















FTA Report to Congress on FY 2008 and FY 2009 FTA Research Projects

<u>Project Title</u>		<u>FY 2008 Funding</u>	<u>FY 2009 Funding</u>	<u>Research Objective or Other Purpose</u>
Sponsorship and Participation in Transit Industry Forums	Discretionary	\$185,000	TBD	Technical Assistance
The Taxi Cab, Limousine & Paratransit Association (TLPA) Partnership Project	Discretionary	\$200,000	TBD	Technical Assistance
Major Capital Projects Roundtable	Discretionary	\$160,000	TBD	Technical Assistance
Human Services Transportation Coordination	Congressionally Directed	\$1,600,000	\$1,600,000	Technical Assistance
Mobility Management for Human Services	Discretionary	\$300,000	TBD	Technical Assistance
National Technical Assistance Center for Senior Transportation	Congressionally Directed	\$1,000,000	\$1,000,000	Technical Assistance
JARC and New Freedom Evaluation	Discretionary	\$150,000	TBD	Technical Assistance
Accessibility for Persons with Disabilities -- Project ACTION	Congressionally Directed	\$3,000,000	\$3,000,000	Technical Assistance
CTAA of America Nationwide Joblinks	Congressionally Directed	\$1,666,000	\$1,520,000	Technical Assistance
DBE Electronic Reporting Project	Discretionary	\$200,000	\$300,000	Technical Assistance
Support for Meeting ADA Requirements	Discretionary	\$250,000	\$350,000	Technical Assistance
Support for Title VI/DBEs/EEO	Discretionary	\$250,000	TBD	Technical Assistance

## **FTA Strategic Research Goal #1: Provide National Transit Research Leadership**

### **Reauthorization Research and Outreach**

**Funding - FY 2008:** \$300,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$300,000

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

This project supports development of FTA's reauthorization proposal through the analysis of transit data to identify industry trends and programmatic lessons learned and through outreach sessions with transit stakeholders.

#### **Relevance to the Transit Industry and Community:**

This project will support the development of white papers on transit industry issues and trends as well as outreach sessions to gain transit industry input.

#### **Expected Final Products and Delivery Dates:**

FTA held three outreach sessions with stakeholders during FY 2009: three in December 2008 and one in January 2009. FTA produced a report on the impact of its transit programs in July 2009. Also, FTA is conducting policy research to support the Secretary's Livability Initiative.

### **Transportation Research Board (TRB) Core Support**

**Funding - FY 2008:** \$200,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$1,743,169 since 2000

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

This program supports the exchange of transit research results at a national level.

#### **Relevance to the Transit Industry and Community:**

Research results are made available to the transit industry through the TRB annual meeting, TRB standing committees and task force activities, the field visit program, inquiries, publications and the Transportation Research Information Service (TRIS).

#### **Expected Final Products and Delivery Dates:**

Every January, FTA conducts three technical panel sessions, special meetings, alongside staff participation at the TRB Annual Meeting. The project supports the ongoing activities of TRB, committees, and TRIS.

**Transit Research Analysis Committee (TRAC)**

**Funding - FY 2008:** None                      **FY 2009:** To Be Determined                      Discretionary

**Total Funding:**              \$725,000 since 2004

**Non-FTA Funding:** None

**National Relevance of the Research:**

The TRAC advises FTA on the Federal role in transit research and on high-priority research opportunities.

**Relevance to the Transit Industry and Community:**

The TRAC is composed of members of the transit industry, academia, manufacturers, labor and others. It is designed to ensure FTA's research meets the needs of the transit industry and community.

**Expected Final Products and Delivery Dates:**

The TRAC produces annual Letter Reports of Recommendations to FTA. The latest Letter Report was published on June 2, 2009.

**FTA Strategic Plan Support**

**Funding - FY 2008:** \$200,000                      **FY 2009:** None                      Discretionary

**Total Funding:**              \$200,000

**Non-FTA Funding:** None

**National Relevance of the Research:**

FTA is developing a new Strategic Plan that will guide FTA and its programs into the future, focus on National outcomes, and become the foundation for development of annual performance plans, linking the performance plan to budgets and programs.

**Relevance to the Transit Industry and Community:**

The plan will outline FTA roles in improving public transportation.

**Expected Final Products and Delivery Dates:**

The Strategic Plan for FTA is expected in FY 2010.

### **Quick Response Policy Analysis**

**Funding - FY 2008:** None                      **FY 2009:** \$500,000                      Discretionary

**Total Funding:**              New in fiscal year 2009

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

This effort will fund a series of policy research efforts aimed at producing analytical results in the areas of transit industry finance, performance measurement, program evaluation, and policy and program development.

#### **Relevance to the Transit Industry and Community:**

This work will provide industry and government leaders a greater analytical foundation to respond to complex industry and policy questions.

#### **Expected Final Products and Delivery Dates:**

Multiple products ranging from white papers to reports will be awarded on a task basis with delivery ranging from several weeks to several months.

### **Electronic Performance Reporting System**

**Funding - FY 2008:** None                      **FY 2009:** \$395,000                      Discretionary

**Total Funding:**              New in fiscal year 2009

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

Results of this reporting system that will improve FTA's ability to manage programs for better results. Focusing resources on products that contribute the most to agency goals is an effective strategy for maximizing the effectiveness of programs.

#### **Relevance to the Transit Industry and Community:**

This effort will improve FTA's management practices.

#### **Expected Final Products and Delivery Dates:**

Expected completion date is September of 2010.

**Technical Support for Research Program**

**Funding - FY 2008:** \$550,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$1,950,000 since 2004

**Non-FTA Funding:** None

**National Relevance of the Research:**

This program assists FTA in identifying national research needs and priorities, reporting on research results, and developing reports.

**Relevance to the Transit Industry and Community:**

These activities support the strategic planning and reporting on FTA research to ensure it meets the needs of the transit industry and communities.

**Expected Final Products and Delivery Dates:**

Deliverables vary per task and include the Annual Research Reports, Multi-Year Research Program Plans, grantee workshops, and technical reports.

## **FTA Strategic Research Goal #2: Support Increasing Transit's Market Share**

### **FTA Rail Cost Database Update and Training**

**Funding - FY 2008:** \$250,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$250,000

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

The research will examine the cost of commuter rail in order to improve FTA's understanding of transit cost effectiveness.

#### **Relevance to the Transit Industry and Community:**

The project will provide FTA customers information on past rail costs as well as analysis of the cost drivers and requirements for commuter rail systems.

#### **Expected Final Products and Delivery Dates:**

The project will produce a Commuter Rail Cost Database in FY 2010.

### **Communication Based Train Control (CBTC)**

**Funding - FY 2008:** \$200,000      **FY 2009:** None      Discretionary

**Total Funding:**      \$200,000

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

Communication Based Train Control (CBTC) systems permit more efficient operations over conventional systems by allowing trains to operate at closer headways with safety protections.

#### **Relevance to the Transit Industry and Community:**

This research will provide transit agencies with cost benefit information on CBTC.

#### **Expected Final Products and Delivery Dates:**

Final results are expected in FY 2010.

### **Transit Infrastructure Needs Report**

**Funding - FY 2008:** \$218,000      **FY 2009:** None      Discretionary

**Total Funding:**      \$218,000

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

The report assessed the level of capital investment required to attain and maintain a state of good repair (SGR) for the Nation's seven largest rail transit operators..

#### **Relevance to the Transit Industry and Community:**

The study found that more than one-third of agencies' assets are either in marginal or poor condition, indicating that these assets are near or have already exceeded their expected useful life. Assuming assets are permitted to remain in service beyond their expected useful life for a limited time (a realistic assumption based on current agency practices), there was an estimated SGR backlog of roughly \$50 billion (2008 dollars) for the agencies under consideration.

#### **Expected Final Products and Delivery Dates:**

The report was completed in April 2009.

### **Public Private Partnership Program (Penta-P) Project**

**Funding - FY 2008:** \$300,000      **FY 2009:** \$207,602      Discretionary

**Total Funding:**      \$1,007,602 since 2007

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

The research will identify best practices and standards for the implementation of public-private partnership (PPP) agreements.

#### **Relevance to the Transit Industry and Community:**

The research will provide a better understanding of lessons learned from FTA PPP pilot projects and develop standards for evaluating PPP agreements and success of PPP.

#### **Expected Final Products and Delivery Dates:**

The project will examine agreements for three PPP pilot projects to extract best practices and lessons learned to improve the evaluation process and protect the public interest. A report on the transfer of risk between public and private sector will be developed as financial agreements for pilot projects are completed and analyzed. To date, no financial agreements are arranged.

### **Rail System Capacity Improvement Study**

**Funding - FY 2008:** \$300,000      **FY 2009:** None      Discretionary

**Total Funding:**      \$300,000

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

This project will examine options that might improve rail capacity and optimize the efficiency of rail operations.

