

University Transportation Centers Program

Progress Report 2005–2007





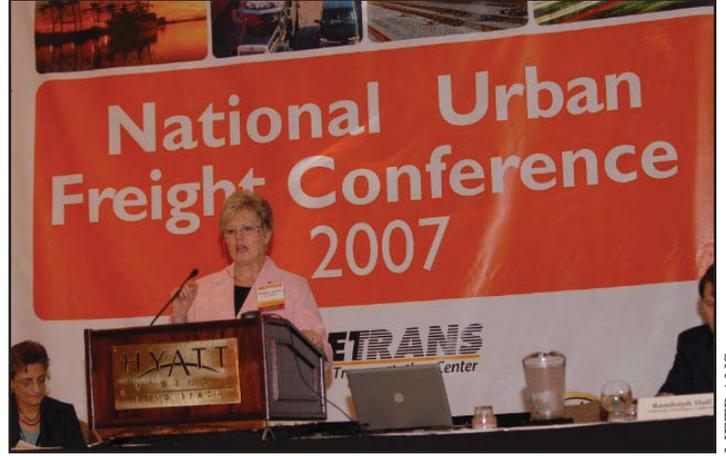
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ABBREVIATIONS AND ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
BTS	Bureau of Transportation Statistics
COE	Center of Excellence
COI	Center of Innovation
CSU	California State University
CUTC	Council of University Transportation Centers
DHS	Department of Homeland Security
DOT	Department of Transportation (State or Federal)
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FY	Fiscal Year
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IRWG	Intermodal Research Working Group
ITS	Intelligent Transportation Systems
ITS JPO	Intelligent Transportation Systems Joint Program Office
LECD	Light Emitting Ceramic Device
LTAP	Local Technical Assistance Program
METRANS	National Center for Metropolitan Transportation Research
MIOHUTC	Michigan Ohio University Transportation Center
MIT	Massachusetts Institute of Technology
MPO	Metropolitan Planning Organization
NA	Not applicable
NCHRP	National Cooperative Highway Research Program
NHI	National Highway Institute
NHTSA	National Highway Traffic Safety Administration
OST	Office of the Secretary of Transportation
OTREC	Oregon Transportation Research and Education Consortium
PHMSA	Pipeline and Hazardous Materials Safety Administration
RFID	Radiofrequency Identification
RiP	Research in Progress
RITA	Research and Innovative Technology Administration
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
TBD	To be determined
TCRP	Transit Cooperative Research Program
TEA-21	Transportation Equity Act for the 21st Century
TEDIS	Transportation and Economic Development Information System
TMF	Traffic Mitigation Fee
TRANSIMS	Transportation Analysis Simulation System
TRB	Transportation Research Board
TRIS	Transportation Research Information Services Online
TTAP	Tribal Technical Assistance Program
UC	University of California
UCLA	University of California Los Angeles
UO	University of Oregon
US DOT	United States Department of Transportation
UTC	University Transportation Center
VII	Vehicle Infrastructure Integration
WCTR	World Congress on Transportation Research

EXECUTIVE SUMMARY

The [University Transportation Centers \(UTC\)](#) Program is an alliance of universities; federal, state, and local governments; and private enterprise to produce the ideas and highly educated professionals that our Nation needs to maintain and continuously improve our transportation systems.

The University Transportation Centers (UTC) Program is a strategic investment in the Nation's transportation knowledge base. This investment produces a superior national capacity in the men and women who are educated and conduct research in transportation. These professionals are employed by public agencies and private businesses, thereby ensuring the professional capacity needed to maintain and improve our transportation systems.

The [United States Department of Transportation \(US DOT\)](#) has enjoyed a fruitful and long-standing relationship with universities, as authorized through various statutes since 1987. This report is a snapshot of the UTC program authorized in the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users of 2005 (P.L. 109-59, SAFETEA-LU). It highlights a small selection of the many contributions UTCs have made to the Nation in transportation research, education, and technology transfer from 2005 to 2007.

The UTC Program has evolved from 10 regional centers in 1987 to 60 centers in 42 states in 2005. SAFETEA-LU significantly increased the total number of UTCs and established five categories with funding levels ranging from \$500,000 to \$3,500,000 annually.

Managed by the [Research and Innovative Technology Administration \(RITA\)](#), the UTC Program has a multimodal focus with a strong track record of university research and education on surface transportation modes. A separate university aviation research program, [Centers of Excellence Program](#), is managed by the Federal Aviation Administration.

Through the UTC Program, the US DOT contributes to the goals set forth by the [American Competitiveness Council](#) to improve

America's science, technology, engineering, and mathematics (STEM) education programs.

A UTC is typically a center within a university that leverages the academic programs and research capabilities of the university to educate transportation professionals, conduct basic and applied research on transportation problems, and transfer research results to end users. Each UTC uses a strategic plan developed at the onset of the federal grant to conduct education, research, and technology transfer activities. The strategic plan sets the framework for research selection and implementation, undergraduate and graduate education activities, and transportation stakeholder participation and outreach.



INTRODUCTION

Transportation is fundamentally a people business. While our focus is on roads and rails; cars, trucks, and airplanes; seaports, airports, and train stations, we are ever mindful that people plan, design, build, and operate these systems everyday for the men, women, and children who use them to get to work, school, visit grandparents, or go to medical appointments. Indeed, the ease of movement of people, and the goods they need and want, is the primary purpose of our transportation systems.

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The [United States Department of Transportation \(US DOT\)](#) has enjoyed a fruitful and long-standing relationship with universities, as authorized through various statutes since 1987. This report describes the operation of the UTC program authorized in the [Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users of 2005 \(P.L. 109-59, SAFETEA-LU\)](#) and highlights a small selection of the contributions UTCs have made to the Nation in transportation research, education, and technology transfer.

The UTC program has evolved from 10 regional centers in 1987 to 60 centers spanning 5 categories in 2005 (chart 1). SAFETEA-LU increased the total number of UTC and established five categories – National, Regional, Tier I, Tier II and Title III—with funding levels ranging from \$500,000 to \$3,500,000 annually (chart 2).

STRUCTURE OF THE UTC PROGRAM

The UTC program provides grants to Centers. It does not provide funding for specific research projects, education, or technology transfer programs. It relies on each Center to fund projects and activities based on a strategic planning framework. Similarly, the US

DOT does not judge the merit or success of specific activities. Instead, it reviews the progress of the Centers in achieving the goals established in a strategic plan that was reviewed by professionals across the Department and approved by the Director of the UTC Program.

SAFETEA-LU requires that each UTC provide assurances that the research and education activities will support the national strategy for surface transportation research, as identified by the report of the National Highway Research and Technology Partnership entitled *Highway Research and Technology: the Need for Great Investment*, dated April 2002, and the programs of the national Research and Technology Program of the Federal Transit Administration.

Each Center is required to involve stakeholders, which typically include State departments of transportation, transit agencies, private industry, and Federal representatives. In addition, specific research projects must be chosen through a competitive process with input and approval of a research selection committee that provides advice and consent.

Direct input into the activities of each Center—including specific projects that are funded—is maintained by the participation of US DOT professionals and officials on Centers’ advisory committees and project selection committees.¹ The participation of US DOT staff in this role has existed in the past. Under SAFETEA-LU, the Research and Innovative Technology Administration (RITA) has made a concerted effort to involve a wider range of US DOT operating administrations in these processes. In the past, US DOT representation was almost exclusively limited to staff from the [Federal Highway Administration](#) and, to a lesser extent, the [Federal Transit Administration](#). From 2005 through 2007, the [Federal Rail Administration](#), [National Highway Transportation Safety Administration](#), and the [Pipeline and Hazardous Materials Safety Administration](#) participated in UTC advisory and research selection committees.

¹ Strictly speaking, the role of DOT staff is circumscribed by federal conflict of interest guidelines. DOT staff cannot participate in the “business decisions” of the Center. Their role is to provide technical advice to the Centers and to inform the Centers of DOT policies relevant to the Center.

CHART 1 University Transportation Program
Number of funded centers by authorizing legislation



In 1987, the Surface Transportation and Uniform Relocation Assistance Act (STURAA) authorized the UTC program through the establishment and operation of transportation centers in each of the 10 standard federal regions. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) reauthorized the regional UTCs for an additional 6 years and added four national centers and six University Research institutes (URI). The mission of the 10 regional and 4 national UTCs was to advance U.S. expertise and technology transfer. The six URIs each had a specific transportation research and development mandate. In 1998, the Transportation Equity Act for the 21st Century (TEA-21) reauthorized the UTC Program for an additional 6 years and increased the total number of Centers to 33. Beginning with TEA-21, an education goal was added to the primary objectives of the program and strategic planning was institutionalized in UTC grants management.

CHART 2 UTC Programs Authorized in SAFETEA-LU-2005

Category	Number of Grants	Competitive	Annual Authorized Funding	100% Match Required
National	10	No	\$2-3.5 M	Yes
Regional	10	Yes	\$1 to 2.25 M	Yes
Tier I	10	Yes	\$1 M	Yes
Tier II	22	No	\$500 K	Yes
Title III	8	No	Amounts vary	No
Total	60			

UTC VISION, MISSION, AND GOALS

VISION

To be internationally recognized centers of excellence, fully integrated within institutions of higher learning, that serve as a vital source of leaders who are prepared to meet the Nation's need for safe, efficient, and environmentally sound movement of people and goods.

MISSION

To advance U.S. technology and expertise in the many disciplines comprising transportation through the mechanisms of education, research, and technology transfer at university-based centers of excellence.

GOALS

1. **Education:** a multidisciplinary program of course work and experiential learning that reinforces the transportation theme of the Center.
2. **Human Resources:** an increased number of students, faculty, and staff who are attracted to and substantively involved in the undergraduate, graduate, and professional programs of the Center.
3. **Diversity:** students, faculty, and staff who reflect the growing diversity of the U.S. workforce and are substantively involved in the undergraduate, graduate, and professional programs of the Center.
4. **Research Selection:** an objective process for selecting and reviewing research that balances multiple objectives of the program.
5. **Research Performance:** an ongoing program of basic and applied research, the products of which are judged by peers or other experts in the field to advance the body of knowledge in transportation.
6. **Technology Transfer:** availability of research results to potential users in a form that can be directly implemented, utilized, or otherwise applied.

