From Vision to Practice

Productive Models

NCHRP’s Prolific Legacy
IDEA Programs
Sparking Innovations
Metropolitan Transportation Planning’s First 50 Years
The Transportation Research Board is one of six major divisions of the National Research Council, which serves as an independent adviser to the federal government and others on scientific and technical questions of national importance, and which is jointly administered by the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The mission of the Transportation Research Board is to provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board’s varied activities annually engage about 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

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* Membership as of December 2012.
FROM VISION TO PRACTICE: PRODUCTIVE MODELS

NCHRP’s 50TH ANNIVERSARY

3 INTRODUCTION
A Half Century of Delivering Research That Works: Lessons from a Proven Organizational Model
John Halikowski
The NCHRP model for delivering practical research products works successfully by involving stakeholders, using resources efficiently and effectively, upholding objectivity, and selecting consultants competitively, observes the author, a state transportation agency CEO.

4 Evolution of an Effective and Productive Partnership: NCHRP’s “Splendid History”
Christopher Hedges
The roots of NCHRP trace back to the origins of the Highway Research Board, the AASHO Road Test, and two leaders’ vision that a pooling of resources could focus research on states’ most pressing highway problems. That vision led to a historic three-way partnership 50 years ago. NCHRP continues to pursue “the growth of service and the diffusion of worthy ideas in useful form.”

8 Advancing Transportation and Meeting States’ Needs: Highlights from NCHRP’s Hefty Portfolio
Crawford Jencks
For 50 years, NCHRP has delivered implementable research, developing objectively derived solutions to the complex and changing issues facing state departments of transportation. The author reviews a selection of significant products addressing highway safety; bridges; long-lasting pavements; design, operations, and maintenance; planning and environmental stewardship; and infrastructure security, as well as related programs.

14 Transit Cooperative Research Program Celebrates Two Decades of Service to Public Transportation

15 National Cooperative Rail Research Program on Track

16 Advancing the State of Highway Practice: Testimonials from NCHRP Participants
Seventeen transportation leaders and researchers who have interacted with NCHRP in a variety of roles and capacities throughout their careers share their experiences, observations, and assessments of the program’s vision, achievements, and impact.

17 The Value of Research to Transportation Executives
Christopher Hedges

FROM CONCEPT TO PROOF TO PRACTICE

20 TRB’s IDEA Programs Turn 20: Sparking Innovation Through High-Risk, High-Payoff Research
Harvey Berlin, Inam Jawed, Linda Mason, and Jon Williams
TRB’s Innovations Deserving Exploratory Analysis (IDEA) programs offer early-stage funding for promising but unproven innovations for highways, transit, and railroad safety and performance. The goal is to promote innovations that can progress to next-generation technologies and methods. The authors review the program’s history and highlight several key inventions.

The Transportation Research Board’s 2012 Annual Report is included in this issue as a special insert between pages 26 and 27.
A NEW FIELD OF PRACTICE EMERGES

27 INTRODUCTION
Working Through the Evolving Legacy of Metropolitan Transportation Planning
Alan E. Pisarski
The 1962 Federal-Aid Highway Act mandated metropolitan transportation planning; federal guidance defined the scope and nature of the technical process, providing training and developing a set of fundamentals, building competency and establishing the foundations of a new practice.

28 Metropolitan Transportation Planning:
An Abbreviated History of the First 50 Years
Kevin E. Heaney and Edward Weiner
The urban planning provisions of the Federal-Aid Highway Act of 1962 were pivotal in the transition of the highway program from a rurally oriented, civil engineering-based activity to a new framework that had a major urban component and that was multimodal, interdisciplinary, and involved local officials. The authors present the developments, influences, and workings that have shaped the practice of metropolitan transportation planning.

John Fischer

34 J. Douglas Carroll, Jr.: Pioneer of Urban Transportation Planning
Alan E. Pisarski

ALSO IN THIS ISSUE:

37 Research Pays Off
Low-Cost and Environment-Friendly Asphalt-Treated Mixtures: Louisiana Tests Designs
Louay Mohammad, Chris Abadie, and Munir Nazzal

40 Profiles
Geotechnical engineering researcher Jean-Louis Briand and Tribal Technical Assistance Program Director Ronald C. Hall

42 News Briefs
Stiffer pavements and fuel; investment gaps for ports, waterways, and airports; shipper goes solar; European researchers form alliance

44 TRB Highlights
Second Strategic Highway Research Program News, 45
Cooperative Research Programs News, 46

48 Bookshelf

52 Calendar

COMING NEXT ISSUE

The vulnerability and adaptability of Alaska’s transportation system to climate change—and lessons for the rest of the nation; Northern European solutions for managing road condition in cold climates; identifying and mapping naturally occurring hazardous materials in Oregon in relation to transportation activities; and insights from a project of the second Strategic Highway Research Program on systems operation and management strategies for states to combat traffic congestion are among the articles slated for the January–February 2013 TR News. Also featured is the annual roundup of findings from state visits by TRB program staff, focusing on the implementation of innovations and summary reports from recent research projects.

(Photo above:) Differential settlement on an abandoned section of the Richardson Highway, south of Fairbanks, one year after maintenance ceased.