#### **Relevance to the Transit Industry and Community:**

Over the last decade, rail transit system ridership has increased in parallel with gasoline prices. This study will examine the costs and improvements to the infrastructure that will bring the biggest growth in ridership.

#### **Expected Final Products and Delivery Dates:**

This study will provide a road map for FTA and the Congress to address future transit needs. The report will be delivered in FY 2010.

### **Performance Management Outreach**

**Funding - FY 2008:** \$285,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$285,000

**Non-FTA Funding:** \$5,000 of in-kind cost share from the American Public Transportation Association (APTA)

#### **National Relevance of the Research:**

Performance measurement can drive improvement at FTA and in the transit industry through benchmarking and improved decision-making.

#### **Relevance to the Transit Industry and Community:**

This program will provide outreach in cooperation with APTA and transit agencies to develop the potential of performance management in the transit industry.

#### **Expected Final Products and Delivery Dates:**

The project produced three training sessions in the summer of 2009; a workshop for transit agencies was conducted in December 2008. In addition, exhibits on transit data and FTA programs were presented at the APTA annual meeting in October 2008 and in January 2009.

### **National Household Travel Survey (NHTS)**

**Funding - FY 2008:** \$200,000      **FY 2009:** None      Discretionary

**Total Funding:** \$400,000

**Non-FTA Funding:** Conducted in partnership with FHWA; plus "buy-ins" by numerous State and local authorities.

#### **National Relevance of the Research:**

The NHTS is a U.S. Department of Transportation effort sponsored by the Bureau of Transportation Statistics (BTS), the Federal Highway Administration, and the Federal Transit Administration to collect data on both long-distance and local travel by the American public. The joint survey gathers trip-related data such as mode of transportation, duration, distance and purpose of trip. It also gathers demographic, geographic, and economic data for analysis purposes.

#### **Relevance to the Transit Industry and Community:**

Policy makers, metropolitan planning organizations, industry professionals, and academic researchers use the data to gauge the extent and patterns of travel, to plan new investments, and to better understand the implications for the nation's transportation infrastructure.

#### **Expected Final Products and Delivery Dates:**

The survey will provide data on approximately 100,000 U.S. households. BTS is currently completing review and analysis of the data and will produce results in the first quarter of 2010.

### **Center for Transit Oriented Development (TOD)**

**Funding - FY 2008:** \$1,000,000      **FY 2009:** \$1,000,000      Congressionally Directed

**Total Funding:** \$4,000,000 since 2006

**Non-FTA Funding:** The Center also receives funding from a number of foundations and organizations.

#### **National Relevance of the Research:**

By improving the level of understanding of the concept and procedures of TOD, this research will increase the incidence of coordinated land use and transit services.

#### **Relevance to the Transit Industry and Community:**

By providing useful information and technical assistance, this research will increase the knowledge, skills, and abilities of the transit industry, states, and communities in developing or increasing TOD programs.

#### **Expected Final Products and Delivery Dates:**

Completed products include a beta-version national database (testing phase), selected case studies of effective TOD practices, two brochures, *TOD 101: Why TOD?* and *TOD 202: What Is Station Area Planning?*, *National TOD Mixed Income Housing TOD Action Guide-2008*, and *Station Area Planning: How to Make Great Transit-Oriented Places*.

**Financial Capacity of Transit Agencies Study**

**Funding - FY 2008:** None                      **FY 2009:** \$300,000                      Discretionary

**Total Funding:**              New in fiscal year 2009

**Non-FTA Funding:** None

**National Relevance of the Research:**

Results will allow FTA to collect data on the ability of transit agencies to repay debts and generate statistics on the financial condition of transit agencies. This will allow FTA to provide useful information to Congress and other decision-makers.

**Relevance to the Transit Industry and Community:**

FTA will be able to use the results of this work to identify which transit agencies are getting into financial difficulty and initiate interventions to prevent these agencies from failing.

**Expected Final Products and Delivery Dates:**

The final report will be completed by December 2009.

**Major Capital Projects, Project Management Outreach**

**Funding - FY 2008:** \$160,000                      **FY 2009:** To Be Determined                      Discretionary

**Total Funding:**              \$310,000

**Non-FTA Funding:** None

**National Relevance of the Research:**

The program supports improvements in major capital project management and engineering practices.

**Relevance to the Transit Industry and Community:**

This program familiarizes and trains grantees and their contractors on FTA's project management requirements and engineering approaches.

**Expected Final Products and Delivery Dates:**

This project produces ongoing outcomes and, on an annual basis, reaches approximately 45 grantees with active Full Grant Agreements (FFGAs).

### **Federal Grants Program Benchmarking**

**Funding - FY 2008:** None                      **FY 2009:** \$200,000                      Discretionary

**Total Funding:**              \$200,000

**Non-FTA Funding:** None

#### **National Relevance of the Research:**

Through this project, FTA is working to further improve its grant management and grant evaluation activities by studying how other Federal Agencies award, manage, and evaluate comparable grant programs.

#### **Relevance to the Transit Industry and Community:**

Enhancements to the grants management and evaluation processes can assist in expediting award of grant funds to transit agencies and States. This will result in funds being more quickly put to work in making tangible community impacts.

#### **Expected Final Products and Delivery Dates:**

The end product will be a report that will include recommendations on enhancements in FTA's grant making and evaluation processes.

### **Transit Conditions, Performance and Investment Needs**

**Funding - FY 2008:** \$332,000                      **FY 2009:** \$100,000                      Discretionary

**Total Funding:**              \$2,532,000

**Non-FTA Funding:** FTA and FHWA jointly fund the report

#### **National Relevance of the Research:**

The report enhances the Nation's understanding of the conditions and performance of U.S. transit systems.

#### **Relevance to the Transit Industry and Community:**

Using data from FTA's extensive database on transit assets, the report analyzes capital asset trends, identifies funding needs, and informs policy decisions.

#### **Expected Final Products and Delivery Dates:**

The report is submitted biennially to Congress. Next report is due in July 2010.

**Venture Capital Scoping Study**

**Funding - FY 2008:** None                      **FY 2009:** \$75,000                      Discretionary

**Total Funding:**              \$75,000

**Non-FTA Funding:** None

**National Relevance of the Research:**

The study will assess the feasibility of creating and operating a public transportation sector venture capital entity.

**Relevance to the Transit Industry and Community:**

The study will examine potential benefits to the transit industry of creating a communications network linking venture capitalists, entrepreneurs, and the transit industry together.

**Expected Final Products and Delivery Dates:**

The study is expected to be completed in FY 2010.

**FTA Strategic Research Goal #3: Support Improving the Performance of Transit Operations and Systems**

**Objective #3.1: Perform Research to Improve Capital and Operating Efficiencies**

**Incremental Bus Rapid Transit (BRT): Research of Concept and Demonstration**

**Funding - FY 2008:** \$250,000      **FY 2009:** None      Discretionary

**Total Funding:**      \$250,000

**Non-FTA Funding:**      None

**National Relevance of the Research:**

Many transit agencies have experimented with elements of BRT systems. This research will examine which elements, or combinations of elements have the greatest impact.

**Relevance to the Transit Industry and Community:**

The research will help transit agencies better understand the costs and benefits of incremental BRT strategies.

**Expected Final Products and Delivery Dates:**

This project will produce a Best Practices and Lessons-learned Final Report documenting existing data from transit agencies on performance impact, such as increased boardings, travel speed, and the cost to implement BRT elements. The report is expected to be completed by first quarter of 2010.

**Development of Transit Standards**

**Funding - FY 2008:** None      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$3,900,000 since 2005

**Non-FTA Funding:**      APTA membership dues.

**National Relevance of the Research:**

Industry standards can improve the design, performance, safety, and reliability of transit systems and reduce the risk for the supply industry.

**Relevance to the Transit Industry and Community:**

The project supports the transit industry to develop voluntary consensus standards.

**Expected Final Products and Delivery Dates:**

More than 40 committees and 1300 transit industry professionals are actively participating in nine major voluntary standards development programs. Examples of specific standards completed in 2008 are the Train Operator Hours of Service standard, In-Service Brake Systems Performance Testing for Buses, and Recommended Practice for Bus Rapid Transit Branding, Imaging and Marketing.

### **BuSolutions Advanced Transit Research**

**Funding - FY 2008:** \$667,135      **FY 2009:** \$1,616,781      Congressionally Directed

**Total Funding:**      \$5,319,776 since 2005

**Non-FTA Funding:** Matching funding of \$575,947 (18% of total) during the project to date, plus \$3.2 million of prior investment by Altair Engineering (project technical lead).

#### **National Relevance of the Research:**

This bus design may lead to better transit service at lower costs, reduced fuel use and greenhouse gas emissions, and better U.S. transit industry competitiveness.

