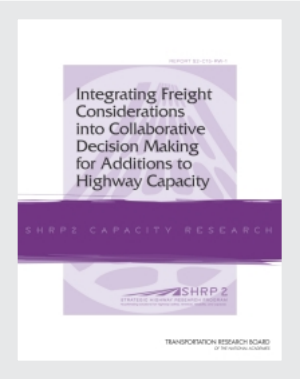


Integrating Freight Considerations into Collaborative Decision Making for Additions to Highway Capacity

DETAILS

0 pages | 8.5 x 11 | PAPERBACK
ISBN 978-0-309-43349-5 | DOI 10.17226/22364

AUTHORS

Cambridge Systematics, Inc.

The Second
STRATEGIC HIGHWAY RESEARCH PROGRAM

SHRP 2 REPORT S2-C15-RW-1

Integrating Freight Considerations into Collaborative Decision Making for Additions to Highway Capacity

CAMBRIDGE SYSTEMATICS, INC.

TRANSPORTATION RESEARCH BOARD

WASHINGTON, D.C.
2014
www.TRB.org

Subject Areas

Freight Transportation
Highways
Planning and Forecasting

The Second Strategic Highway Research Program

America's highway system is critical to meeting the mobility and economic needs of local communities, regions, and the nation. Developments in research and technology—such as advanced materials, communications technology, new data collection technologies, and human factors science—offer a new opportunity to improve the safety and reliability of this important national resource. Breakthrough resolution of significant transportation problems, however, requires concentrated resources over a short time frame. Reflecting this need, the second Strategic Highway Research Program (SHRP 2) has an intense, large-scale focus integrates multiple fields of research and technology and is fundamentally different from the broad, mission-oriented, discipline-based research programs that have been the mainstay of the highway research industry for half a century.

The need for SHRP 2 was identified in *TRB Special Report 260: Strategic Highway Research: Saving Lives, Reducing Congestion, Improving Quality of Life,* published in 2001 and based on a study sponsored by Congress through the Transportation Equity Act for the 21st Century (TEA-21). SHRP 2, modeled after the first Strategic Highway Research Program, is a focused, time-constrained, management-driven program designed to complement existing highway research programs. SHRP 2 focuses on applied research in four areas: Safety, to prevent or reduce the severity of highway crashes by understanding driver behavior; Renewal, to address the aging infrastructure through rapid design and construction methods that cause minimal disruptions and produce lasting facilities; Reliability, to reduce congestion through incident reduction, management, response, and mitigation; and Capacity, to integrate mobility, economic, environmental, and community needs in the planning and designing of new transportation capacity.

SHRP 2 was authorized in August 2005 as part of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The program is managed by the Transportation Research Board (TRB) on behalf of the National Research Council (NRC). SHRP 2 is conducted under a memorandum of understanding among the American Association of State Highway and Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), and the National Academy of Sciences, parent organization of TRB and NRC. The program provides for competitive, merit-based selection of research contractors; independent research project oversight; and dissemination of research results.

SHRP 2 Report S2-C15-RW-1

ISBN: 978-0-309-27396-1

Copyright Information

Note: SHRP 2 report numbers convey the program, focus area, project number, and publication format. Report numbers ending in "w" are published as web documents only.

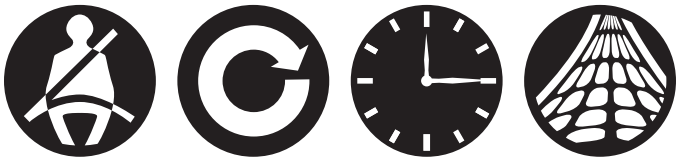
Notice

The project that is the subject of this report was a part of the second Strategic Highway Research Program, conducted by the Transportation Research Board with the approval of the Governing Board of the National Research Council.

The members of the technical committee selected to monitor this project and to review this report were chosen for their special competencies and with regard for appropriate balance. The report was reviewed by the technical committee and accepted for publication according to procedures established and overseen by the Transportation Research Board and approved by the Governing Board of the National Research Council.

The opinions and conclusions expressed or implied in this report are those of the researchers who performed the research and are not necessarily those of the Transportation Research Board, the National Research Council, or the program sponsors.

The Transportation Research Board of the National Academies, the National Research Council, and the sponsors of the second Strategic Highway Research Program do not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the object of the report.



SHRP 2 Reports

Available by subscription and through the TRB online bookstore:
www.TRB.org/bookstore

Contact the TRB Business Office:
202-334-3213

More information about SHRP 2:
www.TRB.org/SHRP2

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine

The **National Academy of Sciences** is a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. On the authority of the charter granted to it by Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters. Dr. Ralph J. Cicerone is president of the National Academy of Sciences.

The **National Academy of Engineering** was established in 1964, under the charter of the National Academy of Sciences, as a parallel organization of outstanding engineers. It is autonomous in its administration and in the selection of its members, sharing with the National Academy of Sciences the responsibility for advising the federal government. The National Academy of Engineering also sponsors engineering programs aimed at meeting national needs, encourages education and research, and recognizes the superior achievements of engineers. Dr. C. D. (Dan) Mote, Jr., is president of the National Academy of Engineering.

The **Institute of Medicine** was established in 1970 by the National Academy of Sciences to secure the services of eminent members of appropriate professions in the examination of policy matters pertaining to the health of the public. The Institute acts under the responsibility given to the National Academy of Sciences by its congressional charter to be an adviser to the federal government and, on its own initiative, to identify issues of medical care, research, and education. Dr. Victor J. Dzau is president of the Institute of Medicine.

The **National Research Council** was organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and advising the federal government. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities. The Council is administered jointly by both Academies and the Institute of Medicine. Dr. Ralph J. Cicerone and Dr. C. D. (Dan) Mote, Jr., are chair and vice chair, respectively, of the National Research Council.

The **Transportation Research Board** is one of six major divisions of the National Research Council. 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. **www.TRB.org**

www.national-academies.org

SHRP 2 STAFF

Ann M. Brach, *Director*
Stephen J. Andrle, *Deputy Director*
Neil J. Pedersen, *Deputy Director, Implementation and Communications*
Cynthia Allen, *Editor*
Kenneth Campbell, *Chief Program Officer, Safety*
JoAnn Coleman, *Senior Program Assistant, Capacity and Reliability*
Eduardo Cusicanqui, *Financial Officer*
Richard Deering, *Special Consultant, Safety Data Phase 1 Planning*
Shantia Douglas, *Senior Financial Assistant*
Charles Fay, *Senior Program Officer, Safety*
Carol Ford, *Senior Program Assistant, Renewal and Safety*
Jo Allen Gause, *Senior Program Officer, Capacity*
James Hedlund, *Special Consultant, Safety Coordination*
Alyssa Hernandez, *Reports Coordinator*
Ralph Hessian, *Special Consultant, Capacity and Reliability*
Andy Horosko, *Special Consultant, Safety Field Data Collection*
William Hyman, *Senior Program Officer, Reliability*
Linda Mason, *Communications Officer*
Reena Mathews, *Senior Program Officer, Capacity and Reliability*
Matthew Miller, *Program Officer, Capacity and Reliability*
Michael Miller, *Senior Program Assistant, Capacity and Reliability*
David Plazak, *Senior Program Officer, Capacity and Reliability*
Rachel Taylor, *Senior Editorial Assistant*
Dean Trackman, *Managing Editor*
Connie Woldu, *Administrative Coordinator*

ACKNOWLEDGMENTS

This work was sponsored by the Federal Highway Administration in cooperation with the American Association of State Highway and Transportation Officials. It was conducted in the second Strategic Highway Research Program (SHRP 2), which is administered by the Transportation Research Board of the National Academies. The project was managed by David J. Plazak, SHRP 2 Senior Program Officer, Capacity and Reliability.

The consulting team acknowledges the following individuals who participated in the case study outreach: Sean Ardussi, Senior Planner, Puget Sound Regional Council; Ron Borowski, Mobility Programs, Policy and Planning Division, and Dorinda Costa, Revenue Development, Policy and Planning Division, Seattle Department of Transportation; Katy Brooks, Community Planning and Outreach Manager, Port of Vancouver USA; Susie Lahsene, Manager, Transportation and Land Use Policy, Port of Portland; Ryan LeProwse, Casey Liles, and Kris Strickler, Assistant Project Manager, Columbia River Crossing Project; Tony Mazzella, Long-Range Planning, Kristen Simpson, Traffic Management Division, Policy and Planning Division, and Cristina VanValkenburgh, Manager, Mobility Programs, Policy and Planning Division, Seattle Department of Transportation; Tom Zelenka, Vice President, Environmental and Public Affairs, Schnitzer Steel Industries, Inc.; Ted Dahlburg, Manager of the Office of Freight and Aviation Planning, and Don Shanis, Deputy Executive Director, Delaware Valley Regional Planning Association; Ed King, Sunoco; Jim Runk, President and CEO, Pennsylvania Trucking Association; Adnan Alvarez, Lynda Bybee, Ernesto Chaves, Susan Gilmore, and Danielle Valentino, Los Angeles Metropolitan Transportation Authority; Esmeralda Garcia, Senior Project Manager, MIG; Jerry Wood, Director of Transportation and Engineering, Gateway Cities Council of Governments; Dan Haake, Senior Planner, Mid-Ohio Regional Planning Commission; Stacy Corona, Planner, and Eliza Arias, Principal Planner, San Diego Association of Governments; John Hoegemeier, BNSF Railway; Bill Figge, Director of Planning, and Pye Salazar, Project Manager, Caltrans District 11.

The consulting team acknowledges the following individuals who vetted the draft guide's implementation potential and provided excellent suggestions for revisions: Kevin Feldt and Rebekah Karasko, North Central Texas Council of Governments; Dan Kuhn and Walter Steinvorth, Utah Department of Transportation; Tom McQueen, Georgia Department of Transportation; and Vern Keesler, InterPlan.

FOREWORD

David J. Plazak, *SHRP 2 Senior Program Officer, Capacity and Reliability*

Freight traffic has generally been growing at a rate faster than passenger traffic on the nation's highway network. As a result, freight bottlenecks have begun to develop at various points throughout the network. These bottlenecks have historically been near ports and other intermodal facilities. However, future travel forecasts are beginning to show the effects of growing freight traffic on congestion on urban freeways, urban arterials, and some cross-country routes in rural areas. Being able to understand freight flows and forecast freight demand is taking on greater and greater importance. Efficient freight movement is directly tied to the economic well-being of states and localities. Most transportation agencies are increasingly focusing on being able to effectively engage and seek input from, and ultimately meet the needs of, private-sector freight stakeholders.

The second Strategic Highway Research Program (SHRP 2) initiated two projects designed to improve the nation's ability to plan for increased freight-related traffic and to begin to address the growing issue of freight bottlenecks. One of these, Project C15, provides guidance to transportation agencies at the state, regional, metropolitan, and local levels on how best to collaborate with private-sector freight stakeholders in planning and developing future highway capacity. As both the C15 project and the accompanying C20 project (improving freight demand models and data) indicate, transportation agencies and private-sector freight stakeholders begin with very different perspectives. On the one hand, transportation agencies are often trying to plan, design, develop, and construct public infrastructure projects that will take a decade or more to put in place and are then expected to meet aggregate freight flow needs for many more decades. On the other hand, many private-sector freight stakeholders begin with the perspective of optimizing particular supply chains. Their interest tends to have a more narrow focus and be short term in nature. Supply chains are optimized over days and weeks rather than decades, and they are re-optimized on a repeated basis. Yet, private-sector freight stakeholders are very important users of the infrastructure that public agencies are planning and developing.

This great difference in perspectives and time horizons can make it difficult for public agencies to effectively collaborate with private-sector freight stakeholders. The separately published C15 freight guide provides examples of good practices in such collaborations. The guide also provides examples of the types of stakeholder involvement that work best with private-sector freight stakeholders. Perhaps most important, this practitioner's guide provides a clear indication of which portions of the capacity project planning and development process merit obtaining freight stakeholder input. This guidance should be useful to the many transportation agencies that are now conducting freight plans or considering freight as part of corridor plans or project development efforts.

The C15 research report shows the process by which the C15 guide was developed and includes additional information about how the case study information used to construct the guide was collected. The report is intended to serve as a basis for further research beyond the SHRP 2 program that might prove necessary to continue to improve stakeholder involvement and collaborative decision making in freight transportation planning, programming, and project development.

CONTENTS

Executive Summary

This second Strategic Highway Research Program (SHRP 2) project was designed to improve the ability of transportation agencies to integrate freight considerations into the highway capacity planning process. The nation's freight shippers, receivers, and carriers depend on transportation agencies to provide new highway capacity to meet the demands of growing domestic commerce and international trade. Yet, the traditional highway planning process has not broadly engaged these freight stakeholders in the planning process. Because freight stakeholders can provide important insight that will improve planning outcomes, this research sought to delineate where and how agencies should engage this important constituency.

In light of the freight planning recommendations of the latest federal transportation bill Moving Ahead for Progress in the 21st Century (MAP-21), state departments of transportation (DOTs) and metropolitan planning organizations (MPOs) have elevated their freight planning efforts to more fully engage private-sector freight stakeholders and other public agencies, including nontransportation agencies, which can affect freight movement.

For the purposes of this research, freight stakeholders include the firms that ship and receive goods (beneficial cargo owners, or BCOs), logisticians, motor carriers, railroads, industrial real estate developers, chambers of commerce, economic development agencies, port authorities, marine terminal operators, local governments, transportation agencies, environmental stakeholders, community groups, and the general public.

Given this recent uptick in freight planning interest and the allocation of resources by agencies to enhance freight planning, this research is timely. By undertaking a comprehensive literature review, conducting interviews with national freight stakeholders, and developing 11 case studies, the research team has identified best practices for application in future agency efforts. The results are summarized in the SHRP 2 C15 guide: *Integrating Freight Considerations into the Highway Capacity Planning Process: Practitioner's Guide.* This report summarizes the process and outcomes of the development of the guide.

The research approach was based on three primary pillars: (1) literature review, (2) industry interviews, and (3) case study development. Through these activities the research team collected and distilled the information on best practices to inform the guide development. The research also relied on the insights of members of the SHRP 2 C15 technical expert task group (TETG) to refine the findings, to steer the research direction, and to develop the guide. In addition to these activities, the research team conducted a series of vetting pilots, in which the draft guidebook was reviewed for its applicability with two state DOTs and an MPO.

Literature Review

The research commenced with a literature review, taking into account research and advisory documents on the subject, many of which were prepared by the Federal Highway Administration (FHWA). The literature review found gaps that this SHRP 2 product could help fill, including

the need to improve integration of freight-specific economic, safety, and regulatory issues in the planning process.

National Stakeholder Interviews

Interviews with national stakeholder organizations were conducted to group the research in a national perspective. Participants helped inform the case study selection and ranking of the decision points.

Case Studies

To provide guidance on where to start in considering freight needs as part of the highway capacity planning process, the project developed brief but useful illustrative examples of successful practices at various scales and for various types of situations and regions. The case studies were developed by conducting interviews and group meetings with public- and private-sector partners at the state, MPO, and multistate corridor level throughout the United States.

Decision-Making Framework

One of the principal goals of the research effort was to identify the most important decision points within the planning process for agencies that are engaging freight stakeholders. Using the collaborative decision-making framework developed through the SHRP 2 Capacity research program, the research team used the literature review, interviews, and case study meetings to identify where freight concerns should be addressed at key decision points and where it is most critical to consider freight in order to make good decisions. The resulting freight decision-making framework is a key product of this research program, designed to help transportation agencies to get the right freight stakeholders with the right information involved at the right time.

SHRP 2 C15 Guide

With the information collected through the research phases of the project, the team developed a SHRP 2 C15 practitioner's guide for agency use. Three agencies vetted the guide, helping to refine its contents and organization. The guide integrates best practices findings and includes how-to modules on important subjects, like how to establish a freight stakeholder committee. The results of the project, including the case studies, are now fully integrated into the PlanWorks transportation capacity decision guide on the Internet (formally known as TCAPP).

CHAPTER 1

Introduction

Background

To address concerns with diminishing productivity gains in freight investments, growing highway congestion, and increasing numbers of bottlenecks for freight transportation, leading transportation organizations have developed a growing body of resources to direct the practice of freight transportation planning practice. The Transportation Research Board (TRB), American Association of State Highway Transportation Officials (AASHTO), FHWA, and other organizations have developed training materials, studies, and guidebooks to cultivate expertise and to weave freight considerations into established planning processes. In addition, leading states (i.e., those that have conducted freight transportation planning exercises), MPOs, and other transportation planning and programming organizations have begun to develop and implement sophisticated mechanisms to systematically and comprehensively address a broad spectrum of goods movement-related issues through their planning activities. While many of these resources instruct agencies on analytical approaches to data and planning for freight transportation, there are fewer resources on the engagement of freight stakeholders in the planning process. This has been a critical gap, especially given the crucial importance of gaining private-sector and other stakeholder input in the freight planning process. The freight industry uses the system differently, more intensely, for different purposes, and sometimes on different facilities than passenger travelers. To understand the needs of this unique and growing user community, planners need the tools to engage freight stakeholders more effectively. This project seeks to improve the existing base of information about how to engage private-sector insight and incorporate it into the freight planning process. As part of the SHRP 2 program, Project C15 was designed to help fill this gap by preparing a guide that reflects the latest methods observed in research, interviews, and case studies. The guide is designed to instruct agencies on how to more effectively integrate freight considerations into the highway capacity planning process.

Research Purpose

The SHRP 2 C15 study was designed to develop a practitioner's guide that would result in much more effective planning made possible through better engagement of industry. The guide was intended to help highway planners and private industry stakeholders more effectively and collaboratively plan and develop highway capacity improvements to improve goods movement. Now complete, the C15 guide will help direct state DOTs, MPOs, stakeholders, and other decision makers on where and how to integrate these considerations within the transportation planning process leading to environmental review and permitting. Case studies and best practice examples illustrate successful methods to integrate freight considerations at all stages and phases of project planning to sharpen decision making leading to better investments serving passenger and goods movement. In addition, the guide and accompanying case studies have been integrated into the SHRP 2 Transportation for Communities—Advancing Projects through Partnerships (TCAPP), now called PlanWorks, website.

Guide Development

To fully account for the important market-driven behavior and interests of the private freight community, the research approach was organized around a proposed set of seven key freight considerations: economy, industry logistics patterns, freight infrastructure, commodity flows, quality of service, environment, and safety and security. These considerations not only focus on market forces appropriate to freight planning but also take into account the six external processes outlined on the PlanWorks website established by the SHRP 2 program. Those external processes include air quality conformity, land use, natural environment, human environment,

capital improvement, and safety and security. Table 1.1 more fully introduces the proposed market-based freight planning considerations.

Outreach Issues

Transportation agencies are becoming increasingly adept at conducting outreach with freight stakeholders. Recent efforts to establish freight advisory committees—as recommended in MAP-21—and the accumulated experience conducting freight outreach for several years (or more) have established a growing foundation of best practices. Yet the ability to conduct effective outreach with freight stakeholders, especially as part of the highway planning process, varies widely by agency.

This research—through the interviews and especially the case study development—sought to identify the key challenges and successes in conducting freight outreach. The findings chapter of this report and the C15 guide detail the findings of this portion of the research. For example, regardless of the level of sophistication or experience, agencies continue to face challenges in maintaining stakeholder engagement.

Market-Based Freight Planning Considerations

One critical element of this work is elevating the importance of the key role private freight stakeholders should have in the collaborative planning and decision-making process. Obtaining input from freight users in the highway planning process is critical for many reasons, including the following market-based freight considerations:

- *Economic impacts*—Industries make decisions about facilities based on current and future conditions and investments in transportation infrastructure, especially highways. In some cases, route selection is discretionary (if alternate routes are available). These decisions affect the economic competitiveness and vitality of communities and regions. Highway

Table 1.1. Market-Based Freight Planning Considerations

Market-Based Freight Considerations	**Examples of Freight Planning Considerations** ***How does the planning or project activity affect . . .***
Economy	• Economic competitiveness (e.g., business retention or attraction) • Employment retention or expansion • Market composition (producer and consumer) • User costs (freight transportation shipping and warehousing) • Passenger-related economic benefits
Industry Logistics Patterns	• Supply chain structure • Regional distribution networks (multistate and urban) • Mode share (highway, rail, water, air)
Freight Infrastructure	• Multimodal network connectivity • Access to existing and new markets (e.g., to a shipper or manufacturing cluster) • Physical capacity (e.g., lanes, bridges) • Operational capacity (e.g., freight throughput as a function of better speed, reliability, information, or changes in truck size and weight) • Corridor chokepoints
Commodity Flows	• Freight flows by route (long-distance, regional, and local deliveries) • Commodity movements • Mode choice by commodity (including intermodal movements that may use highway for a portion of the trip)
Quality of Service	• Improve speed • Enhance reliability (e.g., maintaining flow along key freight corridors) • Driving experience (for freight and passenger vehicles) • Enhance system redundancy (choice of routes)
Environment	• Air quality conformity • Communities (e.g., human environment, urban deliveries, livability) • Land use decisions and vice versa (e.g., location, pattern, Smart Growth) • Climate change (e.g., carbon output or infrastructure adaptation) • Natural environment [e.g., water quality, soil, wildlife, the National Environmental Policy Act (NEPA)]
Safety and Security	• Safety (e.g., crash rates, types of crashes, locations of crashes) • Security of critical infrastructure • Hazardous materials movement • Safe movement of over-dimensional cargo (e.g., wind turbine components, construction equipment)

planning—to sustain or grow regional economies—must account for the freight decision-making process to realize full economic growth potential.

- *Market forces*—Freight highway users are sensitive to market forces. Motor carriers, producers, and shippers can quickly alter supply chains to adapt to changing trends, conditions, and costs (e.g., fuel, labor, production inputs, or new customers). To make wise investment decisions, highway planners must understand how these market forces influence the way shippers will use the system and align public investment in transportation with the needs of industry.
- *Infrastructure needs*—By considering the perspectives of carriers and shippers, states and MPOs may develop a more comprehensive approach to identifying highway needs to include critical commercial flows. Motor carriers can quickly identify system bottlenecks and needed investments based on repeated experience of their drivers. Recent outreach with the freight community suggests relative unanimity among motor carriers in identifying specific highway investment needs.
- *Forecasting flows*—Due to sensitivities to market forces and highway conditions, freight movements are difficult to forecast, especially over the long term. To account for this uncertainty, highway planning efforts could engage knowledgeable logisticians to develop more plausible future scenarios that take into account potential shifts in supply chain strategies.
- *Multijurisdictional issues*—Effective freight planning requires multijurisdictional cooperation to coordinate public legislative and administrative actions (i.e., development and approval of long-range plans, political and financial support for large projects that affect multiple jurisdictions) and to understand how industries use the transportation system across local boundaries and state lines. Involving representatives of the private sector for purposes of understanding their current and future needs can facilitate this multijurisdictional cooperation.
- *Environmental outcomes*—Freight operations have a significant impact on air quality, land use sustainability, and local environmental conditions [e.g., the National Environmental Policy Act (NEPA)]. Motor carriers and shippers are becoming more aware of and concerned about sustainability with growing commitment to modifying operations to decrease the negative environmental impact as evidenced by fleets adapting to changing highway conditions, markets, and technologies (e.g., cleaner diesel, idling reduction, truck stop electrification). The public sector can benefit greatly by working integrally with industry prior to the NEPA process.
- *Safe operations*—In order for transportation agencies to provide a safe operating environment, fleet operating characteristics must be considered as part of any sound and realistic planning strategy. For example, agencies could work with industry to identify highway segments in need of improvement to enhance safety (e.g., maintenance, shoulders, bridge clearance signage).