UTC PROGRAM OUTCOME

The outcomes desired from DOT's investment in the UTC Program are:

- research that supports the national strategy for surface transportation research;
- an increased number of Americans who are prepared to design, deploy, and operate the complex transportation systems that will enhance America's economic competitiveness in the 21st century; and
- the transfer of technologies into practice that provides solutions to national transportation challenges.

UTC STRATEGIC PLANNING

Each UTC is required to develop a strategic plan at the beginning of the grant period, typically spanning 4 to 6 years. The strategic plan outlines the vision, theme, and activities that the UTC will undertake along with an estimated budget. It is the means by which a Center conveys the essence of what it seeks to accomplish with the funds made available under its grant.

UTC PERFORMANCE INDICATORS

Each university is required to implement a three-part program consisting of research, education, and technology transfer with the same performance indicators for all universities. Each UTC reports annually on its performance using the performance indicators described in Appendix 1.

UTC FUNDING

The UTC Program is funded from two provisions in SAFETEA-LU: Title V and Title III. Fifty-two universities are authorized through Title V and eight from Title III. Due to statutory budget adjustments, the actual awards are below the authorized levels for Title V Centers for the duration of SAFETEA-LU (table 1). Funding for Title III Centers was minimally reduced in FY 2006; actual funding amounts in FY 2007 and 2008 are as authorized (table 2).

TABLE 1 Title V -- Authorized v. Actual Funding Levels

UTC categories	FY2006-2008					
	FY 2005					
	Authorized	Actual	Authorized	FY 2006 Actual	FY 2007 Actual	FY 2008 Actual
National	\$2,000,000	\$1,560,000	\$3,500,000	\$3,010,000	\$2,858,000	\$2,950,400
Regional	\$1,000,000	\$780,000	\$2,000,000	\$1,720,000	\$1,633,200	\$1,686,000
Tier I	\$1,000,000	\$780,000	\$1,000,000	\$860,000	\$816,000	\$843,000
Tier II	NF	NF	\$500,000	\$430,000	\$408,300	\$421,500

NOTES: NF = Not funded.

SOURCES: SAFETEA-LU Title V

TABLE 2 Title III -- Authorized v. Actual Funding Levels

University	FY 2006		FY 2007		FY 2008	
	Authorized	Actual	Authorized	Actual	Authorized	Actual
Univ. of TN, Knoxville	\$2,000,000	\$1,980,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Texas A&M-TTI	\$1,500,000	\$1,485,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Morgan State University	\$1,000,000	\$990,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
North Dakota State Univ.	\$400,000	\$396,000	\$400,000	\$400,000	NF	NF
Univ. of Alabama, Tuscaloosa	\$550,000	\$544,500	\$550,000	\$550,000	\$650,000	\$650,000
Univ. of Alabama, Birmingham	\$450,000	\$445,500	\$450,000	\$450,000	\$550,000	\$550,000
Jackson State University	\$550,000	\$544,500	\$550,000	\$550,000	\$650,000	\$650,000
Univ. of Denver/ Mississippi State University	\$550,000	\$544,500	\$550,000	\$550,000	\$650,000	\$650,000

NOTES: NF = Not funded.

SOURCES: SAFETEA-LU Title III

UTC RESEARCH

As noted, US DOT does not directly fund specific research projects. Instead, the Department awards funds to Centers, which select specific projects and activities to fund. These projects and activities are based on the criteria described in the Centers' strategic plans. These criteria vary by UTC, but typically include some or all of these factors: relevance of the proposed project or activity to the UTC theme; soundness of proposed methodology; level of student and faculty involvement; use of UTC laboratory facilities; pedagogical opportunities; relationship to ongoing research; relationship to strategic partners; availability of matching funds; proposed budget; potential for local, state, or national impact; potential for meeting US DOT strategic goals, and potential for deployment and/or commercialization.

UTCs frequently have strong partnerships with their state transportation agencies and are valued intellectual assets in their respective states and regions. UTCs bring to bear the acumen, creativity, and analytical aptitudes of recognized experts, academicians, and students to complex transportation challenges.

UTCs typically select their research projects through committees composed of a mix of faculty, public, and private sector practitioners, and sponsoring local, state, and/or federal partners. US DOT representatives participate in these research selection committees by providing expert advice on specific research topics as well as information and guidance to the universities on the relevance of the projects to US DOT research agenda and policy priorities, not as regular voting members of these committees.

UTCs report annually on the status of ongoing research and submit the final reports to RITA. They are also required to post research project descriptions of the [Transportation Research Board's](#) (TRB's) Research in Progress online database, as described in the box on page 17.

The UTCs send copies of final research reports to the [National Transportation Library at Northwestern University](#), the [Institute of Transportation Library at the University of California, Berkeley](#), and the [National Technical Information Service](#) at the U.S. Department of Commerce.

In addition, UTCs are required to provide a link to full report text to the [Transportation Research Information Services \(TRIS\)](#). UTCs post and archive their research reports on their individual websites and notify TRB staff when a new report becomes available. TRB indexes and abstracts the reports with links from the TRIS record to the full text on the UTC websites.

RELEVANCE OF UTC RESEARCH TO DOT STRATEGIC GOALS

Surface transportation research at the US DOT supports the strategic goals of the Department in safety, congestion reduction, global connectivity, environmental stewardship, and security emergency preparedness and response, as described in the [US DOT Strategic Plan, FY 2006–2011](#). Below are a few examples of recently completed or ongoing UTC research projects that support the strategic goals of the US DOT.

■ UTC Safety Research

University: **Pennsylvania State University**

Project: [Portable Sign Crash Test](#)

Description: Development of portable sign post structure final designs and standard drawings for PennDOT with clearly defined information for the proper design of these structures following NCHRP 350 criteria.

University: **Montana State University**

Project: [Analyses for Wildlife-Vehicle Collision Data: Applications for Guiding Decision-Making for Wildlife Crossing Mitigation & Motorist Safety](#)

Description: Use of wildlife-vehicle collision data to aid transportation management decision making and mitigation planning for wildlife. Recommendations will be provided to transportation departments regarding road-kill data collection techniques, the value of systematically and accurately recorded information, and how different analytical techniques can aid in identifying and prioritizing problematic areas for highway mitigation projects

UTC Faculty Recognized for Research Excellence

UTC professors are at the heart of the UTC program. Their academic achievements, creativity, and expertise fuel research projects. Some of the professors recognized for research excellence in 2006 and 2007 are listed below.

Region II UTC Best Research Paper of 2006 went to **Daniel Hess, Ph.D.**, Assistant Professor, Urban and Regional Planning, **University at Buffalo/SUNY** for his paper on “Light Rail Lite or Cost-Effective Improvements to Bus Service? Evaluating the Costs of Implementing Bus Rapid Transit” written in collaboration with B.D. Taylor and A.C. Yoh and published in *Transportation Research Record*, No. 1927, pp. 22-30.

2007 O. Hugo Schuck Award for best paper in controls systems went to **Rajesh Rajamani, Ph.D.**, Associate Professor in mechanical engineering at the **University of Minnesota**, for research on tire-road friction estimation.

Marc Schlossberg, Ph.D., Associate Professor in the Department of Planning, Public Policy and Management at the **University of Oregon** was a recipient of a Fund for Faculty Excellence Award in 2007. This award honors faculty members performing at the forefront of their areas of research at the UO. Dr. Schlossberg is an OTREC Associate Director and Executive Committee member, and principal investigator on a project studying “active transportation, neighborhood planning and participatory GIS.”

TRB Research in Progress Online Database

RITA partners with the Transportation Research Board (TRB) to support the availability of a publicly available UTC searchable category in the existing web database for [Research in Progress \(RiP\)](#).

This feature allows UTCs to enter on-going research projects into the database as well as view all research in progress by state departments of transportation. The RiP database also serves as a tool to avoid research duplication.

UTC-proposed and on-going research may be searched by State, UTC type and by subject categories.

RITA has contracted with TRB to develop an annual report of UTC projects entered into RiP and TRIS for dissemination to US DOT modes, the UTC community, Congress and other groups as appropriate.

University: **University of Missouri, Columbia** *through the Midwest Transportation Consortium at Iowa State University*
Project: *Secondary Accident Data Fusion for Assessing Long Term Performance of Transportation Systems*

Description: This project proposes the use of data fusion of intranet traffic reports with the accident database, and will result in a near-term technology for analyzing the safety impacts of transportation assets.

University: **Texas A&M**
Project: *Vehicle Infrastructure Integration (VII) Based Road-Condition Warning System for Highway Collision Prevention*

Description: This project will investigate the application of the VII technology for highway crash prevention by providing real time roadway condition information and to estimate its benefits on highway safety under various roadway geometric and traffic conditions.

University: **Iowa State University**
Project: *Development of Fatigue Design Procedures for Slender, Tapered Support Structures for Highway Signs, Luminaries, and Traffic Signals*

Description: The study developed a procedure for predicting wind loads for the fatigue design of slender, tapered luminary support structures. Cantilevered signal, sign, and light support structures are used nationwide on major interstates, national highways, local highways, and at local intersections for traffic control purposes. Recently, there have been a number of failures of these structures that can likely be attributed to fatigue. The equations used for vortex shedding fatigue design were reevaluated and the study recommended reformulations and modifications.

University: **University of Tennessee**
Project: *Transportation and Emergency Services: Identifying Critical Interfaces, Obstacles, and Opportunities*

Description: This research examined the commitment to improved coordination among highway transportation and emergency services organizations. It identified and evaluated the underlying obstacles and opportunities through a survey administered to transportation and emergency services professionals in five states. Based on the survey results and subsequent focus group discussions, recommendations are offered for short-term improvement of emergency transportation operations and for additional research.