#### **Relevance to the Transit Industry and Community:**

This project uses computer-aided design (CAD) tools and methodology to design and prototype a bus that uses standard transit industry components, yet achieves dramatic improvements in bus weight, fuel economy, operating costs, and maintainability.

#### **Expected Final Products and Delivery Dates:**

The finished CAD and Advanced Design Transit Vehicle (ADTV) build will begin in the fourth quarter of 2009.

### **Portland, Oregon Streetcar Prototype Purchase and Deployment**

**Funding - FY 2008:** \$1,490,000      **FY 2009:** \$1,000,000      Congressionally Directed

**Total Funding:**      \$4,390,000 since 2006

**Non-FTA Funding:**      None

#### **National Relevance of the Research:**

Currently there is no domestic trolley/streetcars manufacturer. This prototype project may lead to trolleys being built in the United States.

#### **Relevance to the Transit Industry and Community:**

This project may lead to trolleys being built in the United States and allow trolley projects to comply with "Buy American" provisions.

#### **Expected Final Products and Delivery Dates:**

The streetcar prototype was unveiled on July 2009 and it is currently in testing phase.

**Advanced Technology Bus Rapid Transit (BRT) Project**

**Funding - FY 2008:** \$550,000      **FY 2009:** \$625,000      Congressionally Directed

**Total Funding:**                    \$2,210,000 since 2006

**Non-FTA Funding:**            None

**National Relevance of the Research:**

The final report will provide lessons learned for other properties planning BRT systems.

**Relevance to the Transit Industry and Community:**

The project will provide demonstrations of BRT technologies to reduce dwell time in small urban service areas. The secondary goal is to compare alternative fuel performance to standard diesel in identical vehicles.

**Expected Final Products and Delivery Dates:**

The BRT system demonstration and final report will be completed by 2013.

**National Bus Rapid Transit Institute (NBRTI)**

**Funding - FY 2008:** \$1,701,875      **FY 2009:** \$1,701,875      Congressionally Directed

**Total Funding:**                    \$6,976,250 since 2003

**Non-FTA Funding:**            None

**National Relevance of the Research:**

The NBRTI was created to facilitate the sharing of knowledge and innovation for increasing the speed, efficiency, and reliability of high-capacity bus service through the implementation of BRT systems in the United States.

**Relevance to the Transit Industry and Community:**

The NBRTI serves as a resource to transportation professionals, consultants and the transit community to be aware of the latest trends and information.

**Expected Final Products and Delivery Dates:**

The National Bus Rapid Transit Institute published an updated edition of the *Characteristics of Bus Rapid Transit for Decision Making* in February 2009. The document provides transportation planners and decision-makers with basic information and data to support the development and evaluation of bus rapid transit concepts as one of many options during alternatives analyses and subsequent project planning. This report describes the physical, operational, cost, performance and potential benefits of BRT's constituent elements both individually and combined as integrated system.

**Center for Advanced Transportation Initiatives**

**Funding - FY 2008:** \$525,150      **FY 2009:** \$607,812      Congressionally Directed

**Total Funding:**                    \$2,141,052 since 2005

**Non-FTA Funding:**            None

**National Relevance of the Research:**

Multiple projects are funded from this grant. Most projects have national relevance such as integrated transit asset management, 3D ground penetrating radar, and using transit to evacuate high density urban areas.

**Relevance to the Transit Industry and Community:**

Projects will address issues relevant to transit workforce development programs, the impact of low cost buses on the transit industry, configuration management, the impact of light rail on residential development and station access shuttles in the New Jersey Transit system.

**Expected Final Products and Delivery Dates:**

Projects final reports will be delivered in 2009 to 2011.

**Intelligent Transportation System (ITS) Pilot Project**

**Funding - FY 2008:** \$452,212      **FY 2009:** \$452,212      Congressionally Directed

**Total Funding:**                    \$1,829,774 since 2006

**Non-FTA Funding:**            None

**National Relevance of the Research:**

This project is an investigation of the use of remotely sensed vehicle data and ITS deployments to augment traditional traffic data and improve estimation of traffic flow critical to transit planning and operation.

**Relevance to the Transit Industry and Community:**

Transit agencies can use the results of this project to learn how ITS can improve transit service delivery.

**Expected Final Products and Delivery Dates:**

The final report is expected in September 2009.

**Objective #3.2: Perform Research to Improve Transit Planning and Forecasting**

**New Starts Roundtable and New Starts/Small Starts Outreach**

**Funding - FY 2008:** \$200,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$1,200,000 since 2000

**Non-FTA Funding:** None

**National Relevance of the Research:**

This program provides information on FTA's New Starts/Small Starts programs.

**Relevance to the Transit Industry and Community:**

The program informs local communities of changing program requirements improves communication between FTA and local communities as they consider New Starts/Small Starts projects.

**Expected Final Products and Delivery Dates:**

The project is ongoing. Examples of deliverables include the conference materials and proceedings from 2000-2003.

**Sponsorship and Participation in Transit Industry Forums**

**Funding - FY 2008:** \$185,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$435,000 since 2006

**Non-FTA Funding:** None

**National Relevance of the Research:**

FTA sponsors and participates in national forums in order to educate the industry and promote FTA program initiatives.

**Relevance to the Transit Industry and Community:**

FTA uses stakeholder meetings to share effective planning practices, provide technical assistance, and inform prospective grantees of funding opportunities.

**Expected Final Products and Delivery Dates:**

FTA determines sponsorship of stakeholder forums on a year-to-year basis, depending upon funding and forum opportunities. Sponsored forums result in proceedings that include FTA-generated themes and presentations.

**The Taxicab, Limousine & Paratransit Association (TLPA) Partnership Project**

**Funding - FY 2008:** \$200,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**      \$400,000

**Non-FTA Funding:** None

**National Relevance of the Research:**

This project promotes opportunities for private operators to participate in transportation planning and in providing transportation services funded by FTA.

**Relevance to the Transit Industry and Community:**

The potential exists to improve the quality and cost effectiveness of human services transportation through increased awareness of private operator perspectives and competition in contracting.

**Expected Final Products and Delivery Dates:**

Finished product to date are a workshop series and publication of *Planning Ahead: Enhanced Contracting Opportunities Through Being Involved in the Transportation Planning Process*. In FY2010, TLPA will prepare a guidebook entitled, *Private Transportation Operators at the Table: A Guide to Participating in the Transportation Planning Process*.

**Public Transportation Participation Pilot Program**

**Funding - FY 2008:** \$1,000,000      **FY 2009:** \$1,000,000      Congressionally Directed

**Total Funding:**      \$3,900,000 since 2006

**Non-FTA Funding:**      None

**National Relevance of the Research:**

This project provides seed-funding to support research, testing, and demonstration of innovative approaches to engaging the public and stakeholders in planning for public transportation.

**Relevance to the Transit Industry and Community:**

Proactive participation by stakeholders and the public in transportation decision-making should improve the responsiveness of transportation decisions to community needs.

**Expected Final Products and Delivery Dates:**

Deliverables are produced in accordance with the work plan of each sponsored effort. A "knowledge-center" website has already been prepared and is in use by grantees, and a summary report will be prepared as projects are completed through the fourth quarter of FY2009 and into FY2010.

**Transit Cooperative Research Program (TCRP) Matching Funds for Project H-39**

**Funding - FY 2008:** \$100,000      **FY 2009:** None      Discretionary

**Total Funding:** \$500,000 (The \$100,000 FTA discretionary fund matches \$400,000 FTA provided through TCRP)

**Non-FTA Funding:**

**National Relevance of the Research:**

This research supports a TCRP project on the methodology for determining the economic development benefits of proposed transit projects to determine their merits and impacts and impacts.

**Relevance to the Transit Industry and Community:**

The results of this research will be a universal forecast system that can be applied to all transit agencies permitting them to better understand economic development impacts.

**Expected Final Products and Delivery Dates:**

This project is expected to deliver by February 2010 a final report presenting the findings of the research. The publication will be distributed electronically, in hard copy and in CD ROM, including the algorithms and data files used.

**Major Capital Projects Roundtable**

**Funding - FY 2008:** \$160,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$208,510

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

The roundtable provides information on the latest transit engineering and construction techniques to implement major capital projects efficiently and effectively.

**Relevance to the Transit Industry and Community:**

The roundtable facilitates peer-to-peer contact from the top 50 transit agencies which implement major capital projects.

**Expected Final Products and Delivery Dates:**

Roundtables were held on June 10, 2008 and April 26, 2009. An additional Roundtable is planned for Fall 2009.

### **Planning Partnerships for Improved Transit Planning**

**Funding - FY 2008:** \$150,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$225,000 since 2007

**Non-FTA Funding:**                  None

#### **National Relevance of the Research:**

This two-part project promotes consideration and inclusion of transit solutions in state and local transportation decision-making related to climate-change mitigation and transit system security.

#### **Relevance to the Transit Industry and Community:**

This project will produce an industry profile and selected examples of how transit agencies and MPOs work together to address sustainability and transit solutions in state and local settings.

