A report of the
University Transportation Center for Mobility™
Funded by USDOT, Research & Innovative Technology Administration
University Transportation Centers Program
Report Period: September 1, 2010 - August 31, 2011
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FHWA-RITA and the Office of Policy (with Battelle), FHWA, and the Colorado DOT.

An opportunity identified early in the UTCM’s strategic planning process was to improve the quality of life for rural residents through rural public transportation research and technology transfer. This type of work is difficult to match; as a Title III center without a match funding requirement, the UTCM was uniquely positioned to help. Rural public transportation research has been a focus of the UTCM since its inception. In 2008, the UTCM sponsored a national MBUF Symposium led by Ginger Goodin to explore an emerging innovative financing concept known as mileage-based user fees (MBUF). This feasibility study in rural and small urban areas in Texas was followed later that year by a project to define a possible path toward implementation of MBUF. In 2009, as interest in the concept grew, the UTCM sponsored a national MBUF Symposium planned by Goodin’s research team to foster scholarly discourse on MBUF and implementation issues. Three such annual symposia have now occurred in Texas, Minnesota, and Colorado. Further, the UTCM’s MBUF website provides symposia results, a clearinghouse for national MBUF research, links to news, pilot studies and other resources, and a listserve for ongoing dialogue on MBUF issues. In 2010, UTCM research in this area was extended to include air quality and energy in performance measures of MBUF. On the basis of these investments by UTCM, TTI’s researchers have gone on to conduct MBUF projects for TxDOT, FHWA-RITA and the Office of Policy (with Battelle), FHWA, and the Colorado DOT.

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So, while I am disappointed that the UTCM will not continue in its present form after SAFETEA-LU and its extensions expire, I am encouraged that its well-built programs in research, education, and technology transfer will continue as we planned. I am proud of what we have accomplished through our University Transportation Center, and I look forward to meeting the challenges of the future.

Melissa S. Tooley
Director, University Transportation Center for Mobility™
In December, the UTCM selected its 2010 Student of the Year (SOY), Ms. Suzie Edrington. Suzie is a non-traditional student, maintaining her well-established career in transportation while earning her Master of Urban and Regional Planning from Texas A&M University. She joined TTI in 2006 as an assistant research scientist for the Transit Mobility Program at the Texas Transportation Institute’s Houston office.

Suzie entered her studies with 16 years of hands-on public transit experience with the Metropolitan Transit Authority of Harris County, Texas (METRO) in both the paratransit and fixed route operations and maintenance divisions. During her METRO career, Suzie’s responsibilities included operational performance analysis, service forecasting, manpower planning, capital investment forecasting, ADA compliance, financial analysis, contract management, and National Transit Database reporting.

Since joining TTI, Suzie has applied her practical experience to a variety of projects. She has provided program reviews for several rural, small urban and large urban transit providers evaluating performance measurements, providing recommendations regarding the operations efficiency and effectiveness, assessing the current and future economic viability, and examining internal operating procedures and staffing levels.

Suzie annually evaluates transit district performance data for each of Texas’ 68 state-funded rural and small urban transit districts, and she provides technical assistance on an ongoing basis. Her UTCM research project, “Improved Demand Response Productivity and Service Quality Through Dispatching,” involved the application of demand response dispatching methodologies to each of these transit districts to provide guidance in evaluating efficiency of transit dispatch operations.

As part of an accelerated 5-year joint degree program at the Bush School of Government & Public Service, Suzie concurrently earned a B.S. in Political Science and a Master of Public Service & Administration degree with a Concentration in Transportation Planning & Policy in May 2011. Her graduate advisor, UTCM Executive Committee member Dr. Ann Bowman, encouraged her to also pursue the UTCM-sponsored Graduate Certificate in Transportation Planning.

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Suzie Edrington received the Student of the Year award from (l to r) USDOT Deputy Secretary John Porcari, Council of University Transportation Centers President John Pancari, Council of University Transportation Centers President Steve Albert and RITA Administrator Peter Appel during a luncheon for graduate students during Appel’s visit to the UTCM, the Southwest Region University Transportation Center (SWUTC) and Texas Transportation Institute in February 2011.

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Spotlight on Technology Transfer

Teens in the Driver Seat® Sponsors

Student-Led Distracted Driving Awareness Festival

Car crashes kill more young people than any other cause, accounting for nearly half of all teen deaths in America each year. Most teens and parents are unaware of the top five dangers for teens behind the wheel: driving at night, speeding and street racing, distractions (including cell phone use, texting, and too many teen passengers), low seat belt use, and alcohol use.

But a group of proactive teens is working to change that.

Started in 2002, Teens in the Driver Seat® (TDS) is the first peer-to-peer program that focuses solely on traffic safety for teens, addressing all five of these risks. With funding from the UTCM, Texas teens form the TDS Teen Advisory Board (TAB), which helps to shape the TDS program. The Texas Transportation Institute (TTI) provides the science, guidance and project resources.