Region IX UTC Hosted 11th World Conference on Transportation Research

On June 24-28, 2007, the 11th [World Conference on Transport Research](#) (WCTR) was hosted by the University of California, Berkeley. Elizabeth Deakin, Ph.D., Region IX UTC Director, was Director of the conference of the first WCTR held in the U.S. The conference drew over 1,000 participants from 49 countries.

Nearly 1,000 presentations were made at the conference's 178 sessions. 922 reviewed and revised papers were included in the conference CD, from an original pool of 1,536 abstracts.

Keynote Speaker and Nobel Laureate, Daniel McFadden, spoke on "The Behavioral Science of Transportation."

A French-speaking seminar was sponsored by the French Government.

Over 150 fellowships were made possible by contributions from sponsors, including the US Department of Transportation, the California Department of Transportation, the Metropolitan Transportation Commission, the Bay Area Rapid Transit District, AC Transit, the World Bank Institute, the San Francisco County Congestion Management Agency, and Dowling Associates.

■ UTC Congestion Reduction Research

University: **Montana State University**

Project: [Promoting the Use of Bicycles on Federal Lands](#)

Description: Through case histories, researchers will identify barriers federal land managers face in providing bicycle facilities, identifying successful existing bicycling facilities, creating guidelines for measuring performance of bike access on federal lands and creating a guide of potential solutions for the barriers identified.

University: **Northwestern University**

Project: [Bridge Asset Management Based on Life Cycle Cost Considerations](#)

Description: This research project is aimed toward (a) determining the asset value or total life-cycle cost, as well as the achievable useful life, of bridges and (b) suggesting design, preservation, and improvement practices that lead to lowest life-cycle cost.

University: **University of California, Berkeley**

Project: [Measuring Recurrent and Non-Recurrent Traffic Congestion](#)

Description: This research project developed a methodology to identify and measure total, recurrent, and nonrecurrent congestion delay on urban freeways that are instrumented with loop detectors or other surveillance systems. The methodology calculates the average and the probability distribution of congestion delays by cause (recurrent, incident-related, weather, and other factors) and quantifies the congestion impacts on travel time and travel time variability.

University: **City University of New York**

Project: [Impact of Congestion on Bus Operations and Costs](#)

Description: Traffic congestion in Northern New Jersey imposes a substantial operational and monetary penalty on bus service. The purpose of this project was to quantify the additional time and operational costs due to traffic congestion. The results indicate that the time increment due to congestion would be 423,000 vehicle hours and the monetary cost of the time would be \$27 million.

University: **Massachusetts Institute of Technology**

Project: [Strategies and tools for decentralized management of urban transportation](#)

Description: This project aims to improve coordination among urban transportation facility owners and operators as they deploy Intelligent Transportation Systems (ITSs). Researchers have contended that ITS will serve as the "regional integrator," tying together what they often describe in American cities as a fragmented, loosely related collection of providers of transport operations and infrastructure. Our work will describe the full set of tradeoffs associated with different scales of operation—from fully centralized

to decentralized or distributed—and will develop analytical techniques for representing and reducing the cost of interagency communication.

University: California State University, Long Beach

Project: *Evaluating the Efficiency of Traffic Mitigation Fees at the San Pedro Bay Ports in a Congestion-Pricing Framework*

Description: The purpose of this project is to evaluate the economic efficiency of the recently implemented “Traffic Mitigation Fee” (TMF) at the San Pedro Bay ports by comparing it to a fee structure that would generate a socially optimal mix of peak and off-peak truck traffic. This research focuses on delay costs suffered by the trucking community at the hand of shippers who dispatch an inefficiently large number of trucks to the ports during peak periods.

University: Texas A&M/Texas Transportation Institute

Project: *Texas Transportation Institute Urban Mobility Report*

Description: Sponsorship from Texas A&M’s University Transportation Center for Mobility dramatically improved the estimates of urban congestion in the 2007 Urban Mobility Report. Center funding allowed the researchers to develop improved estimation techniques that take advantage of data from the most advanced traffic monitoring systems in the United States. The analysis was also extended to include congestion estimates for all U.S. urban areas, and there were significant advances in the discussion of congestion solutions. Current sponsorship will assist in improvements to the estimates of the role of public transportation and Intelligent Transportation Systems in addressing congestion issues.

■ UTC Global Connectivity Research

University: Texas A&M

Project: *The Potential for Improving Rail International Intermodal Services in Texas and the Southwest Region of the United States*

Description: This project will determine 2006 Asian trade flows on several global transportation corridors other than those that begin at the southern Californian terminals at Los Angeles and Long Beach. This project will also evaluate the opportunity for Texas and the south western states to benefit from rail investments and reduce highway congestion, especially in the case of NAFTA traffic, which is still dominated by the trucking sector.

University: University of Rhode Island

Project: *A Strategic Model for Optimal Scaling of International Container Ports*

Description: This project will develop and estimate empirical and theoretical models to develop a modeling tool of market entry and demand for port services. The broad objective is to assist planners in determining whether they can capture and profitably defend shipping market share as a hub, traditional land-sea cargo port, or regional feeder port. It will also help them determine whether there are additional gains from cooperative development and in assessing the effects of service interruptions among existing ports due to labor dispute, accident, natural disaster, or other event.

University: City University of New York and New York University

Project: *Assessing New York's Border Needs*

Description: This study examined the implications for both the state and country if New York's key border and corridor needs are unmet. The study team analyzed the border crossing needs identified by New York State Department of Transportation and other agencies, and looked at origin/destination patterns to identify the role of New York's trade corridors in US-Canada trade. The study analyzed the trade-offs that can be made within the framework of state and national policy objectives and scarce resources. It provided an overview of proposals at each of New York's major crossings and concluded with an evaluation of funding prospects.

University: University of Southern California

Project: *Evaluation of Extended Gate Operations at the Ports of Los Angeles and Long Beach*

Description: This research project tracked the implementation of PierPASS at the Los Angeles/Long Beach ports over a period of 2 years. Under continued pressure to adjust operations to mitigate traffic and air quality impacts of port operations and in response to threatened regulatory legislation, terminal operators implemented PierPASS, a voluntary program of extended gate hours. PierPASS assesses a

Traffic Mitigation Fee (TMF) on eligible containers moved into and out of the ports during peak hours. The methodology used included extended interviews with stakeholders, together with data provided by PierPASS and by four drayage trucker surveys. Researchers found that the PierPASS program resulted in a significant temporal shift of cargo moves at the ports to evenings and weekends as intended, thereby, contributing to reduced congestion and vehicle emissions.

■ UTC Environmental Stewardship Research

University: Missouri University of Science and Technology

Project: *Best Practices for Implementing a Biodiesel Program*

Description: This project will review the policies and procedures of state governments, DOTs, or agencies that influence the pricing and availability of biodiesel, review literature and other state practices related to biodiesel quality and year-round operating capability, and compare fuel efficiency of biodiesel v. conventional diesel.

University: University of Arkansas, Fayetteville

Project: *Solar Powered Lighting for Overhead Highway Signs*

Description: This project will design and develop a solar powered lighting system for overhead highway signs with a view to improving night visibility, driving conditions, and highway safety. Two systems will be developed and tested: one system will utilize regular fluorescent tube lights for shining light on the sign, and the other system will employ electroluminescent fibers to highlight the letters in the sign and/or the boundary of the signboard. The system will incorporate a power management controller to adjust the lighting effect to compensate for weather conditions for days with inadequate solar charging.

University: California State University, Long Beach

Project: *Impact of New Diesel Fuels Used in Port Operations on Subsurface Quality*

Description: The purpose of this project is to quantify how the release of a potential new diesel fuel—diesohol—might affect the movement and fate of contaminants in the aqueous phase of the subsurface. Software will be developed to model subsurface flow that accounts for the effect of surfactants (ethanol and other fuel additives) on flow properties, and the dissolution and degradation of diesel components and pre-existing organic contaminants. The distribution of aqueous organics will be quantified for scenarios involving spillage at the soil surface, release from an underground storage tank, and release at a site previously contaminated with organics.

University: University of Vermont

Project: *Integrated Transportation and Land Use Models: Greenhouse Gas Metrics*

Description: Net greenhouse gas “footprint” of Chittenden County, based on fuel consumption and land use change. The project will integrate transportation emissions and land use change emissions and sequestration profiles to produce a greenhouse gas (GHG) footprint analysis tool for the integrated model framework. This will provide a basis for evaluating the effects of policies targeted at mitigating GHG emissions.

University: University of California, Davis

Project: *Studies in Consumers and Automotive Fuel Economy: A Qualitative Field Test of the Effects of Driver Feedback on Automotive Fuel Consumption*

Description: Rising gasoline prices, greenhouse gas emissions, and war in oil-producing regions motivate research on the contribution that energy-use feedback to drivers could make to reduce petroleum consumption. This project examines the effects of energy use feedback on household drivers of conventional and hybrid light-duty vehicles. Drivers will be interviewed and commercially available devices will be installed in some drivers’ vehicles. This qualitative research is expected to produce insights into specific types of driver feedback and to produce the requisite knowledge to design and deploy a larger scale study to produce estimates of generalizable effects.

■ UTC Security, Preparedness, and Response Research

University: Texas A&M

Project: *An Assessment of Cargo Security Procedures for Texas Land and Marine Ports of Entry*

Description: The goals of this project are to identify the data needs for securing containers, drivers, and vehicles entering through the state’s ports of entry, to identify what data collection procedures and technologies are currently planned or in use, and to assess what gaps may exist in these practices. Once needs are identified, recommendations for potential technological or procedural changes to improve on current practices will be developed.

University: University of Minnesota

Project: *Multi-Camera Monitoring of Human Activities at Critical Transportation Infrastructure Sites*

Description: This project leveraged research sponsored by Department of Homeland Security (DHS) that examined ways to detect specified activities and count humans in crowded scenes. The researchers further developed methods to automatically detect and spatially estimate an occlusion (common in crowded outdoor scenes) in world coordinates. The algorithms were tested at the transit

stations where the DHS system is currently deployed and covered activities that are not of interest to the DHS but are of major interest to Metro Transit (e.g., loitering, graffiti, drug dealing) and are directly applicable to other transportation infrastructure sites.

