



U.S. Department of Transportation
Federal Highway Administration
Office of Infrastructure

Optimal Decision-Making for Improving Bridge Resilience

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Outlines

- Program Mission and Goal
- Concept of Resilience – Infrastructure
- Resiliency Goals in Infrastructure Design and Management
- Resilience Strategies in Bridges and Structures
- Research Needs

Seismic and Multi-Hazard Resilience Program –Mission and Goals

- Making the bridge population resilient to the disruption or damage from extreme natural events or accidental human actions to fulfill the key role in the highway transportation network serving our society.
- Supporting Transportation Performance Management in managing transportation system performance outcomes. Supporting Transportation Asset Management Planning in managing the condition of the infrastructure assets that are needed to provide for mobility and safety on the nation's transportation system.

What is Resilience?

- Psychological term for the capability of “bouncing back”.
- The White House:
 - inclusion of the ability to withstand and recover rapidly from deliberate attacks, accidents, natural disasters, as well as unconventional stresses, shocks, and threats to our economy
 - PPD 21: “The ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.”
- AASHTO SCOR
 - The ability of the transportation system to recover and regain functionality after a major disruption or disaster”
- AASHTO SCOTSEM
 - “the ability to prepare and plan for, absorb, recover from, or more successfully adapt to adverse events”FHWA
- MCEER
 - ...the ability of social units (e.g., organizations, communities) to mitigate hazards, contain the effects of disasters when they occur, and carry out recovery activities in ways that minimize social disruption and mitigate the effects of future disasters

Will publish later ...