MATC Hosts USDOT Research and Innovative Technology Administration Grant Administrators

The Mid-America Transportation Center was pleased to host the US Department of Transportation’s Research and Innovative Technology Administration Grant Administrators, Amy Stearns and Lydia Mercado, who visited the University of Nebraska–Lincoln in August. It was a productive day, filled with presentations by the MATC director, associate directors, and faculty, as well as lab tours, meetings with students, and viewing of crash test results.

Robert Rescot: 2008 MATC Student of the Year

MATC is proud to announce Robert Rescot as the 2008 student of the year. Robert is a second-year Ph.D. student in transportation engineering at the University of Kansas (KU). He is originally from the St. Louis, Missouri area, and has previously received a bachelor’s degree in civil engineering and a master’s degree in transportation engineering from the University of Missouri-Columbia.

Robert is an ambitious student, active in all phases of academic life including teaching, research and service, in addition to working on his Ph.D. course work. With a clear goal in mind of one day becoming a professor, he recognizes the vital importance of demonstrating during his graduate work the ability to successfully balance research, teaching, and professional service requirements. Robert is currently instructing several lab sections of a land surveying course, and guest lectures periodically in several other transportation courses. He has also taught classes in the usage of the VISSIM microsimulation software as well as the theory and application of microsimulation.

Jennifer Schmidt: 2008 UNL Student of the Year

The Mid-America Transportation Center is pleased to announce Jennifer Schmidt as UNL’s 2008 student of the year. Jennifer is currently working on her master’s degree in civil engineering at the University of Nebraska–Lincoln.
I am pleased to present the 2nd issue of the Mid-America Transportation Center newsletter. As you will see in the accompanying articles we have been busy implementing our various research, education, and technology transfer programs. In August we had a successful visit by USDOE Research and Innovative Technology Administration (RITA) grant administrator Amy Starnes and Lydia Mercado. We also had our first full Advisory Board Meeting where we received excellent input and advice on our programs.

I would like to take this opportunity to welcome to our MATC Advisory Board Mr. John Craig, Director of the Nebraska Department of Roads and Mr. Dick Reiser, Executive Vice President and General Council of Werner Enterprises. Our Advisory Board will benefit from the excellent advice John presents for the Provost, and I look forward to working with them in the coming years.

During FY 2009, MATC funded sixteen new research projects, which are described briefly in this newsletter starting on page 8. All of the projects are related to the theme of MATC: “Improving safety and minimizing risk associated with increasing multi-modal freight movement on the U.S. surface transportation system.” Similar to the FY 2008 projects, this year’s MATC research program includes significant participation from researchers at major universities in all four states of Region VII, including the University of Nebraska, Kansas State University, University of Kansas, University of Iowa, and the Missouri University of Science and Technology (formerly University of Missouri-Rolla).

To implement the education component of our mission, MATC hosted another successful Summer Institute for middle and high school teachers and students in July and August. We are proud of the fact that one of our previous Summer Institute participants, Mr. Jerel Welker, was recently honored with a Presidential Award for Excellence in Mathematics and Science Teaching. Speaking of award winners, I extend a personal congratulations to Robert Rescott, a Ph.D. student from the University of Kansas, who was the 2008 MATC student of the year. Robert was a unanimous choice of the selection committee and he did an excellent job of representing MATC at the CUTC meeting in January of this year.

I am very enthusiastic about all our transportation research initiatives and look forward to the coming years as we continue to build on one of the pre-eminent UTCs in the country. As always, I welcome your feedback and suggestions. Thank you for your interest and continued support.

Sincerely,
Larry

Visit to India Builds Relationships, Creates Partnerships for MATC

Led by Chancellor Harvey Perlman, an invited group of UNL representatives traveled to India in February to expand opportunities for collaboration with university and research organizations and to initiate and strengthen personal ties with educators and officials.