University: **University of Rhode Island**

Project: *Acoustic Detection and Monitoring for Transportation Infrastructure Security*

Description: The objective of the project is to test the feasibility of using forward looking sonar to detect and monitor divers and to measure their acoustic target strength. This project will develop recommendations and design guidelines for an acoustic system that when deployed in the field, will detect and monitor potential underwater threats to marine transportation facilities.

University: **San Jose State University**

Project: *Designing and Operating Safe and Secure Transit Systems: Assessing Current Practices in the United States and Abroad*

Description: This research project documented and analyzed factors influencing transit security. The major findings were: (1) the threat of transit terrorism is probably not universal—most major attacks in the developed world have been on the largest systems in the largest cities; (2) this asymmetry of risk does not square with fiscal politics that seek to spread security funding among many jurisdictions; (3) transit managers are struggling to balance the costs and (uncertain) benefits of increased security against the costs and (certain) benefits of attracting passengers; (4) coordination and cooperation between security and transit agencies is improving, but far from complete; (5) enlisting passengers in surveillance has benefits, but fearful passengers may stop using public transit; (6) the role of crime prevention through environmental design in security planning is waxing; and (7) given the uncertain effectiveness of antitransit terrorism efforts, the most tangible benefits of increased attention to and spending on transit security may be a reduction in transit-related person and property crimes.



UTC EDUCATIONAL ACTIVITIES

Educating the next generation of transportation professionals is a key purpose of the UTC program. Transportation is fundamentally about people—the people who conceive, create, manage, and operate the highways and transit and rail systems for moving people and goods. Without highly trained professionals, our Nation’s transportation systems will not be able to perform at the expected levels needed for optimal well-being of our citizens and communities.

The UTC educational activities include development of new courses, scholarships to support individuals to pursue advanced degrees in transportation, recruitment and outreach to prospective students, development of laboratories and on-line learning tools, and internships. Six examples of recent and on-going UTC educational activities are described below.

University: Texas A&M

Activity: *On the Move! Exploring Transportation Career Horizons Workshop*

Description: A one-day workshop and event for students in grades 5 through 9 that offers an opportunity to gain hands on experience and insight into transportation, engineering, and technology careers.

Annual Outstanding Student of the Year Awards

Annually RITA and the UTCs honor one outstanding student from each university. The UTC-selected students are acknowledged at a banquet jointly sponsored by the Council of University Transportation Centers (CUTC) and RITA held in conjunction with the Annual Meeting of the Transportation Research Board (TRB) every January in Washington, DC. In addition to \$1,000 award, students are able to participate in TRB’s annual gathering of upwards of 9,000 transportation researchers.

The 2005 and 2006 recipients of the Student of the Year Award are listed in Appendix 2.

University: North Dakota State University

Activity: *Transportation Engineering Scholarship*

Description: The scholarships recognize academic achievement and promote the education of transportation students at North Dakota State University. Funding for the two \$1,500 scholarship is provided by the Mountain-Plains Consortium through the University Transportation Centers Program. To be considered, students must be a junior or senior, have an interest in transportation, and demonstrate academic excellence. Scholarship winners are recognized each fall at the Upper Great Plains Transportation Institute awards banquet.

University: Rutgers University

Activity: [National Summer Transportation Institute at Garret Morgan Academy](#)

Description: The UTC at Rutgers manages the New Jersey Local Technical Assistance Program (NJ LTAP). In July and August 2007 it developed and administered a month-long summer enrichment program that introduced minority high school students to several modes of transportation. Activities included presentations by transportation professionals, scheduled field trips, hands-on learning activities, and participation in weekly competitions.

University: University of Washington

Activity: [Pavement Interactive](#)

Description: Pavement Interactive is an Internet-based multimedia document. The primary purpose is to provide a general pavement overview covering all aspects from materials to design to construction to maintenance. Pave Interactive functions as a “collaborative website” that resides on the Internet and requires only a PC/Mac and minimal freeware to access the information.

University: University of Idaho

Activity: [Development of Traffic Signal Operations Educational Materials](#)

Description: Most transportation engineers receive little if any education on traffic controllers, how they work, and how one designs a signal timing plan that takes advantage of all of the intricacies of the traffic controller-detector system. This project developed materials on traffic signal operations and timing that can be used to educate university students and practicing traffic engineers about the major components of the traffic control system.

University: Portland State University

Activity: [Free podcasts of visiting scholars' lectures](#)

Description: The Oregon Transportation Research and Education Consortium (OTREC) now offers free podcasts (audio files in mp3 format) of the Portland State University Transportation Seminar Series. As part of their technology transfer program, podcasts from seminars given by OTREC Visiting Scholars and others are now available for download via iTunes onto an iPod. In addition, nearly 200 PSU seminars are available anywhere in the world as streaming video and downloadable video files.

UTC TECHNOLOGY TRANSFER

Technology transfer ensures that research results become ideas, technologies, or processes that contribute to the improvement of transportation. Technology transfer activities include publication of research papers, presentations at conferences, training, field testing, and deployment. Six examples of UTC technology transfer activities are described below.

University: **North Carolina State University**

Activity: [CTE National Broadcast Series](#)

Description: The Center for Transportation and the Environment (CTE) produces several broadcasts per year, available via the web (RealPlayer or Windows Media Player) and C-Band satellite. The broadcasts feature expert panels who discuss emerging policy issues, research innovations, and best practices in transportation and the environment.

University: **Northwestern University** along with University of Kentucky, University of Illinois, Purdue University, University of Cincinnati, University of Wisconsin-Milwaukee

Activity: [Midwest Bridge Working Group](#)

Description: The Midwest Bridge Maintenance and Inspection Working Group promotes technical information interchange between state highway agencies and university researchers on issues related to bridge inspection and maintenance.

University: **University of Wisconsin**

Activity: [Mississippi Valley Freight Coalition](#)

Description: The Center for Freight and Infrastructure Research and Education collaborates with the 10-state Mississippi Valley Region to coordinate a regional freight pooled fund.

University: **University of South Florida**

Activity: [Journal of Public Transportation](#)

Description: The Journal of Public Transportation is a quarterly international journal containing original research and case studies associated with various forms of public transportation and related transportation and policy issues. Topics are approached from a variety of academic disciplines, including economics, engineering, planning, and others; and include policy, methodological, technological, and financial aspects. Emphasis is placed on the identification of innovative solutions to transportation problems.



University: **Marshall University**

Activity: *Patent and licensing of light emitting ceramic device*

Description: Richard Begley, Ph.D., associate director of the Nick J. Rahall Appalachian Transportation Institute and Michael Norton, Ph.D., Chemistry Professor coinvented a light emitting ceramic device (LECD) that has applications in transportation, consumer products, and advertising. LECD provides improved durability, visibility and smaller power requirements than traditional lighting. The invention is now being manufactured by Ecer Technologies, LLC of Lewisburg, WV, and marketed by Firefly Lighting Innovations, LLC. This invention significantly reduces light pollution, has no glare or halo effect in adverse weather, conserves energy, and is overall environmentally friendly.

UTC-LTAP-TTAP Connections

The [Local Technical Assistance Program \(LTAP\)](#) and Tribal Technical Assistance Program (TTAP) are composed of a network of centers – one in every state, Puerto Rico and regional centers serving tribal governments. The LTAP/TTAP centers enable local counties, parishes, townships, cities and towns to improve their roads and bridges by supplying them with a variety of training programs, an information clearinghouse, new and existing technology updates, personalized technical assistance and newsletters. In 25 states the LTAP and TTAP centers are co-located at the same universities as the UTCs. This proximity provides an opportunity for enhanced interaction and synergies. One of the three eligible sources of federal funding match for the UTC grant comes from LTAP/TTAP centers.

The following universities have both UTCs and LTAP/TTAP centers.

<i>University of Alaska</i>	<i>Jackson State University</i>
<i>University of Arkansas, Fayetteville</i>	<i>University of Missouri-Rolla</i>
<i>University of California, Berkeley</i>	<i>Montana State University-Bozeman</i>
<i>University of Connecticut</i>	<i>University of Nebraska-Lincoln</i>
<i>University of Delaware</i>	<i>Rutgers University</i>
<i>University of Idaho</i>	<i>North Carolina State University</i>
<i>Purdue University</i>	<i>North Dakota State University</i>
<i>Iowa State University</i>	<i>Oklahoma State University</i>
<i>Louisiana State University</i>	<i>University of Rhode Island</i>
<i>University of Maryland-College Park</i>	<i>Texas A&M University</i>
<i>University of Massachusetts-Amherst</i>	<i>Utah State University</i>
<i>Michigan Technological University</i>	<i>University of Wisconsin-Madison</i>
<i>University of Minnesota</i>	

UTC PROGRAM COORDINATION

A major focus of the RITA implementation of the SAFETEA-LU UTC program has been to improve the coordination among UTCs and to enhance the value of the UTC program to the US DOT. There is little doubt that the UTCs have been successful in producing research products and educational activities and technology transfer programs. However, the US DOT has not always been as aware of the work of the UTCs as it should have been. Similarly, the UTCs have not always been fully aware of US DOT's research and policy priorities when selecting projects and activities to fund. One consequence is a misperception by some that the UTCs are not providing value to the Department.

In order to improve the exchange of information between the UTCs and the Department, the UTC Program Office has undertaken a two-fold approach to directly sponsor a few selected activities and support initiatives by other DOT agencies to improve communication between the Department and the UTC community.

■ **Collaboration with the Council of University Transportation Centers**

The [Council of University Transportation Centers](#) (CUTC) is a membership organization of university-based transportation research and education programs. Annually, RITA collaborates with CUTC on the joint sponsorship of the Outstanding Student of the Year Awards, in conjunction with CUTC's winter banquet held in January during the annual meeting of TRB. During 2005-2007, RITA conducted program-wide meetings for all UTC directors in concert with the regularly scheduled meetings of CUTC. Typically, during the summer gathering RITA's meeting is one day prior to CUTC's business meeting and in January RITA's meeting is up to 2 hours in duration as part of the overall CUTC business meeting. RITA meetings with the UTC directors took place on June 6, 2005 (MIT), January 22, 2006 (TRB), June 22, 2006 (Montana State), January 21, 2007 (TRB) and June 13, 2007 (U. Wisconsin).