For nearly a year, the Teen Advisory Board designed and planned a major festival event that took place March 5, 2011 at Creekview High School in Carrollton, Texas. “TDS Fest” brought awareness programs to teens in a fun atmosphere of carnival games, booths and activities, with live music, giveaways and lots of interaction with members of the TAB, TDS members at Creekview High School and TTI’s TDS staff. The carnival atmosphere provided a fun way to drive home the meaningful message of TDS - “Strive to Keep Our Drive Alive.”

“Awareness programs aimed at changing teen behavior have typically suffered from one major problem - they are run by adults,” says Russell Henk, director of the Teens in the Driver Seat® program. “TDS is different because it’s driven by the people that teens really listen to - their peers.”

TDS Fest was planned and implemented by the Teen Advisory Board, whose 15 members attend high schools across Texas, lead TDS programs in their communities, and attend quarterly Board meetings. Each TAB member hosted a different booth at TDS Fest run by that member’s high school. With the help of TTI’s TDS staff, they engaged the support and attendance of adult community leaders, attracted sponsors, constructed booths and advertised the event with flyers, T-shirts and word of mouth in the local schools and in the community.

The result of the Teen Advisory Board’s efforts was “fantastic,” says Henk. “TDS Fest was crowded with over 200 teens having fun, while still receiving the serious message of the dangers teens face when driving.” Dozens of teens recited and signed the TDS Pledge (see inset graphic, center of this page), which was created by the TAB.

U.S. Transportation Secretary Ray LaHood videotaped a special message endorsing the event (available on the TDS YouTube Channel at http://www.youtube.com/teensthdriverseataplu7/D8xkXfGnx7X0), broadcast as part of the opening ceremonies. Other activities included a driving simulator, TDS pedal-driven cars on a distracted driving obstacle course run by the Garland Youth Council and former TAB member Ana Garcia, Wii Mario Kart

Distracted Driving game booth, a raffle raising money to support TDS activities, professional video tapings of teens’ stories of TDS’s impact on their lives, a balloon launch celebrating the lives of loved ones who drive, a memorial walk in remembrance of teens lost in car crashes, and a collection of shoes – later donated to charity - representing the 400 Texas teens that lose their lives annually in car accidents. Particularly sobering was a display of a crashed truck which seat-belted teens had survived (see photo at left).

The UTCM-funded TDS Teen Advisory Board is composed of a dozen or more teens serving one-year, renewable terms. Members act as liaisons to the TDS program in their local communities, serve as a voice for their peers to the TDS program, and lead other teens by example in responsible driving habits. TAB members are actively involved in the TDS program in each of their schools and communities and other teen driving awareness events held in their local communities. “As a peer-to-peer program, the Teen Advisory Board is critical to our mission,” says TTI associate research specialist Kathy Montemayor.

“Real teenagers in TDS leadership ensure our program is timely and relevant. They let us know what ideas work and which communication avenues to use.”

Teens in the Driver Seat® is implemented by students in 500 Texas high schools, plus four other states across the country.

This technology transfer activity is part of the following UTCM project:

Activating Teens to Prevent Traffic Crashes, the Leading Cause of Death and Injury for America’s Youth

UTCM Project #10-10-52 - 01.01.10 - 05.31.12
Principal Investigator: Russell Henk, PE
Abstract: TRB RIP #24826

Russell Henk, PE
Senior Research Engineer
Center for Transportation Safety
Texas Transportation Institute - San Antonio

Students at TDS Fest (l to r) took photos with the “Big Distraction” inflatable cell phone, maneuvered pedal cars on a distracted driving obstacle course, and placed shoes around the school flagpole in honor of teens lost in car crashes. The shoes were later donated to charity.

TDS Fest activities included (l to r) videotaping testimonials of TDS’s impact on students’ lives, a memorial walk at sunset honoring the lives of teens lost in car crashes, a video message from Transportation Secretary Ray LaHood to attendees, and launching balloons with notes to drivers students care about.
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Project dates: August 1, 2010 - July 31, 2011
Award: $74,999

This project is developing a model for estimating the value of delay (VOD) for highway freight shippers. The research explores the issues important to shippers when evaluating value of delay. A small number of case studies of representative shippers is being conducted and issues associated with surveying shippers are being identified through a pilot survey. The research involves a survey of shippers and Logit modeling of collected data. Participating shippers are classified into groups to ensure reliable estimates of shipper’s value of delay and also to minimize the sampling size.

