Pre-Bidders' Web Conference
for SHRP 2 Capacity Pilot
Project RFPs C33 and C39

Presenter: David J. Plazak, Senior Program Officer,
SHRP 2 Capacity Focus Area
Transportation Research Board
Two Current SHRP2 Capacity RFPs

- On March 20, 2012, the second Strategic Highway Research Program (SHRP 2) released two requests for proposals (RFPs).
- These RFPs will fund pilot tests of the two largest SHRP 2 Capacity web-based products.
- Pilots may be led by state DOTs, metropolitan planning organizations, regional planning organizations, local governments, or consortia of agencies.
- Lead organizations may be assisted by consultants and/or universities.
About This Pre-Bid Webinar

- This web conference will provide information about the two pilot project RFPs to prospective bidders.
- Opportunities will be provided for questions and answers about both pilot project RFPs.
- Questions will be taken via the webinar chat function.
Webinar Learning Objectives

- After participating in this session, the audience members will be more knowledgeable about TCAPP and T-PICS, be able to decide whether they want to prepare a proposal in response to the C33 and C39 RFPs, and be able to prepare better proposals.

- Allow participants to ask questions about the RFPs and have them answered
About the Pilot Tests

- The two products being pilot tested are:
  - T-PICS, a web-based economic impacts assessment tool, and
  - TCAPP, a web-based guide to conducting collaborative transportation planning and project development
- The pilot test projects are SHRP 2 Capacity project numbers C33 and C39.
  - C33 validates T-PICS
  - C39 tests TCAPP
- Pilot tests are intended to lead directly to product improvements.
Capacity Focus Area Overview

- The charge from Congress for Capacity research in SHRP 2 is to develop tools for systematically integrating *environmental, economic, and community requirements* into the analysis, planning, and design of new highway capacity projects.
- This is known in some circles as considering the “*triple bottom-line*”.
## Capacity Research Benefits

### Benefits

- Get the right people at the table at the right time with the right information when planning highway capacity to avoid costly redo-loops
- Provide greater consideration of the needs of communities, the economy, and the environment in highway capacity planning
- Meet future demand for highway capacity in a more expeditious way, avoiding crippling congestion for travelers and freight shipments

### Capacity Product Categories

- **Process Improvement:** products include collaborative planning frameworks, specialized planning guidebooks, environmental crediting systems, strategic plans, and research road maps.
- **Technology:** products include web tools, spreadsheet models, advanced travel demand models, network analysis tools, pricing equations, inventory tools, and spatial analysis tools.

### Capacity Organized Around 8 Tactics

1. Systematically integrate planning around key decision points
2. Provide for interactive collaboration with the public and affected agencies
3. Communicate the economic benefits of highways in a more compelling way
4. Introduce an environmental stewardship culture into transportation
5. Embrace an ecological approach to the environment
6. Provide advanced travel modeling and network analysis tools
7. Improve the efficiency of use of highway capacity through operations and pricing
8. Dramatically improve freight planning
Capacity Product Groups

- Group 1: Collaborative Decision Making
- Group 2: Economic Impact Analysis
- Group 3: Integration of Conservation Planning, Highway Planning, and Environmental Review
- Group 4: Advanced Models and Networks
- Group 5: Operations to Improve Capacity and Reliability
- Group 6: Freight Planning
Capacity: Flagship Products By Group

- Transportation for Communities web portal – TCAPP
- Transportation Product Impacts web tool – T-PICS
- Regional Ecological Framework
- Advanced Models and Networks
- Operations Guidebook for Enhancing Highway Capacity
- Freight Data and Models Road Map
## Products by Category

<table>
<thead>
<tr>
<th>Product Category</th>
<th># of Projects*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guides, Syntheses and Handbooks</td>
<td>6</td>
</tr>
<tr>
<td>Models and Methodology</td>
<td>0</td>
</tr>
<tr>
<td>Databases andDatasets</td>
<td>1</td>
</tr>
<tr>
<td>Web Tools</td>
<td>7</td>
</tr>
<tr>
<td>Software Applications</td>
<td>4</td>
</tr>
<tr>
<td>Model Specifications, Technical Guidance and Strategic Plans</td>
<td>1</td>
</tr>
<tr>
<td>Videos</td>
<td>0</td>
</tr>
<tr>
<td>Prototypes</td>
<td>0</td>
</tr>
</tbody>
</table>

*Each project may produce multiple products within a given category*
Most of the Capacity research projects will be completed by the end of 2012 along with 8 previous pilot tests of research products.