These topics conflate to seven market-based freight planning considerations: economy, industry logistics patterns, freight infrastructure, commodity flows, quality of service, environment, and safety and security. The seven market-based considerations were used during all phases of the research to understand the degree to which these crosscutting elements are woven into current outreach efforts.

Need for Improved Coordination

While the significant and growing body of work [e.g., guidebooks from the National Cooperative Highway Research Program (NCHRP), National Cooperative Freight Research Program (NCFRP), and AASHTO; statewide freight plans; and more] on integrating certain elements of freight into the planning process provides important insight and instruction, a comprehensive guide on integrating freight considerations into highway planning has yet to be developed.

CHAPTER 2

Research Approach

General Approach

The research approach was based on three primary pillars: (1) literature review, (2) industry interviews, and (3) case studies. Through these activities, which are explained in detail in the following sections, the research team collected and distilled the information on best practices to inform the guide development. The research team also relied on the insights of members of the TETG to refine the findings, to steer the research direction, and to develop the guide. In addition to these activities, the research team conducted a series of vetting pilots in which the draft guidebook was reviewed for its applicability with two state DOTs and an MPO.

Identifying Best Practices and Existing Literature

The SHRP 2 C15 literature review assessed a broad range of resources to determine how well the existing literature provides instruction on how to integrate freight into the highway planning process. The research team consulted reports developed by a wide range of authors, including TRB, NCHRP, NCFRP, AASHTO, and other sources. In addition, the research team reviewed and summarized recent freight planning documents from states and MPOs to understand how transportation agencies currently are integrating freight considerations throughout the four major phases of the highway decision-making process: long-range planning, corridor planning, project programming, and the NEPA process.

The research team also determined how well the existing literature provides guidance on integrating seven key market-based freight planning considerations: economy, industry logistics patterns, freight infrastructure, commodity flows, quality of service, environmental concerns, and safety and security into the planning process. The major strengths of the literature include

- Clear identification of appropriate freight data for evaluating the local, regional, and statewide economy, logistics patterns, commodity flows, infrastructure, and service quality considerations;
- Logical strategies for effective stakeholder outreach; and
- Wide-ranging discussion of freight performance measures to assist in planning process, especially in long-range planning and project programming.

The literature review also identified some deficiencies, including the lack of highway-focused freight planning advice (much of the advice is broadly related to the multimodal freight system). Other areas where the existing literature provides only limited insight include

- An incomplete discussion of strategies for incorporating economic considerations (including logistics, commodity flows, and market and employment considerations) into the project programming and environmental review process;
- An evolving evaluation methodology for evaluating freight impacts during the NEPA process;
- Not identifying specific freight-related decision points in the highway planning process for freight stakeholders; and
- A lack of attention to the role of regulatory issues in freight decisions throughout all phases of the highway decision-making process.

Figure 2.1 displays the relative strengths and weaknesses of the existing literature on addressing freight considerations in the highway decision-making process. This figure has been modified from a similar one included in the work plan to better reflect the state of the practice on closer evaluation of the existing literature.

The literature review helped sharpen the research team's approach to the subsequent research tasks—the industry interviews and case study development—by identifying gaps

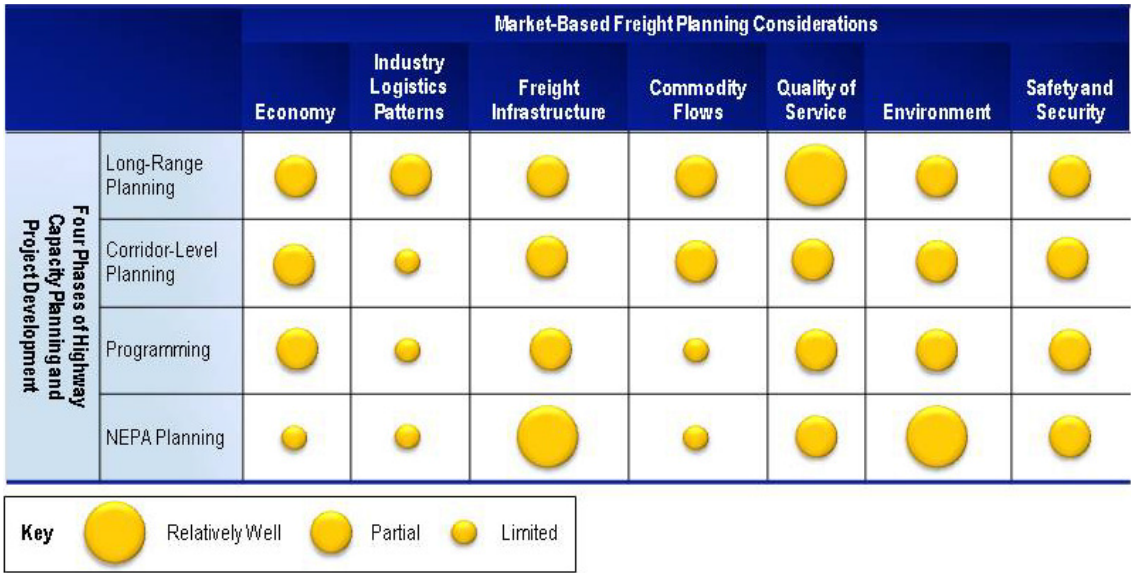


Figure 2.1. Effectiveness of existing literature in addressing freight considerations in the highway decision-making process.

in the existing information. Box 2.1 summarizes the literature review sources.

Strengths and Weaknesses in the Available Literature—General Findings

Strengths

The existing planning literature provides useful insight for better integrating freight into the highway decision-making process for capacity additions. The available guidebooks, planning guides, and processes that have been developed recommend strategies to maintain freight's presence throughout the project development process. Throughout the literature, attention to three major elements was key to effective freight planning efforts:

1. *Freight self-assessment*—This process generally involves needs identification, development of freight policy objectives, evaluation of commodity flows and industry logistics patterns, an assessment of quality of freight service, and identification of bottlenecks and other physical and operational deficiencies. This also includes an identification of staff or freight expert within an agency to shepherd freight matters through the planning process.
2. *Stakeholder outreach*—The literature provides clear strategies to recognize freight stakeholder needs and promotes early involvement of both public and private freight stakeholder groups throughout the planning process. The literature generally supports the formation of Freight Advisory Committees or Councils for ongoing collaboration and discussion. Stakeholder roles within these committees include assisting in the development of a mission statement or goals and objectives for the freight program, project list review or refinement, providing data, helping identify funding opportunities, and project advocacy.
3. *Data analysis*—The literature provides extensive lists of appropriate data sources that planners and policy makers can use to better understand freight issues within their communities. Although there are occasional issues with the availability or application of freight data, it is invaluable to developing or refining existing performance measures and tracking economic growth and benefits associated with freight projects.

Weaknesses

Although there is very useful information in the existing literature on developing a robust freight planning program, using freight data, and engaging freight stakeholders, the recommendations do not always translate well to the highway decision-making process. The following describes ways that the existing literature and practice could be improved to provide highway planning practitioners with the strategies and tools needed to properly consider freight in the highway planning decision-making process:

- Improve the evaluation methodology for assessing freight impacts during NEPA.

There is very detailed information in the existing literature on developing metrics to evaluate project benefits and costs for freight for project programming but little information on how to use or adapt these metrics for the NEPA process. The

Box 2.1. Library of Background Research Sources

TRB (NCHRP, NCFRP, SHRP)

- NCHRP Project 8-53—Guidebook for Integrating Freight into Transportation Planning[a]
- NCHRP Project 8-47—Guidebook for Freight Policy, Planning, and Programming in Small- and Medium-Sized MPOs[a]
- NCHRP Project 7-15—Cost-Effective Methods and Planning Procedures for Travel Time, Delay, and Reliability[a]
- NCHRP Project 8-53—Integrating Freight into Transportation Planning and Project-Selection Processes[a]
- NCHRP Project 8-43—Methods for Forecasting Freight Movements and Related Performance Measures
- TRB SR 297—Funding Options for Freight Transportation Projects
- NCFRP 1—Private and Public Sector Freight Decision-Making
- NCFRP 2—Institutional Arrangements for Freight Transportation Systems[a]
- NCFRP 5—Partnerships for Funding Freight Infrastructure Investment[a]
- NCFRP 7—Identifying and Using Low-Cost and Quickly Implementable Ways to Address Freight-System Mobility Constraints[a]
- NCFRP 8—Freight Demand Modeling to Support Public Sector Decision-Making[a]
- SHRP 2—Transportation for Communities-Advancing Projects through Partnerships Website

AASHTO

- AASHTO Freight-Bottom Line Report Series[a]
- AASHTO State Rail Planning Best Practices[a]

FHWA

- FHWA Freight Cross-Cutting Resource Guide[a] (Ongoing)
- NHI Course 139006—Integrating Freight into the Transportation Planning Process[a]
- NHI Course 129003—Advanced Freight Planning
- NHI Course 139002—Multimodal Freight Forecasting in Transportation Planning[a]
- NHI Course 139001—Freight Planning Course[a]
- NHI Course 139005—Freight Planning and Environmental Considerations[a]
- U.S. DOT Guide to Quantifying the Economic Impact of Federal Investments in Large-Scale Freight Transportation Projects
- Building Capacity between Public and Private Sectors in the Freight Community
- FHWA Quick Response Freight Manual Update[a]
- FHWA Resource Center Training on Engaging the Private Sector in Freight Planning
- Guidebook for Engaging the Private Sector in Freight Transportation Planning

State Freight Planning Studies

- Maryland Statewide Freight Plan[a]
- Kansas Freight Plan[a]
- Minnesota Freight Plan[a]
- Indiana State Freight Plan[a]

Metropolitan and Regional Freight Planning

- Metropolitan Washington Council of Governments' Freight Planning Considerations[a]
- Puget Sound Regional Council's Integrating the Evaluation of Freight Corridor Projects into the Congestion Management Process, and Long-Range Transportation Planning
- I-95 Corridor Coalition's Freight Academy Training Materials[a]

[a] Developed by Cambridge Systematics, Inc.

body of literature would be strengthened with a clearer evaluation methodology.

- Better integrate economic considerations, logistics, and commodity flow decisions into the process for project programming and environmental review.

There is limited information in the existing literature on how to apply the information collected during the initial planning phases (freight profile) on the general economy, industry logistics patterns, and commodity data into the NEPA phase.

- Clarify the key freight-related decision points in the highway planning process.

The literature includes useful information on the types of freight stakeholders to engage and the types of questions to

ask; however, the information is less clear on the specific stakeholders (i.e., shippers versus carriers) and the different level of engagement expected and required at key decision points.

- Direct more attention to the role of regulatory issues in freight decisions throughout all phases of the highway decision-making process.

When determining long-range goals of the freight infrastructure system, regulation (i.e., truck size and weight or hours of service rules) is a key consideration and greatly influences logistics decisions. These types of issues are rarely considered in the current long-range planning process.

The findings from the literature review also have been conflated to the market-based freight planning framework. The following section highlights the seven market-based freight planning considerations and includes detailed discussion on the tools and strategies provided by the existing literature that can be used by planners to enhance freight planning; it also highlights where those tools are lacking. The literature review findings were used to inform the stakeholder outreach and case study evaluation and bridge the state of the practice. Box 2.2 summarizes the literature review sources.

Industry Interviews

In order to ensure adequate and early input from the freight community, the research team conducted an initial round of outreach with industry associations and federal officials. This approach allowed the team to first learn about the national and industry perspective before focusing on project case studies.

The purpose of this initial outreach activity was threefold: (1) to better understand the national perspective of private and public stakeholders with regard to the integration of freight considerations into highway planning, (2) to populate a list of potential second-round interviews, and (3) to identify promising case studies for further exploration in Task 3.

The industry interviews were conducted across three categories of stakeholders: private freight stakeholders

Box 2.2. Summary of Literature Review—Market-Based Freight Planning Considerations

- *Economy*
  - **Strengths**—Roles and responsibilities of public/private stakeholders, type and use of economic data in long-range planning.
  - **Possible Areas of Improvement**—"Translating" freight/economic profile into corridor plans, project programming.
- *Industry Logistics Patterns*
  - **Strengths**—Identification of role of logistics decisions, how logistics decisions are influenced by outside factors, some logistics data, logistics stakeholder roles, and responsibilities.
  - **Possible Areas of Improvement**—More information on the influences of logistics decisions in highway planning (e.g., regulatory influences), how to capture logistics in the programming and environmental process considering the fluidity of the logistics process.
- *Freight Infrastructure*
  - **Strengths**—Evaluation methodologies, roles, and responsibilities, performance measures, identification of expectations for stakeholder outreach at each stage.
  - **Possible Areas of Improvement**—Clearer metrics for evaluating freight's effect on the highway system, possibly using adapted passenger metrics (e.g., impacts on passenger operations, pavement degradation).
- *Commodity Flows*
  - **Strengths**—Identification of the methodology for developing a Regional Freight Profile, including collecting applicable freight data such as: Commodity, Origin, Destination, Mode, Route, and Time (CODMRT), justifying the inputs and outputs to commodity flow evaluations.
  - **Possible Areas of Improvement**—More information on how evaluation results are "translated" into project programming and NEPA planning, more refined data (e.g., how to evaluate commodity flows within a particular highway segment or corridor).
- *Quality of Service*
  - **Strengths**—Performance measures, freight benefits, stakeholders and their role in the process, data tools, and metrics for identifying freight level of service.
  - **Possible Areas of Improvement**—More attention to capturing quality of service benefits and impacts for freight in the NEPA process.
- *Environment*
  - **Strengths**—Data analysis techniques and stakeholder outreach, performance measures for freight programming with environmental considerations.
  - **Possible Areas of Improvement**—More information on freight-related environmental concerns within trade corridors, more specificity on the data used in NEPA evaluation.
- *Safety and Security*
  - **Strengths**—Data sources identified, lots of information on evaluation of safety concerns during project programming and environmental review process.
  - **Possible Areas of Improvement**—More information on safety considerations associated with freight included in the long-range plan and corridor plans, more resources to evaluate safety issues associated with freight, additional background on security considerations for freight, including current regulatory issues.

Table 2.1. National Freight Stakeholder Interviews

Organization Type	Organization
Other Highway Planning Stakeholders	American Road and Transportation Builders Association (ARTBA) Commercial Vehicle Safety Alliance (CVSA) Surface Transportation Policy Project (STPP) and OneRail Coalition
Private Freight Stakeholders (Shippers and Carriers)	National Retail Federation (NRF) Retail Industry Leaders Association (RILA) Council of Supply Chain Management Professionals (CSCMP) Agricultural Transportation Coalition/CONECT National Strategic Shippers Transportation Council (NASSTRAC) National Industrial Transportation League (NIT League) Waterfront Coalition U.S. Chamber of Commerce Coalition for Responsible Transportation (CRT) American Trucking Associations (ATA) Con-way Trucking
Government Organizations	FHWA Office of Planning, Environment, and Realty FHWA Office of Freight Management and Operations AASHTO

(shippers and carriers), other private and nonprofit highway planning stakeholders, and government organizations involved in freight and highway planning policy at the national level. During each interview, the research team sought to discover stakeholders' views on best practices in integrating freight into highway planning, including integration of the seven market-based freight planning considerations and insight into appropriate decision points for freight stakeholder engagement. Interviews were focused on identifying promising case studies and second-round interview contacts to enrich the guidebook. Table 2.1 lists the interviews conducted for this task.

Case Study Development

While the literature review and interviews provided a high-level state of the practice for freight planning around the country, the case studies were intended to capture much more detail and specific examples of best practices. In consultation with the TETG and through the first round of interviews, the research team developed a list of case studies and selection criteria for identifying the most appropriate case studies for further research. The recommended case studies were selected based on the following evaluation criteria:

- Evidence of effective collaboration between state DOTs and MPOs and the freight and economic development communities;
- Attention to projects and programs that deal with a variety of highway capacity solutions (e.g., operational improvements, interchanges, mainline widening, rail diversion);
- Geographic and economic diversity (e.g., urban, rural, coastal, inland, different industry mixes, simple and complex freight networks);
- Case studies that may include an evaluation of specific activities (e.g., economic growth in key corridors necessitating "freight-styled" highway development);
- Highway planning and development projects that have not previously been prominently featured in freight planning research projects by TRB or FHWA, and provides new insight into the incorporation of freight into highway planning;
- Successful integration into the project planning process of some or all of the seven market-based freight planning considerations (economy, logistics, freight infrastructure, commodity flows, quality of service, environmental considerations, safety and security);
- Consideration of private-sector concerns in the public planning process (long-term economic development, investment and business decisions, economic competitiveness);
- Presents a mix of projects across the four initial decision-making phases [long-range transportation planning (LRTP), programming (PRO), corridor planning (COR), and environmental review (ENV)] with at least one phase captured by each case study; and
- Includes cooperative project sponsors and freight stakeholders willing to provide information to develop the case studies and inform other content of the study.

Based on this list of criteria, the team conducted case studies with 11 agencies across the nation. The case studies generally consisted of interviews with a range of stakeholders in each location or study. By design the research team interviewed a

Table 2.2. Case Studies Completed

Phase	Case Study	Organization	Urban/Rural	Region	Region (W/MW/E/S)
LRTP	Baltimore MPO Freight Movement Task Force	Baltimore Metropolitan Council	Urban	Coastal	E
LRTP	Kansas City Regional Freight Outlook	Mid-America Regional Council (MARC)/KC SmartPort	Urban	Inland	MW
LRTP	Delaware Valley Regional Planning Commission (DVRPC) Goods Movement Task Force	DVRPC	Urban	Coastal	E
PRO	Mid-Ohio Regional Planning Commission (MORPC) "Freight" Transportation Improvement Program (F-TIP)	MORPC/Columbus Chamber	Urban	Inland	MW
PRO	Seattle Freight Mobility Advisory Committee	City of Seattle	Urban	Coastal	W
PRO	Puget Sound Regional Council (PSRC) Regional Freight Mobility Roundtable (RFMR)	PSRC	Urban	Coastal	W
COR	I-70 Truck-Only Lanes	Led by Indiana DOT (partnership with Missouri, Ohio, Illinois DOT)	Rural/Urban	Inland	MW
COR	Freight Plan Implementation[a]	Georgia DOT	Rural/Urban	Inland	S
COR	San Diego Association of Governments (SANDAG) State Route (SR) 905 Freeway Project	SANDAG MPO	Urban	Coastal	W
NEPA	I-5 Columbia River Crossing	Oregon DOT/Washington state DOT	Urban	Inland	W
NEPA	I-710 Environmental Impact Report/Environmental Impact Statement (EIR/EIS) Process[a]	Caltrans/LA Metro	Urban	Coastal	W

Note: E = East, MW = Midwest, S = South, and W = West.

[a] Projects/programs that are conducted or assisted by Cambridge Systematics staff.

mix of public- and private-sector clients involved in each location or study. Results and major findings were summarized and integrated into the guide. Table 2.2 lists the case studies developed for the project.

Appendix A contains a summary of each of the case studies, highlighting major findings in each circumstance. Major findings from the case studies are described in Chapter 3 and are integrated throughout the C15 guide.

SHRP 2 Planning Framework

The research team used the SHRP 2 planning framework as the basis for developing the C15 guide. The framework organizes the planning process into four phases: long-range transportation planning (LRTP); programming with fiscal constraint (PRO); corridor planning studies (COR); and environmental review merged with permitting (ENV). The framework also identifies 44 common decision points within the planning process and places each of them within one of the four phases. The research team used the framework as a means for identifying which decision points should consider freight, and specifically stakeholder involvement. Using the literature, interviews, case studies, and professional judgment and input from the TETG, the research team identified which decision points should take into account input from freight stakeholders, how the input might be collected, and the relative importance of engaging the freight community at each point. Figure 2.2 demonstrates the completed framework.

Guide Development

Once the research team completed the research activities their focus turned to development of the C15 practitioner's guide. The first step in this process was the finalization of the SHRP 2 decision-making framework, which was accomplished through iterative review by the TETG and SHRP 2 staff. Next, the team produced an outline and, with the feedback of the TETG, developed the text and graphics to communicate the findings in the form of a draft guide. The TETG provided guidance and edits on the draft guide.

With the guide in draft form, the research team worked with SHRP 2 staff and the TETG to identify potential agencies to conduct vetting of the guide. The selection of agencies considered several factors, including availability of staff and willingness of the agency to participate, and the expertise of the staff in understanding freight planning and

Decision Point	LRP Freight	LRP	PRO Freight	PRO	COR Freight	COR	ENV Freight	ENV
1	◐	Approve Scope of Long-Range Transportation Plan	○	Approve Revenue Sources	○	Approve Scope of Corridor Planning Services	○	Reach Consensus Scope of Environmental Review
2	◐	Approve Vision and Goals	◐	Approve Methodology for Identifying Project Costs and Criteria for Allocating Revenue	●	Approve Problem Statements and Opportunities	○	Approve and Publish the Notice of Intent
3	●	Approve Evaluation Criteria, Methodology, and Performance Measures	●	Approve Project List Drawn from Adopted Plan Scenario or Solution Set	◐	Approve Goals for the Corridor	●	Approve Purpose and Need/ Reach Consensus on Project Purpose (PER-1)
4	●	Approve Transportation Deficiencies	◐	Approve Project Prioritization	○	Reach Consensus on Scope of Social, Cultural, Natural, Environmental Review and Analysis	○	Approve Public Notice (PER-2) Reach Consensus on Study Area
5	◐	Approve Financial Assumptions	◐	Reach Consensus on Draft TIP	●	Approve Evaluation Criteria, Methodology, and Performance Measures (Potential Solutions)	◐	Approve Evaluation Criteria, Methodology, and Performance Measures
6	●	Approve Strategies (Projects)	◐PC	Adopt TIP by MPO	●	Approve Range of Solution Sets	●	Approve Full Range of Alternatives/Approve Resource Agency Public Notice (PER-3)
7	◐	Approve Plan Scenarios	○	Approve TIP by Governor or his Designee and Incorporate into STIP	◐PC	Adopt Preferred Solution Set	◐	Approve Alternatives to be Carried Forward (PER-4)
8	◐PC	Adopt Preferred Plan Scenario (Internal)	◐	Reach Consensus on Draft STIP	◐	Approve Evaluation Criteria and Methodology for Prioritization (Implementation)	◐PC	Approve Draft EIS/Reach Consensus on Jurisdictional Determination (PER-5)
9	○	Adopt Finding of Conformity by MPO (Air Quality)	○	Approve STIP with Respect to Conformity and Fiscal Constraint	◐PC	Adopt Priorities for Implementation	○	Approve Preferred Alternative
10	◐PC	Adopt LRTP by MPO					◐PC	Approve Final NEPA Document
11	○	Approve Conformity Analysis (Federal Conformity Determination)					○	Approve Record of Decision/ Render Permit Decision (PER-6)

○ Little to No Engagement
◐ Minimal to Moderate Engagement (depends on previous decision points)
◐PC Minimal to Moderate Engagement available through Public Comment (depends on previous decision points)
● Extensive Engagement – Critical Decision Point

Critical Decision Points
Most Critical | More Critical | Less Critical

Figure 2.2. Decision flow diagram.

the freight industry. The three vetting pilots were conducted with the

- Utah DOT;
- Georgia DOT; and the
- North Central Texas Council of Governments (NCTCOG).

