SHRP2 SOLUTIONS
TOOLS FOR THE ROAD AHEAD

Proven Strategies for Optimal Planning of Highway Improvements Save Time and Money

Best practice tools help agencies better evaluate and integrate project goals in cost- and time-efficient ways

Transportation agencies continue to face growing opposition to many capacity expansion projects, particularly in sensitive environments. When capacity improvements are needed to support strong communities and economies, the cost and time of navigating the environmental planning process pose a heavy financial burden for the public to bear, potentially delaying needed improvements for decades.

At the same time, elected officials and the public are demanding that highway projects be delivered with fewer delays, with more transparency and collaboration, and in ways that address environmental challenges. Understanding potential project impacts is also another public concern, precipitating a need for better ways to measure highway system impacts and performance. Current processes for collaboration often result in a project getting bogged down in indecision. Therefore, better approaches to quantifying transportation system performance are needed with regard to environmental justice, greenhouse gas emissions, infrastructure vulnerability to climate change, air toxics exposure, consistency with land use, community cohesion, and visual quality.

Accomplishing all of this will require a change in the way projects are planned and developed. A range of strategies is needed to address common constraints and expedite delivery from the earliest project phases. Several new solutions developed through the second Strategic Highway Research Program (SHRP2) identify these "best practice" strategies and performance measures.

Guidance for Improving Collaborative Decision Making and Performance Measures and Expediting Early Planning Processes for Highway Capacity Projects

New planning tools quickly advance the right highway capacity projects

FOCUS AREA:
Capacity (C01/02/19)

Solutions include web-based tools, performance measures, worksheets for mitigation, comprehensive case studies, and decision-making frameworks.

Save Money

- Proven strategies for reducing delays save development costs.
- Better tools for measuring impacts and options expedite progress, saving on costs.
- Collaborative processes that identify optimal improvements ensure prudent investment of resources over time.

Save Time

- Strategically managed planning and environmental review processes expedite schedules.
- Clear performance measures for impacts and options speed project development.

The Solution

C01, the Collaborative Decision-making Framework (CDMF), provides a systematic approach that has proven successful on projects with complex community and environmental issues. This web-based tool can be used as a trouble-shooting guide or roadmap for changing a transportation agency's process when planning and developing highway projects. It identifies keys to success, including the critical decision points for long-range transportation planning, corridor planning, programming, and environmental review and permitting.

C02, Performance Measures for Highway Capacity Decision Making, is a resource for selecting performance measures to evaluate major transportation projects within a system context such as the CDMF. Organized around five broad topics (transportation, environment, economics, community, and cost) and 17 performance factors, this framework helps identify the types of impacts that are important in making informed decisions and the level of detail required at each

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stage of the planning process. The framework, which includes a web-based tool, details how the performance measures can be used in long-range planning, programming, environmental review, and permitting.

C19, Expedited Planning and Environmental Review, identifies 24 strategies for addressing or avoiding 16 common constraints in order to speed delivery of transportation planning and environmental review projects. Constraints are grouped under six objectives: improve public involvement and support, improve resource agency involvement and collaboration, demonstrate real commitment to the project, improve internal communication and coordination, streamline decision making, and integrate across all phases of project delivery. The likely effects of not addressing a constraint are categorized as low, medium, or high, and multiple strategies are suggested for each severity category. A useful worksheet for each mitigation strategy provides background and case examples.

The Benefits

This suite of tools puts forward **best practices for quickly advancing highway capacity projects through planning processes while integrating community and environmental goals**. By ensuring the right people are engaged at the right time with the right information, these strategies and performance measures can help generate better clarity about project goals.

C01: The CDMF strengthens the basis for decision making about when, where, and how much capacity is needed; what the economic impacts will be; and how to build capacity in ways that will enhance communities and the environment.

C02: In addition to analytical value, these performance measures support better collective understanding of the transportation problem. They help a constituency get a clearer picture of how a measure relates to its own concerns, as well as how it does/does not address the concerns of other stakeholders. By providing a solid foundation for making the best transportation decisions, these measures help minimize delay.

C19: Reducing project delays saves more than time. When transportation improvements fail to materialize, project costs and road user costs can escalate while public perception of agency performance deteriorates. The C19 project delivery strategies provide agencies with the means to anticipate where delays are likely to occur and apply tested strategies to avoid or minimize delays during all phases of project development.

How can you learn more?

The entire suite, *Transportation for Communities—Advancing Projects through Partnerships (TCAPP),* is available at the beta website www.transportationforcommunities.com and is scheduled for implementation in 2013. *A Framework for Collaborative Decision Making on Additions to Highway Capacity* is available online at http://www.trb.org/Main/Blurbs/166046.aspx. For more information, contact Spencer Stevens at FHWA, spencer.stevens@dot.gov; Matt Hardy at AASHTO, mhardy@aashto.org; or Stephen Andrle at TRB, sandrle@nas.edu. The report, *Performance Measurement Framework for Highway Capacity Decision Making,* is available online at http://www.trb.org/Publications/Blurbs/161859.aspx. The performance measurement framework is available in TCAPP at www.transportationforcommunities.com. For more information on C02, contact Harlan Miller at FHWA, harlan.miller@dot.gov; Matt Hardy at AASHTO, mhardy@aashto.org; or Steve Andrle at TRB, sandrle@nas.edu. The report, *Expedited Planning and Environmental Review of Highway Projects,* is available online at http://www.trb.org/Main/Blurbs/165282.aspx and from the TRB Bookstore (www.trb.org/shrp2). The C19 strategies and tools are the basis for the Expediting Project Delivery Assessment Tool, a user-friendly assessment tool that is available in TCAPP. For more information on C19, contact Anwar Ahmad at FHWA, anwar.ahmad@dot.gov; Kelley Rehm at AASHTO, krehm@aashto.org; or Steve Andrle at TRB, sandrle@nas.edu. Implementation is scheduled for 2013.

About SHRP2 Implementation

The second Strategic Highway Research Program is a national partnership of key transportation organizations: the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the Transportation Research Board. Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the Nation's highway system.