

***Transportation Research Board (TRB) of the
National Academies***

**National Cooperative Highway
Research Program (NCHRP)**

Update

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Manager, NCHRP**

**AASHTO Highway Subcommittee on
Construction**

August 2, 2006

San Juan, Puerto Rico

NCHRP (& TRB) Overview

- Organization
- Cooperative Research Programs
- SHRP II
- NCHRP
- Construction Interests



Transportation Research Board
of the National Academies

THE NATIONAL ACADEMIES

Private, Nonprofit Institution



TRANSPORTATION RESEARCH BOARD



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COOPERATIVE RESEARCH PROGRAMS

- National Cooperative Highway Research Program (NCHRP) - 1962
 - FHWA - AASHTO - TRB
- Transit Cooperative Research Program (TCRP) - 1992
 - FTA - APTA - TRB
- Airport Cooperative Research Program (ACRP) - 2004
 - FAA - ACI - TRB
- Commercial Truck and Bus Safety Synthesis Program (CTBSSP) - 2001
 - FMCSA - TRB

“NEW” COOPERATIVE RESEARCH PROGRAMS, FY2006-09

- National Cooperative Freight Research Program (NCFRP)
 - RITA- TRB
- Hazardous Materials Cooperative Research Program (HMCRRP)
 - PHMSA- TRB

STRATEGIC HIGHWAY RESEARCH PROGRAM II (SHRP II)

- New TRB Division
- \$51.25M/yr. (\$36M for FY'06) for 4 years
- Themes: Safety, **Renewal**, Reliability, Capacity
- Major issue: re-prioritize research program to match reduced funding level
- RFPs summer-fall '06
- TRB.org/SHRPII

National Cooperative Highway Research Program (NCHRP)

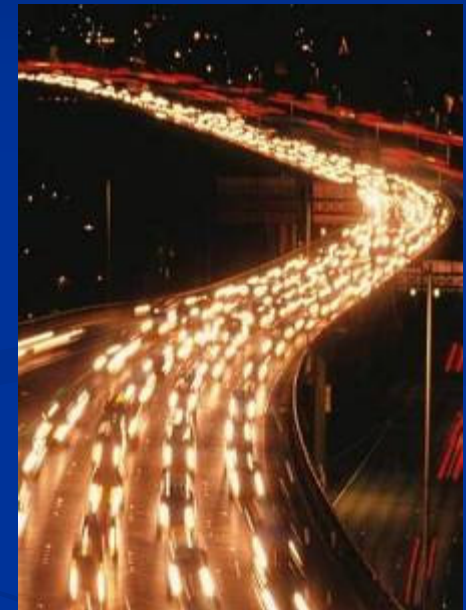
Managed by: Transportation Research Board (TRB)

Sponsored by: American Association of State Highway
and Transportation Officials (AASHTO)

Assisted by: Federal Highway Administration (FHWA)

AASHTO's Research Program - Since 1962

- **State DOTs**
 - Funds (5.5% of SP&R funds)
 - Problems (Approved by AASHTO)
 - Leveraged funds
- **Applied research focus**
 - National issues (emerging concerns)
 - Shared issues (common problems)
- **Contract research**
 - Panels
 - Research contractors