■ **Plenary Conference on DOT Research Program**

On April 11 and 12, 2006, RITA hosted a plenary meeting in Washington, DC, for all UTC directors to listen and respond to US DOT senior research officials who presented the research programs and policy priorities of each Operating Administration. The overarching view of all Departmental research gave the UTC directors the necessary background to respond to the UTC competitions conducted during summer 2006, prepare UTC strategic plans as well as connect with those research programs most closely aligned with the disciplinary expertise and subject-matter interests of the universities. UTC directors were also able to meet the officials and staff in each of the modal research offices.

■ **RITA-TRB Sponsored Spotlight Conferences**

In partnership with the Transportation Research Board, beginning in 2006 RITA has sponsored an annual spotlight conference in areas where there is significant federal interest as well as UTC research activity.

The conference objectives are to:

- Improve collaboration among researchers
- Encourage interaction and synergies among universities, government, private interests, and TRB committees
- Define research opportunities of interest to academia, government, and the private sector
- Identify critical issues for US DOT personnel, and other government staff, including state DOTs and metropolitan planning organizations (MPO)

It is anticipated that these conferences will be held annually, usually in the fall. A different transportation issue or technology will be identified for each year. For 2008, the spotlight will be on the impact of changing sociodemographics on transportation patterns and needs.

The spotlight conferences for 2006 and 2007 are described in the boxes on the following page.

■ Webinars

UTCs have been active participants in webinars sponsored by FHWA's Offices of International Programs and Policy Information in partnership with the Office of Freight Management and Operations and Office of Infrastructure.

- Renewable/Alternative Fuels in the Transportation Sector in Brazil and the United States—June 18, 2007
- Public-Private Partnerships for Transportation Infrastructure in the USA and Brazil—June 11, 2007
- Weigh-In-Motion/Truck Size and Weight Enforcement—February 13 and May 9, 2007

Research Opportunities in Radio Frequency Identification (RFID) Transportation Applications Conference – October 17-18, 2006, Washington, DC

This one-and-a-half day conference provided the forum to assess current research in applications of RFID technologies in transportation. Participants included university RFID researchers, students, government transportation professionals interested in current or potential RFID applications, and industry representatives working in RFID research and technology. The purpose of the conference was to:

- Inform government transportation agencies about current and potential RFID applications that have potential to enhance the mobility of freight and people
- Increase communication among researchers involved in RFID technology applications for transportation
- Give government program managers a better understanding of University Transportation Centers programs and link those interested in RFID applications with university experts
- Identify RFID research opportunities

Research Issues in Freight Transportation—Congestion and System Performance Conference —October 22-23, 2007, Washington, DC

At this 2-day conference, about 50 university researchers engaged an equal number of private sector executives and US DOT and State DOT representatives in a lively dialogue about the Nation's freight challenges and the role of transportation system performance in fostering economic productivity and efficiency.

Specific research needs were identified in the total costs of the supply chain and how the individual cost components and externalities influence transport decisions. While individual elements of the freight system are well known, additional work needs to be undertaken in examining freight transportation from a system-wide perspective. The conference participants also noted that the university community is well suited to conduct research that is larger scale and cross-cutting, and applies new technologies and science. The academic community can also play an important role in addressing issues that are politically sensitive and require a neutral third-party with less direct vested interest in the implementation.

■ **FHWA Outreach and Coordination**

The Federal Highway Administration sponsored three workshops to discuss different aspects of their research program in order to encourage UTC work in support of the FHWA research agenda.

- FHWA/UTC Workshop on Urban/Suburban Mobility and Congestion Mitigation Research—June 6-7, 2006.
- Highway Safety Research & Technology Workshop: Meeting the Safety Challenge Together—December 1, 2006
- Highway Infrastructure Research & Technology Workshop—March 19, 2007

■ **FTA Outreach and Coordination**

The Federal Transit Administration (FTA) sponsored listening sessions for UTCs at various transit-related conferences, conventions, and meetings. These events included UTC focused meetings and other FTA meetings where UTCs were included.

■ **UTC/Transit Agency Meetings Sponsored by FTA:**

- FTA/University Transportation Center/Transit Industry Meeting: Human Service Coordination and Mobility Management and Safety and Operational Issues in Transit (Bus), May 6, 2007, Nashville, Tennessee
- FTA/University of Alabama UTC/Transit Workshop: Human Service Coordination and Mobility Management and Disaster, Response, Recovery, and Security, May 14, 2007, University of Alabama, Birmingham, Alabama
- FTA/University of Denver UTC/Transit Workshop: Operational Issues in Transit (Bus and Rail), Safety and Security Issues in Transit (Bus and Rail), Transit-Oriented and Joint Development, May 16-17, 2007, University of Denver, Denver, Colorado

- FTA UTC/Transit Roundtable Discussion: Operational Issues in Transit, Human Service Coordination and Mobility Management, May 23, 2007, CTAA 2007 Expo, Reno, Nevada
- FTA UTC/Transit Roundtable Discussion: Safety and Security Issues in Rail Transit, Operational and Maintenance Issues in Rail Transit, June 4, 2007, APTA Rail Conference, Toronto, Ontario, Canada

■ **Other FTA 2007 Meetings with UTCs and Transit Industry**

- FTA UTC/State Safety Oversight Discussion: Safety Issues in Rail Transit, September 18, 2007, 11th Annual State Safety Oversight Meeting, Minneapolis, MN
- UTC Directors and Students with FTA Administrator: Public Transportation Research Ideas, Monday, November 7, 2007, Region 7 SAFETEA-LU Rural Transit Training, Kansas City, MO



NATIONAL UNIVERSITY TRANSPORTATION CENTERS

SAFETEA-LU Section 5505 designates 10 non-profit institutions of higher learning to establish and operate national university transportation centers. The role of each center shall be to advance significant transportation research on critical national transportation issues and to expand the workforce of transportation professionals.

Federal funding for National UTCs is authorized at \$2 million in FY 2005 and \$3.5 million in FYs 2006 to 2009. These amounts must be matched 100 percent with non-Federal funds.

National UTCs are not required by statute to establish a consortium of universities. However, all of them have embraced various forms of collaboration with other universities that are within geographic proximity and/or thematic compatibilities.

The designated National UTCs and their themes are listed in table 3.

TABLE 3 National University Transportation Centers, Themes & Partners, FY 2005 – FY 2009

Marshall University	<p>UTC Name: Rahall Transportation Institute Theme: Intermodal Transportation and Economic Development in the Appalachian Region Partners: West Virginia University Institute of Technology Mountain State University Bluefield State College</p>
Montana State University	<p>UTC Name: Western Transportation Institute Theme: Integrated Approaches to Rural Travel and Transportation Partners: N/A</p>
Northwestern University	<p>UTC Name: Infrastructure Technology Institute Theme: Develop Strategies and Tools to Protect and Improve the Condition, Capacity and Performance of the Nation’s Highway, Railroad, and Mass Transit Infrastructure Systems Partners: N/A</p>
Oklahoma State University	<p>UTC Name: Oklahoma Transportation Center Theme: Economic Enhancement through Infrastructure Stewardship Partners: University of Oklahoma Langston University</p>
Portland State University	<p>UTC Name: Oregon Transportation Research and Education Consortium Theme: Advanced Technology, Integration of Land Use and Transportation, and Healthy Communities Partners: Portland State University University of Oregon Oregon State University Oregon Institute of Technology</p>
University of Alaska	<p>UTC Name: Alaska University Transportation Center Theme: Transportation Safety, Security and Innovation in Cold Regions Partners: N/A</p>
University of Minnesota	<p>UTC Name: Intelligent Transportation Systems Institute Theme: Human Centered Technology to Enhance Safety and Mobility Partners: N/A</p>
Missouri University of Science and Technology	<p>UTC Name: Center for Transportation Infrastructure and Safety Theme: Advanced Materials and Non-Destructive Testing Technologies Partners: N/A</p>
University of Vermont	<p>UTC Name: Vermont University Transportation Center Theme: Sustainable Systems and Advanced Technologies for Northern Communities Partners: N/A</p>
University of Wisconsin	<p>UTC Name: National Center for Freight & Infrastructure Research and Education Theme: Freight Transportation Infrastructure and Systems Partners: University of Wisconsin-Milwaukee University of Wisconsin-Superior University of Illinois Chicago University of Toledo Mississippi Valley Freight Coalition</p>

REGIONAL UNIVERSITY TRANSPORTATION CENTERS

SAFETEA-LU Section 5402(c)(1)(A) authorized funding for a single university transportation center in each of the 10 standard Federal regions. Federal funding for the Regional UTCs is authorized for FY 2007 and 2008 at \$2 million each year and \$2.25 million for FY 2009. These amounts must be matched 100% with non-Federal funds.

Each Regional UTC is a consortium universities managed by a lead university. The Regional Centers from TEA-21 were designated for funding in FY 2005 and FY 2006.

In addition, SAFETEA-LU directed the USDOT to hold a competition to designate the Regional Centers for FY 2007-2009. The criteria for selection were:

- The capability of the university to provide leadership in making national and regional contributions to the solution of immediate and long-range problems
- The institution's commitment of at least \$400,000 each year in regularly budgeted funds to support ongoing transportation research and education programs
- Demonstrated ability to disseminate results of transportation research and education program through a statewide or regionwide continuing education program
- The strategic plan that the university proposes to carry out under the grant
- Location within the Federal region to be served
- Evidence of a well-established, nationally recognized program in transportation research and education—
 - of not less than \$2 million in highway or public transportation research expenditures each year for each of the preceding 5 years,

- of not less than 10 graduate degrees awarded in professional fields closely related to highways and public transportation each year for each of the preceding years,
- and not less than 5 tenured or tenured-track faculty members who specialize on a full-time basis in professional fields closely related to highways and public transportation who, as a group, have published 50 refereed journal publications during the preceding 5 years.