As part of this trip agreements and partnerships were built that will expand the opportunities for UNL’s faculty and students and enhance the university’s international reputation. International agreements reached during this visit include: a joint doctoral program and collaborative research in engineering, both with Anna University in Chennai; an academic partnership with India’s Ministry of Food Processing Industries; and an agreement with the International Crop Research Institute for the Semi-Arid Tropics.

As a result of this trip Anna University sent a joint research proposal with the faculty and students. They are also in the process of submitting a joint research proposal related to ITS. Bringing everyone closer on a personal level was a very important strategy on this trip. As a result of this trip Anna University sent a team of administrators and faculty to UNL in March to further explore their potential collaboration. During their visit the Indian Institute of Technology-Madras (IITM) and the Indian Institute of Technology-Bombay (IITB) were also visited.

Robert Rescott: 2008 MATC Student of the Year

Mr. Rescott is an active peer in the research community. He is currently the team leader on a MATC-funded project focused on the evaluation of an intermodal rail-truck freight facility. To that end, he manages a team of undergraduate and graduate students, maintains crucial business relationships with partner agencies, and regularly collaborates with the faculty. Robert’s research interests include highway and work-zone operations, traffic flow theory, highway safety, simulation modeling, and roundabouts. His record of service to the discipline and to his colleagues is also impressive. He is a friend of several TRB committees, an active paper reviewer, and currently serves as the president of the Institute of Transportation Engineers’ KU student chapter. Outside of his field, Robert is active with his church and serves on a regional committee of the Boy Scouts of America.

Jennifer Schmidt: 2008 UNL Student of the Year

She is a graduate research assistant at Midwest Roadside Safety Facility and her research focuses on the safety performance of work-zone traffic control devices with new safety standards. She received her bachelor’s degree in civil engineering from the University of Nebraska-Lincoln.

In the summer of 2007, Jennifer expanded her educational horizons on a study abroad trip to Brazil, where she took an engineering class. Jennifer plans to pursue a career in the structural design of buildings. Her academic honors include earning a University Regents’ scholarship, and graduating from the Honors Program. Jennifer has served as secretary of Chi Epsilon and continues her service to the profession as a member of the American Society of Civil Engineers.

Lydia Mercado: 2008 UNL Student of the Year

Lydia Mercado was chosen as a 2008 UNL Student of the Year by a competitive selection committee of the Anyawati S. Surve College of Engineering.

Outstanding students are selected based on academic excellence, involvement in student organizations, and active engagement in university community service.

Lydia Mercado was chosen based on her outstanding work in mathematics and science. Lydia has served in a leadership position in the Nebraska Mathematics Science and Technology Superior Schools, a state-wide outreach program that recognizes outstanding math and science teachers.

Lydia Mercado has received the aspiring student of the year award by the Harvey Perlman College of Engineering.

She is also an active member of the Nebraska Student Engineers Society. She has served as the co-chair of the society’s monthly meetings.

Lydia Mercado is a member of the Nebraska Engineering Honors Society and a member of the National Honor Society.

In conclusion, Lydia Mercado is an outstanding student who has demonstrated her commitment to excellence in mathematics and science.

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The first meeting of the MATC Advisory Board was held this fall at the University of Nebraska-Lincoln Wick Alumni Center. The meeting started off with a presentation by Dr. Larry Rilett on the State of MATC and a review of the theme and strategic plan. MATC consortium partners then presented overviews of the research, education, and technology transfer activities in progress at each of their campuses. The research underway is exciting. Please turn to the Research Projects section of the newsletter for details.

Dr. Prem Paul, Vice Chancellor for Research and Economic Development at UNL, addressed the advisory board and associate directors to thank them for their support and welcome them to the University of Nebraska. An advisory board member round table discussion was held on issues facing the freight industry related to trucking, railway, waterways, logistics, etc. MATC and its advisory board considered ways they could address these issues through collaborative research projects.

