CTE Awarded UTC Funding for FY06-09

The U.S. Department of Transportation’s Research and Innovative Technology Administration (RITA) announced the FY06-09 grant awards for the national University Transportation Center (UTC) Program as provided for in the SAFETEA-LU federal transportation bill. CTE is pleased to be selected as a Tier II UTC and will receive $500,000 annually to support the Center’s ongoing education and research programs.

As a USDOT university transportation center of excellence, CTE conducts research, education, and technology transfer activities that seek to mitigate the impacts of surface transportation on the environment. CTE has provided over a decade of service to transportation and environmental professionals and has played a pivotal role in developing the next generation of professionals who will be charged with meeting future mobility needs in an environmentally sound manner.

More than 75 colleges and universities throughout the United States participate in the UTC program. Last year, UTC colleges and universities graduated over 1,100 students with advanced transportation-related degrees, offered almost 2,000 undergraduate and graduate transportation courses, conducted 300 research projects, and trained 32,000 practicing transportation professionals.

More information about the UTC program can be found at www.rita.dot.gov.

CTE Supports NCDOT Wetlands Mitigation Efforts

Protecting wetlands from the unavoidable impacts of transportation infrastructure improvements is central to the mission of North Carolina’s Ecosystem Enhancement Program (EEP). CTE is actively supporting EEP in its ongoing efforts to restore, enhance, preserve and protect wetlands, streams and riparian areas throughout the state.

To learn more about the North Carolina Ecosystem Enhancement Program, visit the website www.nceep.net. For more information, please contact David Robinson, CTE senior research associate, (919) 715-2228 or dcrobin2@ncsu.edu.

CTE senior research associate David Robinson, P.E., provides staff assistance to EEP in program design and procedure development. A strategic planning consultant to the EEP since 2003, Robinson assists EEP staff with developing the program and creating, testing and implementing database systems to support EEP’s financial and compliance reporting requirements. In addition, Robinson performs policy analyses of proposed state and federal legislation and rulemaking that might have an impact on EEP.

Chartered in 2001, EEP is a successful partnership between the North Carolina DOT, N.C. Department of Environment and Natural Resources, and the U.S. Army Corps of Engineers. EEP represents a unique national model for providing wetland mitigation for environmental impacts. This new approach is an important step forward in balancing infrastructure needs in a growing economy with the protection and enhancement of natural resources that are essential to quality of life.

To learn more about the EEP, please visit the conference website at www.icoet.net.

ICOET 2007 is scheduled for May 20 – 25, 2007, in Little Rock, Arkansas. The biennial event is the principal inter-agency conference in the U.S. addressing the broad range of ecological issues related to transportation planning and project development. The conference features technical sessions and poster displays on quality research applications and best management practices for wildlife, habitat, and ecosystem issues related to the delivery of surface transportation systems.

The theme of ICOET 2007 is “Bridging the Gaps, Naturally.” The conference is being co-sponsored by the Federal Highway Administration and the Arkansas State Highway and Transportation Department. CTE also is an official sponsor and the conference lead organizer.

For more information about ICOET 2007, please visit the conference website or contact Katie McDermott, CTE technology transfer director, (919) 515-8034 or kpm@ncsu.edu.
CSS Academy Undergrads Study Real-World Issues

In cooperation with the North Carolina Department of Transportation (NCDOT), CTE held its 2006 Context Sensitive Solutions (CSS) Summer Academy from June-August for junior- and senior-level undergraduate students interested in careers in transportation and the environment.

The Academy is a unique, experiential summer program that introduces students to CSS principles and illustrates how CSS concepts are being applied at various levels of transportation planning, project development, construction, operations and maintenance. Dr. John Stone and Dr. Joe Hummer, both from the Civil, Construction and Environmental Engineering Department at NC State University, led the 2006 Academy through its coursework and case study activities.

In addition to classroom instruction, students work as paid interns with NCDOT and participate in field trips that showcase real-life CSS applications. They are placed in positions that directly address environmental concerns in transportation and are required to research and write a case study related to their work assignments. This year’s students studied various NCDOT projects related to railroad crossings, bypass construction, and bridge replacement.

The 2006 Academy students completed their internships in August and gave oral presentations of their study project to transportation professionals and NCSU faculty researchers.

Four Programs Wrap Up Busy Broadcast Year

The 2006 broadcast season proved to be an active one for CTE as nine successful live programs filled the schedule from March-December. The season ended on a high note with four well-received broadcasts in the summer and fall.

In cooperation with the Federal Transit Administration and Federal Highway Administration, CTE in July continued its series of satellite/web broadcasts on the planning and environmental provisions of the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

“Overview of the Proposed Rulemaking on Planning,” broadcast on July 13, discussed the Notice of Proposed Rulemaking changes to the metropolitan and statewide planning requirements outlined in SAFETEA-LU. Panelists for the broadcast were Charlie Goodman with FTA Office of Planning, and Larry Anderson from FHWA Office of Planning, Victor Austin with the FTA Region V Office moderated the program.

