

# Engaging in Technical Activities as a TRB Volunteer

## *A Perspective from TRB AKB50: Seismic Design and Performance of Bridges*

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# Overview

- What is TRB?
- What TRB standing committees do and contribution to AASHTO process
- Get involved!

## Abbreviations

- TRB – Transportation Research Board
- NCHRP – National Cooperative Highway Research Program
- AASHTO – American Association of State Highway and Transportation Officials

# What is the Transportation Research Board (TRB)?

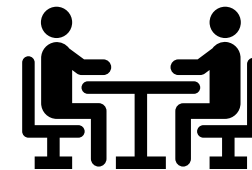
- Part of the National Academies of Sciences, Engineering, and Medicine
- Provides leadership in transportation improvements and innovation through trusted, timely, impartial, and evidence-based information exchange, research, and advice regarding all modes of transportation



RESEARCH



CONVENE



ADVISE



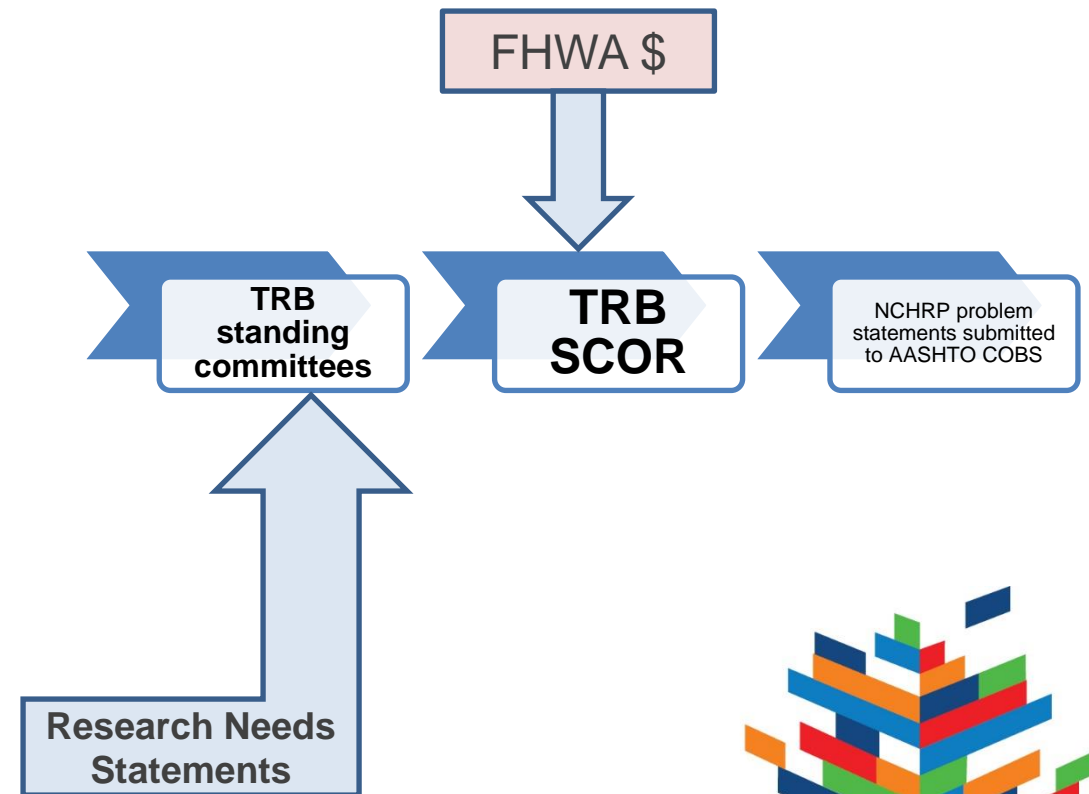
# What standing committees do and contribution to AASHTO process

*“Support progress of research and innovation”*

- **Standing committees** consist of practitioners, academics and other transportation officials from the public and private sectors who collaborate to address critical issues within the transportation sector.
- TRB volunteers also serve on **Cooperative Research Program (CRP)** Panels and Projects
  - **Highways:** National Cooperative Highway Research Program (**NCHRP**)
  - **Transit:** Transit Cooperative Research Program (**TCRP**)
  - **Behavioral Traffic Safety:** Behavioral Traffic Safety Cooperative Research Program (**BTSCR**)
  - **Airports:** Airport Cooperative Research Program (**ACRP**)

# What standing committees do and contribution to AASHTO process

- TRB standing **committee activities** may include:
  - Conducting peer reviews of submitted papers for the TRB Annual Meeting and Transportation Research Record.
  - Planning lectern and poster sessions at the TRB Annual Meeting.
  - Contributing to TRB publications (i.e., e-Circulars, etc.)
  - Planning and attending TRB webinars and/or workshops at the TRB Annual Meeting.
  - Drafting **Research Needs Statements (RNS)** that can be submitted by anyone if there is support from at least one state; RNS are reviewed by TRB SCOR for **NCHRP** consideration, where final problem statements are **selected and voted upon by AASHTO COBS for funding.**



# Proposed Technical Activities for TRB AKB50

## Call for Papers & New Ideas

Allowance of more opportunities for research and innovation to be shared and broadly disseminated at TRB Annual Meeting and TRR publications to advance the current state-of-the-practice.

## Workshops: Seismic Design Basics I & II (proposed)

Translating information to engineers and helping practitioners to understand the seismic hazard and limitations of force-based design.