The afternoon session included discussions of issues currently or potentially facing the DOTs, and then turned to focus on the topic of how to strengthen the relationships between transportation professionals within the private and public sectors. Several action items that were developed to be researched and put into place over the next year. The day ended with a live crash test and tour of the Mid-west Roadside Safety Facility.

We are very thankful to all our board members for their excellent support and continued collaborative efforts to improve freight transportation in Region VII.
As part of the Missouri Valley ITE meeting on September 24, 2008, MATC graduate and undergraduate students were given a tour of the Union Pacific Harriman Dispatching Center in Omaha, Nebraska by Steve Barkley, vice president of center and of Network Operations with Union Pacific.

The Harriman Dispatching Center (HDC) was recently remodeled with state-of-the-art technology, including biometric security on the doors, ergonomic lighting, and cutting-edge sound control with an acoustic cloud throughout the HDC. The first train was dispatched from the newly remodeled center in February of 2008.

Equipped with today's advanced technology and software, the dispatch center coordinates up to 2,000 freight and metro trains simultaneously on over 25,000 miles of track. Network surveillance feeds real-time data into various maps and graphs displayed on the walls of the dispatch center and utilized by the dispatchers. This state-of-the-art system allows Union Pacific to increase its rail network velocity, improve car cycle times, and save fuel, among many other benefits. The new system also integrates mainline and terminal planning in order to improve utilization of locomotives, cars, terminals, and crews.

The HDC also has implemented a sophisticated weather monitoring system that utilizes GIS data to constantly determine the weather conditions on every mile of track. This information is critical in order to mitigate any possible weather interference (tornadoes, hurricanes, etc.), which could create congestion, or even damage tracks or trains. It also allows dispatchers to keep track of every train on every track every minute of every day, so that goods and people are moved quickly, safely, and efficiently through the rail system.

ITS Heartland hosted its first systems engineering workshop this fall at the Oklahoma Department of Transportation in Oklahoma City. With thirty-five ITS professionals in attendance, discussion topics included information on the federal requirements for systems engineering as documented in Rule 940.11. The benefits and organizational implications of applying systems engineering in traditional project development and implementation processes were evaluated, while training and technical resources were made available to help further the understanding of systems engineering and its application. The workshop used the new guide, “FHWA Systems Engineering for Intelligent Transportation Systems: An Introduction for Transportation Professionals,” as a primary reference to introduce systems engineering.

The presenters were Cliff Heise, who is the eastern region vice president of Iteris, Inc., and Mac Lister, an ITS specialist at the FHWA Resource Center.

Mr. Heise, who is responsible for programs at the federal, state, and local levels, and manages a team of systems, software, and transportation engineers, has over twenty-four years of project management experience in the areas of systems and software engineering throughout all phases of program development.

Mac Lister provides training, outreach, and technical support for the National ITS architecture and systems engineering programs. He is also the team leader for the FHWA’s National Field Support team for Regional Architecture Implementation and a member of the FHWA Operations Council’s architecture and systems engineering working group, as well as the field co-chair of the Planning for Operations Working Group and a member of the 511 Deployment Coalition Working Group. Mr. Lister has over thirty-five years of experience in the field of information systems.

The workshop was a joint effort between the ITS Heartland Chapter, ITS America, the Oklahoma Department of Transportation, the Mid-America Transportation Center, and the Oklahoma Transportation Center. A special thanks to Alan Stevenson and the Oklahoma DOT for hosting the workshop and to Matt Vizl of Telvent Farradyne, Inc. for his coordination with ITS America.
MATC Funded Research Projects
Fiscal Year 2009

University of Nebraska Projects

Assessing the Crash Risk for Trucks on Onset Yellow
PI: Dr. Anuj Sharma, Assistant Professor, Civil Engineering, University of Nebraska–Lincoln

DESCRIPTION: This project will assess the crash risk for trucks at the onset of a yellow signal in isolated high speed intersections. Red light running (RLR) and rear-end crashes are more typical of isolated high speed intersections. A decision to continue through the yellow light can lead to a serious rear angle crash, and a decision to stop at the onset of yellow can lead to a serious rear-end crash. This research will evaluate the crash risks of different types of trucks in various situations of yellow onset.