Four Programs Wrap Up Busy Broadcast Year

The 2006 broadcast season proved to be an active one for CTE as nine successful live programs filled the schedule from March-December. The season ended on a high note with four well-received broadcasts in the summer and fall.

In cooperation with the Federal Transit Administration and Federal Highway Administration, CTE in July continued its series of satellite/web broadcasts on the planning and environmental provisions of the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

“Overview of the Proposed Rulemaking on Planning,” broadcast on July 13, discussed the Notice of Proposed Rulemaking changes to the metropolitan and statewide planning requirements outlined in SAFETEA-LU. Panelists for the broadcast were Charlie Goodman with FTA Office of Planning, and Larry Anderson from FHWA Office of Planning, Victor Austin with the FTA Region V Office moderated the program.

CTE Welcomes New Staff

Eugene Murray joined CTE in May as its distance learning specialist managing the center’s satellite/web broadcast programming and online learning initiatives. He also assists CTE’s technology transfer director with the development of communications programs using multimedia technologies. Contact: (919) 515-8037 or eugene_murray@ncsu.edu.

Ann Hartell joined CTE in October as a research associate focusing on the complex interactions among transportation facilities, the users of those facilities, and nearby communities. She also assists in the Context Sensitive Solutions courses and the development of materials for the FHWA National Community Impact Assessment course. Contact: (919) 515-9351 or amhartel@ncsu.edu.

Four Programs Wrap Up Busy Broadcast Year

The 2006 broadcast season proved to be an active one for CTE as nine successful live programs filled the schedule from March-December. The season ended on a high note with four well-received broadcasts in the summer and fall.

In cooperation with the Federal Transit Administration and Federal Highway Administration, CTE in July continued its series of satellite/web broadcasts on the planning and environmental provisions of the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

“Overview of the Proposed Rulemaking on Planning,” broadcast on July 13, discussed the Notice of Proposed Rulemaking changes to the metropolitan and statewide planning requirements outlined in SAFETEA-LU. Panelists for the broadcast were Charlie Goodman with FTA Office of Planning, and Larry Anderson from FHWA Office of Planning, Victor Austin with the FTA Region V Office moderated the program.

Moderator Jeff Moeller leads a discussion of the International Stormwater BMP Database with panelists Richard Tveten, Marcus Quigley, Eric Strecker and Ben Urbonas during the November 29 live broadcast.

In October and December CTE concluded the Izaak Walton League of America’s (IWLA) webcast series “Alternative Practices for Highway Stormwater Management.” The series addressed the latest techniques available to help transportation agencies save money, comply with water regulations, and improve water quality with context-sensitive stormwater management and low impact development techniques.

“Design, Construction and Maintenance – Part One” aired October 26, followed by “Part Two” on December 7. The live webcasts drew nearly 450 viewers from across the country. The IWLA series was made possible with support from CTE, FHWA, and the U.S. Environmental Protection Agency.

On November 29 CTE broadcast “The International Stormwater Best Management Practices Database: A Resource for BMP Selection and Design Guidance.” The database serves as a central clearinghouse for BMP data to help improve BMP selection, design, and performance. This broadcast introduced viewers to the history and significant findings of the BMP Database, and included guidance on monitoring and examples of how various municipalities and DOTs are contributing to and utilizing the database.

Panelists for the broadcast included Ben Urbonas with the Urban Drainage and Flood Control District in Denver, CO, Eric Strecker and Marcus Quigley of GeoSyntec Consultants in Oregon and Massachusetts, and Richard Tveten, water quality team leader with Washington State DOT. Jeff Moeller, senior program director with the Water Environment Research Foundation in Alexandria, VA, served as moderator.

Visit www.cte.ncsu.edu to view these and other CTE broadcasts, and to find information on upcoming broadcasts and events, ordering DVDs and written transcripts.
CTE/NCDOT Research-In-Progress Profile:

Assessment of Groundwater Flows at Juniper Bay and their Impacts on the Surrounding Area.

Performing Organization:
Department of Biological and Agricultural Engineering, and Department of Soil Science, North Carolina State University

Principal Investigators:
Rodney L. Huffman, Ph.D., P.E., Biological and Agricultural Engineering, North Carolina State University, rod_huffman@ncsu.edu
Michael J. Vepraskas, Ph.D., Department of Soil Science, North Carolina State University, michael_vepraskas@ncsu.edu

Project Period:
May, 2002 to December, 2006

This project is a supplement to the study of restoration success in Juniper Bay, a converted Carolina bay depressional wetland in Robeson County, NC. Preliminary data from the Juniper Bay wetland restoration study suggest that significant flows of groundwater are both entering and leaving the bay. However, due to the broad focus of the parent study, the data currently being collected on groundwater only allows for crude estimates of the subsurface flows.