## Webinar: Risk-targeted Ground Motions for Bridge Design

AKB50 members working collaboratively with AASHTO T-3. Topic balloted and adopted at 2022 Annual COBS Meeting. Considering this topic for a future webinar. Technical presentation at AKB50 2023 Committee Meeting.

## RNS → NCHRP 12-125: Earthquake-Induced Bridge Displacements

Contractor to be selected soon for this anticipated 3-year project.

Performance-based seismic design

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# Previous RNS from AKB50: Seismic Design and Performance of Bridges

## Ranking of Research Needs Statements



Estimating inelastic displacement demands for bridges under seismic forces (submitted as top priority for T-3 consideration → EQ-induced bridge displacements)



Updates to Ground Motion and Response Spectra for Bridge Structures (RotDnn)



Developing Fragility Curves for Multi-Span Precast Girder Concrete Bridges in Seismic Regions



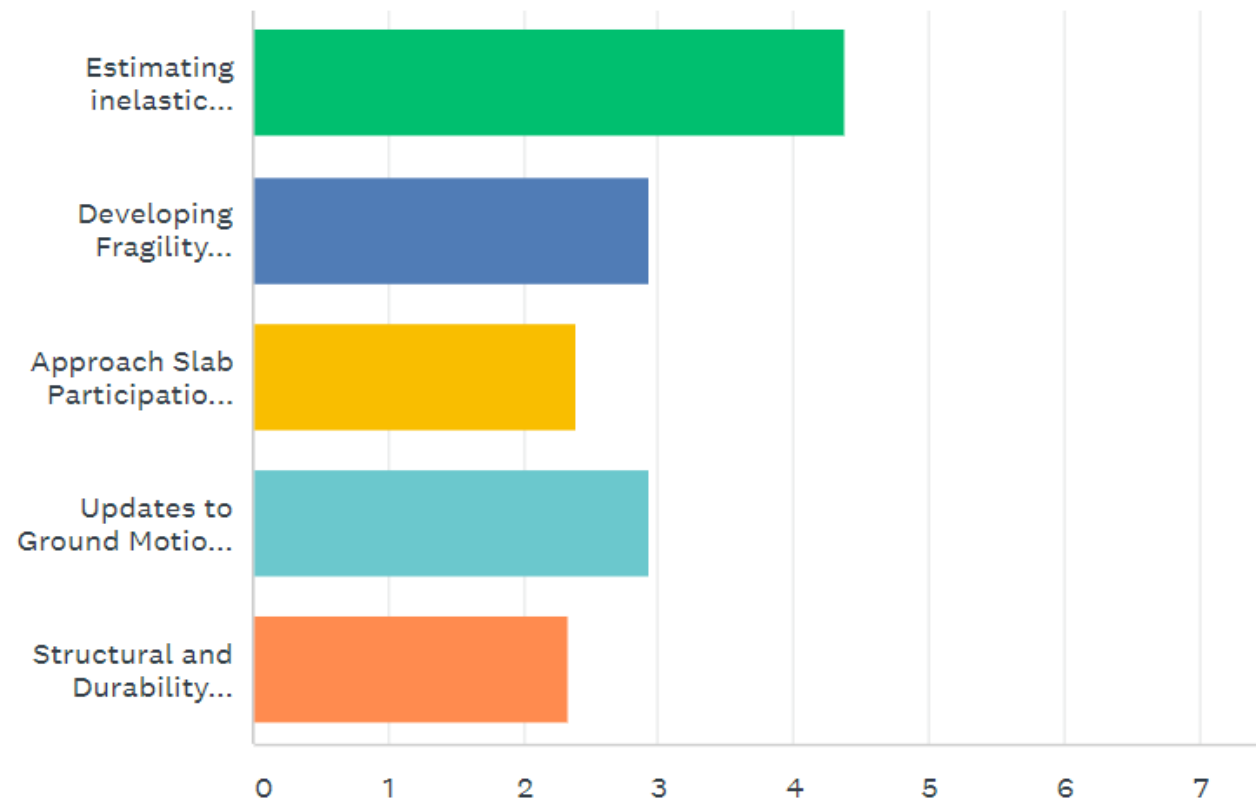
Structural and Durability Effects of Debonding Flexural Reinforcing Bars in Plastic Hinges of Concrete Bridges



Approach Slab Participation in Seismic Resiliency of Multi-Span Continuous Bridges

Rank the following RNS that have been prepared in the past.

Answered: 18 Skipped: 0



# AKB50 History of RNS Funded by NCHRP

and Performance of Bridges (AKB50)  
has been selected by the TRB Technical  
Activities Council (TAC) as the

2023 BLUE  
RIBBON  
COMMITTEE



in the Research  
Category

Learn more about the  
Committee's work:



- Developed more than 21 RNS since 2006
- Approximately \$2.5M of RNS allocated for funding since 2014
- Funding received to support 2 Synthesis Topics in 2016 and 2017





# Get Involved!

## *“Everyone Interested Is Invited”*

- More than 175 standing technical committees!
- Become a **friend** of any committee through self-nomination: [mytrb.org](https://mytrb.org)  
A “friend of a committee” is someone who can attend committee meetings and participate in the same activities as committee members. Exchange information about best practices, professional development, networking, and mentoring.
- However, **committee** (voting) members are selected through a more formal process.
- Active “friends” may be considered for committee membership.



# Thank you!

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