Co-PI: Dr. David Admiraal, Associate Professor, Civil Engineering, University of Nebraska–Lincoln; Dr. Tian Zhang, Professor, Civil Engineering, University of Nebraska-Lincoln

DESCRIPTION: The 1993 and 2008 Midwest floods showed that with weather pattern changes, the period between returning extreme floods may be shortening. These changes threaten existing bridges over rivers. This study transfers the recent supercomputer simulation technology of inundated bridge hydrodynamics from laboratory scales to practical design scales.

BENEFITS: The results of the study will provide engineers with an innovative tool to estimate hydraulic loads accurately when bridge decks are inundated during extreme floods.

Design of High-tension Cable Post Bases
PI: Dr. John Rohde, Associate Professor, Civil Engineering, University of Nebraska–Lincoln

DESCRIPTION: Most DOTs aim at minimal maintenance requirements and low repair costs of median cable systems. Foundations with sleeves to facilitate the replacement of posts seem to be a good solution. Unfortunately, these systems currently have high capital costs and, in many instances, poor performance. This project will develop high-tension cable median post base designs for a variety of soil and weather conditions.

BENEFITS: The result of this study will be a rational design methodology based on situ soil conditions for cable post foundations in high tension cable systems. This design method will rationally compare construction and maintenance costs to minimize the life cycle costs of the post/sleeve system. This will allow various transportation agencies to look critically at existing foundation designs in terms of anticipated life cycle performance and associated costs.

Impact of Truck Loading on Design and Analysis of Asphaltic Pavement Structures
PI: Dr. Yong-Rak Kim, Assistant Professor, Civil Engineering, University of Nebraska–Lincoln

DESCRIPTION: Better preservation of existing highway infrastructure against the effects of heavy load trucks is necessary.

With more accurate and realistic analysis of pavement structures, more successful preservation will be attained. To this end, this study analyzes actual roadways in Nebraska and Missouri by comparing results from the newly-developed pavement design guide (i.e., the Mechanistic Empirical Pavement Design Guide: MEPDG) with the results from the purely mechanistic analysis based on the finite element method (FEM) to improve analysis of pavement structures.

BENEFITS: The results will provide a better understanding of the effects of heavy load trucks on the overall structural performance and life of pavements, as well as a potentially more appropriate implementation of the MEPDG into pavement designs.

Risk Mitigation for Highway and Railway Bridges
PI: Dr. Andrez Nowak, Professor, Civil Engineering, University of Nebraska–Lincoln

DESCRIPTION: Bridges are vulnerable to hazards stemming from negligence and improper maintenance, overloadings, collisions, intentional acts of vandalism, and extreme events such as natural disasters or terrorist attacks. These structures must be protected. However, the current approach to risk is not always rational. Sensitivity analyses will be performed to relate the reliability of bridges to the reliability of the transportation network.

BENEFITS: This project will develop risk analysis procedures for the transportation network including highway and railway bridges, selection criteria for the target risk level, and implementation procedures for risk control. The project will focus primarily on the development of rational selection criteria for the target risk for bridges, depending on the consequences of failure and the relative costs.

Study of RF Propagation Characteristics for Wireless Sensor Networks in Railroad Environments
PI: Dr. Hamid Shiraf, Professor, Computer and Electronics Engineering, University of Nebraska–Lincoln

Co-PI: Dr. Michael Hempel, Computer and Electronics Engineering, University of Nebraska–Lincoln

DESCRIPTION: This project investigates the impact of signal propagation for Wireless Sensor Networks in railroad environments. The wireless transmissions' electromagnetic waves interact with the steel construction of freight cars. It is crucial to understand the impact of this interaction on the performance of wireless transmissions, and how the placement of the transceivers can be optimized to improve the performance. This is a vital issue for improving the safety and security of railroad operations, and will enable the monitoring of railroad trains, tracks, and the freight transported to protect the transported goods, the environment and human life.

