Research Need for Pavement Design, Management & Materials Technical Advisory Group

Effective/Updated: September 4, 2015

ISSUE: Evaluation of the Resurfacing Policy for Other State Maintained Highways

SUMMARY OF PROBLEM: Current IDOT pavement rehabilitation policies include both standard and structural policy overlays. Policy overlay thicknesses were established in the early 1980s due to rising construction costs and limited funding. Research conducted in 1995 was used to refine the policy and develop exceptions to the policy overlay thicknesses. At that time, overlay thickness consisted of one or two generations of overlay. Several additional generations of overlay have been placed since the development of the policy. However, no research has been done to determine the impact of the previous overlays on rehabilitation thickness and performance. Many times a structural overlay is warranted, but the overlay thickness typically defaults to the standard policy thickness. This is due to reduced program funding, accelerated project delivery requirements, or the lack of a pavement investigation. As a result, overlay performance life is decreasing. Additionally, rehabilitation costs continue to increase, causing further reduction in the ability to maintain the highway network.

The rehabilitation policy for other state maintained highways provides exceptions allowing a structural overlay. However, several of these criteria need to be re-evaluated to ensure requirements are appropriate. Also if poor or unstable previous overlays must either be removed, or remain in place, the rehabilitation policy does not provide guidance on what thickness must be used for the new overlay. All factors (condition, traffic, existing materials, etc.) must be reviewed and requirements updated to improve performance of overlays to maximize the effectiveness of policy overlays.

EXPECTED IMPLEMENTABLE OUTCOME: The desired result is an updated and revised overlay policy for state maintained highways other than interstates. These revisions would include: identifying structural deficiencies and situations warranting additional thickness (Section 53-4.04(b)5.), identifying traffic impacts on overlay thickness in combination with existing materials beyond the first resurfacing (Figure 53-4.L), and other potential criteria deemed necessary for determining overlay thickness.

A discussion of the potential impact of an updated and revised overlay policy on rehabilitation costs statewide, and an estimate of the increased costs is also required. To submit a research idea for consideration at the spring 2016 Executive Committee meeting, prepare and submit a Proposed Research Idea form to IDOT (DOT.BMPR.RESEARCH@illinois.gov) no later than October 1, 2015.