The idea behind the vetting pilots was to conduct a review of the draft guide through the eyes of users in a way that would produce recommendations to improve the guide, where necessary. The review differed from that conducted by the TETG because the Utah DOT, the Georgia DOT, and the NCTCOG were asked to examine the guide in terms of its theoretical applicability, what would really work in their situations. Once the agencies reviewed the draft guide, the research team conducted in-person and teleconference debriefs with each agency. Their recommendations were subsequently integrated into the draft final guide prior to TRB publication review. The product of this iterative process is the final version of the guide.

PlanWorks Integration

Well before the development of the draft guide, the research team engaged with the team working on SHRP 2 C01 to map out a strategy for integration of the C15 research within the PlanWorks website. Interaction with the C01 team was mutually beneficial for several reasons. First, it enabled the C15 team to orient the development of its products—especially the case studies—for inclusion in the website, in a form that would be readable and consistent with existing case study vignettes. Second, the framework of the PlanWorks website, which revolves around the SHRP 2 decision-making process, provided the basis for developing a guide that would respond to all relevant decision points with specific information on freight considerations (http://transportationforcommunities.com).

CHAPTER 3

Findings and Applications

Outreach and the Freight Industry

The research sought to confirm the nature and type of principal freight industry stakeholders. Through the literature, interviews, and case study development, the research team identified the freight stakeholder groups identified in Box 3.1 and classified them by major group. For example, the private-sector freight stakeholders include a wide range of businesses and organizations, each bringing a slightly different perspective to the planning process. In addition, several public and quasi-public agencies are among the list. The final category comprises other stakeholders such as environmental, community groups, and the general public.

The following section presents the findings on current engagement practices and summarizes the best practices for consideration by transportation agencies.

Current Practices

The SHRP 2 C15 research—through the literature review, industry interviews, and case study research—identified a range of current practices to engage freight stakeholders in the planning process. Common outreach practices fall into two broad categories: (1) ongoing dialogue and (2) focused outreach.

Ongoing Dialogue

- *Freight advisory committees,* which organize public and private freight stakeholders into formal groups to provide ongoing interaction on goods movement issues with transportation agencies; and
- *Freight stakeholder meetings,* in which the agency makes a presentation on the plan, project, or program, including detail on the project, including study area, time frame for completion, known effects on the community, time frame, and expected result.

Focused Outreach

- *Workshops,* where public agencies assemble stakeholders to work through some issues using visual displays of information and formal and informal facilitation techniques to elicit comment and ultimately reach consensus;
- *Project materials,* including newsletters, can be disseminated by mail or e-mail with a request for comment;
- *Websites* update stakeholders and provide a repository of documents and other resources; and
- *Interviews* can be conducted with stakeholders, both in person and via telephone or, depending on the stakeholder, through online survey tools.

The C15 guide provides detailed descriptions of each of the current practices and what they entail. The guide also provides a description of which methods work best for each stakeholder type or group. Table 3.1 summarizes the best methods by stakeholder type. The application of the most effective methods is meant to provide general guidance as conditions can vary widely by agency or situation. "Effective" is defined as the ability of the activity to motivate a response or participation in the activity. The table classifies the outreach practices as "Focused Outreach" and "Ongoing Dialogue". Under each of these headings are listed some (but not all) the potential strategies to engage freight stakeholders in the collaborative decision-making process. Cells with open circles indicate a general interest by the stakeholder in participating. Cells with solid circles indicate a high likelihood of success in effective collaboration with the freight stakeholder. If cells are empty, it indicates that the particular outreach method is likely to yield little useful information if employed for that kind of stakeholder.

The research focused primarily on current practices to identify which ones would be most effective under each phase of the planning process. While the research did not seek to

Box 3.1. Freight Stakeholders

Private-Sector Freight Stakeholders
BCOs
Logisticians
Motor Carriers
Railroads
Industrial Real Estate Developers
Chambers of Commerce and other business associations

Economic Development Agencies

Port Authorities and Marine Terminal Operators (MTO)

Local Governments

Transportation Agencies
FHWA, state DOTs, MPOs

Other Stakeholders
Environmental, community groups, general public

identify new or innovative means of outreach, this could be an area of future research consideration.

Best Practices

The research revealed best practices in freight stakeholder engagement and also identified some practices that could be improved in order to conduct more effective freight planning. The current best practices are those areas in which transportation agencies are effectively integrating freight considerations into the highway planning process. In general, the best practices

- Engage a wide range of freight stakeholders, including those that have not historically been highly engaged (e.g., the shipping community).
- Bring together public and private stakeholders to discuss a meaningful range of issues and alternatives.
- Occur at the right time for stakeholders to understand the context and implications of the proposed project or alternatives (e.g., not too early).
- Are not too onerous and are able to collect stakeholder input without exhausting the stakeholders.
- Lead to lasting relationships between the agency and stakeholders, not necessarily requiring their constant future involvement but ensuring the ability to work together constructively when needed in the future.

The research team identified which practices are best practices through the frequency of citation in the literature review, mention in the industry interviews, and discussion by agencies and stakeholders participating in the case study interviews. While the C15 guide provides extensive coverage of best practices, the following paragraphs summarize major findings.

Table 3.1. Key Freight Stakeholders: The Most Effective Outreach Methods

	Focused Outreach				Ongoing Dialogue	
Key Freight Stakeholders	**Freight Meetings**	**Workshops or Focus Groups**	**Telephone and In-person Interviews**	**Surveys (e.g., online)**	**Freight Committee**	**One-on-One Meetings**
BCOs[a]	○	○	●		○	○
Logisticians	○		○			○
Motor Carriers	●	●	○		●	○
Railroads	○	●	●	○	●	●
Commercial Real Estate	○	●	●		○	●
Chambers of Commerce and Business Groups	●	●	●	●	●	●
Economic Development Agencies	●	●	●	●	●	●
Port Authorities and Marine Terminal Operators	●	●	●	●	●	●
Local Governments	○	○	●		●	●
Transportation Agencies	●	●	●	○	●	●
Local Governments	○	○	●	○	●	●
Other Stakeholders	○	○	○	○	●	

Note: ● = High likelihood of success in effective collaboration with freight stakeholder, ○ = general interest by the stakeholder in participating, and empty = likely to yield little useful information if employed for that kind of stakeholder.
[a] BCOs (beneficial cargo owners) are the firms that ship and receive goods.

Freight Outreach—What Are We Doing Well?

The research identified several areas in which transportation agencies are perceived currently as doing well with freight stakeholder engagement. Those areas include

- *Advisory committees.* The public- and private-sector participants in this research project concur that agencies are doing a good job in establishing and maintaining freight advisory committees. Not only are agencies involving the right mix of individuals and organizations, they are conducting meetings and other forms of ongoing outreach that leverage the knowledge of the stakeholders to develop plausible recommendations. While much is left to learn as the practice of freight advisory committees matures in a post–MAP-21 era, there is general consensus that agencies are moving in the right direction in institutionalizing freight advisory committees.
- *Early outreach.* The timing of outreach engagement is critically important. The research found that, in general, agencies are engaging stakeholders at the right points in the planning process.
- *Corridor planning.* Agencies are conducting effective outreach with stakeholders within the study area of corridor proposals. The outreach may not be freight specific, but the methods employed in traditional corridor studies are sufficiently comprehensive to capture input from many freight entities.
- *Engagement on specific issues.* Just as corridor planning allows an agency to identify a specific geography and to focus on the stakeholders in the study area, agencies are generally conducting effective outreach on specific issues. For example, if an MPO is examining a specific issue, like freight and air quality, it can hone in on the right mix of stakeholders and conduct the outreach and tailor activities to collect input from them.
- *Nontransportation agency outreach and collaboration (e.g., chambers of commerce, economic development).* While there is room for increased interagency communication, the research showed that many agencies are effectively and consistently reaching out to nontransportation agencies, especially economic development agencies, to share information and to collaborate.

Freight Outreach—What Needs Improvement?

The research also identified areas in which transportation agencies are perceived as needing some improvement in freight stakeholder engagement outreach efforts. In some cases, the areas are the same as those that are cited as "doing well," but for different reasons the interview subjects in particular believe that there is room for improvement. Those areas include

- *Better understanding of freight issues by agencies.* While some public agencies are very sophisticated in their understanding of goods movement, many agencies have limited capabilities and understanding of freight issues. This has led some private stakeholders to develop a belief that public agencies should improve their staff and institutional capabilities to conduct transportation planning in a way that effectively integrates freight considerations. Often these limitations are exacerbated by a lack of dedicated funding to staff freight positions. However, as agencies more fully integrate freight into future planning efforts, they will likely become more experienced and capable of understanding the unique nature of the freight industry.
- *Interagency coordination.* Multiple agencies covering different disciplines and geographies should be involved in freight planning and in cooperatively engaging freight stakeholders. According to the research, many of the transportation agencies that are leading freight planning efforts do not adequately involve other agencies that could contribute very effectively. Partner agencies could include economic development, energy, agriculture, law enforcement, and others, depending on the situation.
- *Earlier engagement.* In some cases transportation agencies are doing a very effective job of engaging stakeholders early, but feedback from the industry interviews conducted for this project found dissatisfaction among some stakeholders about timing. The general comment was that agencies needed to get out to stakeholders earlier to discuss options, issues, and alternatives. Please note that the research also found that many stakeholders are satisfied with the timing of outreach.
- *NEPA process.* Some, but not all, stakeholders participating in either the industry interviews or case study development said that agencies should more consciously integrate freight into the NEPA process. In many cases, the stakeholders said that NEPA is perfunctory and not freight focused.
- *More focus on multimodal involvement.* The primary focus of the research was on highway capacity planning, and in that context the feedback from research subjects was that planners need to ensure that multimodal dimensions are considered. For example, a highway corridor planning effort should take into account all freight moving in a corridor, on the parallel rail lines or waterways, not just on the

roadways. This means that agencies should involve other modes (e.g., carriers and shippers) in the highway capacity planning process. This is important because in some cases alternative investments in nonhighway modes can fulfill some or all of the goals of the project at a lower fiscal and environmental cost.
- *Better integration of data and metrics.* The research also concluded that agencies could do a better job of integrating data and metrics into the freight planning process. Plans and outreach efforts that are complimented and underpinned with careful analytics have greater credibility and have the ability to serve as a discussion point for more meaningful engagement of freight stakeholders.

Summary of Best Practices

- *Nurture "freight champions."* Freight champions are individuals with the ability to mobilize interest in advancing freight planning. A freight champion may be a private-sector leader, a policy maker, or an individual working for a transportation agency. An important role of the freight champion is to be a face for freight and to build trust and relationships with industry stakeholders.
- *Engage early and frequently.* Engagement should be conducted early and often, but targeted at key decision points to help conserve resources and avoid stakeholder fatigue, which can cause participants to lose interest in the planning process altogether.
- *Improve freight planning capacity.* Agencies should continue their efforts to improve freight planning knowledge and staff capacity. Stakeholders indicate that freight agency staff with knowledge of freight issues, trends, and operations provide additional value to the outreach and maximize the benefits of stakeholder engagement.
- *Collaborate with other agencies.* Work with other agencies and organizations to share private-sector freight stakeholder input, which sometimes makes its way into the planning process through elected officials and others with frequent and direct contact with the business community (e.g., chambers of commerce, economic development organizations).
- *Improve interagency communication.* Communications can break down between local, regional, or state government institutions and the DOT and MPO planners related to the highway impacts of new development projects (e.g., BCO purchases property near a highway interchange through an arrangement with local leaders, causing a bottleneck, and DOT is instructed to "make it work"). Inclusion of the MPO in discussions is helpful.
- *Assist policy makers.* Build their knowledge about supply chain and logistics; helps them connect with freight constituents.
- *Focused meetings and materials.* Stakeholders respond to plans and products that already have been prepared or summarized in a way that minimizes the time they need to spend reviewing materials. Stakeholder meetings should be focused with clearly defined agendas and action items.
- *Institutionalize outreach.* Establish regular meetings and outreach activities to build relationships and to improve the understanding of freight issues in the jurisdiction.
- *Limited but creative engagement is most effective.* Use technology, other venues (industry events), focus groups, and so forth. Engagement is dependent on the scale of the freight stakeholder interest in the project. A more robust engagement strategy can be developed for a major truck route improvement versus a commuter route with few trucks.
- *Post and integrate feedback.* Transportation agencies should assimilate feedback from private-sector stakeholders, post it online, and make sure that stakeholders recognize that their valuable feedback is being integrated into the planning documents.

Decision-Making Needs and Gaps

This project was designed to provide planning practitioners with better information on how, when, and where to integrate freight considerations into the planning process through stakeholder engagement. To accomplish this important objective, the research team filtered the information collected from the literature review, interviews, and case studies to populate the SHRP 2 decision-making framework with the most appropriate points at which to engage the freight stakeholders. Through several iterations of development, the decision-making framework was finalized as shown in Figure 2.2.

The decision-making framework represents the most current knowledge as collected through this research project. In this way, the decision-making framework attempts to close many of the knowledge gaps in understanding how, when, where, and who to engage at distinct points in the planning process. This framework has not been tested formally, although it benefited from the vetting and theoretical application by several participating agencies. In the future, as the decision points' framework is used by transportation agencies, it should be refined to reflect the lessons learned through implementation. It will be through that implementation

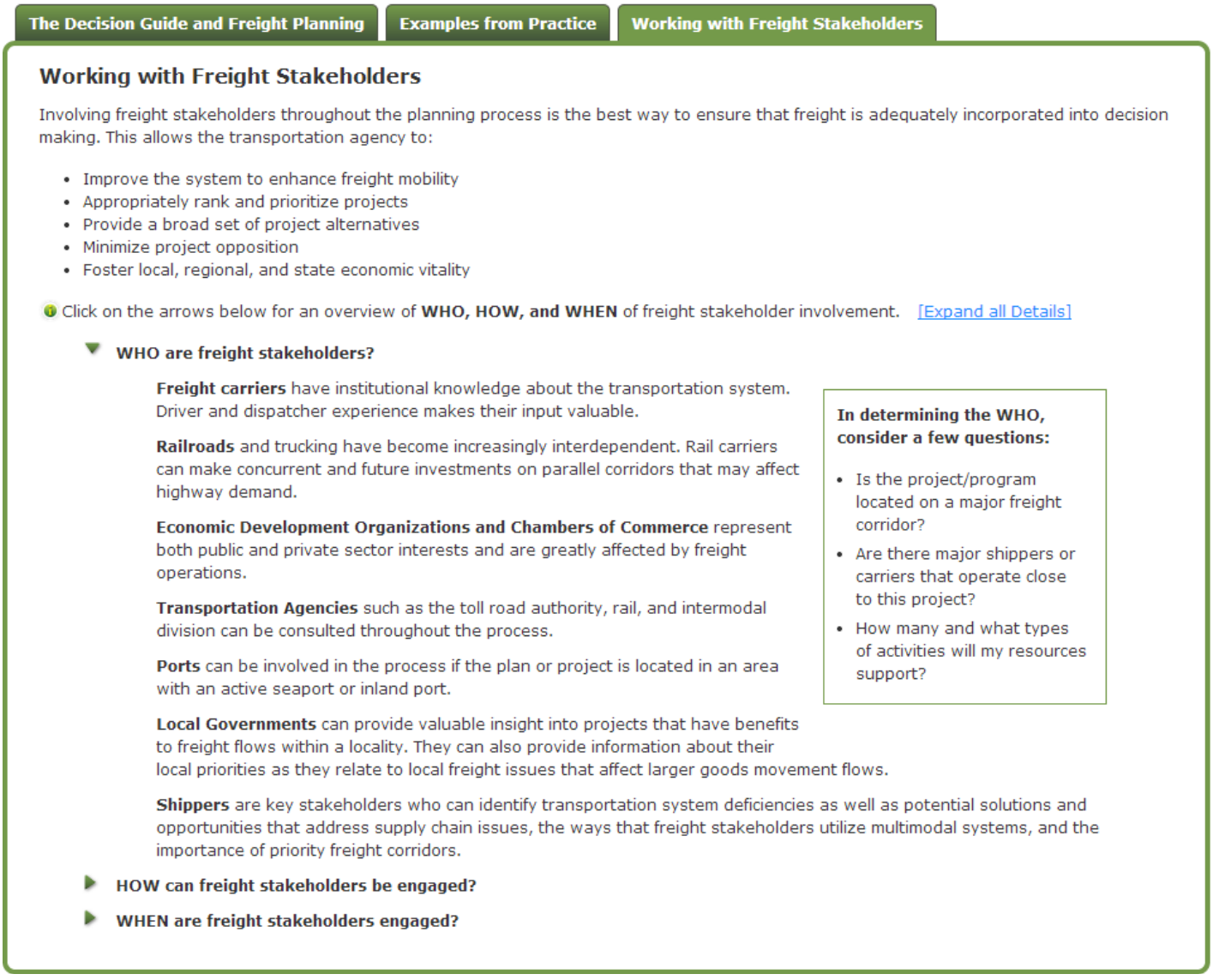
experience that another layer of research needs and gaps may become more apparent.

PlanWorks Freight Application

The findings of the research have been fully integrated into the PlanWorks website: http://transportationforcommunities.com/freight_application. Within the PlanWorks website, the C15 findings are integrated into three areas of information:

- *The Decision Guide and Freight Planning* addresses when and how to integrate freight considerations into four phases of transportation decision making.
- *Examples from Practice* demonstrates successful methods for integrating freight into the planning process.
- *Working with Freight Stakeholder* offers guidance on effective ways to form relationships and gather meaningful feedback from freight stakeholders.

Through a series of drop-down menus and hypertext links, PlanWorks freight application allows users to navigate much of the material that is contained in the C15 guidebook, including specific case studies and recommendations on freight engagement at each point in the outreach process. Figure 3.1 illustrates this.



Source: PlanWorks.

Figure 3.1. PlanWorks freight application—Working with Freight Stakeholders.

CHAPTER 4

Conclusions and Suggested Research

Guide Outcomes

The research culminated in the development of the SHRP 2 C15 guide. The guide summarizes the conclusions of the research and organizes the findings into a reference format for broad use by transportation agencies and their partners as they advance freight planning efforts.

While there are many aspects of highway freight planning that would benefit from improved methods and best practices guidance, this guide focuses specifically on one aspect. The objective of this guide is to make highway capacity planning more effective through better engagement of the freight industry. The guide is intended to help highway planners from state DOTs and MPOs and private industry stakeholders more effectively and collaboratively plan and develop highway capacity improvements to improve goods movement.

The guide accomplishes this by identifying appropriate freight considerations and by providing direction to state DOTs, MPOs, stakeholders, and other decision makers on how and at which points to integrate these considerations within the transportation planning process. The guide also integrates market-based information into the planning process to reduce the likelihood of the public sector making poor project choices (e.g., funding projects that do not align with freight needs or provide little benefit to freight stakeholders). Case studies and best practice examples are woven into the guide to illustrate successful methods to integrate freight considerations at all stages and phases of project planning.

Potential Research

The research conducted to develop the guide fulfilled many of the existing gaps in research. One of the primary research goals was to synthesize and disseminate best practices of collaborative market-based highway freight planning. This goal has largely been achieved through the development of the guide. Yet, during the development of the guide and through the vetting pilots, the team documented several research needs that may merit future exploration. These potential research needs include the following categories.

Innovative Stakeholder Engagement Techniques

The C15 guide provides direction on how transportation agencies might use the existing body of current practices to engage freight stakeholders. This report and the guide summarize the current techniques and estimate their potential efficacy in a variety of circumstances. One area the C15 project did not explore in depth is the potential application of innovative stakeholder engagement techniques. These techniques, which have been used in greater measure in traditional passenger transportation settings, could include greater use of social media, visualization, mobile applications, and other emerging avenues to engage stakeholders and collect information. In the future, the freight community may want to explore the use of innovative outreach.

Engaging the General Public

While the C15 research identified the general public as a constituency in freight planning, the research focused in greater detail on approaches to reach private freight stakeholders. Often, if freight is part of a broader planning effort, members of the public are well engaged through accepted approaches. However, in projects where there is a greater emphasis on freight, or where freight is the primary focus, there is less research available on how the general public might be effectively engaged.

Integrating Freight Data and Analytics into the Stakeholder Engagement Process

A significant and growing body of research, including the SHRP 2 C20 project, has focused on the application of freight data and modeling in planning. Much less has been written about how to integrate data with freight stakeholder engagement into the planning process. Future research may seek to understand best practices in using freight data and analytical tools in outreach efforts. This research examines, for example, how stakeholders can play important roles in vetting the data analysis conducted by agencies—using commodity flow data, GPS data, or models. It could examine how stakeholders can provide data to inform the planning process and how agencies could handle and aggregate proprietary data.

The future research also could examine the intersection of visualization and freight data to enhance outreach. This is an area that is not well understood and may hold potential to enhance mutual understanding of project challenges and potential outcomes.

How to Engage Policy Makers and Other Groups

Agencies participating in the vetting pilots expressed particular interest in understanding how to engage policy makers, including elected officials, in the freight outreach process. This is an area that may require additional research given that the primary focus of the research was on private stakeholders. On a similar note, future research may explore best practices in engaging city planners and other local government stakeholders. This may become increasingly important as counties and municipalities associate goods movement into land use planning.

Future Directions

This report has presented several potential research needs for future consideration. In the future, the FHWA will be leading future implementation efforts related to SHRP 2 C15. Implementation of the guide is being planned for 2014, along with a number of other SHRP 2 products that are designed to improve collaboration in planning processes. As FHWA conducts SHRP 2 C15 implementation activities and as agencies independently adopt principles in the C15 guide, a number of other future research needs and directions may become more evident.

Conclusion

The practice of freight transportation planning has evolved significantly over the last decade, catalyzed by the enhanced freight planning requirements embodied in the last two federal surface transportation laws and a growing national concern about freight capacity. The U.S. DOT, state DOTs, and MPOs—the entities largely responsible for planning, programming, and delivering transportation projects—have started to invest in personnel, training, data, and consulting expertise to build freight programs that account for the needs of freight stakeholders. This rise of freight planning reflects a broadening recognition of the economic, social, and environmental benefits of efficient goods movement.

As part of the increased focus on freight, transportation agencies have dedicated time and resources to engage freight stakeholders. With the growth in freight outreach activities, agencies have been seeking guidance on the most effective means of engaging stakeholders. In response, leading transportation organizations have developed a growing body of resources to direct freight planning practice. TRB, AASHTO, FHWA, and other organizations have developed training materials, studies, and guidebooks to foster expertise and to weave freight considerations into established planning processes. In addition, leading states, MPOs, and other transportation planning and programming organizations have started to develop and implement sophisticated mechanisms to systematically and comprehensively address a broad spectrum of goods movement-related issues through their planning activities. This SHRP 2 project—to synthesize and disseminate best practices of collaborative market-based highway freight planning—comes at an important point in the country's economic and transportation history as freight and passenger demand eclipse capacity.