#### **Expected Final Products and Delivery Dates:**

Products will include summary reports with experience synthesis and overviews, plus informational handouts describing how transit operators can be an integral part of planning for sustainability and planning for security.

### **Transportation Planning Capacity Building Program and Peer Exchanges**

**Funding - FY 2008:** \$185,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$385,000 since 2006.

**Non-FTA Funding:**                  This program is further supported through FHWA funding of approximately \$400,000 each year.

#### **National Relevance of the Research:**

Through this jointly sponsored and managed program, FTA and FHWA intend to improve state and local transportation decision-making by providing technical assistance.

#### **Relevance to the Transit Industry and Community:**

The reports and facilitated, documented peer exchanges support broad dissemination of effective practice and lessons learned to the industry.

#### **Expected Final Products and Delivery Dates:**

In FY2009, FTA and FHWA jointly produced a report, Briefing Book for Transportation Decision-Makers, Officials, and Staff. Over the coming year, the two agencies will jointly sponsor preparation of a comprehensive report documenting the technical assistance topics, methods, and participants served by the TPCB program over the past 5 years.

**New Jersey Institute of Technology's Transportation, Economic, & Land Use System (TELUS)**

**Funding - FY 2008:** \$540,000      **FY 2009:** \$625,000      Congressionally Directed

**Total Funding:**                      \$2,205,000 since 2006

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project will improve understanding by state and local officials of the potential land use and economic development benefits of transit investment.

**Relevance to the Transit Industry and Community:**

By improving awareness of and the ability to estimate potential land use and economic development benefits of transit proposals, this project will facilitate more coordinated land use and transportation planning and program implementation.

**Expected Final Products and Delivery Dates:**

An enhanced model framework, documentation, and case study applications for TELUS will be produced by the end of 2009.

**Objective #3.3: Perform Research to Improve Mobility, Rural Services, and Services for Targeted Populations**

**Human Services Transportation Coordination**

**Funding - FY 2008:** \$1,600,000      **FY 2009:** \$1,600,000      Congressionally Directed

**Total Funding:**                      \$6,400,000 since 2006

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

United We Ride and the Federal Interagency Coordinating Council on Access and Mobility is a national initiative to enhance human service transportation for older adults, individuals with disabilities, children, and individuals with lower incomes. The coordinated transportation services are between human service agencies, public transportation agencies and private transit companies.

**Relevance to the Transit Industry and Community:**

The program provides technical assistance to coordinate human services transportation.

**Expected Final Products and Delivery Dates:**

Ongoing activities include coordination, research and development, technical assistance, and strategic development in partnerships and community involvement.

**Mobility Services for All Americans**

**Funding - FY 2008:** \$1,000,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$2,225,000 since 2006

**Non-FTA Funding:**                  This project is jointly funded by the ITS Joint Program Office

**National Relevance of the Research:**

This research is designed to better coordinate and improve how transportation services are provided to the transportation disadvantaged population, low income individuals, people with disabilities and senior citizens.

**Relevance to the Transit Industry and Community:**

This project funds demonstrations of one stop access for human service program customers using Intelligent Transportation System technologies.

**Expected Final Products and Delivery Dates:**

Phase II projects were awarded in 2009 with implementation scheduled for 2010-2011.

**North Dakota State University Small Urban and Rural Transit Center**

**Funding - FY 2008:** \$1,200,000      **FY 2009:** \$1,167,000      Congressionally Directed

**Total Funding:**                      \$5,517,840 since 2002

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

The center is focused on transit needs of residents of rural areas, small communities and tribal areas, with emphasis on service planning, coordination of social service transportation and rural college campuses where many incoming students are exposed to public transportation for the first time. Their exposure and attitudes toward public transit will help the design and operation of transportation systems that serves rural communities.

**Relevance to the Transit Industry and Community:**

The research yields results that can be applied or adapted in many communities.

**Expected Final Products and Delivery Dates:**

Project examples: Tribal Transit Demographic Need Indicators: October 2007; public transit and transportation seminar: May 2008; Biodiesel Use in Fargo-Moorhead Buses: July 2008; and online passenger transportation service information: December 2008.

**Mobility Management for Human Services**

**Funding - FY 2008:** \$300,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$600,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

Mobility management offers the transit industry a new paradigm in their operations by assisting them to become community travel agents.

**Relevance to the Transit Industry and Community:**

The research focuses on assisting human service transportation providers in understanding the concepts and needs of mobility management. These activities include development and operation of one-stop transportation traveler call centers, operational planning for intelligent transportation technologies, operation of transportation brokerages, and the creation of a network of mobility managers.

**Expected Final Products and Delivery Dates:**

The project will develop a strategic plan for the creation of a mobility management infrastructure and national education plan to be implemented by 2010.

**Pilot Program for Remote Infrared Audible Signs (RIAS), Portland, OR**

**Funding - FY 2008:** \$500,000      **FY 2009:** \$500,000      Congressionally Directed

**Total Funding:**                    \$1,895,000 since 2006

**Non-FTA Funding:**                Sound Transit is providing a 20 percent local share.

**National Relevance of the Research:**

This project will demonstrate RIAS system operations and evaluate multimodal accessibility in public transportation for persons with visual, cognitive, or learning disabilities.

**Relevance to the Transit Industry and Community:**

This project may result in making public transit and paratransit accessible to persons with visual, cognitive, or learning disabilities, and improve the education, community integration, work life and general quality of life of the targeted populations.

**Expected Final Products and Delivery Dates:**

The final evaluation and report to Congress will be delivered in September 2009.

**Remote Infrared Audible Signage (RIAS) Support**

**Funding - FY 2008:** \$70,000      **FY 2009:** None      Discretionary

**Total Funding:**                    \$70,000

**Non-FTA Funding:**                None

**National Relevance of the Research:**

This project supports the development of the Remote Infrared Audible Signage (RIAS) Model report required by Congress.

**Relevance to the Transit Industry and Community:**

RIAS offers one method for transit agencies to improve the accessibility of the systems to persons with visual impairments.

**Expected Final Products and Delivery Dates:**

The final evaluation report to Congress will be delivered in September 2009.

**National Technical Assistance Center for Senior Transportation**

**Funding - FY 2008:** \$1,000,000      **FY 2009:** \$1,000,000      Congressionally Directed

**Total Funding:**                      \$4,990,000 since 2006

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

As the aging population in the United States continues to rise, this program supports mobility and independence for elderly people.

**Relevance to the Transit Industry and Community:**

This program provides technical assistance to states and local communities on the expansion and provision of transportation services for elderly populations.

**Expected Final Products and Delivery Dates:**

Ongoing projects include: The Mobility Planning Academy; a Consensus Conference on Older Adult Mobility; annual trend analysis, fact sheets on older driver transitions, technical assistance, webinars, conferences and meetings, and demonstration grants.

**JARC and New Freedom Evaluation**

**Funding - FY 2008:** \$150,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$1,120,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

SAFETEA-LU required FTA to prepare a report evaluating The Job Access Reverse Commute (JARC) Program performance.

**Relevance to the Transit Industry and Community:**

By collecting data on the JARC and New Freedom (NF) programs, FTA can determine methods to improve the programs.

**Expected Final Products and Delivery Dates:**

Expected final products are a database of JARC and NF Programs; analysis of grantee performance measures; ongoing technical assistance; and a Final Report and Technical Memo analyzing JARC & NF data.

**Accessibility for Persons with Disabilities -- Project ACTION**

**Funding - FY 2008:** \$3,000,000      **FY 2009:** \$3,000,000      Congressionally Directed

**Total Funding:**                      \$26,874,277 since 2000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This program supports implementation of the Americans with Disabilities Act.

**Relevance to the Transit Industry and Community:**

The program provides technical assistance to the disability community, human services agencies and transportation industry on the provision of accessible transportation.

**Expected Final Products and Delivery Dates:**

This program supports multiple activities: technical assistance; training and information sharing; outreach, alternative format products; product awareness; and national steering committee meetings.

**CTAA Nationwide Joblinks**

**Funding - FY 2008:** \$1,666,000      **FY 2009:** \$1,520,000      Congressionally Directed

**Total Funding:**                      \$8,015,790 since 2000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project provides technical assistance to support the crucial role community and public transportation continues to play in helping people make the journey to work.

**Relevance to the Transit Industry and Community:**

The project supports the efforts of the Community Transportation Association of America's (CTAA) Joblinks program as designated by Congress.

**Expected Final Products and Delivery Dates:**

Ongoing products include: analysis of plans; a resource guide; webinars and conferences; technical assistance for non-urbanized areas; the Joblinks website; and an employment access demonstration.

