

# THE LIFE OF A BRIDGE

conception to retirement

**Moderator: Malcolm Kerley, P.E.**  
Virginia Department of Transportation

**Panelists:**  
**Andre Pavlov**  
Florida Department of Transportation

**Jeff Pouliotte**  
Florida Department of Transportation

**Rick Renna**  
Florida Department of Transportation

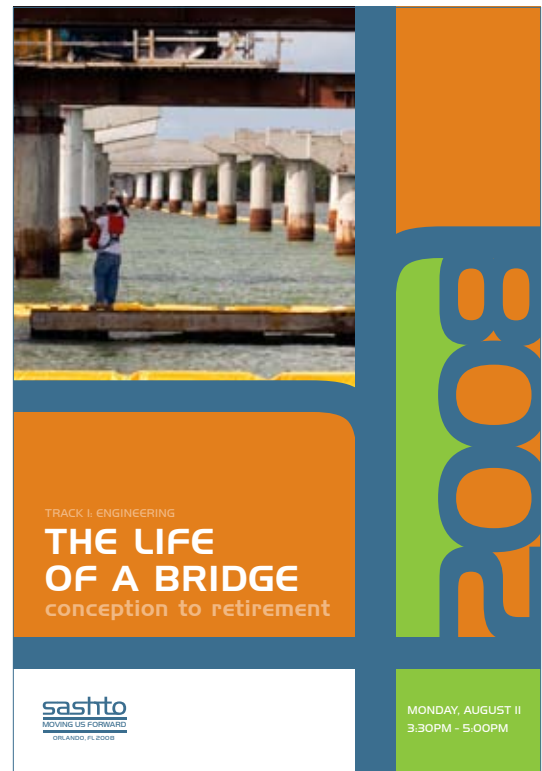
**Mark Bernhardt**  
Burgess and Niple

**Richard Kerr**  
Florida Department of Transportation

What is being done to ensure a long and healthy life for our bridges? Our panelists discussed the "Life of a Bridge – conception to retirement."

**Bridge inspection:** The purpose of a bridge inspection is to provide information for immediate action to limit use of, or close to traffic, any bridge that is shown by inspection to be hazardous, said Mark E. Bernhardt, P.E., Director of Facility Inspection, Burgess & Niple, Inc. An inspection also allows bridge maintenance, repair or replacement to be programmed effectively through early detection of deficiencies.

**Wave forces on bridge structures:** Rick Renna, Florida DOT's Hydraulics Engineer, said the initial work on the AASHTO/FHWA Bridge Wave Task Force has been completed. Guide specs have been approved and future refinements in design guide and countermeasures are underway. He also discussed the ongoing studies of bridge vulnerabilities in Tampa and the Keys and the need for additional research of wave tank tests.



**Load Resistance Factor Rating (LRFR):** The shear capacity of existing reinforced and prestressed concrete bridge members shall be evaluated for permit loads, said Andre Pavlov, Florida DOT Maintenance Office. Jeff Pouliotte, Florida DOT Maintenance Office, said one of the challenges using LRFR load ratings to permit overweight vehicles is many FDOT bridges have low shear ratings using LRFR, limiting mobility. All new FDOT bridges will be LRFD & LRFR.

**Service life of bridges:** Richard Kerr, Florida DOT Maintenance Office, said FDOT policy requires the programming for bridge repair or replacement within six years when a structure becomes structurally deficient or posted for weight. The number of structural replacements will slowly increase over the next 20 years, but the increase will be manageable. A good estimate of the structural service life of FDOT bridges is 80 years. The bridge repair program is a sound investment with solid returns.

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