BENEFITS: This proposed research and its outcomes will improve the overall network performance and robustness and will enable a wide range of novel applications in this domain. It will help improve the safety and security of railroad operation. In addition, the findings of this research will be applicable to other modes of surface transportation.
2009 MATC Research Projects

Kansas State University Projects

Improving Safety of the Surface Transportation System by Addressing the Issues of Vulnerable Road Users: Case of the Motorcyclists
PI: Dr. Sunanda Dixanoayake, Assistant Professor, Civil Engineering, Kansas State University
DESCRIPTION: While some highway safety improvements have been achieved in certain categories, the number and percentage of motorcycle crashes have increased significantly in the United States. Accordingly, it is necessary to focus attention on the topic of how to improve the safety of motorcyclists; this study proposes to analyze crash data related to motorcyclists in order to identify problem areas and issues. In addition, relationships between helmet usage and motorcycle safety will be established.

Benefits: The information obtained from observations of unsafe interactions between trucks and trains will be analyzed to discover information that will facilitate increased truck safety at HRG crossings, and will provide direction for the development and testing of equipment that reduces unsafe truck-train interactions.

Assessing the Damage Potential in Prestressed Bridges Caused by Increased Truck Loads Due to Freight Movements (Phase 2)
PI: Dr. Robert Peterman, Professor, Civil Engineering, Kansas State University
DESCRIPTION: This research is aimed at determining the existing stresses in a concrete member. The first step is to image the concrete in its in-situ stressed condition at a desired location, and then cut around the imaged area using a diamond core bit to a depth of approximately one inch. The result will be a “re-bounding” of most of the elastic strain carried by the concrete member at that point. By re-imaging the point after penetration by the core drill, the change in surface strain can be determined, and thus also an estimate of the initial internal stress. Phase 2 extends the work to pretensioned members with multiple bonded tendons.

Benefits: Based on the findings of the project, areas requiring more attention in terms of improving motorcycle safety will be identified and ideas for mitigation measures will be developed.

Extending Asphalt Pavement Life Using Thin Whitetopping
PI: Dr. Mustaque Hossain, Professor, Civil Engineering, Kansas State University
DESCRIPTION: Thin white topping (TWT) can be a cost-effective measure that extends the life of existing asphalt pavements. This project is aimed at calibrating the TWT design method developed by the Colorado Department of Transportation using data from an experiment conducted under the accelerated pavement testing (APT) program at Kansas State University.

Benefits: The project is expected to produce recommendations regarding design of TWT for high truck traffic routes. The optimal design for a given existing AC pavement condition and truck traffic volume also will be identified.

University of Kansas Projects

Closed Course Testing of Portable Rumble Strips to Improve Truck Safety at Work Zones
PI: Dr. Steven Schrock, Assistant Professor, Civil, Environmental, and Architectural Engineering, University of Kansas
Co-PI: Dr. Yong Bai, Assistant Professor, Civil, Environmental, and Architectural Engineering, University of Kansas

Closed course testing of portable rumble strips at unexpected queuing locations can improve safety. This study will evaluate the potential of using temporary reusable rumble strip units to improve worker and driver safety at short-term work zones, particularly flagger-operated work zones that may result in unexpected queuing.

Benefits: The rumble strip unit could be an effective method of alerting drivers that they are approaching the work zone, and if so, will result in improved safety at flagger-controlled work zones.

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The primary objective of this research is to estimate the highway pavement damage costs attributed to truck (i.e., tractor-trailers) traffic.