Assessing Public Benefits and Costs of Freight Transportation Projects: Measuring Shippers’ Value of Delay on the Freight System

UTCM Project #11-00-65 • RiP.trb.org Database #27530

Comparing Perceptions and Measures of Congestion

Project dates: January 1, 2011 - January 31, 2012
Award: $97,553

People’s perception of congestion and the actual measured congestion do not always agree. Measured congestion relates to the delay resulting from field measurements of traffic volume, speed, and travel time. People’s perception of congestion (historically gathered through surveys) can be influenced by relative growth in congestion, improved or new transportation infrastructure, and societal attitudes on transportation. By examining both the perceived and measured congestion, the research should help relate “congestion” in context of the daily experience of commuters. In this project, researchers are collaborating with IBM researchers who have been involved with commuter congestion surveys for the past several years. For the past three years, IBM’s Commuter Pain Study has measured the attitudes of commuters from across the world on their daily travel. The study is based on a survey intended to gather drivers’ opinions about local traffic issues. The daily commute in some of the world’s most economically important international cities is longer and more grueling than before imagined, reflecting the failure of transportation infrastructure to keep pace with economic activity. In the most recent report, the majority of motorists surveyed say that traffic has gotten worse in the past three years. The Texas Transportation Institute (TTI) publishes the annual Urban Mobility Report (UMR), measuring urban mobility based on public and private traffic data for highways, streets, and transit. The UMR provides information on long-term congestion trends, the most recent congestion comparisons, and a description of many congestion improvement strategies for over 75 urban cities in the U.S. This research will utilize the IBM survey results to be able to connect the relationships between perceived congestion and measured congestion in some key U.S. cities and some key international cities. The researchers will focus on analyzing the traffic data used to develop the TTI mobility performance measures, particularly for the international traffic data made available through this collaboration.

Minh Le, PE
Associate Research Engineer
Research and Implementation
Texas Transportation Institute - Dallas

Shawn Turner, PE
Division Head
Mobility Analysis
Texas Transportation Institute

New Research Projects
**Refining the Real-Timed Urban Mobility Report**

**Project dates:** January 1, 2011 - March 31, 2012  
**Award:** $136,393

The Texas Transportation Institute (TTI) is considered to be a national leader in providing congestion and mobility information. The Urban Mobility Report (UMR) is the most widely quoted report on urban congestion and its associated costs to the nation. The report measures system delay, wasted fuel and the annual cost of congestion in all U.S. urban areas. The data that are available to analyze the transportation performance continue to evolve. In the past year the UMR researchers partnered with a private sector historical speed provider—INRIX—to obtain nationwide speed data to create the best possible estimate of mobility conditions. Researchers are further refining the UMR methodology to make even better use of this data and this partnership. While the TTI and private sector databases have been matched and used to re-compute the UMR statistics based on actual speed data for all days and all major urban roads, there is more research needed to make full use of the potential of the more comprehensive database. This research is further improving the estimates of congestion and its costs, maintaining TTI’s position as the most authoritative source of mobility and congestion information.

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**Designing Communities to Provide Safe Mobility Options for Older Adults**

**Project dates:** January 1, 2011 - February 29, 2012  
**Award:** $22,984

Contemporary community design practice is based on the perceived safety needs of families with children. Little attention has been given to the effects of these practices on older adults, who have difficulty accomplishing their travel objectives in such environments. This study examines a geographic information system (GIS)-based database of crash incidence and urban form to understand how different community design elements may influence the incidence of traffic-related crashes, injuries and deaths involving motorists and pedestrians aged 75 and older.
### The Value of Non-Medical Transportation for Improving the Quality of Life for the Rural Elderly: Methodology and Information Considerations

**Project dates:** January 1, 2011 - May 31, 2012  
**Award:** $117,487

Aging baby boomers, increases in life expectancies, and migration of the young from and elderly to rural areas are factors increasing the elderly rural population. Mobility to non-medical activities has a profound effect on the independence and quality of life of this age cohort. Aging, however, is associated with reduced transportation options, especially in rural areas as the elderly give up their personal automobiles. This project is increasing our understanding of the transportation issues for rural elderly persons. The study focuses on rural elderly patrons' willingness to pay for subsidizing non-medical transportation. Methodological issues as well as applied economic analysis are explored. Researchers are surveying rural residents to determine their willingness to pay for services and their views of rural transportation issues. Findings will be relevant to policy debates on rural elderly quality of life.

**Principal Investigators:**  
- James Mjelde, PhD  
- Rebekka Dudensing, PhD

**Project Website:**  
-[RiP.trb.org Database #27819](http://RiP.trb.org)

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### The Multiple Vehicle MAST Service: Design and Scheduling

**Project dates:** June 1, 2011 - May 31, 2012  
**Award:** $99,999

Conventional “fixed route” transit services suffer within low density rural areas, because of their lack of flexibility. An innovative flexible transit solution, called the Mobility Allowance Shuttle Transit (MAST) service, merging the low-cost operability of fixed route systems with the flexibility of demand responsive systems has been investigated by researchers. Vehicles follow a base fixed route, with one or more mandatory checkpoints, but are allowed to deviate from their path to serve passengers at their desired locations. This new service showed promising preliminary results for the simple single-vehicle/single-line case. This project will focus on identifying decision tools for the fleet size design of the multi vehicle MAST system and develop a proper scheduling algorithm for real time operations.