### **Transportation Equity Research Program**

**Funding - FY 2008:** \$1,000,000      **FY 2009:** \$1,000,000      Congressionally Directed

**Total Funding:**                      \$4,000,000 since 2006

**Non-FTA Funding:**                  None

#### **National Relevance of the Research:**

The program examines the impacts that transportation planning, investment and operations have on low-income and minority populations.

#### **Relevance to the Transit Industry and Community:**

The program supports the development of strategies to advance economic and community development in low-income and minority communities and the development of training programs.

#### **Expected Final Products and Delivery Dates:**

Some final products are already available, such as a literature review and case studies on emergency evacuation of specific needs populations. Other projects will result in sample products transit agencies can use to provide services to riders with limited English proficiency, an online toolkit to improve equity in transportation planning that will start being available to the public in 2010.

### **Advanced Small Vehicle Demonstration Program**

**Funding - FY 2008:** \$150,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$150,000

**Non-FTA Funding:**                  None

#### **National Relevance of the Research:**

Currently, most agencies must purchase separate vehicles for paratransit, small fixed route and suburban feeder service. This research will examine vehicle designs that could handle multiple types of service.

#### **Relevance to the Transit Industry and Community:**

This program will provide information and suggested functional specifications to transit agencies on the performance of several small transit vehicles.

#### **Expected Final Products and Delivery Dates:**

The project will manage and report on advanced small vehicle demonstrations through 2010.

**Objective #3.4: Perform Research to Reduce Energy Consumption and Transit Environmental Impacts**

**Energy Storage for Hybrid Electric Buses Assessment**

**Funding - FY 2008:** \$200,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      **\$200,000**

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

Knowledge will be shared with bus manufacturers and drive system integrators to improve the efficiency and lifetime of hybrid buses deployed across the country.

**Relevance to the Transit Industry and Community:**

The project will analyze and identify the best available current technologies for energy storage on-board transit vehicles recommended in the Electric Drive Strategic Plan put forth by the Electric Drive Strategic Plan Steering Committee..

**Expected Final Products and Delivery Dates:**

The assessment of energy storage technologies for transit buses will be complete in 2010.

**Moving Cooler Study**

**Funding - FY 2008:** None                      **FY 2009:** \$50,000

**Total Funding:**                      **\$50,000**

**Non-FTA Funding:**                  \$772,000 from various other private and governmental

**National Relevance of the Research:**

The *Moving Cooler* study analyzes the effectiveness and cost-effectiveness of a range of transportation demand and system efficiency strategies that could be implemented across the Nation to reduce greenhouse gas emissions from the transportation sector.

**Relevance to the Transit Industry and Community:**

The study provides analysis on the effectiveness of public transportation in reducing greenhouse gas emissions.

**Expected Final Products and Delivery Dates:**

The report *Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions* was released in July 2009.

### **DOT Center for Climate Change**

**Funding - FY 2008:** \$100,000      **FY 2009:** \$100,000      Discretionary

**Total Funding:**                      \$550,000 since 2003

**Non-FTA Funding:**              The center is funded by various DOT modes.

#### **National Relevance of the Research:**

The Center prepares comprehensive and multi model approaches to reducing transportation-related greenhouse gases and to mitigate the effects of global climate change on the transportation network.

#### **Relevance to the Transit Industry and Community:**

The Center research can also assist the transit industry in reducing its emissions intensity by examining vehicle efficiency and alternative fuel options. In addition, the Center's research on climate change impacts is providing the industry with information crucial to adapting to the impacts of climate change.

#### **Expected Final Products and Delivery Dates:**

In 2008, the Center produced two key studies on the impacts of climate change on transportation infrastructure: *Coastal Sensitivity to Sea Level Rise: A Focus on the Mid-Atlantic Region* and *Impacts of Climate Change and Variability on Transportation Systems and Infrastructure: Gulf Coast Study*. In 2009, the Center is producing a report to Congress on a full range of strategies to reduce greenhouse gas emissions from all modes of transportation.

### **Rail Transit Operating Strategies for Energy Conservation**

**Funding - FY 2008:** \$200,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$200,000

**Non-FTA Funding:**              None

#### **National Relevance of the Research:**

This research will examine operating strategies and energy conservation technologies that might reduce transit agencies need for fossil fuels.

#### **Relevance to the Transit Industry and Community:**

Transit agencies and local governments are examining alternative methods to power transit buses and rail systems. Optimizing the use of current energy sources is very important to transit agencies.

#### **Expected Final Products and Delivery Dates:**

The final product will be a compendium of operating strategies and energy conservation methods for transit agencies, expected in 2010.

**Clean Fuels & Electric Drive Bus Deployment Program**

**Funding - FY 2008:** \$450,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$900,000

**Non-FTA Funding:**              Department of Energy

**National Relevance of the Research:**

This program supports data collection and evaluation of the variety of fuel cell bus demonstrations underway nationally.

**Relevance to the Transit Industry and Community:**

The growing concern over petroleum use, costs and emissions will continue to pressure transit agencies to adopt new technologies.

**Expected Final Products and Delivery Dates:**

Evaluation reports as completed according to NREL Evaluation Plan in 2009-2010.

**Missouri Transportation Institute**

**Funding - FY 2008:** \$1,667,837      **FY 2009:** \$923,875      Congressionally Directed

**Total Funding:**                      \$2,591,712

**Non-FTA Funding:**              City of Kansas City; Kansas City Power & Light; National University Transportation Center at Missouri S&T

**National Relevance of the Research:**

There is minimal national transit relevance. The project will support development of plug-in hybrid electric vehicles and hydrogen technologies in a rural area, including municipal trucks not used for transit service.

**Relevance to the Transit Industry and Community:**

An EV Demo Project with the City of Kansas City that can be studied and applied to a nation-wide program to reduce dependence on foreign fuels and decrease GHG emissions. Will include municipal trucks not used for transit service.

**Expected Final Products and Delivery Dates:**

Final products for this grant include reports covering the development and deployment of renewable energy sources for hydrogen production for a rural transit system. Other products include reports covering the use of electric vehicles for a municipal fleet. Final Report is expected in April, 2010

**Hybrid Bus Deployment and Performance Evaluation**

**Funding - FY 2008:** \$250,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$250,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project supports deployment of hybrid transit vehicles, decreasing fuel consumption of the national fleet.

**Relevance to the Transit Industry and Community:**

This research will provide transit agencies with the results of objective evaluations of the performance of hybrid electric buses.

**Expected Final Products and Delivery Dates:**

The final report is expected in 2010.

**Greater New Haven Transit District Fuel Cell-Powered Bus Research**

**Funding - FY 2008:** \$534,875      **FY 2009:** \$607,812      Congressionally Directed

**Total Funding:**                      \$5,580,796

**Non-FTA Funding:**                  State funds for H2 station - \$250,000; CT SBIR Roadblock Removal Program for hydrofiller development - \$125,000.

**National Relevance of the Research:**

Research and development of advanced small vehicles utilizing alternative fuels will lead to reduction of U.S. dependence on fossil fuels and improvement of air quality.

**Relevance to the Transit Industry and Community:**

Most transit agencies and community providers deliver their services to elderly and disabled individuals using smaller gasoline or diesel powered vehicles. This project will develop an alternative fueled vehicle option.

**Expected Final Products and Delivery Dates:**

The delivery of the hybrid vehicle is expected in 2009. The fuel cell vehicle is expected in 2010.

**Return on Investment of Diesel Electric Energy Storage Technologies**

**Funding - FY 2008:** \$150,000      **FY 2009:** None      Discretionary

**Total Funding:**                    \$150,000

**Non-FTA Funding:**                None

**National Relevance of the Research:**

Diesel fuel accounts for a large percentage of the operating costs and emissions of commuter rail systems.

**Relevance to the Transit Industry and Community:**

This research will identify state-of-the-art, on-board energy storage systems for diesel electric commuter rail systems. Dual mode operations would permit the elimination of emissions while pulling in and out of rail stations.

**Expected Final Products and Delivery Dates:**

The analysis report is expected in 2009.

**WVU Exhaust Emission Testing Initiative**

**Funding - FY 2008:** \$743,379      **FY 2009:** \$461,937      Congressionally Directed

**Total Funding:**                    \$9,926,064 since 2002

**Non-FTA Funding:**                None

**National Relevance of the Research:**

The project provides data and tools to improve the efficiency of transit systems and reduce the impact of transit in climate change.

**Relevance to the Transit Industry and Community:**

The project will develop resources to assist transit managers in evaluating the emissions and fuel efficiency implications of existing and emerging bus technologies for bus procurement and strategic planning purposes.

**Expected Final Products and Delivery Dates:**

Results include the development of web-based applications that evaluate emissions, fuel type and economy, and life cycle costs of bus propulsion technologies to help transit agencies make the best investment decisions. Results are expected in 2010.

**East Tennessee Hydrogen Initiative**

**Funding - FY 2008:** \$667,135      **FY 2009:** None      Congressionally Directed

**Total Funding:**                      \$667,135

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project relates to operational and safety issues involved in using hydrogen as a bus fuel and includes an operational pilot test of a hydrogen-generating fueling facility.