This research effort was designed to equip transportation agencies and their partners with the tools necessary to implement more effective outreach of freight stakeholders to more richly inform the transportation planning process. Using the SHRP 2 decision-making framework, the research team developed recommendations on where, how, and who to engage at more than 40 discrete decision points spanning all phases of the highway planning process. The product of this effort is a guide that is designed to significantly improve outcomes by orienting agencies to the most effective techniques and decision points to engage freight stakeholders.

Bibliography

Battelle, American Transportation Research Institute, CH2M Hill, Gordon Proctor and Associates, The Gallamore Group, Starsis Corporation. *NCFRP Report 7: Identifying and Using Low-Cost and Quickly Implementable Ways to Address Freight-System Mobility Constraints.* Transportation Research Board of the National Academies, Washington, D.C., 2011.

Cambridge Systematics, Inc. *Freight-Rail Bottom Line Report.* American Association of State Highway and Transportation Officials. Washington, D.C., 2003.

Cambridge Systematics, Inc. *Enhancing Consideration of Freight in Regional Transportation Planning.* Metropolitan Washington Council of Governments. 2007.

Cambridge Systematics, Inc. *State Rail Planning Best Practices.* American Association of State Highway and Transportation Officials. Washington, D.C., 2009.

Cambridge Systematics, Inc., Economic Development Research Group, Inc., Halcrow, Inc., Decisiontek, LLC, and Boston Strategies International. *NCFRP Report 12: Framework and Tools for Estimating Benefits of Specific Freight Network Investments.* Transportation Research Board of the National Academies, Washington, D.C., 2011.

Cambridge Systematics, Inc., Dowling Associates, Inc., System Metrics Group, Inc., Texas Transportation Institute. *NCHRP Report 618: Cost-Effective Methods and Planning Procedures for Travel Time, Delay, and Reliability.* Transportation Research Board of the National Academies, Washington, D.C., 2008.

Cambridge Systematics, Inc., Economic Development Research Group, Inc., Boston Logistics Group, Inc. *Guide to Quantifying the Economic Impact of Federal Investments in Large-Scale Freight Transportation Projects.* U.S. Department of Transportation. 2006.

Cambridge Systematics, Inc., Gill V. Hicks & Associates, Inc., Network Public Affairs, LLC. *NCFRP Report 2: Institutional Arrangements for Freight Transportation Systems.* Transportation Research Board of the National Academies, Washington, D.C., 2009.

Cambridge Systematics, Inc., Global Insight (formerly Reebie Associates), H. Cohen, A. Horowitz, and R. Pendyala. *NCHRP Report 606: Forecasting Statewide Freight Toolkit.* Transportation Research Board of the National Academies, Washington, D.C., 2008.

Cambridge Systematics, Inc., Prime Focus, LLC, and K. Heanue. *NCHRP Report 594: Guidebook for Integrating Freight into Transportation Planning and Project Selection Processes.* Transportation Research Board of the National Academies, Washington, D.C., 2007.

Cambridge Systematics, Inc., TransManagement, TransTech Management, and K. Heanue. *NCHRP Report 570: Guidebook for Freight Policy, Planning, and Programming in Small- and Medium-Sized MPOs.* Transportation Research Board of the National Academies, Washington, D.C., 2007.

Cambridge Systematics, Inc. Quick Response Freight Manual II. Federal Highway Administration, Washington, D.C., 2007.

Federal Highway Administration, U.S. Department of Transportation. *MAP-21—Moving Ahead for Progress in the 21st Century.* http://www.fhwa.dot.gov/map21/. Accessed November 12, 2013.

Federal Highway Administration, U.S. Department of Transportation. *Freight Cross-Cutting Resource Guide.* (Ongoing)

Federal Highway Administration, U.S. Department of Transportation, Resource Center. Training Session: *Engaging the Private Sector in Freight Planning.*

IHS Global Insight. *NCFRP Report 1: Public and Private Sector Interdependence in Freight Transportation Markets.* Transportation Research Board of the National Academies, Washington, D.C., 2009.

Indiana Multimodal Freight and Mobility Plan. Indiana Department of Transportation, 2009.

Kansas Statewide Freight Study. Kansas Department of Transportation, 2009.

Maryland Statewide Freight Plan. Maryland Department of Transportation, 2009.

Minnesota Statewide Freight Plan. Minnesota Department of Transportation, 2003.

National Highway Institute. Course 129003: *Advanced Freight Planning.*

National Highway Institute. Course 139002: *Multimodal Freight Forecasting in Transportation Planning.*

National Highway Institute. Course 139005: *Linking Freight to Planning and the Environment.*

National Highway Institute. Course 139009: *Engaging the Private Sector in Freight Planning.*

National Highway Institute. Course 139006: *Integrating Freight into the Transportation Planning Process.*

NCFRP 14: Guidebook for Understanding Urban Goods Movement. Transportation Research Board of the National Academies, Washington, D.C., 2009.

NCFRP 8: Freight-Demand Modeling to Support Public-Sector Decision Making. Transportation Research Board of the National Academies, Washington, D.C., 2009.

Puget Sound Regional Council. *Integrating the Evaluation of Freight Corridor Projects into the Congestion Management Process, and Long-Range Transportation Planning.* 2009.

Special Report 297: Funding Options for Freight Transportation Projects. Transportation Research Board of the National Academies, Washington, D.C., 2008.

Transportation for Communities. *Transportation for Communities—Advancing Projects through Partnerships (TCAPP).* http://www.transportationforcommunities.com/. Accessed November 12, 2013. *Note: TCAPP is now known as PlanWorks.*

U.S. Department of Transportation and National Association of Regional Councils. *Building Capacity Between Public and Private Sectors in the Freight Industry: A Resource Manual.* 2009.

Wilbur Smith Associates and S.R. Kale Consulting LLC. *Guidebook for Engaging the Private Sector in Freight Transportation Planning.* Federal Highway Administration. Washington, D.C., 2009.

APPENDIX A

Case Study Summaries

Long-Range Planning, Baltimore Metropolitan Council—Freight Movement Task Force

Background

The Baltimore Metropolitan Council (BMC) formed the Freight Movement Task Force (FMTF) approximately 10 years ago. The move was prompted by a need to involve a more focused stakeholder group in advising the metropolitan planning organization (MPO) on effects of freight projects in the Baltimore region. The move was also driven by federal regulations included in the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) from 2005 requiring MPOs to consider freight interests in the planning process. The FMTF is a subcommittee of the Baltimore Regional Transportation Board (BRTB), the official name for the MPO in the Baltimore area. Together, the BRTB and the MPO technical committee designated the formation of the FMTF, and planning staff coordinate with local jurisdictions, carriers, and shippers who comprise the task force. The technical committee consists of one representative from each member jurisdiction or agency of the BRTB. The committee is responsible for reviewing and evaluating all transportation plans and programs for the BRTB. The list of FMTF participants and associated freight outreach in the region is constantly evolving based on support from MPO leadership and state support of freight planning. The FMTF has enjoyed the advantage of retaining a core group of participants who have been involved for many years, including the committee chair, from Norfolk Southern Railroad, who has been in the position for 6 to 7 years. The BRTB staff is interested in identifying additional public- and private-sector champions for the committee as well as expanding the committee's role in freight stakeholder engagement throughout the planning process.

Stakeholder Engagement Activities

There have been substantial changes in the BMC board in recent months that have provided additional motivation for integrating freight in the planning process. The BRTB strives to best inform board members about the opportunities for freight stakeholder engagement and utilization of the FMTF. One recent development of interaction between the BRTB and FMTF includes designation of a BRTB board member to serve on the freight committee. Currently, all public interaction with the freight stakeholder community is channeled through the FMTF and a majority of information sharing takes place during bimonthly FMTF meetings. Although the FMTF have been involved in vetting freight impacts of regionally significant projects (such as toll lanes on I-95) and participating in freight-oriented projects (such as truck or rail studies), the FMTF has not been fully engaged in the long-range planning (LRP) process at the MPO until recently. Freight stakeholder involvement in the LRP process is expected to continue to increase and evolve. One recent example includes the allocation of small amounts of funding ($2,500–$5,000) to each of the local jurisdictions in the MPO for freight-specific projects or studies. This funding will allow additional support to staff for freight planning on the local level or to allow staff members more robust involvement in regional freight initiatives.

Historically, there has been a consistent representation of stakeholders involved in the FMTF including the Class I freight railroads (both Norfolk Southern and CSX Transportation), key regional shippers (including McCormick Spices), the Maryland Motor Truck Association (MMTA), and representatives from the local jurisdictions. The railroads originally became involved through the development of rail access plans during the past decade and have remained consistently engaged. Other stakeholders' involvement has centered on providing insight and feedback to origin–destination (O-D) surveys, routing, and measuring volumes of truck traffic on highway facilities for specific studies. According to Louis

Campion of MMTA, the engagement generally works best when private-sector participants are able to respond to products that already have been developed (such as a routing plan or O-D survey results), rather than work from a "clean slate." The MPO currently is working on developing a regional freight analysis that will help substantiate the freight needs in the MPO area for the near and long term.

Feedback from Stakeholders

For the FMTF, the bimonthly meetings provide the most effective forum for feedback to the MPO on planning issues. Most meetings consist of presentations on key freight-related issues or initiatives in the MPO area. The opportunity for comments is afforded to meeting attendees on the projects and programs and follow-up arranged by MPO staff as needed. Announcements are made for upcoming public meetings, which stakeholders may wish to attend to provide additional feedback. The LRP process includes project deliverables e-mailed to FMTF members and comments collected. In a recent statewide planning effort, the Maryland Statewide Freight Plan, the FMTF was involved in organizing stakeholder response, which included helping to identify members to serve on the advisory task force where they were expected to provide insight on evaluation criteria, visioning, and project identification. For other regional or statewide projects that required insight or data from stakeholders, this information has been provided through one-on-one interviews conducted by consultants or the BMC staff themselves. For certain projects, more direct stakeholder involvement is required. For example, the ongoing Port of Baltimore Rail Access Study required outreach to the railroads and shippers and a substantial data collection effort. Challenges obtaining data from stakeholders in a timely fashion have historically included data format, propriety nature of the data, and/or difficulty in finding time to provide the data.

Decision Points

The goal of BMC is to engage the broader public (including the freight community) very early in the process of developing long-range plans. Box A.1 presents the principal freight-related decision points of this case study. Often times, LRP documents are simply updated and there is not a lot of new information provided (evaluation methodologies and funding assumptions remain similar to previous iterations of the plan). Initial engagement of the freight community generally takes the form of public meeting notices provided to FMTF members (as well as other subcommittees under BRTB). There appears to be little understanding of the overall planning process among freight stakeholders, especially among the private sector, which may indicate a lack of awareness of the option for involvement early in the process. Although there is no current role for freight stakeholders in developing the scope of the LRP, they are involved in LRP visioning exercises (LRP 2). BMC has instituted a guest speaker series to provide additional insight on regional issues to the FMTF to help shape the regional vision. There is interest from stakeholders in getting more involved in the LRP process and providing feedback at key decision points but the involvement would require careful management to remain cognizant of time constraints and other priorities. This recent expansion of the LRP process for freight stakeholders in Baltimore—input into performance measures (LRP 3)—has attracted additional input from FMTF members (especially the public-sector representatives). There was some discussion of performance measures during the development of the statewide freight plan with private-sector participants on the advisory committee.

At later stages in the planning process (LRP 4), both public- and private-sector freight stakeholders are used for identifying bottlenecks and priority freight corridors. From the perspective of several stakeholders, vetting this list is the most important part of the process. This information is largely provided to BMC from the local jurisdictions through their own outreach efforts; this is a different process from most MPOs. Generally, the MPOs inform the local jurisdictions of their issues, instead of being provided a list of issues for aggregating at the regional level. Beyond this phase, according to the private-sector participant interviewed for this case, there is not a lot of value to approve financial assumptions until specific projects are identified; however, there is a strong interest in scenario planning and reviewing draft plans (LRP 6 and 7). There is interest from the freight stakeholder community in being involved in future LRP efforts, but with focused engagement during the later stages in the planning process.

Although there currently is no separate category for specific freight projects within the transportation improvement program (TIP), there are points during the development of the LRP process to help highlight freight-beneficial projects, such as the development of project priorities. In the LRP's project ranking system, there is a metric that helps promote freight-beneficial

Box A.1. Long-Range Planning, Baltimore Metropolitan Council—Freight-Movement Task Force Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

LRP 2: Vision and Goals
LRP 3: Evaluation Criteria
LRP 4: Issues and Needs
LRP 6: Strategies
LRP 7: Plan Scenarios

projects (generally based on proportion of trucks on a particular highway facility). When the draft LRP is developed, there is a section for freight that highlights the role of freight transportation in the region; this section is largely based on feedback from freight stakeholders during the LRP process.

Beyond the LRP process, there is little existing role for the FMTF or freight stakeholders. Corridor planning efforts at the MPO have not identified a specific role for the FMTF, although in next year's MPO work plan there may be funding available to study key freight corridors. For project programming, there has been some attention to including regionally significant projects in the state TIP (often favoring larger-scale freight-beneficial projects) that would benefit from feedback from the FMTF, although there is no definite plan to do so. Although there is little freight stakeholder interaction in the Baltimore region during the National Environmental Policy Act (NEPA) process, the MPO does offer its perspective as part of the interagency review process for NEPA, which may potentially take earlier freight outreach discussions into account. In the future, there may be an expansion of the FMTF role to help the MPO vet the project priority list, ranking more beneficial projects for freight movement. The MPO also is interested in exploring the discussion of project financing with the FMTF, especially where there is a strong federal role or potential for expediting the projects due to broad financial support.

Long-Range Planning and Project Programming, Mid-America Regional Council (MARC)/SmartPort—Regional Freight Outlook

Background

The Regional Freight Outlook, developed by the Mid-America Regional Council (MARC) and SmartPort (an economic development group based in Kansas City, Missouri) with support from a consulting firm in 2009, is a fresh look at and expansion of a previous freight planning effort in the Kansas City region. The study's goals were multifaceted and largely dictated by the interests of SmartPort. First, the study intended to provide insight into the region's freight flows and highlight the importance of freight to the region. Second, the study compared Kansas City to other regions around the country, with regard to freight traffic flows and advantages of the Kansas City region. Finally, there was an interest in identifying how industry investment and growth could influence projects in the long-range plan and TIP for the MPO. The freight study was initiated in part due to (1) private-sector participants in SmartPort who were interested in learning more about overall freight flows in the Kansas City region in pursuit of a customs clearance center from Mexico and (2) a need to determine how much Mexican freight may be available for preclearance. During the course of the study other freight issues in the region arose, including a substantial expansion of a major rail yard, explored in the Regional Freight Outlook.

Stakeholder Engagement Activities

During the development of the Regional Freight Outlook, the private-sector freight community was not engaged despite the fact that SmartPort had played such a large role in initiating the project. According to interviews with at least two stakeholders, this was due to many stakeholders lacking understanding about the elements of the planning process, a preliminarily unclear definition of roles and responsibilities, and a lack of focus on how the project or study would affect individual businesses. The study used an existing freight advisory group through MARC as well as individual contacts through SmartPort. The SmartPort director acted as the conduit for much of the freight outreach on the project, identifying and soliciting feedback from key stakeholders at appropriate times. Through this liaison, the project team was able to communicate effectively with the MPO and private businesses and maintain relationships with important participants in the process. During the course of the study, the freight stakeholder community was split into different groups to explore issues related to each, shippers, carriers, and others. An extensive survey outreach program was instituted for the study; the program solicited feedback from members in each group. Commodity flow data were purchased for the study, and the stakeholders provided validation of the data. As a result, deficiencies were identified in the interregional and short-haul commodity flows, and a follow-up is planned to the Regional Freight Outlook that will study these issues and build on the findings of the 2009 document. During the study, there also was engagement of the local jurisdictions and the Kansas and Missouri DOTs. The DOTs played a key role in helping to validate data and providing insight into future transportation improvement programs in Kansas and Missouri.

Feedback from Stakeholders

The most important roles for stakeholders in the study were validating data, identifying needs and bottlenecks, and reviewing the draft document. For some participants, reviewing the draft document was sufficient for their needs to feel involved in the process. Others saw value in reviewing each constituent piece of the study and responding. For the Regional Freight Outlook, multiple stakeholder meetings were held and feedback was solicited on project lists, data, and key findings. According to a discussion with one contributor, participants would have been satisfied with a kickoff meeting, periodic updates with the opportunity to respond to

specific deliverables, and an opportunity to review a final draft. There is a strong interest from the private-sector participants to structure meetings similar to those held in the private sector with defined agendas, a strict time schedule, and clear action items; information needs to be provided in easy-to-digest pieces (e.g., bullet points or short presentations). Sometimes, they report, meetings facilitated by public agencies do not always have a clear focus. Private-sector participants see value and are interested in ongoing involvement with MPO planning efforts but effective communication is the key to keeping stakeholders engaged. SmartPort plays a crucial role in facilitating such engagement.

Decision Points

For the Regional Freight Outlook there was a goal to engage the freight stakeholder community early and often. Box A.2 presents the principal freight-related decision points of this case study. The most important meeting was the first meeting, where there was discussion to identify issues and topics for the study (LRP 1) as well as get validation on the focus of the study. The next most important meeting for many of the private-sector stakeholders was the final summary and presentation. It is the view of MARC and SmartPort that stakeholders are generally only involved at these "first and last" points, and they may stay engaged if they see value in the materials being produced.

For MARC, modal committees at the MPO develop the goals and objectives for the LRP (LRP 2). One of the modal committees is focused on goods movement and does have participation from freight stakeholders. Regional goals have been consistent over the past several years, although there has been some refinement. Since the intent of the Regional Freight Outlook was driven by SmartPort, the vision and goals of the project were consistent with MARC's and presented to the freight stakeholders. During the development of the Regional Freight Outlook, private-sector representatives indicated less interest in visioning for the region (LRP 3), and more interest in identifying specific issues and bottlenecks. During committee meetings, stakeholders helped identify the list of regional needs (LRP 4) with validation provided during follow-up interviews.

MARC identifies "freight benefit" as one of the selection criteria for projects in the LRP. Representatives from the freight committee sit on the Total Transportation Committee (a policy committee), and can provide feedback before the completed LRP goes before the MPO Board. It is noted that, due in part to MARC's activities, there are few freight bottlenecks in the region, with most improvements to the freight mobility system occurring in the 1990s. There are efforts by MARC to continue to improve the understanding and recognition of freight issues in the region. The discussion of financial assumptions (LRP 5) generally takes place through discussion with specific project sponsors—Missouri DOT, Kansas DOT, local jurisdictions within the MARC area—so there is little engagement by the MPO during this phase; however, private-sector participants in the Regional Freight Outlook study indicated a strong interest in discussing revenue options during the planning process to help them in their own long-term planning efforts. Planners at MARC typically flush out plan scenarios themselves, without direct feedback from stakeholders (LRP 6), however, committees, (including the freight committee) review and provide input. In the case of the Regional Freight Outlook, the private sector played a major role in the review of the draft plan (LRP 7) to ensure that the project development team (including MARC) had gotten it right. The overall planning process provides an excellent opportunity for the private sector to interact cooperatively with government. Once projects are identified during the LRP process, there is an additional opportunity for freight stakeholders to review and comment on evaluation criteria and project lists included in the TIP and in the state transportation improvement program (STIP), in conjunction with the traditional public outreach process. Evaluation criteria are constantly evolving in the MARC region but more attention in recent years [largely due to the Transportation Investment Generating Economic Recovery (TIGER) and American Recovery and Reinvestment Act federal funding programs] has been directed to economic benefits of projects and linkages with freight transportation.

For corridor plans in the MARC region, stakeholders are better engaged in projects with high levels of potential for private investment or where there is a private partner (e.g., railroad), with most of the engagement handled at the DOT level. There is a strong interest on the parts of both Missouri and Kansas to improve their outreach with the freight stakeholder community through more focused meetings and an increased attention to meaningful issues (such as improving truck facilities and construction management). Kansas has been working to enhance the planning department's role in monitoring commercial trucking operations allowing for better data and recognition of larger regional issues.

Box A.2. Long-Range Planning and Project Programming, Mid-America Regional Council and SmartPort Case Study—Regional Freight Outlook Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

LRP 2: Vision and Goals
LRP 4: Issues and Needs
LRP 6: Strategies
LRP 7: Plan Scenarios

PRO 2: Evaluation Criteria

Long-Range Planning, Project Programming, and Corridor Planning, Delaware Valley Regional Planning Commission—Delaware Valley Goods Movement Task Force

Background

The Delaware Valley Goods Movement Task Force (GMTF) was created as a result of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) transportation reauthorization, which presented a federal mandate for freight planning. Around the same time period (1992), there was a strong push to highlight freight issues through the Pennsylvania DOT on a double-stack rail project in the region. Beyond these institutional mandates, there has been a strong history of freight project work in the region with both the Pennsylvania and New Jersey DOTs, especially with rail assistance programs. The MPO is the Delaware Valley Regional Planning Commission (DVRPC), which is the federally designated MPO for the Greater Philadelphia region. The DVRPC has worked hard to build the GMTF from the ground up, largely through direct outreach by the group leaders, and is constantly updating plans and programs to provide value to the group's quarterly meetings. Initially, the stakeholder attendee list was formed by coordinating with the ports on project work. Many of the staff representatives from DVRPC have been involved with the group since its outset, testifying to the value of continuity in a freight outreach program. There is strong visibility with the GMTF (which has operated continually for nearly 20 years) both locally and regionally, and participants are interested in staying engaged on freight issues in the region. Key pillars of success for the GMTF include the constant recruiting of new members, the process for invitations to potential new members (i.e., members invite their friends), and promotion through recognizing group contributions (such as participation recognition). The goal of the organization is to have a 50/50 public–private split in meeting attendance; this goal has been consistently achieved.

Stakeholder Engagement Activities

Freight stakeholder outreach activities in the region are primarily done through the GMTF, but traditional planning outreach tools like public meetings, web outreach, review, and comment of draft documents are also used. Invitations are provided to GMTF members to attend additional planning meetings beyond the quarterly GMTF meetings where new documents are discussed. The GMTF work product also is used as a baseline project and activity list for larger outreach efforts. Freight stakeholders in the DVRPC area prefer to be engaged early and often and have used the GMTF venue to focus the outreach efforts. Members are informed and aware of upcoming topics and hot button issues and are generally prepared to offer feedback at meetings. Specific efforts used by the GMTF to engage the freight community include periodic presentations on regional freight-oriented topics and the development of priority project lists for the LRP process. The trick to getting stakeholders engaged is to use their insight on solutions on a large issue (such as traffic problems on the I-95) and achieve some kind of tangible outcome (such as a letter of support for a particular solution). This allows the group to build confidence and feel like they are actually providing a useful contribution to the process, rather than just to "check a box." To be most effective, freight stakeholder outreach needs to provide information to the stakeholders on how the planning process works. The three most crucial parts of the planning process for freight stakeholders continue to be the MPO's work program (which allocates funding for planning activities), the long-range plan, and the TIP. The heavy lifting for freight interaction is generally done at the front end of the project to help give the process "legs."