Most research reports should be published by the end of 2012 or in early 2013.

Two flagship web tools are available for beta testing and formal pilot testing now:
- TCAPP (www.transportationforcommunities.com)
- T-PICS (www.tpics.us)
## Completion Schedule for Major Capacity Research Projects

<table>
<thead>
<tr>
<th>Product Group</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative Decision Making</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Economic Impact Analysis</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Integrated Environmental Planning</td>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Advanced Models and Networks</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freight</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
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</table>
Overview of T-PICS Economic Impact Estimation Web Tool

- This segment of the webinar will provide a brief introduction to the Transportation Project Impact Case Studies (T-PICS) web tool.
- Proposers on the C33 RFP should become highly familiar with T-PICS prior to preparing their response to the RFP.
T-PICS

- Economic impact analysis web tool based upon data from 100 detailed before and after project case studies
  - Measures focused on jobs, income, and output
- Variety of types of project types and project settings, including some intermodal projects
- Easier to use and explain than other impact analysis tools
- C11 product provides more depth on reliability, connectivity, and accessibility benefits
- To be validated and improved through 2 to 3 pilots
My Project Tools
You can change the project cost and expected AADT of your project (the default location of the arrows for both represent the medians), and adjust the characteristics of your region to reflect local conditions. These changes will affect the economic impacts of your project.

<table>
<thead>
<tr>
<th>Estimated Project Cost ($)</th>
<th>$192.7 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated AADT</td>
<td>128,000</td>
</tr>
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</table>

### Jobs, Wages, Output

<table>
<thead>
<tr>
<th></th>
<th>Jobs</th>
<th>Wages</th>
<th>Output</th>
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<tbody>
<tr>
<td>Direct Impacts</td>
<td>2,330</td>
<td>$140,325,000</td>
<td>$359,223,000</td>
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<tr>
<td></td>
<td>3,800</td>
<td>$233,875,000</td>
<td>$598,705,000</td>
</tr>
<tr>
<td>Supplier and</td>
<td>1,610</td>
<td>$96,824,000</td>
<td>$247,864,000</td>
</tr>
<tr>
<td>Wage Impacts</td>
<td>2,680</td>
<td>$161,374,000</td>
<td>$413,106,000</td>
</tr>
<tr>
<td>Total Impacts</td>
<td>3,940</td>
<td>$237,150,000</td>
<td>$607,087,000</td>
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<tr>
<td></td>
<td>6,560</td>
<td>$395,249,000</td>
<td>$1,011,811,000</td>
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</tbody>
</table>
### My Project Tools

You enter data characteristics of your own project. On the View Results Screen you can see the likely ranges of economic impacts from your project, and estimates of project cost and traffic volume. You will have the opportunity to adjust cost and traffic estimates, and to adjust complementary regional economic development factors to properly reflect your region. In turn, these adjustments will drive changes in expected economic impacts of your project.

<table>
<thead>
<tr>
<th>Project Type:</th>
<th>Bypass</th>
<th>Limited Access Road</th>
<th>Beltway</th>
<th>Interchange</th>
<th>Widening</th>
<th>Bridges</th>
<th>Access Road</th>
<th>Connector</th>
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</thead>
<tbody>
<tr>
<td>Region:</td>
<td>New England/Mid-Atlantic</td>
<td>Southwest</td>
<td>Southeast</td>
<td>International</td>
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<tr>
<td></td>
<td>Rocky Mountain/Far West</td>
<td>Great Lakes/Plains</td>
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<tr>
<td>Urban/Class Level:</td>
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<td>Mixed</td>
<td>Metro</td>
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<tr>
<td>Economic Distress:</td>
<td>Detressed Only</td>
<td>Non Detressed Only</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Length of your Project:</td>
<td>11 Miles</td>
<td></td>
<td></td>
<td></td>
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</tbody>
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[View Results]
Overview of TCAPP Planning Collaboration Web Tool

- This segment of the webinar will provide a brief introduction to the Transportation for Communities—Advancing Projects Through Partnerships (TCAPP) web site.
- Proposers on the C39 RFP should become highly familiar with TCAPP prior to preparing their response to the RFP.
What is TCAPP?