**Relevance to the Transit Industry and Community:**

The research will assist in preparing infrastructure for use of hydrogen as a bus fuel.

**Expected Final Products and Delivery Dates:**

The project will produce feasibility studies of multi-fuel (including hydrogen) engines and support facilities, permitting, and demonstration scenarios in third quarter 2010.

**Transit Greenhouse Gas Management Compendium**

**Funding - FY 2008:** \$150,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$150,000

**Non-FTA Funding:**                  \$60,000

**National Relevance of the Research:**

This research will develop a compendium of best practices for reducing transit agency energy use and greenhouse gas (GHG) emissions. It will include a detailed study of the carbon footprint of a major transit agency, drawing on life-cycle analysis methods to combine GHG emissions from day-to-day operational end-use with the emissions associated with the agency's investments in vehicle fleets, guideways and buildings

**Relevance to the Transit Industry and Community:**

Transit agencies and metropolitan planning organizations have the potential to take leadership roles and benefit from efforts to reduce carbon emissions.

**Expected Final Products and Delivery Dates:**

A final report is expected in 2010.

### **Transportation Hybrid Electric Vehicle and Fuel Cell Research**

**Funding - FY 2008:** \$486,250      **FY 2009:** \$486,250      Congressionally Directed

**Total Funding:**                      \$1,941,630 since 2006

**Non-FTA Funding:**                  None

#### **National Relevance of the Research:**

There is little national relevance as this project does not focus on transit vehicle powertrain technology development and the research conducted is theoretical with no immediate practical application.

#### **Relevance to the Transit Industry and Community:**

The project funds academic research and is not focused on near-term transit system applications.

#### **Expected Final Products and Delivery Dates:**

Final products include a roadmap of needed and optimal research topics to advance transit powertrain research and final reports from a set of projects researched in response to the technology roadmap.

### **Air Quality and Environmental Research**

**Funding - FY 2008:** \$285,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$835,000

**Non-FTA Funding:**                  None

#### **National Relevance of the Research:**

This project supports transit's abilities to meet environmental protection requirements.

#### **Relevance to the Transit Industry and Community:**

The results of this research could substantially reduce the likelihood that transit agencies will have to produce hot-spot analyses (Hot-spot analysis measures particulate matter (PM) contamination for bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location. EPA establishes the criteria and requirements for the analysis, but had not, and still has yet to, finalize rules and guidance for such analysis. For this reason, the project was put on hold) for their proposed transit projects, thereby accelerating approval.

#### **Expected Final Products and Delivery Dates:**

The research funds were applied to (1) an Environmental Management Systems training program which is ongoing, (2) a \$50,000 interagency agreement with the Advisory Council on Historic Preservation for preparation of a programmatic approach to satisfying the § 106 National Historic Preservation Act process, the report of which was submitted in October 2008, and (3) a transfer of funds in the amount of \$15,000 to FTA's Office of Budget and Policy.

**Southern Fuel Cell Coalition Demonstration Project**

**Funding - FY 2008:** \$190,610      **FY 2009:** None      Congressionally Directed

**Total Funding:**                      \$2,237,682

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

The project is expected to contribute to the experience and knowledge base on hydrogen fuel cell technology, a potential part of the solution for clean, environmentally friendly transportation systems.

**Relevance to the Transit Industry and Community:**

Transit operators and suppliers are considering fuel cell technology; this project is expected to have relevance to transit operators by providing development information and experience on the performance of hydrogen fuel cell buses.

**Expected Final Products and Delivery Dates:**

Final products of this grant include a workplan and a white paper for a hydrogen fuel cell research project to be supported by the Southern Fuel Cell Coalition. The work plan and white paper will be delivered by third quarter 2010.

**Objective #3.5: Perform Research to Improve Safety, Security, and Emergency Preparedness**

**Transit Safety and Security Statistics Analysis and Report (SAMIS)**

**Funding - FY 2008:** \$200,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$1,866,000 since 2000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project provides analysis on national safety trends in the transit industry. The information and analysis is used extensively internally and externally particularly in media and Congressional requests.

**Relevance to the Transit Industry and Community:**

The results of the analysis are used to identify key safety and security problems to be addressed. The objective is to provide FTA and industry stakeholders with the basis for identifying key problems and measuring the effectiveness of countermeasures.

**Expected Final Products and Delivery Dates:**

Results are ongoing, including: data analysis, annual safety and security statistics reports, newsletters, and web products.

**Transit Safety and Security Information Sharing and Public Awareness**

**Funding - FY 2008:** \$300,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$671,000 since 2003

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This program supports safety and security in our nation's transit systems through dissemination of information.

**Relevance to the Transit Industry and Community:**

This project provides updated and timely information to the transit industry and other external customers via the FTA Safety and Security web site and clearinghouse.

**Expected Final Products and Delivery Dates:**

*Sensitive Security Information: Designation, Markings and Control Resource Document for Transit Agencies and Recommended Best Practices for States Conducting Three-Year Safety Reviews* were completed in March 2009; *Recommended Fire Safety Practices for Rail Transit Materials Selection and Security Manpower Planning Model* in 2008.

**Chester County Transit Security Training Facility, PA**

**Funding - FY 2008:** \$750,000      **FY 2009:** \$750,000      Congressionally Directed

**Total Funding:**                    \$3,124,000 since 2005

**Non-FTA Funding:**            None

**National Relevance of the Research:**

This project involves a local training facility for fire fighters and emergency responders with little national relevance to public transportation.

**Relevance to the Transit Industry and Community:**

This project is relevant to transit in the Chester County area because the facility will be designed to train emergency responders and possibly transit employees to deal with transit incidents.

**Expected Final Products and Delivery Dates:**

The final products include: construction of an emergency responders training facility that would be used for training as well as backup for both the 9-1-1 and Emergency Operations Center of Chester County. The construction of the facility is scheduled to be completed in 2011.

**Transportation Safety Institute (TSI)**

**Funding - FY 2008:** \$1,600,000      **FY 2009:** \$1,650,000      Discretionary

**Total Funding:**                    \$9,075,000 since 2003

**Non-FTA Funding:**            None

**National Relevance of the Research:**

The Transportation Safety Institute (TSI) in Oklahoma City advances safety and security state-of-the-art practices throughout the transit industry.

**Relevance to the Transit Industry and Community:**

This activity is aimed at training transit safety and security professionals in various aspects of transit safety and security. Training provides them with the background and information to perform their jobs safely.

**Expected Final Products and Delivery Dates:**

TSI provides training for over 4,000 transit safety and security specialists.

**Drug and Alcohol Management Information System (DAMIS)**

**Funding - FY 2008:** \$1,350,000      **FY 2009:** \$500,000      Discretionary

**Total Funding:**                      \$8,648,000 since 2000

**Non-FTA Funding:**                None

**National Relevance of the Research:**

This program supports safety in our nation's transit systems by evaluating the effectiveness of the drug and alcohol testing regulations and supporting future modifications such as adjusting the random testing rates.

**Relevance to the Transit Industry and Community:**

This program is authorized in the Omnibus Transportation Employee Act of 1991 to collect drug and alcohol information from transit agencies. The FTA DAMIS Program uses the USDOT/DHS model for collecting annual results and developing audit software.

**Expected Final Products and Delivery Dates:**

Results are on-going, including: data collection and annual reporting process, enhancing the web-based reporting system, compliance audit data administration and archiving, seminar and conference planning and administration, and the auditor's website.

**FTA Seminar on Planning for Safety and Security**

**Funding - FY 2008:** None                      **FY 2009:** \$100,000                      Discretionary

**Total Funding:**                      \$100,000

**Non-FTA Funding:**                None

**National Relevance of the Research:**

The seminar includes implementation of safety, security and emergency management principles early during project planning to ensure a greater level of safety, security and reliability within the transit system.

**Relevance to the Transit Industry and Community:**

Transit agencies and communities will benefit from safer, more reliable transit systems based on the knowledge gained and implemented by the engineers and planners working on transit capital projects.

**Expected Final Products and Delivery Dates:**

The FTA seminar on Planning for Safety and Security will be completed in September 2009 and piloted in October at the Washington Metropolitan Area Transit Authority.

**Connecting Communities**

**Funding - FY 2008:** \$100,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$880,000

**Non-FTA Funding:**              TSA has contributed funding to this initiative.

**National Relevance of the Research:**

This program promotes the safety and security of mass transit passengers, employees, and properties through the sharing of policies, procedures, resources, and best practices with local first responders.

**Relevance to the Transit Industry and Community:**

Through this program, local transit providers and first responders discuss emergency management and response with an emphasis on the transit industry's role during an emergency, to facilitate efficient planning, preparedness and response coordination.

