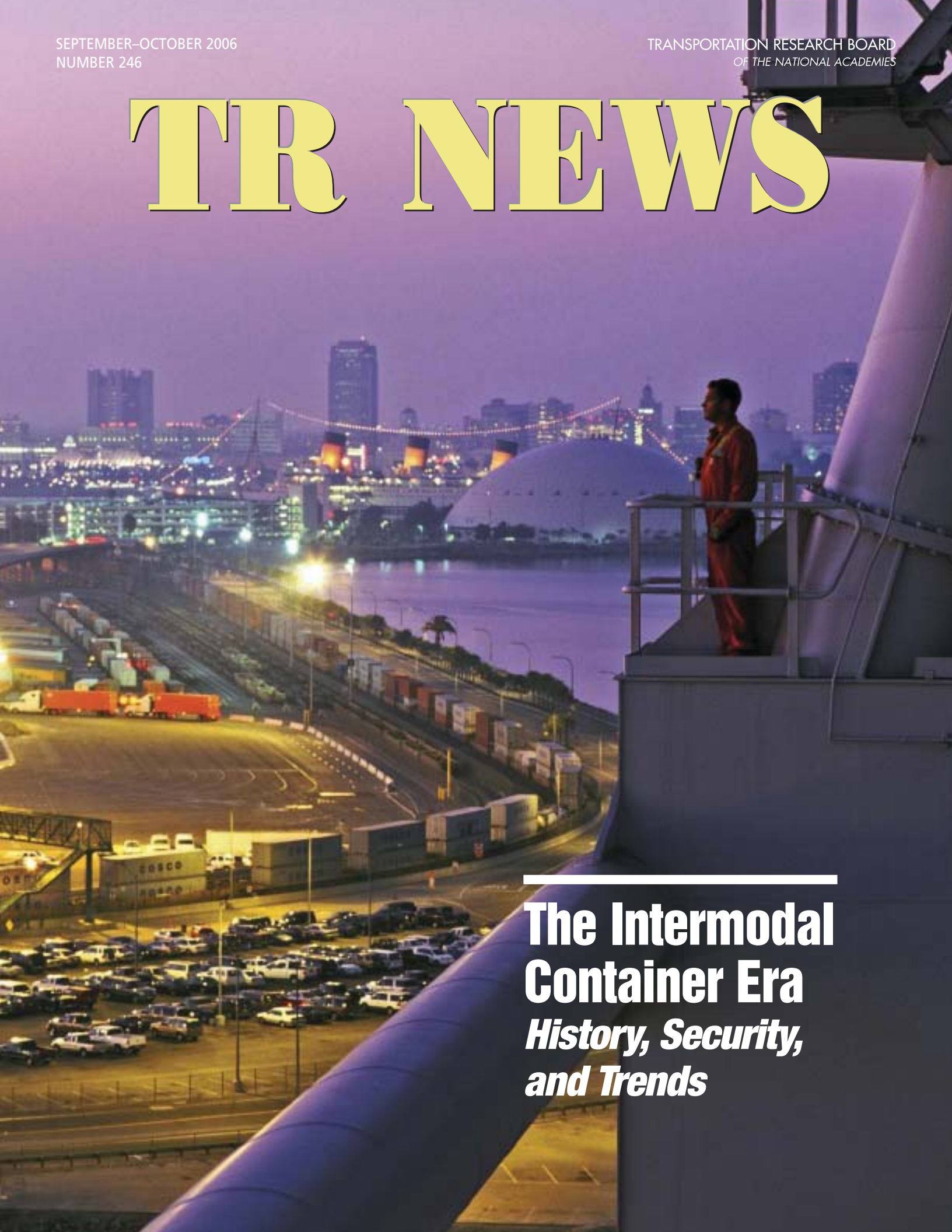


SEPTEMBER–OCTOBER 2006  
NUMBER 246

TRANSPORTATION RESEARCH BOARD  
OF THE NATIONAL ACADEMIES

# TR NEWS



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**The Intermodal  
Container Era**  
*History, Security,  
and Trends*

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*Advisers to the Nation on Science, Engineering, and Medicine*

The Transportation Research Board is a division of the National Research Council, which serves the National Academy of Sciences and the National Academy of Engineering. The Board's mission is to promote innovation and progress in transportation through research. In an objective and interdisciplinary setting, the Board facilitates the sharing of information on transportation practice and policy by researchers and practitioners; stimulates research and offers research management services that promote technical excellence; provides expert advice on transportation policy and programs; and disseminates research results broadly and encourages their implementation. The Board's varied activities annually draw on approximately 5,000 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 September 2006.