The competition was held in the summer of 2006 and the final designations of the Regional Centers were announced on July 27, 2006. The Regional UTCs, consortia universities and corresponding strategic themes for 2007 to 2009 are listed in table 4.



TABLE 4 Regional University Transportation Centers / Themes & Partners, FY 2007 – FY 2009

Region I New England University Transportation Center	Theme: Strategic Management of Disruptive Change in Transportation Systems Lead University: Massachusetts Institute of Technology Partners: University of Connecticut / University of Maine University of Massachusetts, Amherst / University of New Hampshire University of Rhode Island / University of Vermont Harvard University
Region II University Transportation Research Center	Theme: Planning and Managing Regional Transportation Systems in a Changing World Lead University: City College of New York Partners: City University of New York / Columbia University Cornell University / New Jersey Institute of Technology New York University / Polytechnic University Rensselaer Polytechnic Institute / Rowan University Rutgers University / State University of New York Stevens Institute of Technology / University of Puerto Rico - Mayagüez
Region III Mid-Atlantic University Transportation Center	Theme: Technology for Integrated Transportation Systems Operation and Performance Lead University: Pennsylvania State University Partners: University of Virginia Virginia Polytechnic Institute and State University West Virginia University
Region IV Southeastern Transportation Center	Theme: Comprehensive Transportation Safety Lead University: University of Tennessee Partners: University of Kentucky / Vanderbilt University Georgia State University / Georgia Institute of Technology University of Florida / University of South Florida North Carolina A&T University / University of North Carolina Chapel Hill North Carolina State University
Region V NEXTRANS	Theme: Integrated Solutions for Mobility, Safety and Infrastructure Renewal Lead University: Purdue University Partners: Ohio State University / University of Illinois at Urbana-Champaign / Wayne State University / Illinois Institute of Technology Martin University Indiana University Purdue University Indianapolis
Region VI Southwest Region University Transportation Center	Theme: Transportation Solutions to Enhance Prosperity and the Quality of Life Lead University: Texas A&M Partners: University of Texas at Austin / Texas Southern University

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TABLE 4 Regional University Transportation Centers / Themes & Partners, FY 2007 – FY 2009 (continued)	
<p>Region VII Mid-America Transportation Center</p>	<p>Theme: Improving Safety and Minimizing Risk Associated with Increasing Multi-modal Freight Movement on the U.S. Surface Transportation System</p> <p>Lead University: University of Nebraska-Lincoln</p> <p>Partners: Kansas State University / Lincoln University University of Kansas / University of Missouri-Rolla</p>
<p>Region VIII Mountain-Plains Consortium</p>	<p>Theme: Safe, Mobile and Sustainable Freight and Passenger Transportation Systems in the Mountain-Plains Region</p> <p>Lead University: North Dakota State University</p> <p>Partners: Colorado State University / South Dakota State University University of Wyoming / University of Utah</p>
<p>Region IX University of California Transportation Center</p>	<p>Theme: Transportation Systems Analysis and Policy</p> <p>Lead University: University of California, Berkeley</p> <p>Partners: University of California, Los Angeles University of California, Irvine University of California, Davis</p>
<p>Region X Transportation Northwest (TransNow)</p>	<p>Theme: Transportation Operations and Infrastructure Construction</p> <p>Lead University: University of Washington</p> <p>Partners: Oregon State University / Portland State University University of Alaska at Fairbanks / University of Idaho Washington State University</p>

TIER I UNIVERSITY TRANSPORTATION CENTERS

SAFETEA-LU Section 5402 (c)(1)(B) authorized funding for 10 competitively-selected Tier I university transportation centers. Federal funding for the Tier I UTCs is authorized for FY 2007 through 2009 at \$1 million each year. These amounts must be matched 100% with non-Federal funds. The legislation designated ten centers that were in operation under TEA-21 for FY 2005 and FY 2006. The law also required the Department to hold a competition to determine the Tier I Centers for FY 2007 – FY 2009.

The criteria for selection for the 2006 competition were:

- The capability of the university to provide leadership in making national and regional contributions to the solution of immediate and long-range problems
- The institution's commitment of at least \$400,000 each year in regularly budgeted funds to support ongoing transportation research and education programs
- Demonstrated ability to disseminate results of transportation research and education program through a statewide or regionwide continuing education program
- The strategic plan that the university proposes to carry out under the grant
- Evidence of a well-established, nationally recognized program in transportation research and education—
 - of not less than \$1 million in highway or public transportation research expenditures each year for each of the preceding 5 years
 - of not less than 5 graduate degrees awarded in professional fields closely related to highways and public transportation each year for each of the preceding years

- and not less than 3 tenured or tenured-track faculty members who specialize on a full-time basis in professional fields closely related to highways and public transportation who, as a group, have published 20 refereed journal publications during the preceding 5 years.

The competition was held in the summer of 2006 and the final designation of the Tier I Centers was announced on September 29, 2006.

The Tier I UTCs and corresponding strategic themes for 2007-2009 are listed in table 5.



TABLE 5 Tier I University Transportation Centers, Themes & Partners, FY 2007 – FY 2009

Georgia Institute of Technology	<p>UTC Name: Georgia Transportation Institute - University Transportation Center</p> <p>Theme: Investing in the National Transportation System: Economic Growth, System Productivity, and Finance</p> <p>Partners: Albany State University, Clark-Atlanta University, Georgia Southern University, Georgia State University, Southern Polytechnics and State University, and the University of Georgia</p>
Iowa State University	<p>UTC Name: Midwest Transportation Consortium</p> <p>Theme: Addressing Transportation Safety Through Improvements in Management Information Systems</p> <p>Partners: University of Iowa, University of Northern Iowa</p>
Rutgers University	<p>UTC Name: Center for Advanced Infrastructure and Transportation</p> <p>Theme: Management and operations of multimodal transportation infrastructure systems in high-volume intermodal corridor environments - through meaningful research, education, and workforce training</p>
San Jose State University	<p>UTC Name: Mineta Transportation Institute</p> <p>Theme: Transportation Systems Policy and Management</p>
University of Florida	<p>UTC Name: Center for Multimodal Solutions for Congestion Mitigation</p> <p>Theme: Multimodal Solutions for Congestion Mitigation</p>
University of Idaho	<p>UTC Name: National Institute for Advanced Transportation Technology</p> <p>Theme: Advanced Technology for Sustainable Transportation</p>
University of Maryland – College Park	<p>UTC Name: Center for Integrated Transportation Systems Management</p> <p>Theme: Integrated Transportation Systems Management</p>
University of Michigan	<p>UTC Name: Michigan Center for Advancing Safe Transportation throughout the Lifespan</p> <p>Theme: Advancing Safe Transportation throughout the Lifespan</p>
University of South Florida	<p>UTC Name: National Center for Transit Research</p> <p>Theme: To make public transportation and alternative forms of transportation safe, effective, efficient, desirable, and secure</p>
University of Southern California	<p>UTC Name: National Center for Metropolitan Transportation Research (METTRANS)</p> <p>Theme: Transportation within Large Metropolitan Areas</p> <p>Partners: California State University, Long Beach</p>

TIER II UNIVERSITY TRANSPORTATION CENTERS

SAFETEA-LU Section 5402 (c)(2) designates 22 universities to establish Tier II UTCs with funding authorized at \$500,000 per year for FY 2006-2009. These amounts must be matched 100% with non-Federal funds.

The Tier II UTCs and corresponding strategic themes for 2006-2009 are listed in table 6.

TABLE 6 Tier II University Transportation Centers, Themes & Partners, FY 2006 – FY 2009

California State University – San Bernardino	UTC Name: Leonard University Transportation Center Theme: Decision-Making and Management of Transportation Systems
Cleveland State University	UTC Name: Cleveland State University Transportation Center Theme: Highway Workzone Safety and Efficiency
George Mason University	UTC Name: Center for Transportation and Economic Development Theme: The Interrelationship between Surface Transportation Systems and Economic Development
Hampton University	UTC Name: Eastern Seaboard Intermodal Transportation Applications Center Theme: To Enhance Regional Intermodal Transportation Systems by Improving Safety and Efficiency while Minimizing Environmental Impacts
Kansas State University	UTC Name: Kansas State University's Center for Transportation Research Theme: Sustainability and Safety of Rural Transportation Systems and Infrastructure
Louisiana State University	UTC Name: TBD Theme: Transportation Mobility and Infrastructure Management (proposed)
Michigan Technological University	UTC Name: Michigan Technological University Transportation Center Theme: Materials in Sustainable Transportation Infrastructure
North Carolina State University	UTC Name: Center for Transportation and the Environment Theme: Transportation and the Environment
Northwestern University	UTC Name: Center for Commercialization of Innovative Transportation Technology Theme: Foster Commercialization and Implementation of Innovative Transportation Technologies
University of Akron	UTC Name: University of Akron Transportation Center Theme: Transportation Mobility and Infrastructure Management
University of Arkansas	UTC Name: Mack Blackwell National Rural Transportation Center Theme: To Improve the Quality of Rural Life in America through Transportation
University of California – Davis	UTC Name: University of California Transportation Center/ Institute of Transportation Studies Theme: Sustainable Transportation –An Approach to Transportation that Meets the Needs of all Segments of Society while Minimizing Environmental, Societal, and Economic Costs
University of Connecticut	UTC Name: Center for Smart Transportation Theme: Transportation for Smart Growth

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TABLE 6 Tier II University Transportation Centers, Themes & Partners, FY 2006 – FY 2009 (continued)