**Expected Final Products and Delivery Dates:**

The delivery of three additional Connecting Communities Workshops will be completed by December 2009.

**Transit Fire Safety and Analysis Program for Transit Rail and Bus Equipment**

**Funding - FY 2008:** \$50,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$197,049

**Non-FTA Funding:**              National Association of State Fire Marshals, \$60,000

**National Relevance of the Research:**

To purpose of this program is to improve the safety of transit systems through testing the fire safety performance of materials used in the construction of railcars and buses.

**Relevance to the Transit Industry and Community:**

The results of the project are used to provide information to the industry on the fire safety performance of materials used.

**Expected Final Products and Delivery Dates:**

Reporting results were delivered in 2008.

**Continuity of Operations Planning in (COOP)**

**Funding - FY 2008:** \$60,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$221,978

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This program ensures FTA will be able to support the transit industry in the event of an emergency.

**Relevance to the Transit Industry and Community:**

This program ensures FTA is able to continue to provide its essential services to the transit industry.

**Expected Final Products and Delivery Dates:**

This project is for ongoing support.

**Crash Emergency Management of Light Rail Vehicles (LRVs)**

**Funding - FY 2008:** \$175,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$275,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

While rail transit systems experience few serious collisions, when they do occur passengers may be severely injured.

**Relevance to the Transit Industry and Community:**

This research will determine the best rail vehicle interior designs and materials that minimize injuries to standees and wheelchair users.

**Expected Final Products and Delivery Dates:**

The final product will be a set of recommendations for the light rail vehicle manufacturers and transit agencies expected in 2010.

### **Safety Audit Training**

**Funding - FY 2008:** \$25,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$275,000

**Non-FTA Funding:**                  None

#### **National Relevance of the Research:**

This project supports development and testing of a new Transportation Safety Institute training course on the conduct of safety audits of rail transit systems nationwide.

#### **Relevance to the Transit Industry and Community:**

This training course will be available to safety oversight personnel in all states operating rail transit, which are required to maintain state safety oversight programs based on such safety audits.

#### **Expected Final Products and Delivery Dates:**

Training course curriculum and materials were delivered in August 2009. Two pilot sessions of the course will be conducted later in 2009.

### **Emergency Communication System in Subway Trains**

**Funding - FY 2008:** \$200,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$200,000

**Non-FTA Funding:**                  None

#### **National Relevance of the Research:**

This project will provide an emergency communication system for trains in tunnels when the operator is incapacitated.

#### **Relevance to the Transit Industry and Community:**

This project will demonstrate the use of wireless or other technology to provide communication with subway train passengers from a remote location should the train operator be unable to make announcements.

#### **Expected Final Products and Delivery Dates:**

This project will develop a prototype system that communicates between train passengers and remote location and demonstrate its use by 2010.

**Lehigh Carbon Community College Transit First Responder Training Facility**

**Funding - FY 2008:** \$500,000      **FY 2009:** \$500,000      Congressionally Directed

**Total Funding:**                    \$2,117,246 since 2005

**Non-FTA Funding:**            None

**National Relevance of the Research:**

This project involves a training center for public safety emergency responders with little national relevance to public transportation.

**Relevance to the Transit Industry and Community:**

Transit is not a focus of this project. The project will create a comprehensive Public Safety Training Center to develop, equip and train first responders for natural and man-made emergencies.

**Expected Final Products and Delivery Dates:**

Final products include training for emergency responders: commercial driver license training for emergency responders and driver training simulator for police, fire & rescue emergency responders. The training facility had 6563 participants on variety of safety and security courses for 2008 and 5916 participants from January to August 2009.

**Real-Time Subway Train Location Demonstration**

**Funding - FY 2008:** \$400,000      **FY 2009:** None      Discretionary

**Total Funding:**                    \$400,000

**Non-FTA Funding:**            None

**National Relevance of the Research:**

This project will develop a subway train location overlay system that will be enable transit agencies to accurately locate trains in subterranean environments. Existing train control signal systems generally provide signal block occupancy location that allows trains to be identified within one-half mile of their exact location

**Relevance to the Transit Industry and Community:**

This research will support transit agencies to improve their ability to identify the exact locations of their trains.

**Expected Final Products and Delivery Dates:**

The final report is expected in 2010.

**Application of Information Technology to Transportation Logistics and Security**

**Funding - FY 2008:** \$400,000      **FY 2009:** \$400,000      Congressionally Directed

**Total Funding:**                      \$1,600,000 since 2006

**Non-FTA Funding:**                None

**National Relevance of the Research:**

While most of the funds are used for non-transit activities, a portion is being used for information technology applications to enhance the rider experience and improve the operational control of bus service.

**Relevance to the Transit Industry and Community:**

The transit related portion will assist transit agencies to improve effectiveness and operational efficiency, including better communication and security.

**Expected Final Products and Delivery Dates:**

The project will develop a GPS tracking application and implement a rider notification application by 4<sup>th</sup> quarter 2009. In addition, a comprehensive transit wireless infrastructure is anticipated to be in place by the 2<sup>nd</sup> quarter 2010.

**Human Factors Coordinating Committee (HFCC)**

**Funding - FY 2008:** None                      **FY 2009:** \$20,000                      Discretionary

**Total Funding:**                      New in fiscal year 2009

**Non-FTA Funding:**                Other DOT modes

**National Relevance of the Research:**

This is a DOT-wide committee that focuses on research, case studies, and pilot project efforts on human factors issues in transportation.

**Relevance to the Transit Industry and Community:**

FTA contributed to a multi-DOT mode Interagency Agreement (IAA) with the Research and Innovative Technology Administration (RITA) in sponsoring an international conference on fatigue in transportation safety.

**Expected Final Products and Delivery Dates:**

The HFCC meets on a quarterly basis with all DOT modal administrations participating. The HFCC conference was held in Boston on March 3-5, 2009.

### **Evaluation of Safety and Security Training Courses**

**Funding - FY 2008:** \$100,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$100,000

**Non-FTA Funding:**                  None

#### **National Relevance of the Research:**

This project will evaluate national safety and security training courses held by the Transportation Safety Institute (TSI), the National Transit Institute (NTI), John Hopkins, and others.

#### **Relevance to the Transit Industry and Community:**

Currently, there are over 40 FTA sponsored safety and security courses delivered to the transit industry. This evaluation provides FTA with the ability to update and revise training curriculums.

#### **Expected Final Products and Delivery Dates:**

The final report is expected in March 2010.

### **Transit Security Roundtable**

**Funding - FY 2008:** \$200,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$1,205,223

**Non-FTA Funding:**                  TSA has contributed to past roundtables

#### **National Relevance of the Research:**

The Department of Homeland Security and FTA alternate the funding of semi-annual roundtables. They are opportunities for the transit industry to share experiences and best practices on safeguarding public transportation across the United States.

#### **Relevance to the Transit Industry and Community:**

This invitation only event brings together the transit Police Chiefs and Security Directors from the Nation's top 50 transit agencies to share information, experiences and best practices as they pertain to safety and security issues affecting transit.

#### **Expected Final Products and Delivery Dates:**

FTA and DHS have hosted Roundtables in New York City, NY (July 2008), in Dallas, TX (December 2008) and Portland, OR (July 2009). FTA has received final report summaries and compilations of participant evaluations pertaining to each event.

**Safety Awareness Outreach**

**Funding - FY 2008:** \$100,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$715,000

**Non-FTA Funding:**              Operation Lifesaver \$322,000

**National Relevance of the Research:**

This program supports the National Operation Lifesaver effort to reduce fatalities and injuries at rail crossings.

**Relevance to the Transit Industry and Community:**

The program supports community-based outreach programs to enhance awareness of safety issues associated with the use of public transportation, particularly light rail.

**Expected Final Products and Delivery Dates:**

This project supports the ongoing efforts of Operation Lifesaver.

## Other Projects

### Greater Hartford Integrated Mass Transit Planning Study

**Funding - FY 2008:** None                      **FY 2009:** \$475,000                      Congressionally Directed

**Total Funding:**                      New in fiscal year 2009

**Non-FTA Funding:**                      None

#### **National Relevance of the Research:**

This project has no national research significance. The intended use is for alternatives analysis.

#### **Relevance to the Transit Industry and Community:**

The intended use is for alternatives analysis.

#### **Expected Final Products and Delivery Dates:**

To be determined.

### Wisconsin Supplemental Transportation Rural Assistance Program

**Funding - FY 2008:** \$2,000,000                      **FY 2009:** \$2,000,000                      Congressionally Directed

**Total Funding:**                      \$7,980,000 since 2006

**Non-FTA Funding:**                      Local share represents 20 percent of total costs.

#### **National Relevance of the Research:**

This project has no national research significance and provides the Wisconsin Department of Transportation supplemental funding for Section 5310, 5311 and 5316 projects.

#### **Relevance to the Transit Industry and Community:**

This project provides the Wisconsin DOT with supplemental transit funding.