**Principal Investigators:**  
- Luca Quadrifoglio, PhD

**Project Website:**  
-[RiP.trb.org Database #27823](http://RiP.trb.org)

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### Using Smartphones to Collect Bicycle Travel Data in Texas

**Project dates:** January 1, 2011 - May 31, 2012  
**Award:** $72,000

Data collection for bicycling fails to adequately assess the existing demand on the transportation system. Although some agencies purchase expensive data collection equipment to assist them in understanding usage, details such as who, why, where, and how are not captured by current count technology. Intercept surveys provide this information but are time-consuming and static. If Smartphones prove to be an effective tool for collecting bicycle travel data, the information could be used for aiding decision making as to where to locate bicycle facilities and what types of facilities users prefer. By providing adequate facilities, the mode share of bicyclists can increase and lead to a reduction in congestion. Researchers are developing the study using an existing Smartphone application called CycleTracks, created by the San Francisco County Transportation Authority. Austin, Texas area bicyclists are being targeted to test the application. Austin’s strong cycling culture, its reputation for bicycle friendliness, and the presence of several universities including the University of Texas make it an ideal test environment.

**Principal Investigators:**  
- Joan Hudson, PE  
- Jennifer Duthie, PhD  
- Yatinkumar Rathod, PE

**Project Website:**  
-[RiP.trb.org Database #27815](http://RiP.trb.org)
Refining a Methodology for Determining the Economic Impacts of Transportation Improvements

Project dates: March 1, 2011 - May 31, 2012
Award: $48,398

Estimating the economic impact of transportation improvements has previously proven to be a difficult task. There are various methods and models currently in use that all establish their own unique parameters but have no consistent standards or definitions in common. There is a need to set standards for economic impact measurements and incorporate these measures into a refined and usable system. This project examines the current and historical techniques utilized in transportation economic impact studies to determine how effective the available methods are and researchers are developing a cohesive method that is both user-friendly and functional for various levels of analysis. We are assembling the most applicable measures and techniques of economic impact estimations and combining them to create a more standardized method of evaluation. Our analysis incorporates direct, indirect and induced effects on economic development. Some factors include employment, wages, property values, gross sales, business development, business location, change in land use, and change in travel patterns. From our compilation of economic effects, we are determining a basic group of elements to be utilized. These results can be used to determine the economic effects of specific projects as well as to educate the general public about the impacts transportation improvements, or lack of improvements, have and will have on their community. The resulting economic impact model will allow decision makers to see the effects transportation improvements have on the local market and enable them to make more informed choices.

See related article, p. 4
**Enhancement and Outreach for the Active Management Screening Tool**

**Project dates**: September 1, 2011 - May 31, 2012  
**Award**: $90,000

Active traffic management (ATM) – widely deployed for decades in Europe but in its infancy in the United States – maximizes the effectiveness and efficiency of the facility, and increases throughput and safety through integrated systems with new technology, including the automation of dynamic deployment to optimize performance quickly. The principal investigator recently completed a beta version of an Active Management Screening Tool (AMST) for use by agencies in their congestion management process (CMP). The purpose of the AMST is to help agencies better assess the potential of active management strategies for their region within the CMP. It is structured to provide beneficial information and guidance related to active management strategies in all areas and levels of transportation planning. Active management strategies included in the tool are: HOV lanes; HOT lanes; express toll lanes; non-tolled express lanes; exclusive/dedicated truck lanes; exclusive transitways; temporary shoulder use; speed harmonization; queue warning; dynamic rerouting and traveler information; ramp metering; dynamic merge control; and automated enforcement. In this project, researchers are enhancing the AMST with recent and emerging research and domestic experiences to make it a more robust product. Researchers are also expanding the website developed in a previous UTCM project to incorporate recent development and changes in the newly-formed Active Transportation and Demand Management program within the Federal Highway Administration (FHWA). Furthermore, by reaching out to practitioners across the country regarding the availability of the AMST, this project can have a positive impact on transportation networks by providing a tool to assess appropriate active management strategies for a region.

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**Mileage-Based User Fee Symposium**

**Project dates**: September 1, 2010 - August 31, 2011  
**Award**: $35,585

The fuel tax is rapidly losing its ability to support system needs. Federal environmental regulations and the escalating price of fossil fuels have created a strong incentive to develop and utilize more fuel-efficient vehicles, which will drive down fuel tax revenues relative to use of the nation’s roadway network. Given the challenges associated with the declining sustainability of the fuel tax, the likely successor is a road user fee largely based on actual usage. This project co-sponsored the third annual two-day Symposium on Mileage-Based User Fees that brought together professionals in the field of mileage-based fees for the purpose of sharing information on current applications and exploring their potential as a supplement or replacement for the fuel tax.