The focus of this project, led by Dr. Huffman, is the groundwater flows at Juniper Bay and their impact on the surrounding area. The project has two major thrusts, the first being to collect and analyze data to characterize the flows across the project boundary at four locations. The second major thrust is to model the subsurface hydrology of the bay as a whole.

With solid data describing the flows at the perimeter of the site, it will be possible to predict how the changes to the bay’s drainage system will impact the surrounding areas. In addition, with a clear picture of the hydrologic function of the perimeter ditch, it will be possible to make a sound recommendation regarding its management.

For more information on this project, contact Dr. Huffman or project manager G. Dennis Pipkin, research engineer with the NCDOT Research & Development Unit, (919) 508-1816 or dpipkin@dot.state.nc.us.

CTE assists North Carolina DOT with promotion and distribution of its environmental research results to the transportation and environmental community at large. NCDOT funds one of the largest environmental research programs in the country. Additional research information can be found on CTE’s website at www.cte.ncsu.edu/cte/research and on NCDOT’s website at www.ncdot.org/doh/preconstruct/tpb/research/program.html.

Peer Exchange Examines Next Steps for CSS Implementation

CTE and the American Association of State Highway and Transportation Officials (AASHTO) in September collaborated on a successful conference titled “Context Sensitive Solutions: An AASHTO/FHWA Peer Exchange.” Held September 6-8 in Baltimore, Maryland, the three-day event attracted 262 federal and state agency participants, representing 46 state DOTs in addition to the District of Columbia, Puerto Rico, and Nova Scotia.

The peer exchange engaged transportation stakeholders in facilitated sessions that explored the successes, challenges, and lessons learned from CSS implementation since the 1998 “Thinking Beyond the Pavement” conference, which helped establish the first working definition and guiding principles for CSS in transportation. The discussions at this peer exchange will feed into the strategic work of implementing CSS principles in state departments of transportation over the next several years.

AASHTO, CTE, and the Federal Highway Administration co-sponsored the peer exchange. CTE also served as lead organizer for the event and is helping to document its results. Senior research associate Leigh Lane, research associate Ann Hartell, technology transfer director Katie McDermott, and associate director James Martin represented CTE at the conference to manage activities and facilitate discussion sessions.

For more information, visit the AASHTO website at www.transportation.org or contact Katie McDermott, CTE technology transfer director, (919) 515-8034 or kpm@ncsu.edu.

CTE’s Lane Leads CSS Workshop for AASHTO/FHWA

As a follow up to the successful AASHTO/FHWA Peer Exchange on Context Sensitive Solutions (CSS), conducted in Baltimore, Maryland, in September, CTE senior research associate Leigh Lane was invited by AASHTO and FHWA to facilitate a one-day workshop to refine the defining principles of CSS and to lay the ground work for a joint AASHTO/FHWA strategic plan that will help states more effectively implement CSS.

The follow-up workshop was conducted in Portland, Oregon, on October 26, 2006 in conjunction with the AASHTO Annual Meeting. Lane facilitated a productive

A nest of three piezometers with water level monitoring system at Juniper Bay. Piezometers were installed to the depths of significant sand layers to monitor hydraulic heads in the main sand strata. The units were programmed to take readings every 15 minutes.

see WORKSHOP on page 4
What’s Coming Up?

January 21–25, 2007
TRB 86th Annual Meeting
(Washington, DC)
www.trb.org

February 11–14, 2007
2007 EPA National Air Quality Conferences
(Orlando, FL)
www.airnow.gov

April 10–13, 2007
10th Annual National Mitigation &
Ecosystem Banking Conference
(St. Louis, MO)
www.mitigationbankingconference.com

May 20–25, 2007
2007 International Conference on Ecology
and Transportation (ICOET)
(Little Rock, AR)
www.icoet.net

June 25–28, 2007
AASHTO Standing Committee on
Environment
(Asheville, NC)
www.transportation.org

Workshop continued from page 3

discussion between FHWA, AASHTO, and
other state DOT officials on how to design
a strategic agenda for the implementation
of CSS in the states. Lane is continuing
the dialogue with the various task groups
formed to establish objectives and action
items for the strategic goals formulated
during the Portland meeting.

Summaries of both the September peer
exchange and October workshop are being
prepared by CTE for distribution in 2007.

For more information about these
activities, please contact Katie McDermott,
CTE technology transfer director, (919)
515-8034 or kpm@ncsu.edu. For more
information about CSS, contact Leigh
Lane, CTE senior research associate at
lblane@ncsu.edu.