University of Delaware in Newark	UTC Name: Delaware Center for Transportation Theme: Resiliency of Transportation Corridors
University of Detroit – Mercy	UTC Name: Michigan-Ohio University Transportation Center Theme: Alternate Energy and System Mobility to Stimulate Economic Development Partners: Grand Valley State University, Wayne State University, University of Toledo, Bowling Green State University
University of Massachusetts - Amherst	UTC Name: University of Massachusetts Transportation Center Theme: Improving Transportation Mobility and Safety with Innovative Technologies and Strategies
University of Memphis	UTC Name: Center for Advanced Intermodal Technologies Theme: Intermodal Freight Transportation
University of Nevada, Las Vegas	UTC Name: Transportation Research Center Theme: Development of Transportation Systems for Rapidly Growing Urban Areas
University of Rhode Island	UTC Name: University of Rhode Island Transportation Center Theme: Connectivity through Sustainable Transportation Systems
University of Toledo	UTC Name: Intermodal Transportation Institute Theme: Transportation for Economic Security and Development: Alternate Energy, Infrastructure Utilization, and Supply Chains
Utah State University	UTC Name: Utah State University Transportation Center Theme: Innovative Engineering Against Hazards
Youngstown State University	UTC Name: Center for Transportation and Materials Engineering Theme: Transportation: Mobility, Longevity, and Sustainability

TITLE III UNIVERSITY TRANSPORTATION CENTERS

SAFETEA-LU Title III Section 5338 (d)(2) designated eight university transportation centers at funding levels ranging from \$400,000 to \$2,000,000 for fiscal years 2006-2009. These centers have the same UTC programmatic requirements as the Centers authorized by Section V. While the funding for these Centers comes from the Transit Title of SAFETEA-LU, they are not “transit” centers mandated to undertake transit-related research. One major difference with these Centers is that the level of funding and the length of the grant vary by Center (table 2) and they are not required to obtain non-Federal matching funds.

The Title III UTCs and their corresponding strategic themes for 2006-2009 are listed in table 7.

TABLE 7 Title III University Transportation Centers & Themes, FY 2006 – FY 2009

Jackson State University	UTC Name: Institute for Multimodal Transportation Theme: Managing Metropolitan Mobility Funding: FY 2006-2007-\$550,000; FY 2008-2009-\$650,000
Morgan State University	UTC Name: National Transportation Center Theme: Transportation: A Key to Human and Economic Development Funding: FY 2006 – FY 2009 - \$1,000,000
North Dakota State University	UTC Name: Small Urban and Rural Transit Center Theme: The Enhancement of Personal Mobility in Small Urban and Rural Areas Funding: FY 2006 – FY 2007 - \$400,000
Texas A&M University – Texas Transportation Institute	UTC Name: University Transportation Center for Mobility Theme: Improving the Quality of Life by Enhancing Mobility Funding: FY2006 –FY 2009 - \$1,500,000
University of Alabama – Birmingham	UTC Name: UAB University Transportation Center Theme: Traffic Safety and Injury Control Funding: FY 2006 – FY 2007-\$450,000; FY 2008 – FY 2009-\$550,000
University Of Alabama – Tuscaloosa	UTC Name: University Transportation Center for Alabama Theme: Management and Safety of Transportation Systems Funding: FY 2006 – FY 2007-\$550,000; FY 2008 – FY 2009- \$650,000
University of Denver Mississippi State University	UTC Name: National Center for Intermodal Transportation Theme: To promote the development of a safe and efficient national intermodal transportation system Funding: FY 2006 – FY 2007 - \$550,000; FY 2008- FY 2009- \$650,000
University of Tennessee – Knoxville	UTC Name: National Transportation Research Center at Oak Ridge National Laboratory Theme: Heavy Vehicle, Safety, Efficiency, and Security Funding: FY 2006 – FY 2009- \$2,000,000

APPENDIX 1 UTC PERFORMANCE INDICATORS

UTC PERFORMANCE INDICATORS

The UTC program includes a diversity of universities grouped into five categories, as shown in chart 2. Each university is required to implement a three-part program consisting of research, education and technology transfer with the same performance indicators for all universities.

Each UTC reports annually on its performance using the performance indicators described below.

■ Research Selection

1. Number of transportation research projects selected for funding using UTC grant funding (Federal and/or match) and Number of funded projects that are: basic research, advanced research, and applied research
2. Total budgeted costs for the projects reported in 1 above.

■ Research Performance

3. Number of reports issued that resulted from transportation research projects funded by the UTC grant.
4. Number of transportation research papers presented at academic/professional meetings that resulted from projects funded by the UTC grant.

■ Education

5. Cumulative number of transportation-related courses that have been added since the beginning of the grant to the number of courses reported in Baseline Measure 5 in the UTC Strategic Plan.

Undergraduate: _____ Graduate: _____

6. Number of students participating in transportation research projects.

Undergraduate: _____ Graduate: _____

■ **Human Resources**

7. Cumulative number of transportation-related advanced degree programs that have been added since the beginning of the grant to the number of degree programs reported in Baseline Measure 7 in the UTC Strategic Plan.

Master's level:_____ Doctoral level:_____

8. Number of students enrolled in transportation-related advanced degree programs (the baseline programs and any added since the beginning of the grant).

Master's level:_____ Doctoral level:_____

9. Number of students who received degrees through the baseline and any added transportation-related advanced degree programs.

Master's level:_____ Doctoral level:_____

■ **Technology Transfer**

10. Number of transportation seminars, symposia, distance learning classes, etc. conducted by your UTC for transportation professionals.

11. Number of transportation professionals participating in those events.

As of September 30, 2007, 26 UTCs had approved strategic plans and virtually none had been in operation for a full year. Accordingly, RITA does not yet have detailed results to report. By the end of FY 2008, most Centers will have completed a full year of operation under these grants and will have submitted a report on their performance measures. Consequently, RITA expects to report on these performance measures by December 2008.

APPENDIX 2 STUDENTS OF THE YEAR

2006 UTC OUTSTANDING STUDENT OF THE YEAR AWARDEES

Diego F. Arguea

University of Florida
Region IV Southeastern Transportation Center

Matthew Benke

University of Idaho

Jared E. Brewe

University of Missouri-Rolla

Travis Burgers

North Dakota State University
Region VIII Mountain Plains Consortium

Aaron Clark

University of Rhode Island

John Cleary

Cleveland State University

Max Coffman

Portland State University

Rachel Copperman

University of Texas-Austin
Region VI Southwest Region University Transportation Center

Ryan J. Cunningham

University of Central Florida

Frank Goetzke

West Virginia University
Region III Mid-Atlantic University Transportation Center

Rambod Hadidi

Rutgers, The State University of New Jersey

Ralph Hall

Massachusetts Institute of Technology
Region I New England Transportation Center

Joshua L. Hochstein

Iowa State University
Region VII Midwest Transportation Consortium

Nicholas Hornyak

Marquette University
Region V

Paul Huggins

South Carolina State University

Kenneth Kuhn

University of California-Berkeley
Region IX University of California Transportation Center

Brian Kukay

Utah State University

Adam Kokotovitch

University of Minnesota

David Lawson

Marshall University

Nicholas Lutsey

University of California-Davis

Brian Mattingly

University of Arkansas

Wilhelm Muench

University of Alaska-Fairbanks

Kathryn O'Keefe

Montana State University

Oliver Page

University of South Florida

JiYoung Park

University of Southern California

Arlen Planting

Boise State University

Guy Schafer

University of Toledo

Eugene Sit

City College of New York
Region II University Transportation Research Center

Emily J. Stebbins

University of Vermont

Angela Stubblefield

George Mason University

Laura E. Sullivan-Green

Northwestern University

Johnnie Waid

University of Alabama-Birmingham
UAB University Transportation Center

Christina Watson

San Jose State University

Tony Woody

University of Washington
Region X Transportation Northwest

2005 UTC OUTSTANDING STUDENT OF THE YEAR AWARDEES

Scott Beard

University of Tennessee - Knoxville
Southeastern Transportation Center (Region 4)

Andrea Bill

University of Wisconsin - Madison
Midwest Regional University Transportation Center (Region 5)

Michael Blackmore Lowry

University of Washington
Transportation Northwest (Region 10)

Nathan Bradbury

University of Idaho
National Institute for Advanced Transportation Technology

Shawn Brovold

University of Minnesota
Intelligent Transportation Systems Institute

Kenneth P. Brown

Texas Southern University
Southwest Region University Transportation Center (Region 6)

Daniel Chatman

University of California - Los Angeles
University of California Transportation Center (Region 9)

Brenda M. Cruz

Rensselaer Polytechnic Institute
University Transportation Research Center (Region 2)

Andrew Thomas Desautels

Massachusetts Institute of Technology
New England University Transportation Center (Region 1)

Noor El-Mitiny

University of Central Florida
Center for Advanced Transportation Systems Simulation

Jennifer M. Flynn

University of South Florida
National Center for Transit Research

Ryan Funk

Virginia Polytechnic Institute
National ITS Implementation Research Center

Alex Delrick Geiger

South Carolina State University
University Transportation Center

Zachery C. Grasley

University of Illinois, Urbana-Champaign
FAA Centers of Excellence

Gary G. Greene, Jr.