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**Creating the Next Generation of Transportation Professionals**

**Project dates**: October 1, 2010 - September 30, 2011  
**Award**: $40,000

Recent studies by the National Science Board reported a troubling decline in the number of U.S. citizens who are training to become engineers and scientists. Previously, this research team developed a half-day in-class workshop and field trip agenda for middle school students that offered an opportunity to gain hands-on experience and insight into what transportation and other technology careers have to offer. Both types of events (in-class workshops and field trips) provided experiences to encourage interests in engineering, science, and math. However, budget, travel, and time constraints limited the ability of school districts and transportation professionals to conduct these types of in-person events, as well as more in-depth workshops. Thus, new methods for conducting these types of programs need to be investigated. In this project the team is (1) developing more in-depth educational modules, (2) assessing the feasibility of using webinar technology to conduct the modules, (3) expanding the number of locations where workshops are conducted in-class, (4) conducting modules via webinar at select locations, if determined to be feasible, and (5) comparing the effectiveness of implementation methods.
Livability Performance Measures Workshop

Project dates: January 1, 2011 - December 31, 2011
Award: $19,995

The U.S. Department of Transportation, the Department of Housing and Urban Development, and the U.S. Environmental Protection Agency launched a “sustainable communities” initiative in 2009. Combined with other policy and research initiatives at the national, regional, and state level, this initiative has made livability an area of emphasis for many transportation agencies. Livability is primarily concerned with issues such as transportation choices, neighborhood character, access to destinations, affordability, and maintaining cohesive rural, urban and suburban communities. As transportation agencies work toward addressing livability goals, it is important that they monitor their progress. Performance measurement is highly relevant in this context and can help transportation agencies better understand and apply livability concepts and enhance decision-making processes. Researchers are planning and conducting a workshop on transportation and livability performance measures. The workshop includes the participation of researchers and transportation practitioners from a variety of agencies. The outcome of this workshop will advance the field of livability performance measures and help agencies such as state departments of transportation, metropolitan planning organizations, transit agencies, and other groups to develop and use livability performance measures.

Transportation and Tourism Conference

Project dates: January 1, 2011 - April 30, 2012
Award: $14,000

In this project, researchers are planning and conducting a Texas Transportation and Tourism Conference. This event builds on the 2001 Texas Rural Transportation Conference, which was supported by the Southwest Region University Transportation Center and included a Transportation and Tourism Track. This conference brings together key players from the various groups involved with tourism and transportation in the state. The conference includes a discussion of areas for further research, outreach, and technology transfer. The conference sessions may include topics such as eco-tourism, aviation and tourism track, bicycle, pedestrian, and motorcycle, tour operators, and Texas trails. This project covers the conference logistics, planning and delivery, including site selection, registration, and on-site support. It will also include a final report summarizing the key elements and research needs covered at the conference.
An eCertificate in Transportation Planning

Project dates: January 1, 2011 - April 30, 2012
Award: $62,000

This purpose of this proposal is to extend the delivery of the recently developed graduate certificate in transportation planning to a national audience via distance education as an online eCertificate. While the need for an interdisciplinary approach to transportation is widely recognized by the professional community, there are few educational programs that address the field of transportation in a truly comprehensive, interdisciplinary manner. Texas A&M University’s campus-wide graduate certificate in transportation planning was established in August 2008 to address this need. The Certificate provides an interdisciplinary perspective on how economics, public policy, finance, and urban design influence the effectiveness of transportation systems. This Certificate has proved to be very successful. A limitation is that it is only available to graduate students physically enrolled at Texas A&M. In this project, researchers are (1) converting four courses in the existing certificate program to online courses, (2) developing a plan for delivering these courses via distance education and (3) submitting the program for university approval. The eCertificate will substantially increase access to Texas A&M’s transportation curriculum and strengthen Texas A&M’s stature as a national and global leader in the education of transportation professionals.

Forster Ndubisi, PhD, ASLA
Professor and Head
Department of Landscape Architecture and Urban Planning
Texas A&M University

Eric Dumbaugh, PhD
Assistant Professor
Department of Landscape Architecture and Urban Planning
Texas A&M University

Ken Joh, PhD
Assistant Professor
Department of Landscape Architecture and Urban Planning
Texas A&M University

Using Innovative Educational Modules to Prepare Our Next Generation of Transportation Professionals

Project dates: January 1, 2011 - May 31, 2012
Award: $70,000

Basic science and mathematics competence, including awareness of engineering careers, gained in grades K–12 form the foundation of an educated, capable, and technical future transportation workforce. This project is developing educational STEM-based modules for grades 6-12 that engage students in real world applications of math, deductive reasoning, and problem solving. These modules can be incorporated in either the classroom or informal educational settings, such as an after-school enrichment program. The project tasks are to (1) identify candidate schools for participation, (2) identify and prioritize module ideas, (3) conduct kickoff meetings with selected schools, (4) develop pilot modules, (5) test pilot modules at participating schools, (6) develop final modules and (7) deliver modules and the final project report.