**BenEFits:** The benefits of this research include improving safety for motor carriers on highways in Kansas, and subsequently the safety for other vehicles sharing the road with motor carriers. With a decrease in wind-induced crashes, the disruption in interstate commerce that costs stakeholders lost productivity and revenue also will decrease.

**DESCRIPTION:** Previous studies have found that trucks place heavy loads on highway pavement, which lead to significant road damage, thereby resulting in increased highway maintenance costs nationwide. The primary objective of this research is to estimate the highway pavement damage costs attributed to truck (i.e., tractor-trailers) traffic.

**University of Nebraska Projects**

**Safety investigation and Guidance for Work-Phase Devices in Freight Transportation Systems Subjected to Passenger Car and Truck Impacts with New Crash Standards**

**PI:** Dr. Ronald Falla  
**Co-PI:** Karla Lechtenberg, James Holloway

**Foundation Design for High Tension Cable Guardrails**

**PI:** Dr. John Rhode  
**Co-PI:** Dr. Ronald Falla, Karla Lechtenberg, James Holloway

**Investigating RFID for Roadside Identification Involving Freight Commercial Vehicle Operators (CVO)**

**PI:** Dr. Erick Jones  
**Co-PI:** Dr. Judy Perkins

**Impact of Trucks on Signalized Intersections**

**PI:** Dr. Elizabeth Jones

**Investigation of Factors Associated with Truck Crashes Related to Skid Resistance in Region VII**

**PI:** Dr. Aemal Khattak

**University of Iowa Projects**

**Mitigating Wind-induced Truck Crashes**

**PI:** Dr. Thomas Muinazzi, Professor, Civil, Environmental, and Architectural Engineering, University of Kansas  
**Co-PI:** Dr. Steven Schrock, Assistant Professor, Civil, Environmental, and Architectural Engineering, University of Kansas

**Description:** The objective for this research is to increase the safety of motor carriers traveling across Kansas by reducing the likelihood of a wind-induced crash. The work will be done in concert with the Kansas Department of Transportation, the National Weather Service, and the Kansas Highway Patrol, among other stakeholders, to identify high-risk corridors and subsequently to enable the correlation of wind advisories to roadway segments, and to develop a framework for improving wind-related warnings to truck drivers for the forthcoming ITS system. Additional research will be conducted in order to differentiate at-risk vehicles based on profile and weight.

**Benefits:** The benefits of this research include improving safety for motor carriers on highways in Kansas, and subsequently the safety for other vehicles sharing the road with motor carriers. With a decrease in wind-induced crashes, the disruption in interstate commerce that costs stakeholders lost productivity and revenue also will decrease.

**University of Kansas Projects**

**Investigation of Factors associated with truck crashes in Freight transportation Systems Subjected to Passenger Car and Truck Impacts with New Crash Standards**

**PI:** Dr. Ronald Falla  
**Co-PI:** Karla Lechtenberg, James Holloway

**Foundations Design for High Tension Cable Guardrails**

**PI:** Dr. John Rhode  
**Co-PI:** Dr. Ronald Falla, Karla Lechtenberg, James Holloway

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**PI:** Dr. Elizabeth Jones

**Investigation of Factors Associated with Truck Crashes Related to Skid Resistance in Region VII**

**PI:** Dr. Aemal Khattak

**University of Missouri Projects**

**Pilot Study on Rugged Fiber Optic Brillouin Sensors for Large Strain Measurements to Ensure the Safety of Transportation Structures**