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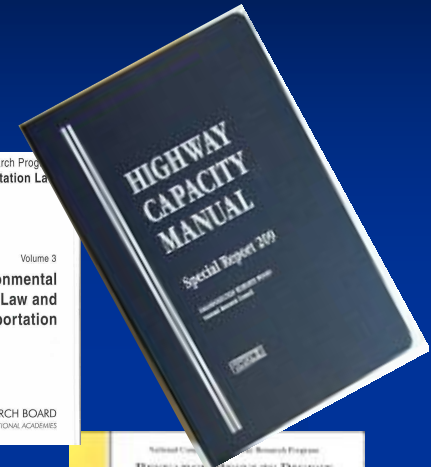
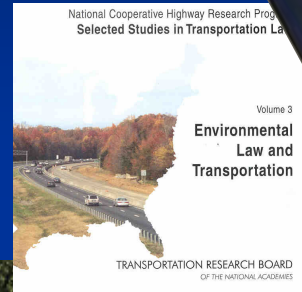
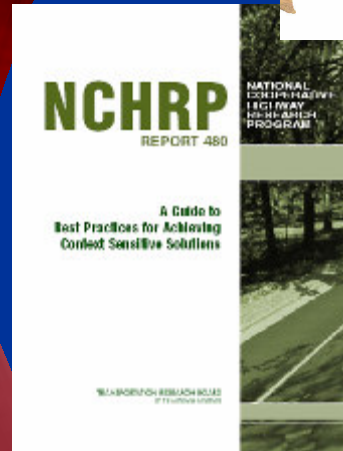
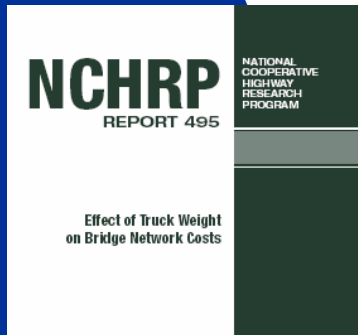
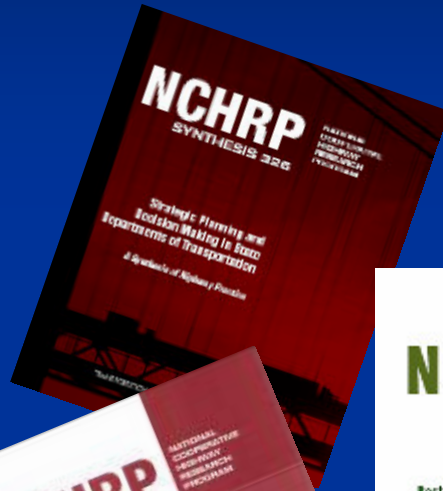
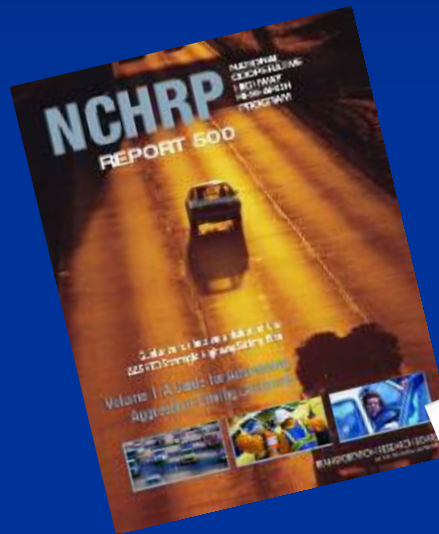
SAFETEA-LU NCHRP Funding

<u>Fiscal Year</u>	<u>\$ Millions</u>
2004*	35.4
2005	33.0
2006	32.7
2007	<i>33.0 (est.)</i>

*TEA-21 based

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Research Project Products



Research Projects

- 20-72, Tools to Aid State DOTs in Workforce Issues
- 20-73, Best Practices on Accelerating Project Delivery
- 20-76, Standards and Models of a Disparity/Availability Study Standard for DBE Programs

More Projects

- Risk Management Methods to Control Cost Escalation (8-60)
- Warm Mix Asphalt (9-43)
- Specs for Mineral Fines (9-45)
- Specs for Externally Bonded FRP Repair Systems (10-73)
- Fly Ash Properties (18-13)
- Cracking at Ends of Pretensioned Girders (18-15)
- High-Performance/High-Strength Lightweight Concrete (18-15)

NCHRP “Sub-” Programs

- 20-5, Synthesis Program (state of practices)
- 20-6, Legal Studies (legal reviews)
- 20-24, Administration of State DOTs (for state DOT CEOs)
- 20-30, NCHRP-IDEA (support for product initiation)
- 20-36, International Info. Sharing & Scans
- 20-68, US Domestic Scan Program (New)
- AASHTO Committee Support--20-7: SCOH; 8-36: SCOP; 25-25: SCOE; 20-65: SCOPT

New Syntheses (20-5)

- 38-01, Quality Assurance in Design-Build Construction
- 38-02, Information Technology for Project Design and Construction
- 38-06, Pre-Overlay Repair for Existing Pavements
- 38-12, Alternative Contracting Methods to Facilitate Faster Construction and Reconstruction

Legal Studies (20-6)

- *Selected Studies in Transportation Law* (on CRP-CD-20)
 - Volume 1, Construction Contract Law
 - Volume 2, Environmental Law and Transportation
 - Volume 4, Tort Liability of Highway Agencies

AASHTO Standing Committee on Highways (20-7)

- Task 220, Update of the *AASHTO Guide Specifications for Highway Construction*
- *Task 225, Best Practices in the Management of Design Errors and Omissions*
- *Task 227, Technology Transfer Guidebooks for Implementation of Innovative Technologies*
- *Task 229, Bridge Construction Practices Using Incremental Launching*

20-24 Series

Addressing State DOT Leadership

- 20-24(51), State DOT CEO Leadership Forum (September 24-26, 2006)
- 20-24(52), Future of the Interstate Highway System
- 20-24(54), AASHTO Bottom Line Report (for reauthorization and other Congressional input)

NCHRP-IDEA (20-30)

Products

- Pavement Quality Indicator
- MFMX 2 Steels, Corrosion Resistant Rebar
- Fiber-Reinforced Honeycomb Composite Bridge Deck
- Damper System for Stay Cable Vibrations
- Filtration System for Removing Lead from Wash Water
- Basalt Fiber Rebar
- Robotic Safety Markers
- Shape Memory Alloys for Seismic Rehabilitation

International Scans (20-36)

- Recent FY 2006 Scans
 - Oversight of Large and Innovative Projects
 - Long-Life Concrete Pavements
- Proposed FY 2007 Scans
 - Warm Mix Asphalt Technologies
 - Bridge Inspection and Health Monitoring

Domestic Scans (20-68)

- New, pilot phase
- Completed 1-Week Scan: Accelerated project delivery (focus on ROW and utilities)
- Upcoming 2-Week Scan (Sept. '06):
Transportation Asset Management
- More to come, new solicitation

Problem Submittals for FY 2008

NCHRP

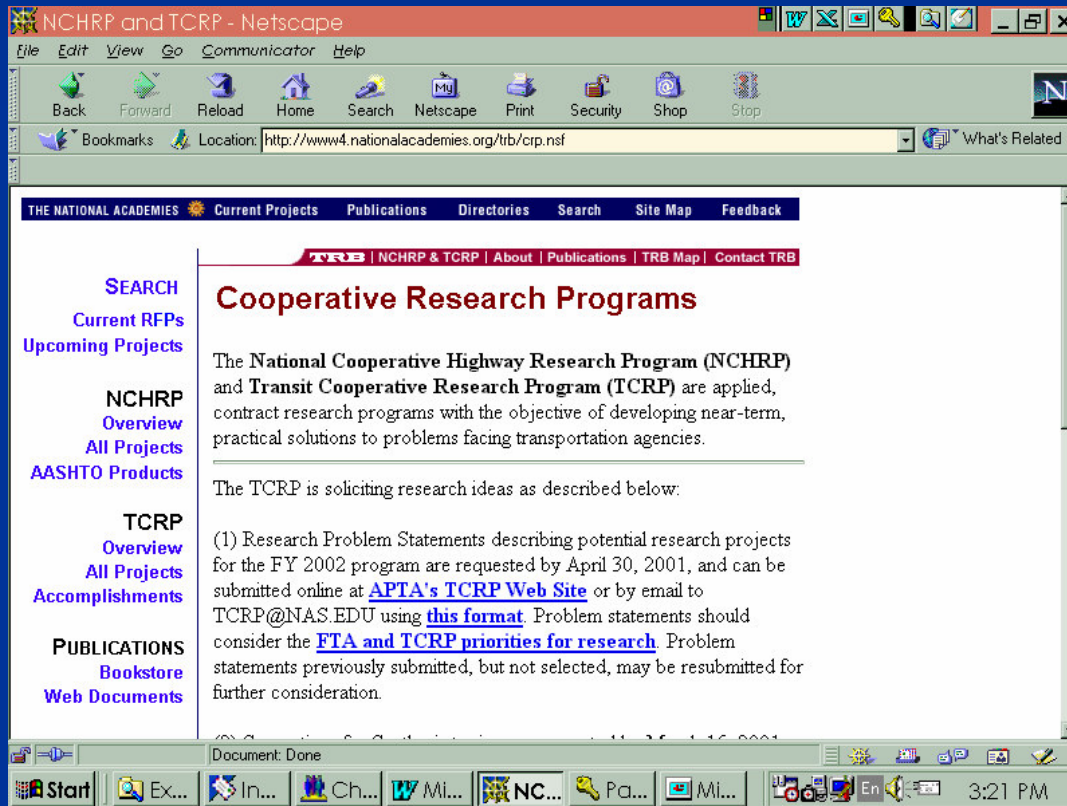
- **Research Problem Statements**
 - Due by September 15, 2006 from State DOTs, AASHTO committees, & FHWA
 - Selected in March 2007 by AASHTO Research Committee
- **Synthesis Topics**
 - Due by February 9, 2007
 - Selected in May 2007 by NCHRP panel
- **Project 20-7 Tasks**
 - Due prior to semi-annual meetings of SCOH
 - Send to chair of 20-7 NCHRP panel

NCHRP Programming FY 2007

	Requested		Programmed		Contingent	
	Dollars		Dollars		Dollars	
	<u>Items</u>	<u>(millions)</u>	<u>Items</u>	<u>(millions)</u>	<u>Items</u>	<u>(millions)</u>
Continuations	21	9.945	20	9.270	0	0.000
New Projects	167	64.827	33	11.180	4	1.950
Submitted by:						
Member Departments	96	37.247	8	2.450	2	0.750
AASHTO Committees	68	27.080	24	8.630	2	1.200
FHWA	3	0.500	1	0.100	0	0.000
TOTAL	188	74.772	53	20.450	4	1.950

NCHRP WEBSITE

<trb.org/nchrp>



- Information on NCHRP and TCRP
- Search engine
- Project Info since 1988: Anticipated / Active / Completed
- CRP publication lists / ordering info
- Requests for proposals
- Registration form for notification of RFPs
- AASHTO Products List

National Cooperative Highway Research Program

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Wanted!

Senior Program Officer
National Cooperative Highway
Research Program