# TR NEWS

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SEPTEMBER–OCTOBER 2006

## THE INTERMODAL CONTAINER ERA: HISTORY, SECURITY, AND TRENDS

### 3 INTRODUCTION

#### **Toward More Golden Anniversaries: Securing Transportation's Place in the National Policy Agenda**

*Jeffrey N. Shane*

The golden anniversaries of the Interstate Highway System and container shipping have made 2006 a special year for transportation. At the same time, a new wave of transportation innovation is gaining momentum through several initiatives, including a transformational and collaborative national strategy to solve the shortfall in transportation capacity and to move freight more reliably and efficiently, so that the transportation system continues to drive economic growth.

#### **4 Freight Transportation Industry Roundtable: Fostering a Dialogue with Federal Policy Makers**

*Michael D. Meyer*

### 5 The Containership Revolution: Malcom McLean's 1956 Innovation Goes Global

*Brian J. Cudahy*

On April 26, 1956, the *Ideal X* cast off from Port Newark, New Jersey, for Houston, Texas, specially equipped to carry 56 trailer-truck bodies, the first containers, and launched a revolution that has transformed and stimulated the growth of U.S. and world trade. The author traces the origin and development of the intermodal freight innovation by Malcom McLean, the evolution of the vessel designs, the efficiencies achieved, and the obstacles overcome in creating and shaping a now-global industry.

### 10 Container Shipping and the Economy: Stimulating Trade and Transformations Worldwide

*Marc Levinson*

The container is at the core of a highly automated system for moving goods from anywhere to anywhere worldwide, with a minimum of cost and complication, making shipping cheap and changing the shape of the world economy, this author notes. New ports have emerged that function like vast factories and serve as hubs in a nearly seamless global freight system. Container shipping has played a major role in increasing the integration of the global economy.

### 13 The 40-Foot Container: Industry Standard Faces Challenges and Change

*Ron Katims*

The drive to increase the economies of scale in container shipping on waterways, highways, and railways is challenging the modular standards of 20- and 40-foot container lengths, set by the International Organization for Standardization in the early 1960s. This author reports that the 53-foot container is in widespread use in U.S. domestic freight, and China also may adopt the larger size, which will require adjustments by carriers, ports, and terminals.

### 17 Can Intermodal Freight Terminals Handle Supersizing?

*Robert Harrison*



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COVER: View of the Port of Long Beach, California, from the upper structure of a new gantry crane on Pier J, showing containers on trucks, trains, and ships. The port handled more than 6.7 million containers in 2005. (Photo courtesy of the Port of Long Beach.)

# TR NEWS

features articles on innovative and timely research and development activities in all modes of transportation. Brief news items of interest to the transportation community are also included, along with profiles of transportation professionals, meeting announcements, summaries of new publications, and news of Transportation Research Board activities.

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## 18 POINT OF VIEW

### **World Trade Security Is Imperative and Attainable: Cooperative Effort, U.S. Leadership Are Necessary**

*Charles G. Raymond*

Containerization was an American innovation, proved in domestic trade by an American company, Sea-Land Service, Inc., before becoming a global revolution. To accomplish the complex and far-reaching task of securing world trade from outside threat, American leadership is needed again to drive the infrastructure and technology investments required for continued economic prosperity, this author maintains, presenting a blueprint for a layered, cooperative approach involving government and industry.

## 22 From There to Here: Supply Chain Security

*Text and graphics courtesy of the Port of Tacoma*

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### 24 Profiles

International rail consultant Louis S. Thompson and Port of Portland land use policy manager J. Susie Lahsene

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#### **Preventing Pavement Failure Caused by Hot-Mix Asphalt Temperature Differentials: Washington State's Systematic Approach**

*Steve Muench and Kim Willoughby*

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## COMING NEXT ISSUE



Applying chip seal to preserve a highway surface.

The future of highway and transit finance—identified as a critical issue by the TRB Executive Committee—is the topic of a feature article reviewing current sources of revenue, the financing system, and the options ahead, in the November–December 2006 *TR News*. Other features examine the outsourcing of project delivery functions by state departments of transportation and present one state's successful model for a pavement preservation program, plus an initiative to improve road safety in developing countries and the latest on commuting in the United States.