#### **Expected Final Products and Delivery Dates:**

This grant consists of 11 rural transit services and 4 rural transit planning projects.

**Workforce Planning**

**Funding - FY 2008:** \$160,000      **FY 2009:** \$45,000      Discretionary

**Total Funding:**                      \$205,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

Workforce planning efforts ensure FTA is able to respond to transit industry needs.

**Relevance to the Transit Industry and Community:**

This project develops workload indicators to support decisions on the distribution of staffing resources.

**Expected Final Products and Delivery Dates:**

The workforce plan is expected in October 2009.

**Project TRANSIT: American Cities Transportation Institute**

**Funding - FY 2008:** \$294,000      **FY 2009:** \$570,000      Congressionally  
Directed

**Total Funding:**                      \$1,359,000 since 2006

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project does not have broad national relevance.

**Relevance to the Transit Industry and Community:**

This project covers the Philadelphia area and the surrounding transit providers.

**Expected Final Products and Delivery Dates:**

This project will make students aware of careers in transit. It will also open opportunities for minority contractors to work with Philadelphia transit providers.

**Staten Island Transit Enhancement Plan - Phase II**

**Funding - FY 2008:** \$220,500      **FY 2009:** None      Congressionally Directed

**Total Funding:**                      \$220,500

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project has no national research significance.

**Relevance to the Transit Industry and Community:**

The intended use is for alternatives analysis.

**Expected Final Products and Delivery Dates:**

To be determined.

**Louisiana Capital Area Regional Transportation Plan**

**Funding - FY 2008:** None                      **FY 2009:** \$285,000                      Congressionally Directed

**Total Funding:**                      New in fiscal year 2009

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project has no national research significance.

**Relevance to the Transit Industry and Community:**

The intended use is for alternatives analysis.

**Expected Final Products and Delivery Dates:**

To be determined.

**Disadvantaged Business Enterprise (DBE) Electronic Reporting**

**Funding - FY 2008:** \$200,000      **FY 2009:** None      Discretionary

**Total Funding:**                      \$200,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

This project would create an electronic system to permit grantees to report on their DBE goals.

**Relevance to the Transit Industry and Community:**

Electronic reporting will reduce the DBE reporting burden on transit agencies.

**Expected Final Products and Delivery Dates:**

The system will be ready for beta testing by mid-September 2009. It is anticipated to be fully operational by third quarter of 2010.

**Support for Meeting ADA Requirements**

**Funding - FY 2008:** \$250,000      **FY 2009:** \$300,000      Discretionary

**Total Funding:**                      \$850,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

Technical assistance manuals will assist transit agencies to meet ADA requirements.

**Relevance to the Transit Industry and Community:**

Transit agencies will better understand the ADA requirements.

**Expected Final Products and Delivery Dates:**

Issue Briefs for Transit Providers should start being available in October 2009 – December 2009. A Comprehensive Rider’s guide is also being developed and should be complete by December 2009.

**Support for Title VI/DBEs/EEO**

**Funding - FY 2008:** \$250,000      **FY 2009:** \$350,000      Discretionary

**Total Funding:**                      \$600,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

Grantees have a number of Title VI, DBE, and EEO requirements they must comply with.

**Relevance to the Transit Industry and Community:**

This project provides technical assistance to grantees to ensure they are in compliance with their requirements.

**Expected Final Products and Delivery Dates:**

This project produces ongoing technical assistance.

**Transit Technology Career Ladder Partnership Training Program**

**Funding - FY 2008:** \$1,000,000      **FY 2009:** \$1,000,000      Congressionally Directed

**Total Funding:**                      \$5,272,995 since 2004

**Non-FTA Funding:**                  U.S. Department of Labor

**National Relevance of the Research:**

The Transit Technology Career Ladder Partnership Program (TTCLP) seeks to address the skills gap for hourly transit maintenance employees.

**Relevance to the Transit Industry and Community:**

The project supports state and local partnership programs that address skills training needs of the current workforce.

**Expected Final Products and Delivery Dates:**

The project is ongoing and produces partnership training and other technical assistance materials. Around 7000 training opportunities have been provided through the Transit Career Ladder Partnership Program since October 2008.

### **International Mass Transportation Program**

**Funding - FY 2008:** \$400,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$2,335,000 since 2003

**Non-FTA Funding:**                  Private companies contribute funds for trade events

#### **National Relevance of the Research:**

This program supports increased marketing opportunities for the U.S. transit industry abroad.

#### **Relevance to the Transit Industry and Community:**

These trade missions and other trade events permit domestic providers of transit goods and services to showcase their products internationally.

#### **Expected Final Products and Delivery Dates:**

The program is ongoing and includes trade missions, screening tours, and reports.

### **Small Business Innovative Research (SBIR)**

**Funding - FY 2008:** \$330,000      **FY 2009:** \$254,446      Congressionally Directed

**Total Funding:**                      \$2,288,107 since 2000

**Non-FTA Funding:**                  Small businesses are expected to seek support for commercialization in the venture capital market.

#### **National Relevance of the Research:**

The Small Business Innovative Research (SBIR) Program encourages inventors to apply innovative technology to public transportation. The Small Business Innovation Development Act, of 1982, requires that 2.5 percent of FTA's extramural research and development budget must be used for the SBIR program.

#### **Relevance to the Transit Industry and Community:**

SBIR projects address transit needs and occasionally produce products with commercial potential.

#### **Expected Final Products and Delivery Dates:**

FTA is currently supporting two Phase II prototype developments, a combined lift and ramp for commuter rail passengers, both individuals with disabilities and others, and a high-pressure water jet for cleaning third-rail insulators for heavy rail transit systems. Both projects are expected to be completed in 2010.

### **Trauma Care System Research and Development**

**Funding - FY 2008:** \$486,250      **FY 2009:** \$486,250      Congressionally Directed

**Total Funding:**                    \$1,967,500 since 2006

**Non-FTA Funding:**                None

#### **National Relevance of the Research:**

The objective of studying the integration of established motor vehicle crash investigation techniques into mass transit accident analysis as a means to reduce injury and mortality associated with mass transit mishaps.

#### **Relevance to the Transit Industry and Community:**

This project examines data collection and reporting practices for different types of mass transportation accidents with the aim of increased safety for mass transportation, specifically buses.

#### **Expected Final Products and Delivery Dates:**

The project will generate reports on trauma situations that describe common critical success factors and distribute findings to transit agencies, emergency medical professionals, motor vehicle departments and other key stakeholders. A final more comprehensive report is expected in the 4<sup>th</sup> quarter 2010.

### **Electronic Government (E-Gov) Initiatives**

**Funding - FY 2008:** \$204,155      **FY 2009:** \$227,897      Discretionary

**Total Funding:**                    \$1,478,573 since 2003

**Non-FTA Funding:**                All government agencies contribute to government-wide E-government initiatives.

#### **National Relevance of the Research:**

This funding is not research related.

#### **Relevance to the Transit Industry and Community:**

There is no direct relevance to the transit industry.

#### **Expected Final Products and Delivery Dates:**

The project supports various ongoing government-wide, E-government initiatives.

**Regional Transit Training Consortium Pilot Program**

**Funding - FY 2008:** \$380,000      **FY 2009:** \$450,000      Congressionally Directed

**Total Funding:**                    \$1,477,300 since 2006

**Non-FTA Funding:**                None

**National Relevance of the Research:**

This project does not have national relevance.

**Relevance to the Transit Industry and Community:**

Training is provided to maintenance technicians and supervisors who are responsible for public transit operations in Southern California.

**Expected Final Products and Delivery Dates:**

This project has delivered over 6000 training hours to 14 transit agencies located in Southern California.

**Transportation Infrastructure and Logistics Research**

**Funding - FY 2008:** \$486,250      **FY 2009:** \$486,250      Congressionally Directed

**Total Funding:**                    \$1,941,630 since 2006

**Non-FTA Funding:**                None

**National Relevance of the Research:**

This project does not have national relevance. The project involves developing a traffic and freight model to relieve stress on the Alabama infrastructure.

**Relevance to the Transit Industry and Community:**

This project has very little relevance to the transit industry.

**Expected Final Products and Delivery Dates:**

This project will deliver an infrastructure planning tool for highway and freight movement in Alabama.

**COMTO Careers in Transportation Internship Program**

**Funding - FY 2008:** \$100,000      **FY 2009:** To Be Determined      Discretionary

**Total Funding:**                      \$250,000

**Non-FTA Funding:**                  None

**National Relevance of the Research:**

The transit industry needs to ensure it has enough skilled and qualified individuals to serve our communities.

**Relevance to the Transit Industry and Community:**

This internship program offers opportunities for college level students across the country.

**Expected Final Products and Delivery Dates:**

Nine interns were funded in 2008. Twelve interns are funded in 2009.

**Federal Transit Administration**

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