

# Assessment of Performance of Vital Long-Span Bridges in the United States

Edited by Richard J. Kratky

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# ASSESSMENT OF PERFORMANCE OF VITAL LONG-SPAN BRIDGES IN THE UNITED STATES

EDITED BY  
Richard J. Kratky

SPONSORED BY  
Sub-committee on Performance of Bridges

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## **Introduction**

The Subcommittee for the Performance of Bridges has prepared a report on the Assessment of Performance for our Nation's Long Span Bridges whose main spans are 500 ft or greater. This special report attempts to raise the awareness of the need for lifetime performance assessment of these vital bridges. The report clarifies that different types and levels of engineering assessment are needed for a reliable capturing lifetime performance for these special bridges. It delineates six general assessment categories that deserve attention in view of our present technologies and knowledge. The present obstacles in attempting to retrieve, and coordinate data on previously completed engineering assessments are disclosed in the report. This Special Report identifies the need for better ways to improve the communication and coordination on assessments within the engineering profession in order to gain meaningful performance assessments for these long span bridges. The value of condition and lifetime performance assessments is differentiated. Conclusions are drawn as to the current status of lifetime performance assessments of the long span bridges in the United States and how this relates to the meeting of our sought goal levels of performance for their lifetimes. Recommendations by the Subcommittee are made for fostering better documentation of engineering performance assessments, and for the advancement of necessary long span bridge lifetime performance assessments.

## Acknowledgments

The Subcommittee would like to express their thanks and appreciation to all the states, DOTs, authorities, agencies and owners who lent their assistance for this Special Project Report on Assessment of Performance of Vital Long Span Bridges in the USA. The care of our bridges is a demanding responsibility for them. We know the difficulties that were involved in taking time to honor our requests, and to respond to them. We are grateful to these staffs for their efforts, especially in the completion of the Assessment Questionnaires. Our very special thanks to Barry Noland, Jim Rossberg, Don Dusenberry, John Carrato, Michael Ritter, Dr. Atorod Azizinamini, the TAC on Bridges, Susan Richardson (Davis) and Debbie Smith of the ASCE/SEI Organization for their efforts, patience and support on this Special Project.

Appreciation is extended to all Subcommittee members (from 1999 to 2002) for their dialogues, suggestions and contributions to the subject matter in this Special Report. The Chair would like to especially thank Satinder P.S. Puri, Past Chair of the Subcommittee, and Jagtar S. Khinda, Chair of the Infrastructure Group, Met Section NYC for their participation in the writing and review of the manuscript. Special thanks to Ann Kratky for her proof reading of the Report.