Whether you are a practitioner, resource specialist or stakeholder - using Transportation for Communities - Advancing Projects through Partnerships (TCAPP) can improve how you develop, prioritize, and inform transportation plans and projects. TCAPP is a decision support tool, built from the experiences of transportation partners and stakeholders, which provides how-to information when it is most needed.

How do I get started?

The information on TCAPP is extensive, but it does not have to be understood and used all at once. Choose the best path to find what you need.

The Decision Guide is the foundation of TCAPP. Use it to access detailed information about decisions made in long range planning, corridor planning, programming, or environmental review.

What can TCAPP do for me?

View this short video to become acquainted with TCAPP.

How does TCAPP work in the real world?

See how others have used TCAPP to support real-world projects. Washington State DOT used the Corridor Planning Application to define the first phase of the SR 509 corridor project.

What's new in TCAPP?

The Integrated Ecological Framework (IEF)
The TCAPP Decision Guide

LONG RANGE TRANSPORTATION PLANNING

<table>
<thead>
<tr>
<th>LRP-1</th>
<th>LRP-2</th>
<th>LRP-3</th>
<th>LRP-4</th>
<th>LRP-5</th>
<th>LRP-6</th>
<th>LRP-7</th>
<th>LRP-8</th>
<th>LRP-9</th>
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<tbody>
<tr>
<td>LRP-10</td>
<td>LRP-11</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adopt LRTP by MPO</td>
<td>Approve Conformity Analysis</td>
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</table>

PROGRAMMING

<table>
<thead>
<tr>
<th>PRO-1</th>
<th>PRO-2</th>
<th>PRO-3</th>
<th>PRO-4</th>
<th>PRO-5</th>
<th>PRO-6</th>
<th>PRO-7</th>
<th>PRO-8</th>
<th>PRO-9</th>
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</thead>
<tbody>
<tr>
<td>Approve Revenue Sources</td>
<td>Approve Methodology for Identifying Project Costs and Criteria for Allocating Revenue</td>
<td>Approve Project List drawn from Adopted Plan Scenario</td>
<td>Approve Project Prioritization</td>
<td>Reach Consensus on Draft TIP</td>
<td>Adopt TIP by MPO</td>
<td>Approve TIP by Governor and Incorporate into Draft STIP</td>
<td>Reach Consensus on Draft STIP</td>
<td>Approve STIP with Respect to Conformity and Fiscal Constraint</td>
</tr>
</tbody>
</table>

CORRIDOR PLANNING

<table>
<thead>
<tr>
<th>COR-1</th>
<th>COR-2</th>
<th>COR-3</th>
<th>COR-4</th>
<th>COR-5</th>
<th>COR-6</th>
<th>COR-7</th>
<th>COR-8</th>
<th>COR-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approve Scope of Corridor Planning Process</td>
<td>Approve Problem Statements and Opportunities</td>
<td>Approve Goals for the Corridor</td>
<td>Reach Consensus on Scope of Environmental Review &amp; Analysis</td>
<td>Approve Evaluation Criteria, Methods and Measures</td>
<td>Approve Range of Solutions Sets</td>
<td>Adopt Preferred Solution Set</td>
<td>Approve Evaluation Criteria, Methods &amp; Measures for Prioritization of Projects</td>
<td>Adopt Priorities for Implementation</td>
</tr>
</tbody>
</table>