Debbie Jasek
Research Specialist
Center for Professional Development
Texas Transportation Institute

Transportation Workforce Development: Sustaining and Expanding High School Outreach Programs and Multi-Agency Partnerships

Project dates: February 1, 2011 - July 15, 2012
Award: $98,635

The objective of this ongoing multi-university/agency partnership among Prairie View A&M University (PVAMU), the UTCM, Texas Transportation Institute and Texas A&M University (TAMU) is to produce high quality transportation professionals from underrepresented groups with research and other real world experiences. Current pipeline programs consist of the 12-year-old Federal Highway Administration-sponsored Summer Transportation Institute (STI) and the four-year-old STI Scholars program, developed with previous UTCM funding. These programs established an academic pathway from 11th grade through undergraduate and advanced degree programs to placement in transportation careers. In this project, researchers are (1) developing sustaining funds for operating the program; (2) expanding current outreach efforts to local high schools; (3) providing scholarships to STI program students to pursue Civil Engineering at Prairie View A&M and to other students who pursue transportation engineering; and (4) developing opportunities for research and workplace internships. Project tasks are: (i) review and update the curricula for the existing STI and STI Scholars program; (ii) foster a stimulating environment on the web for former students to network and promote the STI and STI Scholars programs; (iii) continue to develop the network for sustainability; and (iv) revise and complete a streamlined academic pathway for the students to follow. This project is enhancing the positive impact of the existing STI and STI Scholars programs on the Civil Engineering programs at PVAMU and TAMU and providing a blueprint for expansion of these successful outreach programs to other universities and community colleges.

Raghava Kommalapati,
PhD, PE, BCEE
Interim Department Head and
Associate Professor
Department of Civil and Environmental Engineering
Prairie View A&M University

Radhakrishnan
Ramalingam,
PhD
Associate Professor
Department of Civil and Environmental Engineering
Prairie View A&M University

Bill Stockton, PhD, PE
Research Engineer
Executive Associate Agency
Director
Texas Transportation Institute
Technology Transfer

Activating Teens to Prevent Traffic Crashes, the Leading Cause of Death and Injury for America’s Youth

Research Team: Russell Henk, PE, Teens in the Driver Seat® Center, Texas Transportation Institute - San Antonio
Project dates: January 1, 2010 - May 31, 2012 • Award: $38,497
UTCM Project #10-10-52 • RiP投身.org Database #24826

Transit Management Certificate Program

Research Team: Linda Cherrington, Transit Mobility Program, Texas Transportation Institute - Houston
Ben Welch, PhD, Department of Management, Texas A&M University
Project dates: January 1, 2010 - May 31, 2012 • Award: $75,000
UTCM Project #10-55-48 • RiP投身.org Database #24801

Graduate Certificate Program in Transportation Planning: Phase 2

Research Team: Forster Nduubisi, PhD, ASLA, and Eric Dumbaugh, PhD, Department of Landscape Architecture and Urban Planning, Texas A&M University
Project dates: February 1, 2010 - September 30, 2011 • Award: $58,000
UTCM Project #10-02-56 • RiP投身.org Database #24830

Ongoing Projects

Statistical Analysis of Waterway Network Congestion: Causes and Costs

Research Team: Ximing Wu, PhD and Stephen Fuller, PhD, Department of Agricultural Economics, Texas A&M University
Project dates: March 1, 2009 - August 31, 2011 • Award: $79,456
UTCM Project #09-16-14 • RiP投身.org Database #20595

The Impact of Gas Prices on Toll Road Use

Researcher: Mark Burris, PhD, Zachry Department of Civil Engineering, Texas A&M University
Project dates: September 1, 2009 - August 31, 2011 • Award: $58,158
UTCM Project #09-01-03 • RiP投身.org Database #20581

Multiple Depot Vehicle Routing with Applications to Paratransit and Rural Transportation

Research Team: Swaroop Darbh, PhD, Department of Mechanical Engineering, Texas A&M University
Luca Quadrifoglio, PhD, Zachry Department of Civil Engineering, Texas A&M University
Project dates: September 1, 2009 - August 31, 2011 • Award: $80,000
UTCM Project #09-15-13 • RiP投身.org Database #20584

Developing Performance Measures for Sustainable Freight Movement

Research Team: Joe Zietsman, PhD, PE and Mohamadreza Farzaneh, PhD, PE, Air Quality Studies, Texas Transportation Institute
Project dates: September 1, 2009 - December 31, 2011 • Award: $80,000
UTCM Project #09-37-15 • RiP投身.org Database #20596

Teen Driver Cell Phone Blocker

Research Team: Mark Benden, PhD, CPE, School of Rural Public Health, Texas A&M Health Science Center
Rainer Fink, PhD, Department of Engineering Technology and Industrial Distribution, Texas A&M University
Project dates: January 1, 2010 - December 31, 2011 • Award: $105,500
UTCM Project #10-15-47 • RiP投身.org Database #24840

Use of Performance Measurement to Include Air Quality and Energy into Mileage-Based User Fees

Research Team: Mohamadreza Farzaneh, PhD, PE, Air Quality Studies, Texas Transportation Institute
Richard T. Baker, and Ginger Goodin, PE, Texas Transportation Institute - Austin
Project dates: January 1, 2010 - January 31, 2012 • Award: $100,000
UTCM Project #10-25-50 • RiP投身.org Database #24803

Effect of Climate Change Transportation Flows and Inland Waterways Due to Climate-Induced Shifts in Crop Production Patterns