There are different levels of engagement required for different users. Highway projects generally have a broader range of stakeholders (although direct users like trucking firms can be more difficult to engage) while rail projects generally having a more refined focus. Much of the work done at DVRPC in recent years benefits the trucking segment, including safety, and operations studies; however, there have been freight rail efforts as well, such as the double-stack clearance project for CSX Transportation. In recent years, most freight-beneficial projects highlighted in the near-term capital improvement program are either operational improvements or projects focused on system preservation, not necessarily capacity improvements.

Feedback from Stakeholders

At the earliest stages in the process, the MPO is interested in collecting data from stakeholders to help guide the project or program analysis. Beyond data, they have used GMTF members to provide insight into their operations, transportation needs, and information on existing facilities. They have accomplished this through the GMTF regular meetings or through directed outreach or interviews with key stakeholders. Members also are engaged to vet freight-beneficial projects. Generally, according to DVRPC staff, too much involvement with freight stakeholders will bore them—the organization needs to develop strategies to keep them engaged in creative ways. One example of creative engagement that yielded very interested information for the MPO's planning efforts was presenting a freight plan showcase, where they brought together the public, stakeholders, and other constituents and presented a "simulated supply chain" in which participants walked through the components of a theoretical supply chain. Through this

process, about 25 to 30 interviews were conducted with stakeholders to identify facilities and projects, including rail, highway, and distribution facilities in the region.

Decision Points

There is engagement of the freight stakeholder community by the DVRPC GMTF throughout the planning process; however, the involvement is more focused during the development of the long-range plan. Box A.3 presents the principal freight-related decision points of this case study. The crafting of the scope of the LRP is done by the MPO staff without the involvement of freight stakeholders, with the idea that the plan is expected to serve all users. In the DVRPC area, the GMTF has helped craft a stand-alone freight vision, which is provided to the planners drafting the scope of work for the overall plan. Freight stakeholders and staff work to integrate the freight vision into the MPO's vision. The GMTF ultimately endorses the vision and goals of the LRP, with continued goal to more directly influence elements of the LRP vision.

Following the approval of the vision and goals (LRP 2) of the LRP process, the MPO develops or refines evaluation criteria for projects and programs in the LRP. Freight stakeholders currently participate in that process (LRP 3); however, the discussion might not involve the entire GMTF, rather individual stakeholders personally invited by the MPO to offer feedback on evaluation criteria. Coordination with the DOT is crucial at this stage—they generally know the needs of freight but do not necessarily know how to respond to those needs. During this portion of the LRP process, freight stakeholders provide invaluable information in the identification of bottlenecks and system deficiencies through the conduct of charrettes, evaluation of data, presentations, surveys, and interviews (LRP 4). Freight scans, developed by the DVRPC with input from the GMTF, have helped with identifying regional needs at the county level. The freight scans act as a starting point for the bottleneck evaluation and prioritization in the LRP. According to follow-up interviews with private-sector stakeholders, this is one of the most valuable points to engage freight stakeholders. Other recent freight planning efforts that lay the foundation for identifying priority corridors include the development of the "Delaware Valley Freight Corridors," a stand-alone document. This attention to freight issues has led to additional coordination with local jurisdictions and promoting preliminary planning and engineering efforts to position the region for attracting outside funds for larger-scale freight-beneficial projects.

For project funding, the DVRPC is very proactive in sharing information with freight stakeholders in order to help build consensus and leverage local/private opportunities to outside funding (LRP 5). There is little attention paid to public-private partnerships (PPP) until much later in the process, since most potential PPPs generally require a long lead time and multiple partners. Private-sector stakeholders see great value in these conversations, if only to better understand the actual implementation time frame for projects. When the long-range plan is developed, the GMTF is presented with the opportunity to review and comment and provide an endorsement of the draft plan. This provides value to private-sector stakeholders, however, it is important for the public-sector organization to balance the amount of review required with the time constraints and level of interests of certain stakeholders. Many stakeholders are satisfied with a review of the final product as a final check as opposed to continually reviewing and providing feedback on draft plans (LRP 6 and LRP 7). One very important element in the DVRPC method is having staff identify pertinent sections in the draft document for the private sector to review, saving the participant's time and more efficiently soliciting their feedback in the process.

Challenges in the LRP process for freight stakeholders include promoting a better understanding of freight benefits to the local jurisdictions. This would help the local stakeholders prioritize freight-beneficial projects to their communities, even if the project itself is outside their jurisdiction. Currently, to many of these local jurisdictions, most freight-beneficial projects are seen as someone else's problem, due to their scale. Other challenges include a lack of understanding of freight operations issues (e.g., truck hours of service, truck parking) and how they relate to infrastructure. The activity of freight stakeholders in the LRP process sets the stage for additional coordination in corridor planning, project programming, and the NEPA process.

The project programming (PRO) and development of the TIP contents at DVRPC are typically driven by the DOT and

Box A.3. Long-Range Planning, Project Programming, and Corridor Planning, Delaware Valley Regional Planning Commission—Delaware Valley Goods Movement Task Force Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

LRP 2: Vision and Goals
LRP 3: Evaluation Criteria
LRP 4: Issues and Needs
LRP 5: Financial Assumptions
LRP 6: Approve Strategies
LRP 7: Approve Plan Scenarios

PRO 4: Approve Project Prioritization
PRO 5: Reach Consensus on Draft TIP

COR 2: Problem Statement
COR 3: Goals and Objectives

local government planners working to negotiate the key regional priorities. The project list generally evolves organically from the LRP, without too much need for additional feedback. Projects beneficial to freight flows, especially larger, more significant projects are promoted by the freight community, through the GMTF (PRO 4). Historically, the federal Congestion Mitigation and Air Quality Improvement (CMAQ) program funding allocation process provided an avenue for using the GMTF to provide official support for funding freight-beneficial projects. During the last year of funding for CMAQ, there were 55 applications in Pennsylvania, and all five major freight projects (e.g., truck electrification facility, rail spur, cross-dock facility) were funded. There has been talk at the MPO to incorporate a section in the TIP for freight projects; however, since the prevailing stakeholder belief is that "all projects are freight projects," they have moved away from this idea.

For corridor planning (COR), the GMTF provides feedback to the lead agency through identification of one or two active members to act as a partner in the corridor planning effort and to provide the freight perspective to staff. These members help the MPO develop the scope of study for the corridor and ensure that key trade corridors are considered, which may be more expansive than those designated for the highway corridor plan. As corridor plans develop, these members are available to provide insight into the best solutions for accommodating freight needs in the corridor (COR 6). Currently, the environmental review (ENV) process does not include much coordinated support from the freight stakeholder community, although GMTF members are encouraged to offer support or comment for either the freight benefits of projects or projects that would have a detrimental effect on freight operations during development of NEPA documents. DVRPC has worked hard to cultivate a robust outreach program for freight stakeholders throughout the planning process and will continue to work with the GMTF to represent freight interests within the region.

Long-Range Planning and Project Programming, Mid-Ohio Regional Planning Commission—Creating the Freight Transportation Improvement Program and Coordination with Columbus Region Logistics Council

Background

Freight planning in the Columbus, Ohio, region through the Mid-Ohio Regional Planning Commission (MORPC) began largely as a reaction to the region's plan to construct a new inland port in the mid-1990s. A series of inland port studies throughout the decade focused on expanding Port Columbus and Rickenbacker and helped support the recognition of the importance of the movement of goods to the regional economy (more than 14% of total jobs in the region). Although MORPC had their own freight group for a time, they became more involved in the outreach efforts of the Columbus Chamber of Commerce, which also had been leading studies on logistics and freight issues in the region. The Chamber's coordination efforts evolved from a council created from participants in the inland port studies, to form the Columbus Region Logistics Council (CRLC). Large regional organizations active in CRLC activities include several of the larger third-party logistics providers in the region as well as representatives from major retailers, including Big Lots, Mattel, and Limited Brands. Participants in CRLC also include air cargo interests, small local and regional chamber of commerce representatives, and key shippers, freight carriers, and other interested parties. MORPC serves as a member of CRLC and is in constant communication with the organization.

For many years, there were competing freight advisory groups among the MPO and the chamber of commerce—both groups had a challenge keeping stakeholders engaged on freight-beneficial projects, especially the MPO group, due in large part to staff turnover issues and regional priorities. The current iteration of CRLC has been active since 2008 and includes four specific committees, including the infrastructure, workforce, technology, and business environment committees, with MORPC being most involved in the infrastructure committee. Committee meetings are run by the chamber of commerce, with planning and agenda assistance and feedback from the MPO. The current organizational framework enables MORPC to become more directly involved in industry collaboration. Through CRLC, MORPC was able to better gain access for advocacy efforts, validate regional transportation needs, and explore funding opportunities. The region's freight planning efforts and the partnership between MORPC and the chamber of commerce have helped create successes at Rickenbacker and throughout the region in the form of expansion activities and other projects both attracting new business and contributing to the regional economy. Support from MPO leadership also has played a major role in effective collaboration with the MPO's transportation and executive director strongly supporting MORPC's freight planning efforts.

Stakeholder Engagement Activities and Feedback

In addition to coordinating and providing feedback during the LRP process and prioritizing projects during the TIP development, CRLC plays a role in soliciting outreach for specific freight planning studies, mostly related to Rickenbacker. CRLC holds regular meetings and has initiated a range of projects in

recent years, including the Central Ohio Logistics Roadmap and major access studies to Rickenbacker. Previously, common complaints with freight stakeholder involvement during the public planning process included the long duration and sometime lack of focus during meetings and a limited understanding of private-sector interests. Outreach methods for projects have included one-on-one discussions and presentations during meetings. The feedback is much more effective when the stakeholders have a product to respond to, rather than planners simply inquiring about their needs. Focus groups have played a major role in soliciting feedback from industry, especially during recent studies. For a recent project, the study team found intriguing distinctions between the different stakeholders on the topics they were most interested in exploring. According to Robert Fredman, a member of CRLC, shippers generally were more focused on the high-level issues (such as goals, objectives, and broader system needs) while carriers (such as trucking companies or third-party logistics providers) were more focused on specific improvement projects and implementation strategies, with an eye to local issues.

Decision Points

The freight stakeholders are generally involved throughout the LRP process, including the development and approval of vision and goals (LRP 2), and evaluation criteria (LRP 3) for projects. Although the development of the scope of work (LRP 1) for the LRP does not require a lot of feedback, members of CRLC do sit on the transportation advisory committee (TAC) for the MPO; the TAC provides technical assistance and recommendations to the policy committee. The private sector is involved in the development of visions and goals for the LRP in the same capacity. There are three goals within the transportation plan that support freight. They are efficiency, multimodal, and economic development. Throughout the planning process, the MPO and chamber of commerce work with private industry to encourage them to respond to information (especially evaluation criteria, funding assumptions, and draft plans).

For PRO, MORPC has developed a strategy for highlighting projects in the TIP that have significance for the freight community (F-TIP). This idea was adapted from DVRPC in Philadelphia and helps quantify the freight-beneficial projects in the region. The inclusion of projects in the F-TIP is not a particularly scientific process; rather MPO staff, with input from the private- and public-sector freight communities identify the roads and other facilities in the region that access key freight areas (PRO 2). The F-TIP is developed only after the TIP is developed and includes only the projects that are expected to be funded. Truck counts and other readily available data may be used to validate the inclusion of certain corridors. Stakeholders also provide support in calculating the truck percentage of service to intermodal facilities and potential fuel consumption reductions from improvements. The stakeholders review the draft list to ensure its completeness (PRO 3). The MPO asks questions during CRLC meetings and collects comments to obtain feedback. Box A.4 presents the principal freight-related decision points of this case study.

The freight stakeholder community in the Columbus region also takes an active role in project finance. For a recent freight study in the region, CRLC collected $500,000 from private-sector participants to fund the study. Recent legislative developments in Ohio on private development of transportation facilities may provide additional opportunities to engage the freight community to expedite key transportation projects. The Ohio DOT currently is writing the rulebook on how those alternative financing opportunities might be realized, using a project connecting Rickenbacker and U.S. 23 as an example (Pickaway East-West Connector Project). Freight stakeholder feedback also is used to determine the jobs impact for certain projects, raising their profile at the regional and state level and marshalling support for freight-beneficial projects.

Although the freight stakeholders provide feedback on freight project priorities (PRO 4), all modes are considered together for the TIP. Based in part on the work and insight that the freight stakeholders provide (including data and a better understanding of regional and local benefits), freight projects have traditionally risen to the top of the list. During the latter stages of the project programming process for MORPC, freight stakeholders do play a role in reviewing the draft TIP/F-TIP (PRO 5). Other ways that freight projects are highlighted in the programming process is through the activities of the MPO's federal funding group, a subset of the TAC, which also helps identify projects of national significance, a category in which many freight projects are classified. One of the key issues that the MPO has encountered, despite all of

Box A.4. Long-Range Planning and Project Programming, Mid-Ohio Regional Planning Commission—Creating the Freight Transportation Improvement Program and Coordination with Columbus Region Logistics Council Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

LRP 2: Vision and Goals
LRP 3: Evaluation Criteria
LRP 4: Issues and Needs

PRO 2: Evaluation Methodology
PRO 3: Approve Project List
PRO 4: Approve Project Prioritization
PRO 5: Reach Consensus on Draft TIP

this support, is the borderless nature of trade corridors, the improvements on which are generally very large scale and take many years to fund. Improvements to the I-70/I-71 connectors have been in the TIP for 20 years with little movement toward final resolution.

The state typically leads the process for ENV of transportation projects, including freight-beneficial projects involving freight stakeholders generally only if there is a direct impact to a freight facility. The state generally understands freight planning, but is still trying to identify the most efficient methods for incorporating freight considerations into the NEPA process. State transportation planners use the relationships that the MPO has in Columbus to reach out to freight stakeholders in the region.

The planning process for freight can be improved in the MORPC MPO region by using the Rickenbacker Infrastructure Coordinating Committee (created by the MPO to identify and prioritize projects, seek funding, and foster cooperation in the Rickenbacker area) to better rank regionally significant projects. There currently are some divergent interests of stakeholders (e.g., rail versus highway, conflicts between certain shippers) that may hinder discussion on ranking one freight-beneficial project over another. The next generation of the freight planning program at MORPC will likely include some scenario planning, which is intended to help inform the LRP. Finally, a large-scale regional freight study in the MORPC area is long overdue due to the development and expansion of intermodal yards throughout the region. In conclusion, the MPO's coordination with CRLC seems to work well, but may not work in every region of the United States. The strength of the local chamber of commerce coupled with a strong recognition for the benefits of freight transportation in the region makes this interaction a strong partnership.

Long-Range Planning, Project Programming, Corridor Planning, and Environmental Review, Seattle Department of Transportation and Seattle Freight Advisory Board—Ongoing Freight Stakeholder Involvement

Background

This case study documents Seattle Department of Transportation's (SDOT) success in effectively involving freight stakeholders in the City of Seattle, Washington, to improve freight planning and collaborative decision making in the area. More than a decade ago, public officials realized the potential value of establishing a formal freight advisory committee to advocate for a well-functioning multimodal transportation system, which, in turn, would support economic vitality in the city. Freight stakeholders have provided public officials with helpful insights about freight movement, supply chain strategies, and global and domestic trade and transportation trends. Incorporating freight stakeholder feedback and involving these stakeholders throughout the transportation planning, programming, corridor, and environmental processes has enhanced the quality and inclusivity of these processes, and enabled SDOT to deliver transportation infrastructure projects that improved the flow of goods and services in the area.

SDOT works closely and collaboratively with the Puget Sound Regional Council (PSRC), the MPO overseeing the transportation system in Kitsap, Pierce, King, and Snohomish counties. SDOT is a member of PSRC, and SDOT's TIP must be aligned with PSRC's since Seattle is located in King County. There is recognition that freight crosses county borders and, therefore, collaboration with neighboring public agencies is critical. A case study summary is presented separately on PSRC's freight stakeholder outreach efforts.

Stakeholder Engagement Activities

The Seattle Freight Mobility Advisory Committee (SFMAC) was established in 2002 as a partnership between SDOT and the Seattle Manufacturing Industrial Council (SMIC) to address freight mobility issues and provide a forum for freight stakeholder input to be aired. In December 2010, the SFMAC sunsetted because its members felt having a board organizational structure would offer additional clout to promote freight mobility. In its place, the Seattle Freight Advisory Board (SFAB) was formed; SDOT is the staff resource to SFAB. SDOT has policy guidelines that require broad engagement of stakeholders from all modes and therefore receives comments in at least the following ways: (1) SFAB submits its meeting minutes to the various SDOT project managers and also writes formal letters to the mayor and city council on various issues; (2) private individuals and groups provide feedback at public meetings; (3) ad hoc stakeholder group meetings furnish input about specific projects; (4) people send e-mails; and (5) people call and write letters to the mayor, city council, and SDOT. SDOT has found that freight stakeholders generally do not like to respond to surveys, but are more likely to offer input through phone or in-person interviews.

Recently, a trimodal committee was formally chartered to ensure transportation issues are addressed from the perspective of multiple modes rather than in silos. The trimodal committee is made up of the chairs and vice chairs of the SFAB, the Bicycle Board, and the Pedestrian Board. Because they are peers, members of the trimodal committee have been effective in breaking down barriers by having a forum in which the needs and nuances of their particular modes can be shared and where they can work more collaboratively to achieve better overall outcomes.

Feedback from Stakeholders

Three instances of successful stakeholder engagement that yielded positive outcomes are described:

- SDOT engaged motor carriers very early when it reconstructed the Fremont Bridge over the Seattle Ship Canal, which connects Puget Sound, Lake Washington, and Lake Union. Stakeholders provided truck routing information and operational strategies. The motor carriers were so involved they wanted to know where SDOT was positioning every detour sign and had opinions about them all.
- There was a great deal of discussion with and recommendations from the freight community on the State Route 519 project near the Seattle stadium area. This resulted in a plan to construct a multimillion-dollar truck overpass to bypass blocked waterfront area railroad tracks adjacent to the Port of Seattle's Terminal 46.
- Several years ago, SDOT successfully brought together rail and truck interests on a project where the City of Seattle was studying whether to close a truck route that crossed rail tracks. This study enabled the two groups to discuss the interaction between the two modes as well as safety and delay issues from both perspectives, which led to a more balanced outcome.

Decision Points

SDOT gives freight stakeholders the opportunity to be engaged early and on an ongoing basis in the LRP, PRO, COR, and ENV processes. Box A.5 presents the principal freight-related decision points of this case study. Usually SDOT collects information on big picture freight issues at the beginning of the LRP process, but frequently, stakeholders offer specific information. It has been SDOT's experience that freight stakeholders generally do not like having endless meetings just about big picture issues but appreciate focused interaction. Often, SDOT receives input from those most impacted by a project, such as private citizens, neighborhood groups, and local policy experts who enjoy weighing in on transportation projects. SDOT and freight stakeholders regularly educate the public about the nuances of cargo movement, the value of freight mobility, and its connection to a healthy economy, job retention, and growth.

SDOT involved stakeholders in scoping needs and solutions for past freight plans. The last SDOT freight plan was prepared in 2005. The plan had a short-term focus and included new actions and programmed capital projects that benefited freight. SDOT also works closely with representatives of Seattle's two manufacturing and industrial centers and the Port of Seattle, critical economic engines of the city. The primary focus is on ground transportation and marine facility landside access. The foundations of the freight plan are the Seattle Comprehensive Plan and the Seattle Transportation Strategic Plan. Both plans contain specific freight plan elements. SDOT has proposed that the City of Seattle prepare a citywide freight master plan. Once funded and programmed, SFAB will be consulted throughout the planning process (LRP 1).

SDOT expects to coordinate with freight stakeholders during the plan's initiation phase. Regarding the past freight action plan, the primary focus of freight stakeholders has been on positive actions, funding, and implementation (LRP 2). SDOT expects to receive input from freight stakeholders on their interests and suggested performance measures as the future freight master plan proceeds. SDOT communicates with a range of stakeholders groups, including bike and pedestrian, in developing multimodal plans in the spirit of fostering an inclusive process (LRP 3). SDOT has recognized that freight stakeholders are very interested in reviewing specific project design and maintenance plans that affect major truck routes and other key arterials used for freight movement. Freight operators are very knowledgeable about bottlenecks and performance concerns, and SDOT is receptive to hearing these anecdotal stories early in the LRP phase as well as during other planning phases. SDOT identifies priority corridors that consider connectivity, demand, physical feasibility, and stakeholder

Box A.5. Long-Range Planning, Project Programming, Corridor Planning, and Environmental Review, Seattle Department of Transportation and Seattle Freight Advisory Board—Ongoing Freight Stakeholder Involvement Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

LRP 1: Scope Crafting
LRP 2: Vision and Goals
LRP 3: Evaluation Criteria
LRP 4: Issues and Needs
LRP 5: Financial Assumptions
LRP 6: Strategies
LRP 7: Plan Scenarios

PRO 1: Revenue Sources
PRO 3: Project List
PRO 4: Ranking Projects

COR 2: Problem Statement
COR 3: Goals and Objectives
COR 5: Evaluation Criteria
COR 6-7: Solution Sets
COR 8-9: Implementation Priorities

ENV 4: Freight Concerns
ENV 6-7: Approve Alternatives
ENV 8: Draft EIS Comment
ENV 9-11: Ongoing Dialogue

input. Freight stakeholders provide information on corridor-level and spot improvement needs (e.g., vertical and horizontal obstructions), and intersection geometry (tight radii), traffic control (signals, striping, and signing), conflicts with other modes, and general loading needs. Stakeholder input is recognized and the plan is modified as appropriate (LRP 4).

SDOT discusses plan costs and financing measures when developing plans and identifies the possibility for public-private partnerships. SDOT tends to solicit external agency participation and private funding more often in the specific project's development phase. At the regional level, SDOT has been an active participant in the regional Freight Action Strategy for the Everett-Seattle-Tacoma Corridor (FAST Corridor) Partnership, which has funded a series of street and rail grade separations and port access improvements (LRP 5). More information about the FAST Corridor Partnership can be found in the PSRC case study summary. SDOT has involved freight interests in developing past action plan components, including strategies and plan scenarios through ongoing communications with SFAB and manufacturing and industrial interests (LRP 6). SFAB has offered input on draft plans at meetings, in meeting minutes, and through formal correspondence to elected officials and SDOT on topics of particular interest. SDOT expects to hold public meetings and use other communication practices to give freight stakeholders the opportunity to provide input on the freight master plan. In addition, the Seattle City Council provides an opportunity for public comment prior to plan adoption (LRP 7-11).

Since funding is a critical element in project planning, SDOT discusses potential revenue sources with freight stakeholders on both the corridor and project level. Stakeholders do not approve revenue sources unless the funds originate from an external agency or private-sector constituency. For example, SMIC has contributed funding to the intelligent transportation systems program. SDOT also receives support letters for project funding applications. SDOT is not pursuing tolling mechanisms at this time, though the Washington State DOT is expanding tolling in the Puget Sound Region. One specific public-private partnership that SDOT fosters is for funding participation to improve paving on industrial area streets (PRO 1).