University of Missouri - Rolla
Center for Advanced and Non-Destructive Testing Technologies

Brandon Hughes

Northwestern University
Infrastructure Technology Institute

Chandra Inglis-Smith

Marshall University
Nick J. Rahall II Appalachian Transportation Institute

Hillary Isebrand

Iowa State University
Midwestern Transportation Consortium (Region 7)

Minh Q. Le

University of Arkansas
Mack-Blackwell Rural Transportation Center

Alison Linder

University of Southern California
National Center for Metropolitan Transportation Research (METTRANS)

David T. Nartey

Morgan State University
Development and Research Management, Transportation for Center

Alan Nybing

North Dakota State University
Mountain Plains Consortium (Region 8)

Wajahat Nyaz

San Jose State University
Norman Y. Mineta International Institute for Surface Transportation
Policy Studies

Richard Jon Porter

Pennsylvania State University
Mid-Atlantic Universities Transportation Center (Region 3)

Clifford Price

New Jersey Institute of Technology
The National Center for Transportation and Industrial Productivity

Liza Runey

North Carolina State University
Center for Transportation and the Environment

Mark Sadsarin

North Carolina A&T University
Transportation Institute

Jessica Sick

University of Rhode Island
University of Rhode Island Transportation Center

Laura Stanley

Montana State University
Western Transportation Institute

Jeffrey Wilson

University of Alabama – Huntsville
University Transportation Center for Alabama

Matthew Zeller

Rutgers, The State University of New Jersey
Center for Advanced Infrastructure & Transportation

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AL	<p>University of Alabama, Birmingham UAB University Transportation Center UTC Category: Title III Dr. Russ Fine, Director Email: rfine@uab.edu Website: http://main.uab.edu</p>	CA	<p>University of California - Davis University of California Transportation Center/ Institute of Transportation Studies UTC Category: Tier II Dr. Susan Handy, Director Email: slhandy@ucdavis.edu Website: http://www.its.ucdavis.edu/about/</p>
AL	<p>University of Alabama, Tuscaloosa University Transportation Center for Alabama UTC Category: Title III Dr. Jay K. Lindly, Director Email: jlindly@eng.ua.edu Website: http://utca.eng.ua.edu</p>	CA	<p>University of Southern California/ California State University Long Beach Center for Advanced Transportation Technologies Metropolitan Transportation (METRANS) UTC Category: Tier I Dr. Genevieve Giuliano, Director Email: giuliano@usc.edu Website: http://www.metrans.org</p>
AK	<p>University of Alaska Alaska University Transportation Center UTC Category: National Mr. Billy G. Conner, Director Email: ffbgc@uaf.edu Website: http://www.uaf.edu/ine/AUTC/AUTCindex.html</p>	CO	<p>University of Denver/Mississippi State National Center for Intermodal Transportation UTC Category: Title III Dr. Patrick Sherry, Director Email: psherry@du.edu Website: http://www.ie.msstate.edu/ncit/</p>
AR	<p>University of Arkansas Mack Blackwell National Rural Transportation Center UTC Category: Tier I (FY 05-06) Dr. Heather Nachtmann, Director Email: hln@uark.edu Website: http://www.mackblackwell.org/</p>	CT	<p>University of Connecticut Center for Smart Transportation UTC Category: Tier II Dr. Norman W. Garrick, Director Email: garrick@enr.uconn.edu Website: http://www.cti.uconn.edu/</p>
AR	<p>University of Arkansas Mack Blackwell National Rural Transportation Center UTC Category: Tier II Dr. Heather Nachtmann, Director Email: hln@uark.edu Website: http://www.mackblackwell.org/</p>	DE	<p>University of Delaware - Newark Delaware Center for Transportation UTC Category: Tier II Dr. Sue McNeil, Director Email: mcneil@ce.udel.edu Website: http://www.ce.udel.edu/UTC/index.html</p>
CA	<p>California State University-San Bernardino Leonard University Transportation Center, CSUSB UTC Category: Tier II Dr. Haw-Jan "John" Wu, Director Email: jwu@csusb.edu Website: http://leonard.csusb.edu/</p>	FL	<p>University of Central Florida Center for Advanced Transportation Systems Simulation UTC Category: Tier I (FY 05-06) Dr. Jack Selter, Director Email: jselter@mail.ucf.edu Website: http://catss.engr.ucf.edu/</p>
CA	<p>San Jose State University Mineta Transportation Institute UTC Category: Tier I Mr. Rod Diridon, Director Email: diridon@mti.sjsu.edu Website: http://transweb.sjsu.edu/</p>	FL	<p>University of South Florida National Center for Transit Research UTC Category: Tier I Mr. Joel Volinski, Director Email: volinski@cutr.usf.edu Website: http://www.nctr.usf.edu</p>

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GA	<p>Georgia Institute of Technology GIT University Transportation Center UTC Category: Tier I Dr. Michael Meyer, Director Email: michael.meyer@ce.gatech.edu Website: TBD</p>	LA	<p>Louisiana State University TBD UTC Category: Tier II Mr. Harold "Skip" Paul, Director Email: skippaul@dotd.la.gov Website: TBD</p>
ID	<p>University of Idaho National Institute for Advanced Transportation Technology UTC Category: Tier I Dr. Michael Kyte, Director Email: mkyte@uidaho.edu Website: http://www.webs1.uidaho.edu/niatt/</p>	MD	<p>Morgan State University National Transportation Center UTC Category: Title III Dr. Andrew Farkas, Director Email: zfarkas@moac.morgan.edu Website: http://www.eng.morgan.edu/~ntc/</p>
IL	<p>Northwestern University Infrastructure Technology Institute (ITI) UTC Category: National Dr. Joseph Schofer, Director Email: j-schofer@northwestern.edu Website: http://www.iti.northwestern.edu/</p>	MD	<p>University of Maryland College Park Center for Integrated Transportation Systems Management (CITSM) UTC Category: Tier I Dr. Philip J. Tarnoff, Director Email: tarnoff@eng.umd.edu Website: TBD</p>
IL	<p>Northwestern University Center for Commercialization of Innovative Transportation Technology UTC Category: Tier II Mr. Brett Johnson, Director Email: bretj@northwestern.edu Website: http://www.iti.northwestern.edu/</p>	MA	<p>Massachusetts Institute of Technology New England University Transportation Center UTC Category: Regional Dr. Joseph Coughlin, Director Email: coughlin@mit.edu Website: http://ctl.mit.edu/</p>
IN	<p>Purdue University NEXTRANS UTC Category: Regional Dr. Srinivas Peeta, Director Email: peeta@purdue.edu Website: http://widget.ecn.purdue.edu/~sqdh</p>	MA	<p>University of Mass - Amherst University of Massachusetts Transportation Center UTC Category: Tier II Dr. John Collura, Director Email: collura@ecs.umass.edu Website: http://www.ecs.umass.edu/umtc</p>
IA	<p>Iowa State University Midwest Transportation Consortium UTC Category: Regional (FY 05-06) Dr. Tom Maze, Director Email: tmaze@iastate.edu Website: http://www.ctre.iastate.edu/mtc/index.htm.</p>	MI	<p>Michigan Technological University Michigan Technological University Transportation Center UTC Category: Tier II Dr. Lawrence Sutter, Director Email: lsutter@mtu.edu Website: http://www.misti.mtu.edu/index.php</p>
IA	<p>Iowa State University Midwest Transportation Consortium UTC Category: Tier I (FY 07-09) Dr. Tom Maze, Director Email: tmaze@iastate.edu Website: http://www.ctre.iastate.edu/mtc/index.htm</p>	MI	<p>University of Detroit Mercy Michigan-Ohio University Transportation Center UTC Category: Tier II Dr. Leo E. Hanifin, Director Email: hanifinl@udmercy.edu Website: http://mih-utc.udmercy.edu/</p>

MI	University of Michigan Center for Advancing Safe Transportation throughout the Life Span (M-CASTL) UTC Category: Tier I Dr. David Eby, Director Email: eby@umich.edu Website: http://m-castl.org/	NJ	Rutgers University Center for Advanced Infrastructure & Transportation UTC Category: Tier I Dr. Ali Maher, Director Email: mmaher@rci.rutgers.edu Website: http://www.cait.rutgers.edu/
MN	University of Minnesota Intelligent Transportation Systems Institute UTC Category: National Dr. Max Donath, Director Email: donath@me.umn.edu Website: http://www.its.umn.edu	NY	City College of New York University Transportation Research Center UTC Category: Regional Dr. Robert Paaswell, Director Email: paaswell@utrc2.org Website: http://www.utrc2.org/
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MO	Missouri University of Science and Technology Center for Transportation Safety and Infrastructure UTC Category: National Dr. John Myers, Director Email: jmyers@umr.edu Website: http://campus.UMR.edu	ND	North Dakota State University Mountain–Plains Consortium UTC Category: Regional Dr. Denver Tolliver, Director Email: denver.Tolliver@ndsu.edu Website: http://www.mountain-plains.org
MO	Missouri University of Science and Technology Center for Infrastructure Engineering Studies UTC Category: Tier I (FY 05-06) Dr. John Myers, Director Email: jmyers@umr.edu Website: http://utc.mst.edu/	ND	North Dakota State University Small Urban & Rural Transit Center UTC Category: Title III Dr. Jill Hough, Director Email: jill.hough@ndsu.edu Website: http://www.surtc.org/
MT	Montana State University Western Transportation Institute UTC Category: National Mr. Steve Albert, Director Email: stevea@coe.montana.edu Website: http://www.coe.montana.edu/wti/	OH	Cleveland State University Cleveland State University Transportation Center UTC Category: Tier II Dr. Stephen Duffy, Director Email: s.duffy@csuohio.edu Website: http://www.csuohio.edu/utc/#
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NV	University of Nevada - Las Vegas Transportation Research Center UTC Category: Tier II Dr. Mohamed Kaseko, Director Email: kaseko@ce.unlv.edu Website: TBD	OH	University of Toledo Intermodal Transportation Institute UTC Category: Tier II Dr. Mark Vonderembse, Director Email: richard.martinko@utoledo.edu Website: http://www.utoledo.edu/research/utut/

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<p>OR Portland State University The Oregon Transportation Research and Education Consortium (OTREC) UTC Category: National Dr. Robert Bertini, Director Email: bertini@pdx.edu Website: www.otrec.us</p>	<p>TX Texas A&M University Texas Transportation Institute (TTI) University Transportation Center for Mobility UTC Category: Title III Dr. Melissa Tooley, Director Email: m-tooley@ttimail.tamu.edu Website: http://tti.tamu.edu/groups/program.htm?p_org_code=UTC</p>
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WA	University of Washington Transportation Northwest (TransNow) UTC Category: Regional Dr. Nancy L. Nihan, Director Email: nihan@u.washington.edu Website: http://www.transnow.org/	WI	University of Wisconsin National Center for Freight and Infrastructure Research and Education UTC Category: National Dr. Teresa M. Adams, Director Email: adams@engr.wisc.edu Website: http://www.mrutc.org
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University of Akron



University of Rhode Island



University of Alabama Birmingham



OTREC



University of Vermont



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Map - Bureau of Transportation Statistics