ENVIRONMENTAL REVIEW / NEPA MERGED WITH PERMITTING

<table>
<thead>
<tr>
<th>ENV-1</th>
<th>ENV-2</th>
<th>ENV-3</th>
<th>ENV-4</th>
<th>ENV-5</th>
<th>ENV-6</th>
<th>ENV-7</th>
<th>ENV-8</th>
<th>ENV-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach Consensus on Scope of Environmental Review</td>
<td>Approve Notice of Intent</td>
<td>Approve Purpose and Need / Reach Consensus on Project Purpose</td>
<td>Reach Consensus on Study Area</td>
<td>Approve Evaluation Criteria, Methods and Measures</td>
<td>Approve Full Range of Alternatives</td>
<td>Approve Alternatives to be Carried Forward</td>
<td>Approve Draft EIS with Conceptual Mitigation</td>
<td>Approve Resource Agency Public Notice</td>
</tr>
<tr>
<td>ENV-10</td>
<td>ENV-11</td>
<td>ENV-12</td>
<td>ENV-13</td>
<td>ENV-14</td>
<td>ENV-15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approve Preferred Alternative / LEDPA</td>
<td>Approve Final Jurisdictional Determination</td>
<td>Reach Consensus on Avoidance and Minimization for the LEDPA</td>
<td>Approve Final EIS</td>
<td>Approve the ROD</td>
<td>Render Permit Decision and Approve Avoidance and Minimization</td>
<td></td>
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</tbody>
</table>

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Things TCAPP Can Help With

- Lack of definition of key issues that need to be addressed in planning
- Lack of communication among decision makers
- Loss of trust by decision makers, stakeholders, and environmental resource agencies
- Avoiding planning, programming, and developing projects that lack sufficient support to be fully implemented
- Engaging a wide variety of stakeholders at the right time in the process
- Lack of structure in the process and lack of understanding of decision-making authority
Things TCAPP Can Help With (2)

- Helping to get delayed projects “un-stuck” and expediting project delivery
- Lack of data, tools, and/or information needed to help make key decisions
- Lack of integration of important social, economic, and environmental considerations
- Project cost escalation caused by delays
- Lack of transparency
- Tackling emerging issues such as integrating environmental planning and greenhouse gasses
TCAPP Helps Deliver Many SHRP 2 Products

- Freight
- Expedited Project Delivery
- Economic impact
- Ecological Approach to Mitigation
- Performance Measures
- Greenhouse Gases
- Community Visioning
- Public-Private Partnerships
This project is intended to engage several teams of public-sector transportation agencies (state transportation agencies, metropolitan planning organizations, regional planning agencies, and localities) and (if desired) their consultants and/or university research partners in pilot tests of the utility of T-PICS as a tool for enhancing decision making in the planning of highway capacity additions.

For the purposes of this project, ‘utility’ has several dimensions, including the usability of the T-PICS web tool, the validity of the estimates of project impacts produced by T-PICS, and the applicability of the 100 case studies in the database to typical transportation planning problems addressed by transportation agencies.
Overview of SHRP 2 C33 Pilot Project RFP: Intent

- The results of this work will include an assessment of T-PICs in the dimensions defined here; additional guidance for future T-PICS users; and recommendations for improving and extending T-PICS.

- It is important for teams preparing proposals to be very familiar with T-PICS, to fully appreciate SHRP 2’s objectives for this pilot test, and to communicate this understanding in their proposals.
Overview of SHRP 2 C33 Pilot Project RFP: Objectives

- For SHRP 2, the objective of the project is to determine whether the T-PICS web tool is useful and helpful to transportation agencies and whether it produces results that are credible and reasonable.
- For transportation agencies, engagement in this project will provide an opportunity to use and apply the T-PICS web tool to improve their own economic impact assessment capability.
C33 Proposal Evaluation Criteria

- Level of collaboration.
- Whether the projects selected for the pilot test are a good test of T-PICS and are generally applicable to transportation planning practice elsewhere.
- Diversity and numbers of highway capacity projects proposed. The one pilot test that has already been awarded for C33 is located in the North Central region of the US and is focused mainly on highway widening projects.
The quality of the plan for the pilot test. In other words, how will the usability and validity of results from T-PICS be determined?

What percentage of the proposed work is devoted to economic assessments and what percentage to usability testing?

