The Center for Transportation and the Environment is a university transportation center that seeks to mitigate the impacts of surface transportation development on the environment.

CTE News & Notes

FHWA and CTE Open National Dialog on CSS

CTE is partnering with the Federal Highway Administration (FHWA) to begin a national dialog about Context Sensitive Solutions (CSS). With the launch of the CSS National Dialog website in January 2009, the multi-month project will facilitate an ongoing exchange of ideas and build momentum for wider implementation of CSS in the transportation industry.

CTE associate director James Martin, PE and research associate Ann Hartell are lead staff, with contributions from the Center’s web developer Nancy Bailey to build and manage the project website. FHWA staff from the Sustainable Transport and Climate Change Team and the Environment Technical Service Team also support the Dialog.

CSS is a collaborative, interdisciplinary approach to planning, designing and implementing transportation facilities. The approach involves all stakeholders in developing infrastructure that fits the physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. Since 2002 CTE has been a national leader in CSS research and training, conducting professional development for thousands of transportation practitioners across the US.

The goals of the Dialog include introducing CSS principles to a wide array of partner organizations, identifying and presenting best practices to a national audience, and bringing new perspectives to planning, designing, building and maintaining transportation facilities. The Dialog will feature a series of one-day workshops to be held across the US, each focusing on a particular aspect of CSS and using transportation projects, programs or plans to highlight best practices and provide a springboard for discussion and interaction.

The CSS National Dialog is currently seeking examples of best practices in the application of CSS principles to transportation projects, programs and plans. Selected case studies will be featured at the Dialog workshops. Submissions from transportation agencies, planning agencies, communities and other organizations are welcome and will be accepted through June 30, 2009. FHWA also is interested in partnering with University Transportation Centers to host the workshops across the country.

To participate in the CSS National Dialog, and for more information, visit www.cssnationaldialog.org and contact CTE at 919-515-9351 or email cssnationaldialog@ncsu.edu.

CTE and NC to Host 2010 TRB Environment and Energy Conference

The Transportation Research Board (TRB) of the National Academies has invited CTE to co-host and organize its 2010 Environment and Energy Research Conference. Scheduled for June 6-10, 2010 in Raleigh, NC, the conference will bring together members of more than a dozen TRB standing environmental committees to discuss a broad range of transportation and environmental issues. The American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on the Environment will meet jointly with the conference.

Over 400 professionals representing transportation and resource agencies across the US are expected to attend. CTE, the North Carolina DOT, and FHWA are partnering with TRB to sponsor the event.

Preliminary planning is underway, with details forthcoming on the TRB and CTE websites. In addition to its staff’s long service on TRB committees including ADC10 Environmental Analysis in Transportation, CTE brings many years of successful conference planning experience to this TRB event. Most notably, the Center is lead organizer for the biennial International Conference on Ecology and Transportation (ICOET).

For more information on the 2010 TRB Environmental Conference, visit the conference website at www.cte.ncsu.edu/cte/EEConference or contact CTE associate director James Martin, PE at jbm@ncsu.edu.
Climate Change Broadcast Draws High Viewership

More than 670 transportation and environmental professionals registered to watch CTE’s December 3, 2008 teleconference on “Transportation and Climate Change: Time to Think, Plan, Mitigate, and Adapt.” The two-hour program drew a large and diverse audience from the US, Canada, UK, Spain and Australia as expert panelists discussed the current practice and emerging issues for integrating climate change considerations into transportation planning.

The live CTE teleconference, part of the Center’s National Broadcast Series, provided examples and insights into how federal, state and regional agencies can approach the mitigation of impacts, adaptation strategies, and policies to address climate change through both technological advances and changes to travel behavior. The program was aimed at a broad audience including state DOTS, MPOs and RPOs, environmental agencies, non-governmental organizations, universities, and private-sector organizations.

Following the presentations, the broadcast also provided an interactive Q&A session with panelists. Audience participants eagerly submitted dozens of questions by email and phone. The program was successfully distributed by Webcast and also carried on the US Environmental Protection Agency’s Air Pollution Distance Learning Network.

“Transportation and Climate Change: Time to Think, Plan, Mitigate, and Adapt” is the forty-third program in CTE’s long running annual series of teleconferences addressing emerging policy issues, research innovations, and best practices in transportation and the environment. More information on this teleconference, video and transcript archives of past programs, and how to order DVD copies, is available on the CTE website www.cte.ncsu.edu/CTE/TechTransfer/Teleconferences.

Hartell Advises on NC Transportation Infrastructure Issues

On February 9-10, the Institute for Emerging Issues (IEI) at North Carolina State University hosted its 2009 annual forum in Raleigh, NC. Titled “Changing Landscapes: Building the Good Growth State?” the two-day event brought together state, national, and international leaders to examine the impacts of North Carolina’s growing population and transitioning economy on its infrastructure, including the state’s transportation system.

Ann Hartell, CTE research associate, was invited by IEI to serve on a working group to provide expert input as the Institute staff developed ideas and topics for debate at the forum. For several weeks prior to the forum, Hartell and fellow working group members met and discussed the challenges North Carolina is currently facing in four areas: transportation, housing, school construction, and water and sewer. Hartell was invited to participate based on her knowledge of the interaction between land use and transportation.

“Participating in the forum was a wonderful opportunity to contribute to a statewide conversation about how North Carolina addresses various types of public infrastructure,” said Hartell. “The discussions during the working group meetings brought a tremendous range of perspectives together to propose a slate of possibilities for planning, funding, building and maintaining these critical systems. Personally, I’m glad to see a rising interest in infrastructure issues, because they are such an important part of our quality of life.”

Over 1000 leaders and citizens in government, higher education, business, and nonprofits attended the 2009 IEI forum. During the event, see HARTELL on page 4

**Expert panelists featured on the December 3 broadcast were (left to right)**

CTE/NCDOT Environmental Research Project Profile

CTE assists the North Carolina Department of Transportation 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. A final report for the following research project has been released and is available online.

Stilling Basin Design and Operation for Water Quality: Field Testing
Principal Investigator: Dr. Richard A. McLaughlin, North Carolina State University
Project Period: July 2007 – June 2008

Many construction projects need to pump turbid water from borrow pits or other excavations into stilling basins or sediment bags prior to discharge. The design and operation of these basins needs to be optimized to provide the best water treatment prior to discharge. This research project was designed to provide an evaluation of stilling basin designs and polyacrylamide (PAM) injection to minimize turbidity in discharged water. A Piedmont subsoil mixed with water in a large holding pond served as a source of the turbid water, which was pumped into the stilling basin. Initial turbidities were in the range of 250-400 nephelometric turbidity units (NTU) in the source basin. Physical changes to the open basin, both with porous baffles and distribution along the bottom, significantly reduced turbidity or total suspended solids in the stilling basin, but the highest reduction was only 25%. Chemical treatment with PAM reduced turbidity and TSS by up to 88% and 84%, respectively, with little effect from the baffles or bottom spreader. