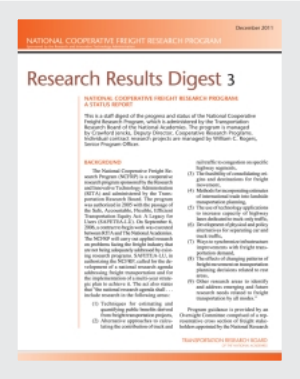

National Cooperative Freight Research Program: A Status Report 2011

DETAILS

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NATIONAL COOPERATIVE FREIGHT RESEARCH PROGRAM
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Research Results Digest 3

NATIONAL COOPERATIVE FREIGHT RESEARCH PROGRAM: A STATUS REPORT

This is a staff digest of the progress and status of the National Cooperative Freight Research Program, which is administered by the Transportation Research Board of the National Academies. The program is managed by Crawford Jencks, Deputy Director, Cooperative Research Programs. Individual contract research projects are managed by William C. Rogers, Senior Program Officer.

BACKGROUND

The National Cooperative Freight Research Program (NCFRP) is a cooperative research program sponsored by the Research and Innovative Technology Administration (RITA) and administered by the Transportation Research Board. The program was authorized in 2005 with the passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). On September 6, 2006, a contract to begin work was executed between RITA and The National Academies. The NCFRP will carry out applied research on problems facing the freight industry that are not being adequately addressed by existing research programs. SAFETEA-LU, in authorizing the NCFRP, called for the development of a national research agenda addressing freight transportation and for the implementation of a multi-year strategic plan to achieve it. The act also states that "the national research agenda shall . . . include research in the following areas:

(1) Techniques for estimating and quantifying public benefits derived from freight transportation projects,
(2) Alternative approaches to calculating the contribution of truck and rail traffic to congestion on specific highway segments,
(3) The feasibility of consolidating origins and destinations for freight movement,
(4) Methods for incorporating estimates of international trade into landside transportation planning,
(5) The use of technology applications to increase capacity of highway lanes dedicated to truck-only traffic,
(6) Development of physical and policy alternatives for separating car and truck traffic,
(7) Ways to synchronize infrastructure improvements with freight transportation demand,
(8) The effects of changing patterns of freight movement on transportation planning decisions related to rest areas,
(9) Other research areas to identify and address emerging and future research needs related to freight transportation by all modes."

Program guidance is provided by an Oversight Committee comprised of a representative cross section of freight stakeholders appointed by the National Research

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Council of The National Academies. The NCFRP Oversight Committee meets annually to formulate the research program by identifying the highest priority projects and defining funding levels and expected products. Research problem statements recommending research needs for consideration by the Oversight Committee are solicited annually, but may be submitted to TRB at any time. See NCFRP website www.TRB.org/NCFRP.

INTRODUCTION

America's freight transportation system makes critical contributions to the nation's economy, security, and quality of life. In 2010, $1.2 trillion (about 8.3 percent of the U.S. Gross Domestic Product) was spent annually to move freight, and the cost and volume of goods movement are crucial to the productivity of the entire U.S. economy.

The freight transportation system in the United States is a complex, decentralized, and dynamic network of private and public entities, involving all modes of transportation—trucking, rail, waterways, air, and pipelines. In recent years, the demand for freight transportation service has been increasing fueled by growth in international trade; however, bottlenecks or congestion points in the system are exposing the inadequacies of current infrastructure and operations to meet the growing demand for freight. U.S. domestic freight, measured by ton mileage, is expected to grow by some 50 percent in the next 20 years. Strategic operational and investment decisions by governments at all levels will be necessary to maintain freight system performance, and will in turn require sound technical guidance based on research.

The NCFRP will produce a series of research reports and other products such as guidebooks for practitioners. Primary emphasis will be placed on disseminating NCFRP results to the intended end-users of the research: freight shippers and carriers, service providers, suppliers, and public officials. Relevant industry associations will play a key role in making research information available through their committee structures. The NCFRP may arrange for workshops, training aids, field visits, technology scans, and other activities to ensure that results are implemented by practitioners.

THE NCFRP

The NCFRP is managed using procedures modeled after those used by TRB in managing the National Cooperative Highway Research Program and other cooperative research programs. TRB solicits potential research problem statements from all parties. The NCFRP Oversight Committee selects and prioritizes these research needs based on the funding available. Each selected project is assigned to a panel, appointed by TRB, which provides technical guidance and counsel throughout the life of the project. Heavy emphasis is placed on including members representing the intended users of the research products. The panels prepare requests for proposals (RFPs) and select contractors, guide the projects, and review reports. Day-to-day program management is provided by NCFRP staff and includes the following tasks:

- Assisting the Oversight Committee in identifying and prioritizing research needs;
- Appointing and coordinating expert technical panels to guide research projects;
- Developing and distributing RFPs;
- Processing and evaluating proposals to select the best qualified research agencies;
- Executing contracts with the selected researchers;
- Guiding the research;
- Reviewing research reports;
- Publishing and disseminating research reports; and
- Promoting the application of research results.

SELECTION OF RESEARCH PROJECTS

The NCFRP Oversight Committee meets annually to select research projects that will inform investment and operations decisions affecting the performance of the freight transportation system. The membership of this committee is given in Table 1.

The Oversight Committee has met 5 times and selected 43 projects for funding. Table 2 is a list of the projects—see the NCFRP website for details.

Table 3 shows the list of NCFRP publications.

Table 1 NCFRP Oversight Committee*

Chair	Lillian Borrone	Consultant
Vice Chair	C. Randal Mullet	Con-Way, Inc.
Secretary	Christopher W. Jenks	TRB
Member	Keith J. Bucklew	Indiana DOT
Member	Christina S. Casgar	San Diego Association of Governments
Member	Thomas M. Corsi	University of Maryland
Member	Emil Frankel	Bipartisan Policy Center
Member	John T. Gray	Association of American Railroads
Member	Rodney Gregory	Department of Defense
Member	Jeffrey D. Holt	BMO Capital Markets, Inc.
Member	John Isbell	Starboard Alliance, LLC
Member	Barbara A. Ivanov	Washington State DOT
Member	Gloria J. Jeff	District of Columbia DOT
Member	Catherine T. Lawson	State University of New York–Albany
Member	Eric G. Madden	American Council of Engineering Companies of PA
Member	John C. Morris	Cushman & Wakefield
Member	Paul Nowicki	BNSF Railway
Member	Craig Philip	Ingram Barge Company
Member	Thomas H. Wakeman, III	Stevens Institute of Technology
Ex Officio Member	Gregory D. Winfree	Research and Innovative Technology Administration, U.S. DOT
Ex Officio Member	Anthony T. Furst	Federal Highway Administration, U.S. DOT
Ex Officio Member	Randolph R. Resor	Office of the Secretary of Transportation, U.S. DOT
Agency Liaison	Thomas Bolle	Research and Innovative Technology Administration, U.S. DOT
Agency Liaison	Bruce Carlton	National Industrial Transportation League
Agency Liaison	Ronald J. Duych	Bureau of Transportation Statistics
Agency Liaison	John Horsley	AASHTO
Agency Liaison	Leo Penne	AASHTO
Agency Liaison	Caesar Singh	Research and Innovative Technology Administration, U.S. DOT
Agency Liaison	John Steinhoff	Federal Motor Carrier Safety Administration, U.S. DOT
Agency Liaison	Martin Walker	Federal Motor Carrier Safety Administration, U.S. DOT

*Current as of November 2011.

Table 2 NCFRP Research Projects, FY 2006–2011*

NCFRP 01	Review and Analysis of Freight Transportation Markets and Relationships (Completed)
NCFRP 02	Impacts of Public Policy on the Freight Transportation System
NCFRP 03	Performance Measures for Freight Transportation (Completed)
NCFRP 04	Identifying and Using Low-Cost and Quickly Implementable Ways to Address Freight-System Mobility Constraints (Completed)
NCFRP 05	Framework and Tools for Estimating Benefits of Specific Freight Network Investment Needs (Completed)
NCFRP 5A	A Strategy for Investing in Priority Categories of Freight Projects (Cancelled)
NCFRP 06	Freight Demand Modeling to Support Public-Sector Decision Making (Completed)
NCFRP 6A	Design Competition for New Approaches to Freight Demand Modeling (Cancelled)
NCFRP 6B	Peer Exchange on Developing Freight Modeling Capacity (Cancelled)
NCFRP 07	(Combined with NCFRP-04)
NCFRP 08	(Combined with NCFRP-05)
NCFRP 09	Institutional Arrangements in the Freight Transportation System (Completed)
NCFRP 10	Separation of Vehicles—CMV-only Lanes (Completed)
NCFRP 11	Identification and Evaluation of Freight Demand Factors
NCFRP 12	Specifications for Freight Transportation Data Architecture (Completed)
NCFRP 13	Developing High Productivity Truck Corridors (Cancelled)
NCFRP 14	Truck Drayage Practices (Completed)
NCFRP 15A	Understanding Urban Goods Movement
NCFRP 16	Representing Freight in Air Quality and Greenhouse Gas Models (Completed)
NCFRP 17	North American Marine Highway Operations (Completed)
NCFRP 17(01)	Marine Highway Transport of Toxic Inhalation Hazard (TIH) Materials
NCFRP 18	Synthesis of International Freight Scans
NCFRP 19	Truck Tolling—Understanding Industry Tradeoffs When Using or Avoiding Toll Facilities
NCFRP 20	Guidebook for Developing Sub-national Commodity Flow Data
NCFRP 21	Accessing Private Data for Transportation Planning: Effective Practices and Promising Options (Cancelled)
NCFRP 22	Applying Benefit-Cost Analysis (BCA) to Freight Project Selection: Lessons from the Corps of Engineers
NCFRP 23	Economic and Transportation Drivers for Siting Freight Intermodal and Warehouse Distribution Facilities
NCFRP 24	Preserving and Protecting Freight Infrastructure and Routes
NCFRP 25	Freight Trip Generation and Land Use
NCFRP 26	Freight Transportation Cost Data Elements
NCFRP 27	Promoting Environmental Goals in Freight Transportation Through Industry Benchmarking
NCFRP 28	Truck Idling Scoping Study
NCFRP 29	New Dedicated Revenue Mechanisms for Freight Transportation Investment
NCFRP 30	Web-Based Screening Tool for Shared-Use Rail Corridors
NCFRP 31	Overcoming Barriers to Sharing Freight Transportation Data
NCFRP 32	Impact of Smart Growth on Metropolitan Goods Movement
NCFRP 33	Impact of Environmental Regulations on the Supply Chain
NCFRP 34	Evaluating Alternatives for Landside Transport of Ocean Containers
NCFRP 35	Multimodal Freight Transportation Within the Great Lakes–Saint Lawrence Basin
NCFRP 36	Quick Response for Special Needs
NCFRP 37	Port Resiliency in the Extended Intermodal Supply Chain
NCFRP 38	Improving Freight System Performance in Metropolitan Areas
NCFRP 39	Making Trucks Count: Innovative Strategies for Obtaining Comprehensive Truck Activity Data
NCFRP 40	Improving Export Freight Logistics
NCFRP 41	Capacity and Level of Service Analysis for Trucks
NCFRP 42	Integrating MTS Commerce Data with Multimodal Freight Transportation Performance Measures to Support MTS Maintenance Investment Decision Making
NCFRP 43	Guidebook for Assessing Evolving International Container Chassis Supply Models

*See the NCFRP website for project status at www.trb.org/CRP/NCFRP/NCFRP.asp

Table 3 **Publications of the NCFRP**

Reports

No.	Proj. No.	Title, Pages, Publication Year
1	01	Public and Private Sector Interdependence in Freight Transportation Markets, 68 p. (2009)
2	09	Institutional Arrangements for Freight Transportation Systems (& CD 72), 65 p. (2009)
3	10	Separation of Vehicles–CMV-Only Lanes, 108 p. (2010)
4	16	Representing Freight in Air Quality and Greenhouse Gas Models, 172 p. (2010)
5	17	North American Marine Highways, 108 p. (2010)
6	02	Impacts of Public Policy on the Freight Transportation System (Revised)
7	04	Identifying and Using Low-Cost and Quickly Implementable Ways to Address Freight-System Mobility Constraints (& CD 87), 140 p. (2010)
8	06	Freight-Demand Modeling to Support Public-Sector Decision Making, 64 p. (2010)
9	12	Guidance for Developing a Freight Transportation Data Architecture, 106 p. (2010)
10	03	Performance Measures for Freight Transportation, 172 p. (2011)
11	14	Truck Drayage Productivity Guide (& CD 97), 106 p. (2011)
12	05	Framework and Tools for Estimating Benefits of Specific Freight Network Investments, 132 p. (2011)
13	23	Freight Facility Location Selection: A Guide for Public Officials, 70 p. (2011)

CDs

No.	Proj. No.	Title, Publication Year
72	09	Appendix Material for NCFRP Report 2 (2009)
87	04	Low-Cost Improvement Analysis Tool (for NCFRP Report 7) (2010)
97	14	Supplemental Materials for NCFRP Project 14 (& Rep. 11) (2011)

TRB

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Washington, DC 20001

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These digests are issued in order to increase awareness of research results emanating from projects in the Cooperative Research Programs (CRP). Persons wanting to pursue the project subject matter in greater depth should contact the CRP Staff, Transportation Research Board of the National Academies, 500 Fifth Street, NW, Washington, DC 20001.