

Transit Cooperative Research Program

TCRP

TCRP Oversight and Project Selection Committee

Transportation Research Board
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January 30, 2015

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FROM: Christopher W. Jenks
Director, Cooperative Research Programs, TRB

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Re: **Research Problem Statements for the Fiscal Year 2016 Transit Cooperative Research Program due by June 15, 2015**

Jonathan McDonald
Atkins North America

Therese McMillan
Federal Transit Administration

E. Susan Meyer
Spokane Transit Authority

Bradford Miller
Pinellas Suncoast Transit Authority

Gary Thomas
Dallas Area Rapid Transit

Matthew O. Tucker
North County Transit District

Denise Tyler
Delaware Transit Corporation

Phillip Washington
Denver Regional Transit District

Patricia Weaver
University of Kansas

The purpose of this announcement is to solicit problem statements identifying research needs for the Transit Cooperative Research Program (TCRP) Fiscal Year 2016 Program. These submittals form the basis for selection of the annual TCRP research program. It is easy to develop and submit a problem statement for consideration. Most are 1-3 pages in length using the enclosed outline.

The TCRP was authorized by the Intermodal Surface Transportation Efficiency Act of 1991 and subsequent reauthorizations and operates according to a memorandum of agreement among the cooperating organizations: The Federal Transit Administration (FTA); The National Academies, acting through the Transportation Research Board; and the Transit Development Corporation, Inc. (TDC), a nonprofit educational and research arm of the American Public Transportation Association. The TCRP undertakes applied research and technical activities focusing on the needs of transit operating agencies. Research is conducted in all areas of public transportation, including operations, policy, planning, service configuration, engineering of vehicles and facilities, maintenance, human resources, and administration.

The TCRP focuses on research that is consistent with, and supportive of, FTA's strategic research goals and TCRP strategic priorities. Presented below are two FTA strategic research goals.

- (1) **Support Increasing Livability** – FTA conducts research designed to help transit agencies improve livability in their communities. Transit ridership is critical for realizing the economic, environmental, and mobility needs of our communities.
 - How can we assess the benefits of transit to a community?
 - How can we best estimate the cost benefits of system expansion?

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Christopher W. Jenks
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- How are changing demographics going to affect demand for different types of transit services?
 - What is the impact of congestion on transit systems?
 - What coordination technologies or methods are available to ensure that the transportation benefits available to seniors and disadvantaged populations are fully utilized?
 - How can more efficient and more effective provision of transit services promote sustainability? What improvements to transit vehicles and infrastructure would reduce emissions and promote energy independence? Which technologies now available or currently being tested promise the greatest improvements in energy conservation, fuel economy and reduction of harmful emissions? What can FTA and individual transit agencies do to foster introduction of economical and environmentally friendly transit vehicles? How can land use policies support these efforts?
 - How can we better integrate transit into our communities?
- (2) **Support Improving the Performance of Transit Operations and Systems** – FTA strives to make safe, affordable, reliable, accessible, and efficient public transportation available to all Americans.
- How can we improve the reliability of our transit systems and the productivity of our transit workforce?
 - What technical and operational advances best contribute to cost-effective management of the planning, design, construction and operation of major transit investments?
 - What technologies and practices are available to promote the most cost-effective service and capital replacement policies?
 - How do we ensure transit assets are in a state of good repair?
 - How can we systematically promote life-cycle planning for transit assets?
 - What safety considerations should be factored in capital, operating, and maintenance expenditures? What obstacles currently prohibit safety factors from being part of the initial planning process of capital projects? What technology and practical solutions can help transit agencies increase safety and security training, public awareness, and emergency preparedness? How can we improve the safety of transit workers?

The TCRP has also established five strategic priorities:

I. Place the Transit Customer First: The importance of the transit rider as well as the community at large as the customer was a principal outcome of the TCRP Future Search. The American consumer society is demanding; no industry can prosper that does not place the customer first.

II. Enable Transit to Operate in a Technologically Advanced Society: TCRP will support public transportation to integrate state-of-the-art technology in all aspects of its business so that mobility needs can be served as communities change and customer needs evolve.

III. Continuously Improve Public Transportation: The TCRP will support communities throughout the United States to continuously improve public transportation.

IV. Flourish in the Multimodal Environment: More authority for transportation investment decisions is now in the hands of state and local decision-makers. The transit industry must work harder and smarter to realize the intermodal flexibility and community-based planning opportunities offered by federal and other programs.

V. Revitalize Transit Organizations: Information technologies, changes in the work force, and new roles and partnerships are revolutionizing the workplace. By reinventing themselves, transit organizations can “Work Better – Cost Less.”

