Research Needs for Structures/Hydraulics/Geotechnical Technical Advisory Group

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ISSUE: Load Rating of Bridges in Illinois

SUMMARY OF PROBLEM: The current American Association of State Highway and Transportation Officials (AASHTO) Manual for Bridge Evaluation, which includes load and resistance factor rating (LRFR) procedures, is based on national data and trends on truck sizes and weights. However, the load factors prescribed by AASHTO may be conservative or may not be representative of the actual trucks (sizes and weights) that typically traverse Illinois highways. Refining the load factors from those prescribed by AASHTO for Illinois bridges through the use of weigh-in-motion data and sophisticated reliability analyses would provide the Illinois Department of Transportation (IDOT) with more accurate and realistic load ratings for its population of about 25,000 state and local bridges.

DESIRED RESULTS/OUTCOMES: Revised load factors for rating of Illinois bridges through use of existing and newly collected weigh-in motion data and reliability analyses.