**PI:** Dr. Genda Chen  
**Co-PI:** Dr. Hai Kao

**Impact of Trucks in the Development of Work Zone Capacity Guidelines**

**PI:** Dr. Ghulam Bham  
**Co-PI:** Dr. Praveen Edara

**Improving Work Zone Safety for Heavy and Light Weight Vehicles: Speed Limit Up or Speed Limit Down**

**PI:** Dr. Ghulam Bham  
**Co-PI:** Dr. Praveen Edara

**A Framework for the Nationwide Multimode Transportation Demand Analysis**

**PI:** Dr. Hojoong Bae

**University of Nebraska Projects**

**Feasibility of Using Cellular Telephone Data to Determine the Truckshed of Rail-truck Intermodal Facilities**

**PI:** Dr. Steven Schrock  
**Co-PI:** Dr. Tom Muinazzi
MATC Advisory Board Members

Mr. E. Dean Carlson  
Former Executive Director, FHWA,  
Former Secretary of Transportation, Kansas

Mr. Dan Murray  
Vice President, Research,  
American Transportation Research Institute

Mr. Ed Trout  
Chairman, American Trucking Association; President, Cornhusker Trucking,  
Cornhusker Motor Lines, Omaha

Mr. David Connell  
Vice President, Engineering, Union Pacific Railroad

Dr. Judy Perkins  
Chair and Department Head, Department of Civil and Environmental Engineering, Prairie View A&M University

Mr. Robert VanderClute  
Senior Vice President, Safety and Operations, Association of American Railroads

Mr. Joseph Werning  
Division Administrator, Nebraska Division, Federal Highway Administration

Mr. David Sehrt  
Senior Vice President, Ingram Barge Lines

Mr. Michael Flanigon  
Director, Office of Technology, Office of Research, Demonstration and Innovation, Federal Transit Administration

Dr. Ray Krammes  
Technical Director, Research and Development, Turner-Fairbank Highway Research Center

Mr. Mark Stiles  
Senior Vice President, Trinity Industries Inc.

New MATC Board Members

Mr. John Craig  
Director, Nebraska Department of Roads  
Since 1999, John Craig has been the director of the Nebraska Department of Roads, which is the surface transportation agency responsible for highway, rail, public transportation and other programs throughout Nebraska. He is on the board of directors of the American Association of State Highway and Transportation Officials (AASHTO) and chair of the Nebraska Railway Council. He is a past member of the Executive Committee of the Transportation Research Board, National Academies. Craig previously served 24 years as a commissioned officer in the U.S. Army Corps of Engineers with assignments in the continental United States, Alaska, Korea and Europe. He has bachelor of science and master of science degrees from Central Missouri State University and a master of science degree from the University of Alaska.

Mr. Richard Reiser  
Executive Vice President and General Counsel, Werner Enterprises, Inc.  
Dick Reiser is executive vice-president and general counsel of Werner Enterprises, Inc., an Omaha-based motor-carrier and logistics company that provides trucking service in 48 states. Dick is responsible for managing all of the legal, regulatory, and legislative affairs of Werner Enterprises, which include all general transportation and corporate legal matters. As a transportation expert, Reiser serves as Chairman of the Transportation Council of the Greater Omaha Chamber of Commerce, Nebraska State Highway Commissioner for District 2, Vice-Chairman of the Litigation Center Board of Directors for the American Trucking Association, and Member of the ATRI Board of Directors. Recently, Reiser also agreed to serve on the Board of Trustees of the Greater Omaha Alliance for Business Ethics. Reiser’s educational background includes a bachelor of science degree in business administration from the University of Nebraska–Lincoln (1968) and a juris doctorate degree from the University of Nebraska (1972). Prior to joining Werner Enterprises, he was in private practice in Omaha, Nebraska from 1972 through 1993. He is admitted to practice law in Iowa, Nebraska, the U.S. District Court for the District of Nebraska, and the U.S. Circuit Court of Appeals for the 8th Circuit.

