preservation or maintenance.

In conclusion, NAPA appreciates the opportunity to provide feedback and suggestions on the NPRM for National Performance Management Measures. These comments were developed through a dedicated
task group of asphalt pavement contractors, consultants, and State Asphalt Pavement Association representatives. Some of our State Asphalt Pavement Associations discussed this NPRM with their State DOTs and the feedback they received has factored into our comments. Although we have specific technical concerns and are generally concerned that the proposed rule may add undue burden to agencies, we support a national program of performance measures for pavements.

If you have any questions or need more information regarding our comments, please contact us. We look forward to working with you.

Sincerely,

Audrey Copeland, PhD, PE
Vice President — Engineering, Research, & Technology

Task Group Members:

Shane Buchanan, PhD, PE, Oldcastle Materials
Harry Bush Jr., PE, Vulcan Materials
Audrey Copeland, PhD, PE, National Asphalt Pavement Association
Kent Hansen, PE, National Asphalt Pavement Association
Gary Hoffman, PE, Pennsylvania Asphalt Pavement Association
Craig Parker, Silverstar Construction
Larry Patrick, Oklahoma Asphalt Pavement Association
Will Rogers, PhD, Georgia Asphalt Pavement Association
Jim Scherocman, PE, MS, MBA, Consulting Engineer
Ron Sines, PE, Oldcastle Materials
Jill Thomas, PE, Minnesota Asphalt Pavement Association