A list of TCRP projects may be found on the TCRP website: <http://www.trb.org/TCRP/Public/TCRPPProjects.aspx> . The FTA and TCRP priorities and ongoing TCRP projects should be considered in preparing a research problem statement. A problem statement outline is enclosed. Problem statement submittals should follow the outline and may be submitted by anyone at any time. However, the deadline for submitting problems for consideration in the FY 2016 program is **June 15, 2015**. Problem statements may be submitted by e-mail to trcp@nas.edu. If sent electronically, it is preferred that the problem statement be sent as an attachment to the e-mail message in Microsoft Word format.

If you have previously submitted a research problem statement that was not selected for funding, but is still a relevant transit research topic, please feel free to resubmit the problem statement for consideration. There are many good research topics that are not selected each year simply due to the level of funding available. Research problem statements must be resubmitted each year to receive further consideration.

The governing board of the TDC, which also serves as the TCRP Oversight and Project Selection (TOPS) Committee, will select the research problem statements for the FY 2016 program in the fall of 2015. For problems selected by the TOPS Committee, requests for proposals will be issued, and contractors will be selected through a competitive proposal process.

Thank you very much for your consideration. Your willingness to participate in the identification of relevant transit research topics is a key element of a successful, industry-driven TCRP. Should you have any questions or need additional information, please feel free to contact me at 202/334-3089 or cjenks@nas.edu.

Attachment

Distribution: Chair and Members, TOPS Committee; Executive Director, TDC; Associate Administrator, Research, Demonstration and Innovation, FTA; Associate Administrator, Budget & Policy, FTA; Liaison Representatives, FTA; APTA Committees; Directors, University Transportation Centers; Chair and Members, AASHTO Standing Committee on Public Transportation; Executive Secretary, Women’s Transportation Seminar; Executive Director, National Society of Black Engineers; Executive Director, National Association of Minority Contractors; CEO and President, National Urban League; President, National Council of Negro Women; President, Blacks in Government; Representatives, Historically Black Colleges; Board Members, State Delegates, and Associate Director, Community Transportation Association of America; Executive Director, Conference of Minority Transportation Officials; Executive Director, National Transportation Consortium of Minority Colleges & Universities; Society of Hispanic Professors of Engineers; National Forum for Black Public Administrators; Chair and Members, TRB Executive Committee; Chairs and Members, TCRP Panels; Chairs, TRB Group Councils and Sections; Chairs, TRB Committees (Transit); TRB State Representatives; TRB University Representatives; TRB Transit Representatives; TRB Sustaining Associates; Chair, Subcommittee on NRC Oversight; and TRB Staff (Selected).

OUTLINE FOR TCRP PROBLEM STATEMENTS

I. PROBLEM TITLE

The title should be no more than 10 words.

II. RESEARCH PROBLEM STATEMENT

In no more than three paragraphs, provide a general description of the problem or need.

III. OBJECTIVE

Include a clear, concise statement of the objectives (anticipated products) that are expected to be met by this particular research.

IV. RESEARCH PROPOSED

Provide a statement of the specific research proposed, how it relates to the general problem statement in Section II and, if possible, the research approach and the tasks envisioned.

V. ESTIMATE OF THE PROBLEM FUNDING AND RESEARCH PERIOD

Recommended Funding: Include an estimate of the funds necessary to accomplish the objectives stated in Section III. As a general guideline, the present cost for research usually averages approximately \$200,000-\$250,000 per professional staff-year. TCRP projects typically are in the \$400,000-\$600,000 range. A detailed budget is not necessary.

Research Period: Provide an estimate of the period of time needed to complete the research, including 3 months for review and revision of a draft final report.

VI. URGENCY AND PAYOFF POTENTIAL

Include a statement concerning the urgency of this particular research. Identify and, if possible, quantify the potential and magnitude of payoff from the achievement of the project objectives. Any institutional, political, or socio-economic barriers to implementation of the anticipated research products should also be identified.

VII. RELATIONSHIP TO FTA STRATEGIC RESEARCH GOALS and/or TCRP STRATEGIC PRIORITIES

Categorize this problem statement using the FTA strategic research goals and/or the TCRP Strategic Priorities.

VIII. RELATED RESEARCH

If available, provide information on other research—completed, in progress, or pending—that is closely relevant to the proposed problem.

IX. PERSON(S) DEVELOPING THE PROBLEM

Provide the specifics (i.e., name, title, address, telephone, and fax numbers) for the person(s) who developed the problem.

X. PROCESS USED TO DEVELOP PROBLEM STATEMENT

State whether this problem statement is the product of an individual, a formal committee, or another group.

XI. DATE AND SUBMITTED BY

Provide the specifics (see Section IX) of the person(s) who submitted the problem and the date of submission.

Submit to:

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