The City of Seattle provides all stakeholders the opportunity to comment on the particular improvement program prior to adoption by city council and the mayor. SDOT presents SFAB with information on SDOT projects planned for the calendar year, along with individual project schedules and contacts (PRO 2). SDOT identifies projects that are on significant freight and port connector routes, and by analyzing annual truck tonnage data (PRO 3). The freight project prioritization methodology differs from other modes to some extent, for example, to recognize challenges that include physical clearances and weight limitations (PRO 4). In this regard, the input from freight stakeholders is essential to ensure the project accommodates the special needs of certain products, such as over-dimensional cargo.

SDOT and Washington State DOT have formed steering committees and work groups for very large projects, in particular for corridor-level projects. SDOT involves all modal stakeholders in identifying scoping needs and solutions for corridor projects. They plan to consult with the SFAB on the future freight master plan and will coordinate with Seattle's two manufacturing and industrial centers and the Port of Seattle. SDOT has structured project alternatives in an effort to accommodate freight interests in the corridor plans (COR 1).

Freight stakeholders are involved in developing corridor study goals and objectives and play a role in developing criteria and performance measures for evaluating the corridor at a very high level (COR 2-5). Once solution sets and specific project alternatives for corridor plans are developed, freight stakeholders are consulted and given an opportunity to provide input to ensure freight needs are addressed and there are no deficiencies in the solutions and alternatives. SDOT has structured project alternatives in an effort to include freight interests in corridor plans. On occasion, the former freight stakeholder committee indicated a preference for one or more plan alternatives. Similarly, Seattle's manufacturing and industrial interests provide their perspective (COR 6-7) for both the project alternatives and implementation priorities (COR 8-9).

Freight stakeholders are not formal participants in the environmental review processes. Freight input is solicited through the public process and SFAB, and by the membership of steering and working committees. In the past, freight stakeholder groups have submitted formal comments on city and state projects of particular interest. Freight stakeholders are not involved in developing the scope of environmental review; however, freight modal considerations are a typical component of the project environmental review process. SDOT does not typically solicit feedback from the freight community on how well the purpose and need reflects freight stakeholder concerns in the early stages of project development. The exception is for projects that significantly improve freight access and circulation to freight destinations. Freight stakeholders do have the opportunity to review the draft as part of the typical public review process, so their voices can be heard (ENV 1-3). Feedback is sought in applicable studies and projects regarding the study area and boundaries. The type of feedback includes level of truck activity, size of trucks, relationships to other transportation modes, operational needs, and detours (ENV 4).

During approval of the full range of project alternatives, SDOT works with the freight stakeholder community to a limited extent to evaluate the alternatives and identify a preferred alternative, typically for a project with significant freight mobility importance (ENV 6-7). On the other hand, during the review and approval process of the draft environmental impact statement (EIS), SDOT engages freight stakeholders

outside the traditional public review efforts by soliciting SFAB input, and through targeted meetings with manufacturing and industrial stakeholder groups. Other mechanisms for engagement include a truck stakeholder Listserv (e-mail alert list), project-specific Listservs for stakeholders to sign up for, and media releases (ENV 8). Once the public comment period for the draft environmental document is completed, SDOT maintains a dialogue with the freight stakeholder community on the project approval time frame by means of the typical project public review process. SDOT periodically updates the SFAB about larger, more significant projects.

On the whole, SDOT's efforts to reach out to freight stakeholders have proven very beneficial to its ongoing efforts to maintain and enhance the city's multimodal transportation system.

Long-Range Planning, Project Programming, Corridor Planning, and Environmental Review, Puget Sound Regional Council, Puget Sound Regional Council Regional Freight Mobility Roundtable, and Freight Action Strategy for the Everett-Seattle-Tacoma Corridor—Ongoing Freight Stakeholder Involvement

Background

This case study highlights the efforts of PSRC, the MPO overseeing the transportation system in the Washington counties of Kitsap, Pierce, King, and Snohomish, to increase and enhance outreach to freight stakeholders in the Puget Sound region through the use of two formal freight advisory committees. Establishment of these official freight advisory groups was the result of the public officials' growing recognition of the connection between a well-functioning multimodal transportation system and the region's economic health. Hearing the voices of freight stakeholders became an essential part of the planning, programming, corridor, and environmental processes undertaken at the regional level and led to improved freight planning processes and transportation infrastructure projects that were more beneficial to freight interests. PSRC works closely and collaboratively with SDOT since Seattle is located in King County. A summary of SDOT's freight stakeholder outreach efforts is presented in a separate case study.

Stakeholder Engagement Activities

More than a decade ago, PSRC established two freight-related advisory groups: the Regional Freight Mobility Roundtable (RFMR) and Freight Action Strategy (FAST) Freight Advisory Committee (FAC). Though each group has a different composition and focus, they complement one another quite well. RFMR, founded in 1997, is open to any interested party and is chaired by Dan O'Neil, who also chairs the Washington State Transportation Commission. Members come from maritime shipping, ports, railroads, shippers (such as Boeing), and other parts of the private sector, Washington State DOT staff, and legislative staffers from regional governments. Meetings are held at the PSRC office every other month and average 30 to 40 attendees. The agenda is different for every meeting and always concerns topical issues relating to maritime shipping or multimodal transportation and/or specific regional or local projects or issues. Example presentations to educate RFMR members include those by Washington State DOT, the U.S. Navy, FedEx, and UPS staff. At the meetings, discussion is usually open and lively. For review of most projects or programs, feedback is provided to PSRC, but generally no official voting takes place.

From the beginning, PSRC was successful in attracting high-powered and interested participants from across the region to RFMR. Originally, the group was made up mostly of quasi-public-sector people, but as time went on, more private-sector representatives joined. According to a long-time RFMR member, PSRC was able to attract the movers and shakers from the region by finding a way to make freight "sexy" by demonstrating the connections between freight mobility and economic development. There is a good mix of members on RFMR and the group is very vibrant. According to one of the original members, PSRC got the organizational structure right by having co-sponsors and the chair has done a great job maintaining the group's objectivity. Another positive is that the group does not meet excessively, so members do not get overwhelmed or lose interest.

RFMR has been able to take the various messages out to wider audiences in the community because it ties freight mobility back to job creation and economic health, which resonates with everyone a large constituency. Once it hears from RFMR members about an issue, PSRC takes a position and works the issue through regional and state governments. RFMR members advocate for the issues to local, regional and state government officials. It is rare for the ideas of PSRC and RFMR to conflict. RFMR members gain allies through membership in the committee in their lobbying efforts to government officials, magnifying their voices. This added bonus makes them more likely to continue their membership.

Another important organization for freight outreach, the FAST for the FAST Corridor is a partnership of 26 local cities; counties; ports; federal, state, and regional transportation agencies; railroads; and trucking interests, intent on solving freight mobility problems with coordinated solutions. Established in 1998, the FAST Corridor partnership was formed to address the 25 most important projects that would improve

freight mobility across the region. This consolidated approach resulted in a more successful outcome than doing the projects piecemeal. While originally having access to federal funds to complete the FAST projects, the seed money that assisted the partnership in completing 20 projects so far is no longer available. Despite the loss of funding, the FAST program had institutional knowledge that PSRC wanted to maintain, so the group evolved into an official regional freight advisory committee—FAST FAC—that provides input and advice to other groups in the regional governance structure. FAST works on regional planning to ensure government planners take freight issues into consideration. It also advises the Transportation Policy Board within the PSRC, which is mostly made up of elected officials, and regional staff committees, which are managers at local governments and senior planners who can speak for their organizations.

FAST has served as a technical freight advisory body to provide input related to freight and goods movement for the long-range planning process, while still working to complete the remaining five of the original 25 FAST Corridor projects. Members come from local governments, ports and railroads, and other interested PSRC members may participate. FAST has a co-chair structure and from 10 to 12 members attend meetings held every other month. FAST is a "roll-up-your-sleeves" type of committee that provides PSRC input and feedback on long-range plan updates and other planning issues for local governments, the region, and the state, often at a detailed, project-specific level.

Feedback from Stakeholders

In developing previous regional freight strategies, input and lists of recommendations from both RFMR and FAST were included as background material, the final work product, maps, and so forth. PSRC does not use a single method to solicit input from private and public stakeholders. On a project-specific basis, PSRC has learned it must reach out to various stakeholders through one-on-one interviews and focus groups; otherwise the process becomes self-selecting where only the voices of those who speak loudly and frequently are heard. These methods are particularly useful in reaching private-sector stakeholders who do not often attend meetings, as they stay in the office performing their daily job functions to keep freight moving. PSRC learned from previous discussions with private industry representatives that freight stakeholders prefer to be engaged early and often.

Two recent successful PSRC efforts to engage freight stakeholders are cited as follows:

- As part of the process of developing the long-range transportation plan adopted in 2010, *Transportation 2040,* a separate appendix titled "The Regional Freight Strategy" was created to cover many of the bigger issues with regard to freight and goods movement. During 2009, PSRC held events at its office and went out to various locations to meet new people who traditionally had not been involved in previous strategic planning efforts. It even held a focus group with local trucking and logistics managers to hear their perspectives. PSRC gathered unique and valuable information by going out and actively soliciting input.
- Even though RFMR members generally discuss "big picture" issues, in 2006 a major state highway project was planned that intended to improve connectivity from the Port of Seattle to I-90. However, subsequent to the project's conception, two stadiums were built in the area, which drastically altered traffic flow and increased congestion. During a presentation at RFMR, freight stakeholders expressed concern that the project as originally designed would no longer achieve the desired goals for regional freight and goods movement under the existing conditions that included increased activity near the stadiums. After these concerns were brought to the forefront, changes were made to the project scope that helped meet the freight needs for the project. Overall, the project outcome was better as a result of public discussions with freight stakeholders.

Decision Points

PSRC starts engaging private and public stakeholders early and throughout all planning processes. Box A.6 presents the principal freight-related decision points of this case study. Stakeholders are asked to identify the larger, regional issues as part of every project scoping process (LRP 1). The earlier PSRC hears about major issues, the better, and PSRC always records public comments throughout every planning process. In a broad sense, PSRC does not engage the RFMR on every issue or every project, as this would overwhelm members. Rather, it uses FAST to deal with more granular issues and small projects. During the planning process (LRP) for specific projects, PSRC solicits feedback from RFMR members after roundtable meetings by setting up an interview room adjacent to the main meeting room where RFMR members can converse with staff members. PSRC also performs targeted outreach across the region. PSRC has learned it is easier to gather feedback from private- and public-sector stakeholders on specific projects like the Columbia River Crossing than on LRP or visioning processes, where more technically oriented participants (such as those on FAST) are more inclined to be interested and engaged.

PSRC coordinates with its freight stakeholder groups during the regional freight plan refinement process. PSRC generally involves freight stakeholders in the discussion and approval of vision and goals for the long-range plan (LRP 2) to make sure freight interests are addressed, and when discussing evaluation

Box A.6. Long-Range Planning, Project Programming, Corridor Planning, and Environmental Review, Puget Sound Regional Council, Puget Sound Regional Council Regional Freight Mobility Roundtable, and Freight Action Strategy for the Everett-Seattle-Tacoma Corridor—Ongoing Freight Stakeholder Involvement Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

LRP 1: Scope Crafting
LRP 2: Vision and Goals
LRP 3: Evaluation Criteria
LRP 4: Issues and Needs
LRP 5: Financial Assumptions
LRP 6: Strategies
LRP 7: Plan Scenarios

PRO 1: Revenue Sources
PRO 3: Project List
PRO 4: Ranking Projects
PRO 5-9: Additional Feedback

COR 1: Study Scope
COR 2: Problem Statement
COR 3: Goals and Objectives
COR 5: Evaluation Criteria
COR 6-7: Solution Sets
COR 8-9: Implementation Priorities

ENV 1-3: Study Scope, Purpose, and Need
ENV 4: Freight Concerns
ENV 6-7: Approve Alternatives
ENV 8: Draft EIS Comment
ENV 9-11: Ongoing Dialogue

criteria for projects to be included in the TIP, LRP, etc. (LRP 3). Freight stakeholders provide helpful feedback on how to measure project success. When PSRC does LRP, it solicits input from system users about specific bottlenecks and other transportation deficiencies, priority corridors, and freight needs, though this information is usually not surprising. Input is included in the plan either as background information, maps, or appendices, or as a combination of all three, generally in the freight component of the plan (LRP 4).

Once the general planning needs are identified, PSRC discusses financial assumptions with freight stakeholders (LRP 5) and seeks ideas from members of the two advisory committees about potential public-private partnerships and funding mechanisms. Freight stakeholders are included in discussions during the approval stage of strategies and plan scenarios to ensure that transportation projects address the needs of the freight community (LRP 6). Input on draft plans is solicited at RFMR and FAST meetings, public outreach meetings, public comment meetings, and so forth, and incorporated into the plan, as appropriate (LRP 7-11).

During the development of TIPs, FAST members provide feedback on potential funding sources for projects (PRO 1). If tolling or other user fees are being considered, PSRC requests comments from FAST members, who also provide input on evaluation methodologies to identify project costs and criteria for allocating revenue (PRO 2). FAST also is used as a source of feedback on the inclusion of freight priority projects in the development of the TIP/STIP (PRO 3). Project lists are reviewed by FAST and by freight stakeholders at other public meetings, in focus groups, and through individual interviews. Projects that will benefit freight mobility are specifically called out in the TIP/STIP. FAST provides its opinion on prioritization of projects most important to enhance freight mobility and address other freight-related system deficiencies. PSRC's methods for ranking and prioritizing projects are comprehensive and examine aggregate benefits across user classes, and not by mode (PRO 4). After providing comments on the draft TIP/STIP, PSRC continues to engage freight stakeholders in discussions. Some members of FAST participate in the Regional Project Evaluation Committee, which takes freight into consideration along with many other transportation functions (PRO 5-9).

Freight stakeholder input is solicited at the beginning and throughout the corridor planning process. Stakeholders provide comment when the project scope is being developed (COR 1) and are involved in formulating study goals and objectives to ensure the outcome of the study will be beneficial to freight interests. PSRC consults with each FAC about appropriate evaluation criteria and performance measures to judge the project's success in meeting freight needs. Both committees provide valuable information about freight flows along and through corridors (COR 2-5). PSRC solicits feedback and recommendations once solutions and specific project alternatives have been determined, but stakeholders do not generally hold a vote on the best alternative. However, while RFMR does not make specific recommendations, FAST members may consider drafting letters of support for an alternative to local, regional, and/or state governments, and individual members frequently submit comments and recommendations on behalf of their local government or organization (COR 6-7). Freight stakeholders play a major role in identifying implementation priorities to ensure the most critical issues get addressed timely (COR 8-9).

PSRC's LRP process is not subject to NEPA but is subject to Washington State's Environmental Policy Act under Washington state law. As such, all stakeholders participate throughout the planning process and there is always a public comment period during the environmental portion of a project. PSRC solicits feedback from the freight community on how well the purpose and need reflect freight stakeholder concerns as part of the public comment process. RFMR and FAST members are asked to review the purpose and need statements and the

draft plan to highlight any deficiencies and suggest revisions (ENV 1-3). As in other planning processes, freight stakeholders help the PSRC identify system bottlenecks, recommend system improvements, provide comments on specific infrastructure projects, and identify key freight corridors (ENV 4). They also help the PSRC identify performance measures (ENV 5) and vet the range of project alternatives during the environmental review process (ENV 6-7). During the review and approval process of the draft EIS, PSRC engages freight stakeholders outside the traditional public review efforts through special meetings and presentations (ENV 8). Ongoing dialogue with the freight community is maintained via RFMR and FAST meetings and other public outreach events so PSRC will be kept abreast of changing freight-related conditions and trends (ENV 9-11).

Using RFMR and FAST as sources of freight-related information and to vet elements of regional and project-specific plans has enabled PSRC to develop and implement better plans and execute infrastructure projects that more effectively address freight stakeholder needs.

Corridor Planning, Indiana DOT: Mid-America Freight Coalition—I-70 Dedicated Truck Lanes Feasibility Study

Background

Deteriorating traffic lanes and recognition of increasing truck traffic in and through the states of Ohio, Indiana, Illinois, and Missouri prompted the participating states to develop a multistate, collaborative study to implement truck-only lanes on Interstate 70 (I-70) beginning in 2006. All four states are members of the Mid-America Freight Coalition (MAFC) and the study was facilitated through that organization. The Mid-America Freight Coalition was formerly the Mississippi Valley Freight Coalition. The study effort was led by Tom Sharp [Indiana Department of Transportation (INDOT)] through discussions with Pete Ron [Missouri Department of Transportation (MoDOT)], and led to an application for a "Corridors of the Future" grant that would study the truck lane concept along the four-state corridor. The total study cost was around $6 million, with the $5 million grant covering the majority of the costs for planning in Missouri, Indiana, Illinois, and Ohio. Driving the study was a strong recognition from all the states that heavy truck movements between Missouri and Ohio would benefit from major improvements, including dedicated truck facilities. According to the project manager from INDOT, the most critical needs along the corridor include portions between Columbus, Ohio, and Indianapolis, Indiana; however, there is recognition that the bulk of the traffic within the corridor travels less than 500 miles, with a large proportion traveling less than 300 miles. This indicates that there could be substantial user benefits to completing individual sections of the truck lane corridor on the way to promoting a truck lane concept throughout the region.

Each state involved in planning for the I-70 truck lanes has over time reported different priorities for the corridor and many already have been involved in substantial individual planning efforts. Missouri had previously done and continues to do extensive planning and environmental review within its portion of the corridor and obtained a record of decision (ROD) concluding the environmental analysis. This provides the opportunity for MoDOT to quickly begin construction on availability of federal funding. There have been other successes through TIGER grant application processes with INDOT and MoDOT being selected for grants to enlarge truck parking areas adjacent to I-70. Ohio currently is working on its own long-term maintenance strategies for I-70, and several of the states are exploring public-private partnerships (PPP) for improving the corridor within their jurisdiction. There is an expectation that the I-70 truck lane project will not move forward without some kind of PPP, and it is of strong benefit to the project that enabling legislation is not a major constraint for the partners, due to recent agreements. It is clear to all four states that I-70 needs to be improved, and the truck lane concept provides a solid solution to facilitate freight and overall traffic flows on this important regional corridor.

Stakeholder Engagement Activities

Through the planning process for the I-70 truck lanes, there was positive engagement with the freight stakeholder community, especially with key representatives from the trucking industry. For the project, the MAFC did not form a formal freight advisory committee. Instead, there were focus group discussions held to explore opportunities for the corridor such as longer combination–higher productivity vehicles and one-on-one interviews held with shippers, third-party logistics providers, and other system users to present the various dedicated truck lane concepts. In 2009, after some preliminary discussions about the project, the state DOTs met with representatives from each of the four state trucking associations, an owner-operator association, and one large carrier (Con-way) to introduce the project and continue dialogue. Based on follow-up discussions with Indiana and Missouri trucking associations, there was not a great deal of clarity at first on what the goals and objectives of their involvement were; however, both participants interviewed were glad to have been a part of the process for a "voice at the table." There was an interest in gaining more information about the focus of the project and how this effort was connected to previous corridor planning at each DOT. Throughout the process, the project team engaged private stakeholders through presentations and

individual meetings with trucking associations, held meetings with MPOs and conducted survey outreach with key shippers in the region. Other outreach methods included focus groups and radio interviews with truck driver radio shows (estimated 1 million listeners) between 2009 and 2011. One key question asked in all the surveys: *What does the truck facility have to do in order for you to use it?*

INDOT developed the original outreach list with insight from project partners, including each DOT and the trucking associations. The list was vetted by the consultant team, and there was strong attention paid to including a broad range of stakeholders, not just trucking firms, but a broad cross-section of trucking firms [less-than-truckload (LTL), truckload], in addition to major shippers. The study team also reached out to the railroads due to the potential for a modal shift of cargo with an improved I-70. During the course of the project, one major Class I railroad spent the whole day with the study team to better understand the concept and planning effort. This provided the potential to bring in other views to the process and hopefully ally stakeholder concerns of possible negative effects of the project. The success of the I-70 planning effort was due in large part to personal relationships with key freight stakeholders and focus from the project team. The outreach plan was not institutionalized, with mostly ad hoc interaction.

Feedback from Stakeholders

There currently is a memorandum of understanding (MOU) or corridor development agreement between all the different coalition partners. Under this agreement, the partners are expected to cooperate and share information and support the process moving forward. INDOT has been the champion of the multistate effort, along with MoDOT. One of the benefits of the agreement is that it is not binding and that it gives states flexibility to move planning and implementation of individual project segments forward within their jurisdictions without having to worry about penalties from the other members or delays in the overall project concept. Coalition members participate in the group because they see strong network benefits from completing truck lanes along the entire corridor. Priorities for the private sector were highlighted early on in the project planning and include identifying operational and access effects from the project, resolving revenue and cost issues, and improving the understanding of benefits from the project (e.g., safety). According to the Missouri Trucking Association, the stakeholders who participated from the trucking association saw value in the roundtable discussions and focus group meetings on the project goals and intent, although the focus on getting letters of support for the project as proposed seemed to trump gaining additional substantive feedback.

Decision Points

Generally, freight stakeholders need to be involved early and often, with a clear understanding of the overall project goals to encourage ownership of the project outcomes. If stakeholders (who are users) do not have ownership of the project, it may have difficulty gaining traction and funding commitments. For the development of the I-70 Dedicated Truck Lanes Feasibility Study, the trucking industry and other key freight stakeholders were presented with the goals of the corridor (COR 3), and asked to respond. According to the stakeholder follow-up interviews, these goals could have been more clearly defined for them, especially with so many parallel planning efforts underway (with each individual DOT). According to the Indiana Motor Truck Association, there was some confusion about which project the focus group meetings were addressing.

The private sector was most interested in operational and access considerations (COR 2) and the funding options (PRO 1). Box A.7 presents the principal freight-related decision points of this case study. Stakeholders overall were not necessarily opposed to the concept of tolling, however, there is a recognition among stakeholders that the project will not happen without some sort of public-private partnership. There also were differing views among stakeholders on the funding concept with many potential users reserving judgment on how such a system would be implemented. There was very strong support for the truck lane concepts (COR 6), especially if it included ability to use longer combination vehicles (LCVs) (approximately 80% of trucking representatives endorsed the concepts during outreach activities). Project sponsors were especially interested in soliciting shipper and carrier feedback on specific design options. The trucking community did raise the issue that supporting a specific concept (COR 7) might preclude momentum to allowing longer combination vehicles on the entire Interstate system in the future. There also were questions about corridor priorities (COR 9) exploring issues such as volume and weight benefits

Box A.7. Corridor Planning, Indiana DOT: Mid-America Freight Coalition—I-70 Dedicated Truck Lanes Feasibility Study Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

PRO 1: Approve Revenue Sources

COR 2: Problem Statement
COR 3: Goals and Objectives
COR 6: Solution Sets
COR 9: Priorities/Implementation

of users, efficiency in shipments, reduced congestion, and safety considerations.

For a major freight facility such as I-70, there was a strong interest in getting stakeholders involved early to solicit feedback on the concepts being explored. There is a growing recognition at DOT of the need to improve coordination between the freight planning staff and corridor planners. Many project managers are not focused on freight, since freight issues are not generally seen as "show stoppers" on projects. For the I-70 project, there was a concerted effort to involve both planners and engineers throughout the agency in developing project concepts. For future planning efforts related to the I-70, INDOT is exploring a pilot program on the use of LCVs across I-70 in Indiana and on the Ohio Turnpike. Pilot implementation will require federal legislation but INDOT is pursuing the concept. The MAFC also is exploring a potential NEPA study for tolling on multijurisdictional corridors to continue to improve I-70.