Assurance that sufficient data are likely to be available to assess the validity of T-PICS against real-world economic impact results.

Proposed budget compared with the value to be provided to SHRP 2.

The breadth of the proposed scope, quality of the statement of proposed work, and the likely ability to complete the work in the time allocated.
C39 Pilot Test Objectives

- The broad intent of this project (C39) is to engage public agencies in additional pilot tests of the utility of TCAPP and the Decision Guide as enhancements to decision making in the planning of additions to highway capacity.
- The pilot tests should provide illustrations of how TCAPP can help solve agency problems.
- The detailed objectives of this project are to
  - (1) test the content and functionality of TCAPP;
  - (2) apply the collaborative decision-making principles and practices and assess how well they work; and
  - (3) test any of the materials contributed to TCAPP by SHRP 2 projects C01, C02, C03, C06A, C06B, C08, C09, and C19 alone or in combinations; (4) provide an independent evaluation of the benefits and value of using TCAPP.
“Practical Applications” Available Through TCAPP Now

- C01: Collaborative decision-making
- C02: Performance measures
- C03: Economic impacts (also uses T-PICS)
- C06A&B: Integrated environmental planning
- C08: Community visioning
- C09: Greenhouse gases
- C19: Expedited project delivery

Other project material is being added, but cannot be practically tested at this point (freight, operations, smart growth, PPP)
C39 Proposal Evaluation Criteria

- Geographic diversity. The locations of previously funded C18 pilot test locations will be considered in new pilot project selection.
- Diversity of transportation agency size and resource availability for planning and project development.
- Level of collaboration: multiple stakeholders such as state departments of transportation, metropolitan planning organizations, city and county agencies, resource agencies, or Federal Highway Administration Division Offices are desired depending on the nature of collaboration proposed.
C39 Proposal Evaluation Criteria (2)

- Whether the problem, project, program of projects, or business process selected for the pilot test is a good test of the TCAPP framework and is applicable to practice elsewhere.
- Quality of the independent assessment plan. In other words, how will the benefits of using a SHRP 2 product or group of products be determined? At least 10% of the work effort should be devoted to assessment.
- Commitment from management (at least 25% of the work effort must be from the lead public agency).
- Value to SHRP 2 in relation to the proposed budget
Due Date and Budget Notes

- Proposals are due at TRB by 4:30PM eastern Time on Tuesday, May 1, 2012
- C33 (T-PICS validation)--$177,400 available
  - One pilot in has already been funded in the Upper Midwest (C33A)
    - This proposal was generated from an RFP issued last July
  - Up to two more are anticipated (multiple awards—C33B, C33C)
  - Firms involved in building T-PICS should not participate
- C39 (TCAPP pilot tests)—$1 million available
  - Multiple wards are anticipated (5 to 7)
  - Should not be similar to previous C18 pilots (location, content)
  - Likely smaller and more focused than the four C18 pilots
  - Previous C18 pilot agencies should not bid
- No cash match is required, but the lead public agency is required to provide a minimum level of effort (25%); can be paid for with SHRP 2 funds
Elements of a Good Proposal

- Conveys understanding of intent and objectives of pilot test
- Obvious familiarity with web tool(s) being tested
- Provides value to SHRP2 (not just “free money”)
- Team expertise and skills fit the proposed work plan
- Well-defined team organization and reasonable allocation of budget to team members
- Clear work plan that responds to the RFP
  - Practical: can be accomplished; focused
  - Creative: doesn’t simply parrot back the RFP
- Realistic time-line
- Reasonable budget with some detail
  - Budget is allocated in a manner that will generate results
- Meets specified proposal selection criteria
Good Luck to Bidders!

- David J. Plazak
  - Senior Program Officer
  - SHRP 2 Capacity Focus Area
  - TRB, Washington DC
  - dplazak@nas.edu
  - Phone: 202-334-1834
Question and Answer Session

- Please ask any questions you would like answered via the chat box function in the webinar software.
- It will be helpful if you can indicate whether the question pertains to the C33 RFP or to the C39 RFP.