Research Team: Dmitry Vedenov, PhD, Stephen Fuller, PhD, Gabriel Power, PhD, and Bruce McCarl, PhD, Department of Agricultural Economics, Texas A&M University
Project dates: February 1, 2010 - October 31, 2011 • Award: $95,000
UTCM Project #10-54-51 • RiP投身.org Database #24804

Research

Improving Intermodal Connectivity in Rural Areas to Enhance Transportation Efficiency and Reduce Metro/Port/Border Congestion: A Case Study

Research Team: Stephen Fuller, PhD, John Robinson, PhD, and Francisco Fraire, Department of Agricultural Economics, Texas A&M University
Sharada Vadali, PhD, Mobility Analysis Program, Texas Transportation Institute
Project dates: September 1, 2007 - September 30, 2010 • Award: $60,000
UTCM Project #07-07 • TRID Online Accession #01342387

Leveraging Land Development Returns to Finance Transportation Infrastructure Improvements

Research Team: Jesse Saginor, PhD, and Eric Dumbaugh, PhD, Department of Landscape Architecture and Urban Planning, Texas A&M University
David Ellis, PhD, Mobility Analysis Program, Texas Transportation Institute
Project dates: June 1, 2009 - January 31, 2011 • Award: $100,000
UTCM Project #09-13-12 • TRID Online Accession #01340814

Estimating the Value of Freight Delays in the Freight System

Researcher: Bruce Wang, PhD, Zachry Department of Civil Engineering, Texas A&M University
Project dates: September 1, 2009 - January 31, 2011 • Award: $3,856*
UTCM Project #09-00-45 • RiP投身.org Database #23692
* This project received additional funding through a UTCM Fellowship in the amount of $43,577.
Examining Challenges, Opportunities and Best Practices for Addressing Rural Mobility and Economic Development under SAFETEA-LU’s Coordinated Planning and Human Services Framework

Research Team: June Martin, Cecilia Giusti, PhD, and Eric Dumbaugh, PhD, Department of Landscape Architecture and Urban Planning, Texas A&M University
Linda Cheviron, Transit Mobility Program, Texas Transportation Institute - Houston

Project dates: May 1, 2008 - May 31, 2011 • Award: $100,000
UTCM Project #08-17-09 • RiP.trb.org Database #15600

A New Graduate Course in Transportation Infrastructure Finance in the Civil Engineering Department at Texas A&M University

Research Team: Ivan Dammjanovic, PhD, Zachry Department of Civil Engineering, Texas A&M University
Sharada Vadali, PhD, Mobility Analysis Program, Texas Transportation Institute
Erin McGigue, PhD, Department of Teaching, Learning and Culture, Texas A&M University

Project dates: January 1, 2010 - February 28, 2011 • Award: $60,000
UTCM Project #10-22-49 • TRID Online Accession #01339717

Promoting Workforce Development for the Transportation Profession Through a Multi-University/Agency Partnership

Research Team: Raghava Kommalapati, PhD, PE and Judy Perkins, PhD, Department of Civil and Environmental Engineering, Prairie View A&M University

Project dates: January 1, 2010 - January 31, 2011 • Award: $109,785
UTCM Project #10-18-57 • TRID Online Accession #01340833

Facilitating Outreach Programs for Minority Students in Rural South Texas

Researcher: Debbie Jasek, Center for Professional Development, Texas Transportation Institute

Project dates: May 1, 2008 - September 30, 2010 • Award: $118,029
UTCM Project #08-45-07 • RiP.trb.org Database #24828

The Transportation Economy: Past and Future

Research Team: Richard Cole and David Dennis, TTI Communications, Texas Transportation Institute

Project dates: January 1, 2009 - May 31, 2011 • Award: $29,000
UTCM Project #09-10-08 • TRID Online Accession #01340827

Transportation Plan Repository and Archive

Research Team: John Overman, Transit Mobility Program, Texas Transportation Institute - Arlington
Sandra Tucker, University Libraries, Texas A&M University

Project dates: January 1, 2010 - February 28, 2011 • Award: $45,000
UTCM Project #10-20-58 • TRID Online Accession #01340824

Development of a Mileage-based User Fee Research Website

Researcher: Richard T. Baker, Texas Transportation Institute - Austin

Project dates: July 1, 2010 - November 30, 2010 • Award: $3,556
UTCM Project #10-00-61 • TRID Online Accession #01340825
**Sponsored Conferences and Workshops**

*Texas Transit Leadership Seminar.* Austin, TX, October 2010/January 2011.

*Teens in the Driver Seat* TDS Fest. Carrollton, TX, March 5, 2011.

*3rd Annual Symposium on Mileage-Based User Fees.* Breckenridge, CO, June 13-14, 2011.

*Conference on Performance Measures for Transportation and Livable Communities.* Austin, TX, September 7-8, 2011.


*Summer Transportation Institute.* Prairie View A&M University, Prairie View, TX, June 6 - July 1, 2011.

**UTC Mobility Colloquia**

“Development and Growth of the Texas A&M Health Science Center.” Presented by David S. Carlson, Vice President for Research and Dean, School of Graduate Studies, Texas A&M Health Science Center. College Station, TX, December 6, 2010.