MATC Contact Info:

Mid-America Transportation Center  
University of Nebraska–Lincoln  
113 Nebraska Hall  
PO Box 880530  
Lincoln, NE 68588-0530  
Phone: 402-472-1974  
Email: matc@unl.edu  
Web site: matc.unl.edu
Dr. Elizabeth G. Jones  
Associate Professor, Civil Engineering; Associate Director, Mid-America Transportation Center, University of Nebraska—Lincoln  
Dr. Elizabeth “Libby” Jones is an associate professor in the Department of Civil Engineering at the University of Nebraska-Lincoln (Omaha campus). She directs and oversees the MATC Intelligent Transportation Systems Lab at the University of Nebraska’s Peter Kiewit Institute. Dr. Jones has been a principal investigator or co-principal investigator on more than 15 research projects. She has authored or co-authored 18 journal papers and served as committee chair for 18 masters’ students. Currently she is supervising five masters’ students and one Ph.D. student. Dr. Jones will serve as the MATC Associate Director for UNL.

Dr. Genda Chen  
Professor, Civil, Architectural and Environmental Engineering  
Associate Director, Mid-America Transportation Center, Missouri University of Science & Technology  
Dr. Genda Chen is a professor in the Department of Civil, Architectural, and Environmental Engineering at the Missouri University of Science & Technology (formerly, University of Missouri-Rolla) and the interim director of the Center for Infrastructure Engineering Studies (CIES). He is a registered professional engineer in the state of California. Dr. Chen has been a principal investigator and co-principal investigator on over 40 research projects, totaling more than $6 million for his teams and approximately $2 million for his share. He has supervised 13 doctoral students and 11 masters’ students, and has published over 35 peer-reviewed journal papers and an additional 100 conference papers. Dr. Chen will serve as the MATC Associate Director for the Missouri University of Science & Technology.

Dr. Linda Boyle  
Assistant Professor, Department of Mechanical and Industrial Engineering and Public Policy Center; Associate Director, Mid-America Transportation Center, University of Iowa  
Dr. Linda Boyle is an assistant professor in the Department of Mechanical and Industrial Engineering at the University of Iowa. She holds a PhD in civil and environmental engineering and a MS in inter-engineering from the University of Washington. She is on the editorial board of the Accident Analysis and Prevention journal and is the recipient of the NSF Career Award. Her research area focuses on human factors and statistical modeling. She will serve as the MATC associate director for the University of Iowa.

Dr. Mustaque Hossain  
Professor, Civil Engineering  
Associate Director, Mid-America Transportation Center, Kansas State University  
Dr. Mustaque Hossain is a professor and the graduate program director in the Department of Civil Engineering at Kansas State University. His main areas of interest include the application of new technologies in construction, quality control/quality assurance, mechanistic analysis and design of pavements, non-destructive testing of pavements, and pavement and maintenance management systems. Dr. Hossain has conducted over 25 research projects, published over 40 peer-reviewed journal articles and has four patents related to his research. Dr. Hossain will serve as the MATC Associate Director for Kansas State University.

Dr. Paul Hanley  
Assistant Professor, Civil and Environmental Engineering and Public Policy Center; Associate Director, Mid-America Transportation Center, University of Iowa  
Dr. Paul Hanley is an associate professor of transportation in civil and environmental engineering as well as in urban and regional planning at the University of Iowa. He also has an appointment at the University’s Public Policy Center, where he is the director of transportation policy research. His principal research interests are transportation engineering, planning, and economic policy analysis. In general, his work focuses on assessing the impacts of policy changes on transportation behavior and on infrastructure provision as a means of enhancing safety, ensuring economic welfare, and promoting sustainable urban patterns. He will serve as the MATC associate director for the University of Iowa.

Dr. Tom Mulinazzi  
Professor, Civil, Environmental and Architectural Engineering; Associate Director, Mid-America Transportation Center, University of Kansas  
Dr. Tom Mulinazzi is a professor and former department chair of civil engineering at the University of Kansas (KU). In 2000, he was named Engineer of the Year by the Kansas Society of Professional Engineers and received the Outstanding Faculty Award from the Order of Omega, a KU honor fraternity. Dr. Mulinazzi will serve as the MATC associate director for the University of Kansas.