Long-Range Planning, Project Programming, Corridor Planning, and Environmental Review, Georgia Department of Transportation—Statewide Freight and Logistics Plan Implementation

Background

Due in large part to a growing recognition of the importance of freight and logistics to the Georgia economy, in recent years, the governor's office in Atlanta, Georgia Department of Transportation (GDOT), and the MPO in the state, have substantially increased attention to freight and logistics. This case study highlights the efforts of GDOT and collaboration with these other organizations to expand their focus on improving freight planning and collaborative decision making in the state. GDOT's efforts have truly raised the profile for freight projects, in part by using resources from TRB's NCFRP and other organizations to improve GDOT's institutional capacity and continue to expand collaboration efforts. The governor's Task Force on Freight and Logistics coupled with the nearly completed Georgia Statewide Freight and Logistics Plan and implementation program promises to continue the momentum for improved freight planning in Georgia.

Stakeholder Engagement Activities

Although GDOT's freight stakeholder outreach program is still evolving, previous planning efforts, such as the 2004–2005 State Transportation Plan and Statewide Strategic Transportation Plan (2009–2010), identified freight as an emerging priority for the state and brought attention to improving the outreach methods to engage stakeholders. For previous outreach efforts, GDOT has generally worked with a small group of stakeholders: Georgia Motor Trucking Association, Georgia Ports Authority, and representatives from the rail and airport sectors. Input from these representatives has been used for both long-range and corridor planning efforts. The Georgia Statewide Freight and Logistics Plan (2009–2011) elevated the profile of outreach efforts throughout the state through contact with a broad range of both public- and private-sector stakeholders. A concerted effort was given to form a stakeholder advisory group for the project to build on interest and momentum for identifying freight issues in the state. For corridor planning, during the development of four recent studies, including "Connect Central Georgia," there was a focus on highlighting freight needs, including potential increases in truck volumes to and from the Port of Savannah as a result of the Panama Canal widening. For both long-range and corridor planning, the tools for evaluating the impacts of freight in the region have improved substantially. Several years ago, GDOT did not even have a traffic count program. Now they not only use counts to evaluate traffic flows but also collect truck counts to measure the effects of trucks on key facilities.

Feedback from Stakeholders

For the development of the Georgia Statewide Freight and Logistics Plan, a private-sector advisory council provided input throughout the process. The governor of Georgia hosted a committee of high-level executives (from UPS, Home Depot, railroads, and key trucking firms) with special guests from the Georgia Ports Authority, legislative committees, and the Center for Logistics Innovation in the state. GDOT has played a major role in this coordination. This process had evolved through efforts from the previous governor of the state who had formed a series of task forces to explore transportation issues, including the Georgia Task Force on Freight and Logistics. This attention to freight at the highest level helped highlight the importance of the issue with the private sector and signaled official support for transportation improvements that would serve freight interests. One way that these issues were codified was through an annual summit at Georgia Tech to identify freight transportation issues in the state. Beginning in 2007–2008, and through an evolving process, GDOT and the Georgia Task Force on Freight and Logistics worked with the Georgia Center for Logistics Innovation to organize the summit. GDOT was a major participant at the summit and stakeholder attendees had the opportunity to meet with staff to discuss issues and needs for freight and logistics in the state. GDOT currently is working on strategies to integrate findings from the Task Force on Freight and Logistics into the state's existing planning and

project selection processes. The governor's role in supporting freight projects has assisted greatly in illuminating the importance of freight issues. Recent discussion topics between the governor and industry include cost/benefit analysis for transportation projects. Feedback from industry has helped immensely to identify project categories, review high-level network analyses, and identify projects that have greatest benefit.

Decision Points

Box A.8 presents the principal freight-related decision points of this case study. During the GDOT process to update the long-range transportation plan, freight stakeholders have generally not been involved in crafting the scope; however, the agency recognizes the value of identifying the interests of key stakeholders and garnering participation through informal outreach, such as phone calls or off-the-record discussions at meetings. During subsequent phases, freight stakeholders have been more involved. During the development of the Statewide Freight Plan, the efforts of which informed the LRP process, GDOT involved freight stakeholders in the creation and vetting of the vision and goals (LRP 2) and development of evaluation criteria (LRP 3). The process was iterative and took the form of meetings with a defined agenda and solicitation of comments and responses. There also was extensive outreach in the identification of bottlenecks and other transportation deficiencies (LRP 4, COR 2). Since most of the outreach is done by the MPOs, GDOT generally acts as a repository of information, collating the findings from the MPOs and providing a statewide perspective. The insight from the freight stakeholders on bottlenecks and deficiencies is generally provided through survey outreach or Q&A at meetings. For later phases in the LRP process, freight stakeholders at the statewide level have been involved in the approval of strategies (LRP 6) by helping the MPOs identify priorities. The state facilitates discussion with the MPOs and codifies the statewide benefits of regional projects. During the planning process, GDOT held one-on-one interviews with the MPOs to identify regional issues. The MPOs in Georgia are largely very involved in the process and recognize the value and necessity of their input. During the approval process of the LRP inputs (LRP 7-11) comments from stakeholders are integrated and draft documents presented to the group for their buy-in. Following the approval of planning documents, freight stakeholders facilitate outreach through support of projects most beneficial to freight in their discussions with elected officials.

For PRO, since most of the inputs are developed by the MPOs, GDOT has a passive role in collating the regional information for the state TIP (STIP). At the state level, there is little required involvement for freight stakeholders. GDOT maintains a stakeholder mailing list, but there is no formal outreach effort. Currently, there is no separate funding source for freight projects, and thus no separate category in the STIP. GDOT is exploring ways that the TIP/STIP process can be used to highlight freight-beneficial projects (such as truck turning radii improvements) and are considering a pilot program to identify strategies (PRO 2).

Freight stakeholders are not generally involved in the very early stages of COR; however, GDOT tends to solicit feedback and insight from stakeholders during the development of goals and objectives (COR 3) and evaluation criteria (COR 5). This feedback is provided during the course of corridor studies and in the context of larger project advisory committee meetings. Only certain corridor studies with a major freight interest or issue (COR 2) have had separate outreach with a comprehensive freight stakeholder group. Generally, one or two key stakeholders within the corridor, such as a major shipper, may be invited to be part of the larger stakeholder group that includes representatives from all interest groups, including freight. As part of an advisory group, stakeholders discuss and respond to solution sets (COR 6) but there is generally not any official action for approval of a particular solution set at this point in the process. For corridor planning in Georgia, depending on the facility (i.e., major trucking route), GDOT will engage the freight stakeholders about every 3 to 4 months (4 to 6 formal meetings during the duration of the project).

For recent corridor planning efforts with a major freight component, such as a 2007 truck lane feasibility study, GDOT involved several trucking industry representatives. The study explored the development of truck-only and managed lanes, and overall improvements along an important goods movement corridor in the state. Generally, GDOT tries to use

Box A.8. Long-Range Planning, Project Programming, Corridor Planning, and Environmental Review, Georgia Department of Transportation—Statewide Freight and Logistics Plan Implementation Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

LRP 2: Vision and Goals
LRP 3: Evaluation Criteria
LRP 4: Issues and Needs
LRP 6: Strategies
LRP 7: Plan Scenarios

PRO 2: Evaluation Criteria

COR 2: Problem Statement
COR 3: Goals and Objectives
COR 5: Evaluation Criteria
COR 6: Solution Sets

ENV 6/7: Approve Alternatives

creative outreach approaches when engaging freight stakeholders. A stakeholder advisory group formed for the Connect Central Georgia study (an initiative spanning the middle of Georgia from the Alabama border to the South Carolina border and encompassing the cities of Columbus, Macon, Warner Robins, and Augusta) explored access to major mining areas and industrial production facilities for kaolin. Kaolin is a mineral used in making paper, plastics, and other products. The group helped conduct an assessment of freight connections to the region and even attended a festival with kaolin producers. In summary, outreach methods for corridor plans are most effective when customized for the local environment with feedback from regional planning agencies and economic development and other industry associations. Preliminary interviews with these organizations can solidify the understanding of the key players in the region.

There is little engagement of freight stakeholders during the ENV, although, if community advisory groups are formed (as they typically are on larger or more controversial projects), there may be representatives from freight or the economic development community involved. Typically, stakeholders would be interviewed or brought in for feedback on the full range of project alternatives (ENV 6/7).

According to GDOT, the effectiveness of freight outreach really depends on the region and local support for identifying and engaging stakeholders. In locations around Georgia, where there is a relatively less organized population of shippers or a divergent group of carriers (e.g., small drayage firms) engagement has been more of a challenge. These users of the transportation system are often so focused on micro-level access issues that anything beyond is of little immediate interest. GDOT also has experienced challenges in engaging stakeholders in very rural areas, since system users are often more concerned with operational improvements of local facilities. For future freight planning efforts in Georgia, there is the expectation that the Statewide Freight and Logistics Plan will be "updatable" and the process will continue to improve. GDOT currently is considering that the freight committee formed for the project is used for an ongoing discussion of funding opportunities and potential public-private partnerships.

Corridor Planning, San Diego Association of Governments—Corridor Planning for SR 905 and SR 11/Otay Mesa East Port of Entry

Background

The San Diego area, with its bustling seaport and border connection with Mexico, offers an opportunity to evaluate freight considerations during the corridor planning process, based on two ongoing corridor initiatives: the SR 905 extension and the SR 11/Otay Mesa East Port of Entry (POE) project. In the San Diego region, there is a challenging environment for freight planning. Due to the interest of commuters and extensive congestion issues, there is more interest in highway capacity management than capacity additions as well as a focus on alternative modes of transportation, such as rail transit. In many parts of the region, physical constraints, cost, and congestion issues have reduced support for additional capacity expansion of the highway system. Based on these considerations, there is not a huge constituency for freight improvements. In spite of these challenges and due in large part to the availability of funding from a variety of federal, state, and local sources, the SR 905 expressway has been planned and constructed piece by piece, intended to provide key benefits by improving safety, reducing congestion, and improving operational efficiency for the movement of goods in the region.

Major issues influencing the corridor plans and subsequent projects are congestion and access to the Otay Mesa border crossing, issues that have been gestating for many years. Planners began noticing the problem in the 1980s when Otay Mesa Road (SR 905) opened. Previously, to access the border crossing, all truck traffic was routed to the parallel Virginia Avenue, a local street. The California Department of Transportation (Caltrans), in the 1990s, developed a project to widen Otay Mesa Road, although this was only seen as a temporary measure. There remain 11 traffic signals on Otay Mesa Road that contribute to extensive idling and poor efficiency standards for the large volume of trucks using the roadway. Later in the 1990s, Caltrans and the San Diego Association of Governments (SANDAG) began planning a more permanent solution, a limited access expressway connecting I-805 to the west with the Otay Mesa border crossing, which not only would serve passenger vehicles accessing the border but also would enhance the mobility for trucks serving the export assembly plants in the United States–Mexico border areas (maquiladoras) and points north.

The success of freight planning in the region largely stems from the coordination and relationships between SANDAG and Caltrans, as well as positive personal relationships with the chambers of commerce and the railroads. The region benefits from the recognition of the importance of the border region for the larger state economy and availability of funding sources, such as the Proposition 1B bond bill for goods movement at the state level. Additionally, flexibility in funding through SANDAG's Transnet (the San Diego regional sales tax for transportation improvements) sales tax allows the exploration of projects with regional benefits.

Stakeholder Engagement Activities

Generally, within the region there are not a lot of resources to do freight planning. For the SR 905 corridor planning process, freight stakeholders participated in the alternatives

analysis during the project development team process. The process also benefited through support from the chamber of commerce, trucking firms, and the railroad. Key regional stakeholders, such as representatives from the maquiladoras help raise awareness for freight movement issues; however, other constituents are largely absent. Throughout the process, these key stakeholders were interested in sharing information to help the MPO better understand the different planning time frames and operational issues for their businesses. Issues discussed during stakeholder meetings included tolling and financing opportunities and trucking and rail operations. A challenge was helping many of the stakeholders better understand the planning process and maximizing their ability to stay engaged. One strategy included minimizing the number of meetings for the stakeholders in attendance.

For the development of most corridor plans in the SANDAG region, including the SR 905 plan, the process generally begins with initial outreach and one-on-one follow-up on local access issues with users of the facility. For the SR 905 process there was a strong effort to identify the vision for the border with input from the freight stakeholders. Background studies helped to support this vision (e.g., traffic counts, truck volumes, delay). The key finding from this preliminary evaluation was extensive congestion in the Otay Mesa area, back-ups at the POE, and a clear recognition that demand for traffic, especially truck traffic, was outstripping supply on the corridor. The ultimate corridor vision, beyond the improvement of SR 905, was a second commercial POE—Otay Mesa East, 2.5 miles from the existing crossing. The MPO had conversations with trucking firms to share the vision and solicit their feedback. Value of time improvements and a tolling option were the stated priority preferences for short-term implementation. The process also helped to establish partnerships with transportation counterparts in Mexico and local planning entities.

At SANDAG, there is a separate borders committee that is focused on the new POE. The Borders Committee has a standing commercial forum and includes many public officials, which helps raise the profile of planning efforts associated with the border. The Borders Committee's efforts overlapped with the SR 905 corridor planning effort and involved interviews with stakeholders, surveys for tolling revenue (included responses from more than 2,000 border users), and a discussion of ITS solutions. SANDAG and Caltrans jointly managed an ITS and revenue study that supported the goal to substantiate the border crossing project. Stakeholder outreach during this process also was done through maquiladoras/Otay Mesa Chamber of Commerce. Building the outreach efforts for each project concurrently helped mitigate the "heavy lift" for staff time to conduct surveys and engage key stakeholders. For each of the projects, SR 905 and SR 11, the projects have been developed as funding becomes available (federal, state, local, tolling).

Feedback from Stakeholders

Throughout the process, and especially at the outset, it was crucial to identify the benefit for private-sector stakeholders and explore how the project might impact operations. There are three main types of freight stakeholders in the region with different interests that were engaged relative to those interests: customers, transportation providers, and the railroads. Customers (including shippers) are focused on how the project will influence freight rates (more efficient operations leads to lower costs). Transportation providers (carriers) are focused on operational issues (i.e., congestion, delay) and how the issues will influence their ability to compete and make a profit. Railroads have the interests of both and often have a similar outlook to the public sector on long-term operational benefits of transportation improvements. It is the experience of SANDAG that the customers and shippers are the most challenging stakeholders from whom input is sought. Information from these stakeholder types most helpful to planners is a better understanding how customers and shippers make location decisions. Chambers of commerce can play an important role here, helping to ferret out information and interpolate benefits to the larger freight community.

Decision Points

In corridor planning in the San Diego region, there is extensive collaboration between Caltrans and SANDAG, and the decision points are related to their collaboration. Box A.9 presents the principal freight-related decision points of this case study. Caltrans, as the DOT, has responsibility for overseeing and maintaining the highway system in the state and SANDAG, as the MPO and the regional transportation planning agency, has responsibility for improvements to the system. Corridor managers designated by Caltrans (shared employees between SANDAG and Caltrans) exist to help promote planning and improvements on a broader regional scale. Within the corridor manager framework, a dedicated staff member focuses on

Box A.9. Corridor Planning, San Diego Association of Governments—Corridor Planning for SR 905 and SR 11/Otay Mesa East Port of Entry Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

COR 2: Problem Statement
COR 5: Evaluation Criteria
COR 6: Solution Sets

COR 9: Priorities/Implementation

freight gateways that help manage and expedite projects in the freight portfolio. This portfolio includes highway projects, rail projects, and port access projects. The highway corridors initiative began about 5 years ago and originally designated the major Interstates in the region as warranting a staff member to focus on corridor-wide issues on I-5, I-15, and I-805. These corridor planning efforts have been used to identify early action projects funding through Transnet, regional sales tax for transportation improvements. There also has been a growing recognition of the value of evaluating all transportation modes within the corridors (including transit, managed lanes, and trucks) as a unified system.

Generally, the engagement of freight stakeholders is done on an ad hoc basis, based on specific projects and builds on a list of stakeholders involved in previous efforts or the Borders Committee. In addition to helping define logistics issues within corridors (COR 2), freight stakeholders are involved in forming evaluation criteria, and vetting, and assigning scores for projects (COR 5). SANDAG has project evaluation criteria for projects allowed to receive additional "points" associated with freight benefits. Freight considerations also are included in the multimodal evaluation, and freight projects have the opportunity to compete for $1 billion in statewide funds provided through the Goods Movement Emission Reduction Program (program). The program is a partnership between the state Air Resources Board (ARB) and local agencies (like air districts and seaports) to quickly reduce air pollution emissions and health risk from freight movement along California's trade corridors. For later stages in the corridor planning process, such as the approval of solution sets or specific project alternatives (COR 6), stakeholders have provided input as solutions are developed, however there is no official action (i.e., resolution) from the private sector. The implementation plans (COR 9) do necessitate feedback from private-sector freight stakeholders to see how the plan will affect business.

From SANDAG's experiences with outreach with the private-sector freight community on the SR 905/SR 11/POE projects in the Otay Mesa area, a distinction between larger network effects and local effects are very important and help break down barriers between the MPO and the state. The ad hoc groups formed for different issues need to be maintained and the engagement with stakeholders kept active. The MPO can continue to improve engagement with private-sector freight stakeholders by better identifying the key benefits of projects (i.e., what is "in it" for them). Targeted outreach and one-on-one interviews provide the best medium to codify the understanding of these benefits. There also exists a public lack of awareness of the benefits of freight projects that needs to be improved. For projects to gain traction in the region, both the freight community and the motoring public at large need to recognize the benefits. It also is important for the study team to describe and promote the benefits to users outside the immediate region (especially for larger-scale border crossing projects where benefits might be to consumers outside the region or state). Corridor planning representatives at Caltrans are crucial to the success of SANDAG's efforts. Unfortunately, there is little focused support at the broader state level for freight planning. For improving the effectiveness of freight planning, the state needs to be more involved in the process to provide the broader perspective as MPOs generally are not well equipped to manage freight network issues.

Environmental Review, Columbia River Crossing Project

Background

Columbia River Crossing (CRC) is a bistate transportation infrastructure project that is designed to study and select an alternative to improve the Interstate 5 (I-5) Bridge crossing the Columbia River between the states of Washington and Oregon. This case study documents how the two project co-sponsors, the WSDOT and ODOT, the governors of Washington and Oregon, and CRC staff used various stakeholder groups, including freight stakeholders, during the six-year process to develop the draft EIS. The case study presents stakeholder engagement activities and a description of the lessons learned from the perspective of freight-related decision points from three freight stakeholders, all of whom participated in the CRC project and were involved in its predecessor committees.

At the project's outset, CRC staff identified the need for heavy involvement of the freight community because the CRC serves two ports (Portland and Vancouver USA) and is located on a nationally significant freight corridor. Additionally, the project is focused on multimodal transportation needs, including freight, commuters, and transit users. On implementation, the CRC project is expected to become a national model, including a range of innovative improvements such tolling, light rail between two states, and bike and pedestrian solutions. Project planners have taken great care to involve a wide range of stakeholders and provide numerous opportunities and methods for stakeholders to weigh in with feedback.

On December 7, 2011, FHWA and FTA signed a ROD for the CRC project, which completes the environmental review process and formally identifies the federal agencies' selected alternative for the CRC, which is a replacement I-5 bridge with light rail. According to a joint press release by the governors of Washington and Oregon on December 7, 2011, "a final EIS on the locally preferred alternative was released in September 2011. Through that process, advisory groups, partner agencies, and the public worked with CRC staff to generate and screen 70 project ideas, narrow them to 12 multimodal representative alternatives, before selecting five alternatives to study

for the draft environmental impact statement. One locally preferred alternative was selected." The CRC project's technical and public process was validated and permission was granted to move forward with construction planning. Specific design features will be refined so that construction can commence around 2013. The ROD also allows the project to be eligible for future federal funding, an essential element for the project to advance.

Stakeholder Engagement Activities

The CRC project planning process itself got under way in 1998 when a business task force was assembled to determine whether I-5 Bridge congestion was a problem for businesses in the region. The task force met over the course of about 2 years and concluded that the I-5 Bridge presented issues to users and would require a range of solutions. Subsequent to the business task force, the I-5 Trade and Transportation Partnership was established in early 2001 and met for several years to help ODOT identify possible solutions, which would need to include a multimodal approach, transportation demand management (TDM), and a land use component. The partnership also refined the corridor to be improved and settled its focus on the I-5 Bridge and adjacent interchanges on both the Washington and Oregon sides of the Columbia River, plus the interchange to Hayden Island. The ports of Portland and Vancouver USA each played an active role. Bill Wyatt, executive director of the Port of Portland, was a member of the partnership, and the Port of Vancouver USA, under the executive directorship of Larry Paulson, became involved in the CRC project when the port served as one of the partnership sponsors.

The CRC project formally entered the required decision-making process under NEPA in 2005, and a 39-member task force was established to determine the project's vision, values, purpose, and needs. The task force comprised freight stakeholders on both sides of the river, including the ports of Portland and Vancouver USA, motor carriers, shippers, and business people, as well as environmental groups, municipalities, and other government agencies. Bill Wyatt and Larry Paulson served on the task force. In 2007, a 13-member freight working group was established to address more detailed requirements and designs and to ensure freight needs were adequately addressed. Members served on the freight working group until 2011. The group helped educate CRC staff, government officials, and the public about the nuances of how freight moves and how the multimodal transportation system is used in the region. The group provided valuable insights and technical details that were incorporated into the work of the CRC staff. The project currently is transitioning to a new bistate committee that will have freight interests represented. In addition, CRC staff has committed to provide continued updates for the freight community.

When setting up the task force and freight working group, CRC staff tapped internal and external knowledge to identify participants to represent the various freight interests in the region. To accomplish this, CRC staff gathered names from the ports, the Columbia Corridor Association, and Jubitz Corporation (a truck stop operator), as well as others. During this long, complex process, the CRC project gained several champions in every stakeholder sector, those who participated in the task force and freight working group as well as those outside the formal groups. Key champions were both ports and the City of Portland Freight Bureau. This ensured that all interests were represented and heard, and kept the momentum going. Formal freight stakeholder engagement evolved over time. The chronology of the establishment of the various advisory groups is as follows: 2005, task force; 2007, freight working group, Marine Drive Interchange Stakeholders Group, and Performance Measures Advisory Group; 2008, Project Sponsors Council (members selected by the governors of Washington and Oregon); and 2012, future bistate Citizens Advisory Committee. The project did have a prescribed process for determining the length of time each group remained active. Each group sunset at appropriate times with some overlapping responsibilities due to project and stakeholder needs.

CRC staff used formal working group meetings, open houses, listening sessions, the project website, phone calls, presentations out in the field, and a huge e-mail distribution list to provide project updates and solicit feedback from interested parties. The various methods of engagement have proved very useful. It also has been helpful that the CRC project support team is knowledgeable, has authority to speak on behalf of the project, has a consistent message, and maintains continuity in the information provided to stakeholders and the general public. The amount of interaction that stakeholders desire about this project has been a function of geography and transportation system use. CRC staff members had frequent interaction with the two ports and motor carriers, with extensive engagement with environmental and neighborhood groups and MPOs.