**TRB Sessions**

“A Generally Applicable Sustainability Assessment Framework for Transportation Agencies”

Moderator: Tara Ramani


Moderator: Melissa Tooley

**TRB Presentations and Posters**

“A Generally Applicable Sustainability Assessment Framework for Transportation Agencies”

Session: Active Traffic Management

Presenter: Beverly Kuhn

“Benefactors: TTI Experience with Private-Sector Speed Data for Performance Monitoring”

Session: Use of Private-Sector and Blended Private-Public Sector Speed Data by Public Agencies for Planning and Operations

Presenter: Shawn Turner

“Truck Transportation at the U.S./Mexico Border: Trade Facilitation Implications”

Session: Transportation and Cross-National Borders

Presenter: Juan Carlos Villa

**Other Presentations**

Attavanich W., McCarl B.A., Fuller S.W., Vedenov D.V. and Ahmedov Z. “The Effect of Climate Change on Transportation Flows and Inland Waterways Due to Climate-Induced Shifts in Crop Production Patterns.” 2011 Canadian Agricultural Economics Society & Western Agricultural Economics Association Joint Annual Meeting. Banff, Alberta, Canada, June 29 - July 1, 2011.


Dumbaugh E. and Zhang Y. “Urban Form and the Incidence of Crashes Involving Older Drivers and Pedestrians.” Association of Collegiate Schools of Planning 52nd Annual Conference. Salt Lake City, UT, October 14, 2011.


Ellis D. “Transportation Finance 101.” TTI Strategic Solutions Center Board of Advisors. College Station, TX, September 23, 2010.

Ellis D. “Transportation Finance 101.” Northwest Houston Chamber of Commerce. Houston, TX, June 14, 2011.

Ellis D. Keynote Speaker at The Bond Buyer’s 12 Annual Transportation Finance/P3 Conference: Bridging the Gap. Chicago, IL, November 14-16, 2011.


Lomax T. “Mobility in the Metroplex (or Not!): Trends and Strategies.” Dallas Chamber of Commerce Transportation Policy Committee. Dallas, TX, September 23, 2010.

Lomax T. “Mobility in Houston: Trends and Strategies.” North Houston Area Association Transportation Committee Meeting. Houston, TX, October 6, 2010.


Lomax T. “Mobility in Houston: Trends and Strategies.” Greater Houston Partnership Transportation Policy Committee Meeting. Houston, TX, January 24, 2011.


Lomax T. “Congestion Management Issues: National Perspective (from an Aggie?)” Guest lecturer in Dr. Walton’s class, University of Texas, Austin, TX, March 3, 2011.

Lomax T. “Mobility in Austin: Trends and Strategies.” Capitol Area Metropolitan Planning Organization Technical Advisory Committee Meeting. Austin, TX, April 27, 2011.


Lomax T. “Mobility in Houston: Trends and Strategies.” Central Houston Association Transportation Committee Meeting. Houston, TX, May 6, 2011.

Lomax T. “Debate About the Urban Mobility Report Findings: Why Can’t People Read?” 19th Annual Congress for the Other Presentations (cont.)


Lomax T. “Mobility in Houston: Trends and Strategies.” Greater Houston Partnership Transportation Policy Committee Meeting. Houston, TX, January 24, 2011.


Lomax T. “Congestion Management Issues: National Perspective (from an Aggie?)” Guest lecturer in Dr. Walton’s class, University of Texas, Austin, TX, March 3, 2011.

Lomax T. “Mobility in Austin: Trends and Strategies.” Capitol Area Metropolitan Planning Organization Technical Advisory Committee Meeting. Austin, TX, April 27, 2011.


Lomax T. “Mobility in Houston: Trends and Strategies.” Central Houston Association Transportation Committee Meeting. Houston, TX, May 6, 2011.


Qu T. “Investigating the Effect of Freeway Congestion Thresholds on Decision-Making Inputs.” Natural Building Virtual College of Architecture Symposium, Texas A&M University. College Station, TX, October 18, 2010.

Quadrifoglio L. and Shen C. “The Zoning Paratransit System with Transfers: Formulation, Optimization and Heuristic.” University of California-Berkeley Institute of Transportation Studies Friday Weekly Seminar. Austin, TX, November 7-10, 2010.


Reports & Publications


Jasek D. (2011) Facilitating Outreach Programs for Students in Rural Texas. University Transportation Center for Mobility.


Smith M., Benden M., and Lee C. (2011) At the Intersection of Promoting Active Communities and Technology-Based Distracted Driving: a Trajectory Towards Danger. Preventing Chronic Disease, In Press.


FY11 Project Funds

- Technology Transfer: 16%
- Research: 34%
- Leveraged Funds: 47%
- Education: 3%

FY11 Federal Funds

- Technology Transfer: 23%
- Administration Costs: 17%
- Committed to FY12 Programs: 10%
- Research: 42%
- Education: 8%