CRC staff has solicited technical feedback throughout the entire project about such things as commodity flows, freight corridors, and bottlenecks. For example, CRC staff members worked closely with the Port of Portland regarding different alignments for the Marine Drive interchange. They discussed the port's volume forecasts and how that would impact the interchange in the future in order to make sure the project modeling reflected these forecasts. CRC staff also got input about truck volumes from Jubitz Corporation and existing travel flows on the various port access roads from Port of Vancouver USA. These data were used to calibrate and fine tune the CRC travel demand model.

One example of a project outcome that changed as a result of freight stakeholder involvement concerned the movement

of wind energy components. Freight stakeholders in the wind energy industry provided feedback about the access routes (Mill Plain and 4th Plain) from the Port of Vancouver USA to I-5 and beyond to wind farms in the Columbia Gorge along I-84. This information enabled the CRC staff to better model wind energy transport vehicles from vertical, horizontal, and volume perspectives to ensure road turning radii and tunnels could accommodate movement of this over-dimensional cargo, so vital to the Port of Vancouver USA. The modelers also were able to study congestion at key interchanges.

Feedback from Stakeholders—What Was Done Well

1. According to freight stakeholders involved in the development of the CRC EIS, the freight community generally cooperated and provided valuable feedback during the environmental review process. CRC staff did a reasonably good job of keeping freight stakeholders engaged during key decision points, critical to maintaining their support.
2. Having the freight working group involved in addressing day-to-day operations and technical issues such as the Marine Drive interchange has been vital to the project's progress and better solutions were developed as a result. Freight stakeholders believe it is essential to gather technical input from freight stakeholders about what matters most to them, beyond just count trucks in key areas around the project. Data included (a) transit time reliability, (b) travel times, (c) issues encountered in moving over-dimensional cargo like wind energy components, (d) design decisions relating to spatial and geometry issues like turning radii at intersections and height restrictions, and (e) behavioral issues like truck acceleration and the impact of the steepness of a particular grade.
3. The project gained support when businesses and freight stakeholders coalesced under the framework of the CRC Coalition, sponsored by the ports of Portland and Vancouver USA and the Portland Business Alliance, the city's chamber of commerce. The coalition became an important component external to the official CRC groups and process and functioned as an advocacy group, counterbalancing some perspectives of stakeholders. Members of the Portland Freight Committee, which provides advice on transportation and freight issues to Portland's mayor, city council, and city bureaus as well as to the Portland Business Alliance, also constantly lobbied government officials and provided verbal and written testimony in support of the CRC project. This involvement, crucial to demonstrate the project's broad base of support, likely lengthened the timeline for completion.
4. Local governments have veto power over the project since they must enter into agreements with the federal government to build the project, making it necessary for CRC staff, various committees, and stakeholders to address issues to obtain support from the local governments. To move the public agencies toward consensus took great effort and continuous input from the freight community about the critical importance of improving freight flows across the Columbia River. Support from WSDOT and the Washington state governor especially helped in this effort.
5. Progress has been made in getting regional legislators to better understand the value of freight mobility. The Obama Administration's focus on promoting exports helped reinforce the urgency of the CRC project, the value of freight, and its linkage to a healthy economy, job retention, and growth. The project process has created an impetus for the City of Portland and State of Oregon to understand how businesses operate and how products move from source to market. All the research that has been done during the project planning process has allowed legislators to become more knowledgeable about freight issues. These are very positive ramifications that will likely be amplified in future transportation infrastructure projects.

Feedback from Stakeholders—What Could Have Been Done Better

1. According to one freight stakeholder, the CRC project is not a good example of a positive public engagement process. There is a sense of frustration that neither side of the discussion actually got the project that they wanted. Freight stakeholders have not been opposed to bicycle and transit solutions, but they feel the project should have focused more on commuter traffic, less on recreational travel. In the end, there was a concern from some freight stakeholders that the project will not substantially improve the movement of goods and people as it really was envisioned to do.
2. The project has taken too long and is not a good way to manage scarce resources. Although public input is essential, public involvement has spanned almost 15 years. It makes it difficult for project staff to plan so far in advance and account for increases in costs and changes in political dynamics. According to a freight stakeholder who participated in task force activities, the project progressed in fits and starts, not always having a clear direction. Neighborhoods and environmentalists often disagreed with business interests about the need for increased capacity over the bridge. It has been difficult for the public, legislators, and CRC staff to understand the variety of uses and myriad of ways products move from origin to destination, and accommodate the needs of all users. Education of the public, government officials, and stakeholders has been necessary to reach agreement on potential project designs.

3. CRC staff could have found more creative ways to keep businesses engaged. CRC staff held countless public open houses that attracted citizens, but this form of outreach was not found to be the most effective means to reach freight stakeholders. Because of the project's duration, it has been challenging for regional businesses to stay involved. CRC staff might have done more to reach out to industry associations, not just motor carriers, and to local employers who generate freight. Project ambassadors could have been recruited to disseminate the message to a wider audience and generate support for the project. The Port of Vancouver USA leadership felt compelled to help get freight stakeholders to the table and formed the Vancouver Freight Alliance (80 members), which was invited to CRC project meetings and has provided testimony and written letters to the governors of Washington and Oregon and other legislators supporting the project.
4. There is a perception that the political process at times allows, if not facilitates, stakeholders who get involved late in the process to impact a project decision more than those who are engaged throughout the process. At times the charter of a stakeholder process might be ill understood or stated, such as when the governors of Oregon and Washington formed the Project Sponsors Council in 2008 to "control" the process, seen by some participants to replace the CRC Task Force that had been doing the heavy lifting for three years. Council members revisited old issues, cited new issues, and made decisions, sometimes contrary to what was done by the task force. This lead to questions about the role of each stakeholder group and whose voice should carry the most weight.
5. When a business leader testifies or provides input on the project, he or she is actually representing numerous jobs, not only himself or herself. Often, outside voices, speaking only for themselves or for a few others, drown out the opinions of the business community. Though every stakeholder should have a seat at the table, someone with background information and a clear understanding of the issues should carry more weight. CRC staff has had a difficult time managing people with unorthodox ideas or people who simply did not like the project without offering support for those views. All citizens should be afforded equal access to the process, but that should not guarantee equal impact to the project decision making, which should be more dependent on the quality of the information imparted.
6. There was some frustration that the CRC project did not lead to a substantial net increase in transportation system capacity, since no more lanes will be added to I-5 Bridge. In many ways, this project is really about new transit, bicycle, and pedestrian solutions. Freight-related solutions (such as additional highway capacity) were largely subsumed by other interests in the planning process.

Decision Points

Box A.10 presents the principal freight-related decision points of this case study. In 2005, one of the CRC Project Task Force's first missions was to create a vision and values statement that provided guidance about what the project should accomplish. The next task was to develop a concise, big picture project purpose and needs statement that demonstrated to FHWA and FTA (which are co-leads on the CRC) why the project is critical to the region (ENV 1). CRC staff felt early involvement from the freight community was essential to address the purpose and need and develop an evaluation framework (which came out of the vision and values statement) to ensure the designs met the purpose and need (ENV 2). CRC staff used dozens of ways to evaluate alternatives to ensure they meet the project's purpose and need statement, including actively soliciting stakeholder feedback and official public comment and establishing the freight working group. The freight working group was the first group to review early design details and evaluation criteria to make sure freight needs were addressed. A focus group also was formed to evaluate various plans for the Marine Drive Interchange between I-5 and the Port of Portland and industrial areas, as well as a Performance Measures Advisory Group. Freight interests participated in both of these groups (ENV 3).

These focus groups also helped CRC staff address freight issues within the study area such as whether freight-only access and/or lanes made sense, and how to accommodate over-dimensional cargo like wind energy components that arrive at Port of Vancouver USA (ENV 4). The groups met every few months to get project updates from CRC staff and provide feedback. Moreover, from time to time, CRC staff visited various businesses in the region and adjacent to the project boundaries, and organizations, including the Oregon Transportation Alliance, Portland Freight Committee, and Vancouver Freight Alliance to present information about the project's progress, solicit new ideas and feedback, and seek

Box A.10. Environmental Review, Columbia River Crossing Project Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

ENV 1: Scope Development
ENV 2: Purpose and Needs
ENV 3: Evaluation Criteria
ENV 4: Freight Concerns
ENV 5: Performance Measures
ENV 6-7: Approve Alternatives
ENV 8: Draft EIS Comment
ENV 9-11: Ongoing Dialogue

evaluation of ideas. This work was designed to ensure a balanced view of stakeholder needs was received. Adjustments to the project details were often made as a result of feedback from freight stakeholders.

CRC staff engaged freight stakeholders very early to help identify project performance measures (ENV 5). Moreover, CRC staff solicited input from the task force and various focus and working groups during the entire NEPA process (ENV 6-7). It was the task force that helped narrow 70 original ideas to address problems on I-5 to 12 preliminary alternatives and then to the five that were studied in the draft EIS process. The task force concluded its work in 2008 after recommending a locally preferred alternative to the project sponsors.

After commenting on the draft EIS, the various groups and freight interests have still been involved even though the draft EIS was submitted to the federal government in the fall of 2011 and the ROD was granted in December 2011 (ENV 8). CRC staff members continue to make project status presentations in various forums and venues and solicit feedback particularly about finer bridge design details, rather than having the focus groups meet formally, in order to be respectful of stakeholders' time. The CRC project website also is active and project status e-mails are sent to the wide distribution list of interested parties (ENV 9-11).

From the perspective of CRC staff, the entire CRC project has been an example of successful public and freight stakeholder involvement; however, freight stakeholders have mixed feelings.

Environmental Review, Los Angeles County Metropolitan Transportation Authority—Interstate 710 (I-710) National Environmental Policy Act Process

Background

Building on recognition of growing deficiencies on a major highway facility accessing the preeminent port complex in the nation coupled with years of detailed planning led to the completion of a major corridor study (MCS) in 2005, exploring the implementation of major improvements on the Interstate 710 (I-710) corridor in south Los Angeles County. Once the MCS was completed a partnership of the several agencies elected to develop an environmental impact report/environmental impact statement (EIR/EIS) to comply with state and federal environmental statues to move the project forward. The organizations involved in both the MCS planning effort and the ongoing environmental review include the San Pedro Bay Ports, Gateway Cities (consisting of nearly 30 cities in southern Los Angeles County adjacent to the I-710 corridor), and California State University Long Beach (through their METRANS program). It was the recognition by the ports and other stakeholders of the truck issues in the corridor (including air quality, safety, and access) that has helped define the project issues and highlight the potential benefits to improve the highway. The study effort built on historical involvement by many of the key stakeholders in regional transportation planning; it contributed to the ports opening up their engagement with the community, where they had previously been very insular, and involved the Gateway Cities on addressing the health effects to the communities adjacent to the corridor with increasing truck traffic. This case study will build on previous analyses on the robust public outreach program set up for the project and primarily focus on the outreach of freight-oriented stakeholders during the environmental review process.

Stakeholder Engagement Activities

There were several tiers of outreach during the I-710 environmental review process (still ongoing). Tier I outreach included the formation of local committees around key interest groups including trucking, labor, and economic issues (The California State University at Long Beach Economic Development Department represented economic interests.). The trucking interests were represented via the California Trucking Association. The outreach process, which included large group meetings, focus groups, and interviews, was intended to memorialize priorities of each stakeholder group. Some interests (such as labor or the California Trucking Association) were expected to act as proxies for other industries during the early phases of the report. A key finding early on was that meetings needed to provide real value for industry participants and provide them information from which they could respond.

Strategies proposed by Jerry Wood (a consultant working on the project through the Gateway Cities Councils of Government) for engaging the private sector based on his experiences with the I-710 project and other recent planning efforts with the Gateway Cities include doing outreach early and often, but with clearly defined goals for the engagement. There needs to be an understanding of the different time frames for business planning between governments and the private sector. Although industry operations planning often happen on a quarter-by-quarter basis, major transportation investments, such as the I-710 improvements, can sometimes take decades to plan. A major key to engagement with private-sector stakeholders is trust and personal relationships. These relationships can best be built through one-on-one interaction with the stakeholders. Once relationships are established, the stakeholders can be brought together in smaller groups. It makes for more effective engagement if planners are well informed of industry issues ahead of time so that they can speak intelligently. Engagement depends on freight "stake" in the project;

the level of involvement required depends on magnitude of potential impact on freight operations. On the I-710 project, it was discovered that the industry was often afraid to take a stand on an issue definition or project concept, since they did not want to be tied to it moving forward or be inundated with comments from customers or other interest groups. The industry is much decentralized in the region and it was difficult to identify appropriate stakeholders.

One major issue that galvanized the freight stakeholder community in the I-710 corridor was an initial project concept that did not meet the needs of anyone (a large number of residential and commercial "takes"). Sometimes it takes an initial project concept that is wrong in order to light a fire under the stakeholder community and solicit feedback. According to Jerry Wood, a consultant through the Gateway Cities Council of Governments, for the I-710 project attention to community and freight stakeholder involvement (including 200–300 community meetings) and countless discussions with industry have led to tremendous ownership of the project from many sides, which has kept it moving.

Feedback from Stakeholders

For the duration of the I-710 study (from early evaluation to the MCS), there has been an unprecedented attention to outreach efforts with the stakeholder community. For outreach to freight stakeholders, much of the engagement was done prior to the inception of the actual environmental document, during the MCS and technical studies exploring goods movement issues and transportation operations supporting the environmental document. Freight stakeholders have been important in exploring not only the effects on freight movement but also community impacts associated with freight (especially trucks). The level of cooperation from the freight stakeholder community throughout the process has yielded mixed results. Many stakeholders, such as California State University at Long Beach (representing economic development interests in the corridor), have been involved throughout the process; however, some freight representatives (such as shippers and terminal operators at the port) have not been engaged, despite extensive outreach efforts. The San Pedro Bay Ports have generally been very cooperative and also are contributing one-third of the funding for the environmental studies. Other stakeholders, such as the Harbor Trucking Association (drayage operators) have been engaged at the periphery of the project but have expressed disappointment about the involvement of other stakeholders. Generally for the stakeholders in the region, there is a focus on involvement if there is a perceived threat to their interests. One issue that brought stakeholders out in force during the environmental review was the discussion related to a health impact assessment, which was developed as part of the EIR/EIS process. Since this assessment would likely designate responsibilities for certain environmental impacts, stakeholders that had not previously been engaged got involved, helping defend their interests.

Decision Points

Box A.11 presents the principal freight-related decision points of this case study. For developing the scope of environmental review (ENV 1) there was some engagement by the freight stakeholder community, especially the ports, with both ports being major funding partners. The original scoping meeting also included some representatives from industry, who likely attended to gather information, not necessarily to contribute to the discussion. The Tier II report from the MCS included outreach with freight stakeholders, and those findings were integrated into the scope of work and purpose and need for the environmental document (ENV 3). The views of various interest groups were captured during this stage of the environmental process. The Tier II report was officially used as "prescoping guidance" for the EIR/EIS.

Since the project was intended in large part to improve freight flows within the study area, freight stakeholders were involved more to screen possible concepts during the major investment study and initial environmental review. Interviews with freight forwarders, shippers, and carriers during the development of technical studies helped identify project impacts and appropriate performance measures to measure impacts (ENV 5). During the course of developing the MCS, one key goal was to identify candidates for public-private partnerships. Private-sector stakeholders were interviewed during the screening of alternatives, traffic/air quality, and goods movement study. This helped lead to the development of "goods movement" scenarios, largely derived from information provided by freight stakeholders (ENV 6). During these MCS studies, scenarios were explored that maximized

Box A.11. Environmental Review, Los Angeles County Metropolitan Transportation Authority—Interstate 710 (I-710) National Environmental Policy Act Process Case Study: Freight-Related Decision Points

Key Decision Points Are in Bold.

ENV 1: Scope of Environmental Review
ENV 3: Purpose and Need
ENV 5: Performance Measures
ENV 6: Full Range of Alternatives
ENV 7: Approve Alternatives to be carried forward
ENV 8: Approve Draft EIS

goods movement benefits within the corridor, including a transportation system management and technology alternative. During review of the alternatives, there were focused meetings with the industries proximate to the areas that would be impacted by the various alternatives. For one alternative (which would have led to the closure of the Washington Boulevard interchange) industry voiced their displeasure for the alternative and it was modified. There was extensive vetting and consensus building during the development of the MCS.

Although the review and approval process of the alternatives for the draft EIS for I-710 has not yet commenced (ENV 7/8), there is expected to be engagement of key stakeholder groups (including freight) to ensure that key environmental impacts are considered. Throughout the planning process for I-710, there have been some complaints by industry that there was too much engagement. During the development of previous planning documents such as the Air Quality Action Plan, freight stakeholders were somewhat hesitant to get too involved, since project planners were still trying to build trust with industry groups. As trust increased, there were additional meetings and enhanced dialogue actually coordinated by industry (i.e., industry conferences). Additionally, there were one-on-one phone calls and discussion of project alternatives with key stakeholders. Preparatory to the release of the environmental document, there are expected to be open houses and presentations to various stakeholder groups. The project team has continued to speak at trade organization meetings such as Future Ports and provided presentations to port staff, the Los Angeles Economic Development Corporation, the Los Angeles County Business Federation (BizFed), and the chambers of commerce for several cities in the region. There is expected to be ongoing engagement with the freight stakeholder community even after the project is completed. The project is still exploring conventional versus zero emission trucks and financing alternatives that will be refined once the environmental review process is complete. There has not yet been a tolling and revenue study but there likely will be one once an alternative is selected. The Harbor Trucking Association and other trucking representatives are expected to be more involved in that part of the process. The project sponsors may have to shift their focus from identifying the appropriate improvements to the I-710 to managing expectations of implementation and operations.

The planning process for freight outreach could be improved by soliciting additional guidance from federal sources on how to evaluate corridors of federal and international significance. There is an inconsistent role that federal agencies played on the project, including conflicts between participating environmental agencies [e.g., Environmental Protection Agency (EPA), U.S. Army Corps of Engineers]. The outreach on the I-710 project was extensive, and some of the most effective outreach tools were the use of specialized working groups—environmental, transportation, and community design—for each stage. The lead agency (LA Metro) worked diligently to balance the interests of the different stakeholder groups; however, it was an even greater challenge to identify specific freight stakeholders (rather than proxies) that would stay involved throughout the process. For the final stages of the process, including environmental approval and implementation planning, there is more specific outreach for freight stakeholders planned. These discussions will likely focus on specific corridor geometrics, green technology, and project funding partnerships.

TRB OVERSIGHT COMMITTEE FOR THE STRATEGIC HIGHWAY RESEARCH PROGRAM 2*

CHAIR: **Kirk T. Steudle,** *Director, Michigan Department of Transportation*

MEMBERS

H. Norman Abramson, *Executive Vice President (retired), Southwest Research Institute*
Alan C. Clark, *MPO Director, Houston–Galveston Area Council*
Frank L. Danchetz, *Vice President, ARCADIS-US, Inc.*
Malcolm Dougherty, *Director, California Department of Transportation*
Stanley Gee, *Executive Deputy Commissioner, New York State Department of Transportation*
Mary L. Klein, *President and CEO, NatureServe*
Michael P. Lewis, *Director, Rhode Island Department of Transportation*
John R. Njord, *Executive Director (retired), Utah Department of Transportation*
Charles F. Potts, *Chief Executive Officer, Heritage Construction and Materials*
Ananth K. Prasad, *Secretary, Florida Department of Transportation*
Gerald M. Ross, *Chief Engineer (retired), Georgia Department of Transportation*
George E. Schoener, *Executive Director, I-95 Corridor Coalition*
Kumares C. Sinha, *Olson Distinguished Professor of Civil Engineering, Purdue University*
Paul Trombino III, *Director, Iowa Department of Transportation*

EX OFFICIO MEMBERS

Victor M. Mendez, *Administrator, Federal Highway Administration*
David L. Strickland, *Administrator, National Highway Transportation Safety Administration*
Frederick "Bud" Wright, *Executive Director, American Association of State Highway and Transportation Officials*

LIAISONS

Ken Jacoby, *Communications and Outreach Team Director, Office of Corporate Research, Technology, and Innovation Management, Federal Highway Administration*
Tony Kane, *Director, Engineering and Technical Services, American Association of State Highway and Transportation Officials*
Jeffrey F. Paniati, *Executive Director, Federal Highway Administration*
John Pearson, *Program Director, Council of Deputy Ministers Responsible for Transportation and Highway Safety, Canada*
Michael F. Trentacoste, *Associate Administrator, Research, Development, and Technology, Federal Highway Administration*

* Membership as of July 2014.

CAPACITY TECHNICAL COORDINATING COMMITTEE*

CHAIR: **Mark Van Port Fleet,** *Director, Bureau of Highway Development, Michigan Department of Transportation*

MEMBERS

Kome Ajise, *Program Manager, Public-Private Partnership Program, California Department of Transportation (Caltrans)*
Michael Bruff, *Manager, Transportation Planning Branch, North Carolina Department of Transportation*
Jacquelyn D. Grimshaw, *Vice President for Policy, Center for Neighborhood Technology*
Kris Hoellen, *Director, Conservation Leadership Network, The Conservation Fund*
Carolyn H. Ismart, *Florida Department of Transportation (retired)*
Randy Iwasaki, *Executive Director, Contra Costa Transportation Authority*
Thomas J. Kane, *Thomas J. Kane Consulting*
Keith L. Killough, *Assistant Director, Travel Demand Modeling and Analysis, Multimodal Planning Division, Arizona Department of Transportation*
T. Keith Lawton, *Principal, Keith Lawton Consulting, Inc.*
Debra Nelson, *Strategic Policy Advisor, New York State Department of Transportation*
Bob Romig, *State Transportation Development Administrator, Florida Department of Transportation*
Joseph L. Schofer, *Professor of Civil Engineering and Environmental Engineering and Associate Dean, McCormick School of Engineering and Applied Science, Northwestern University*
Barry Seymour, *Executive Director, Delaware Valley Regional Planning Commission*
Brian J. Smith, *Washington State Department of Transportation*
John V. Thomas, *Office of Policy, Economics, and Innovation, Environmental Protection Agency*
Gary Toth, *Director, Project for Public Spaces*
Jeff Welch, *Director, Knoxville Regional Transportation Planning Organization*
Doug Woodall, *State Director, Turnpike Planning and Development, Texas Turnpike Authority Division, Texas Department of Transportation*

AASHTO LIAISONS

Janet P. Oakley, *Director, Policy and Government Relations, American Association of State Highway and Transportation Officials*
Matthew Hardy, *Program Director, Planning and Policy, American Association of State Highway and Transportation Officials*

FHWA LIAISONS

James Cheatham, *Director, Office of Planning, Office of Planning HEPP-1, Federal Highway Administration*
Gary A. Jensen, *Team Leader, Byways, TCSP & Delta Programs, Office of Human Environment HEPH-30, Federal Highway Administration*
Spencer Stevens, *Community Planner, Office of Planning Oversight and Stewardship, Federal Highway Administration*

*Membership as of July 2014.

Related SHRP 2 Research

A Framework for Collaborative Decision Making on Additions to Highway Capacity (C01)

Interactions Between Transportation Capacity, Economic Systems, and Land Use (C03)

Freight Demand Modeling and Data Improvement (C20)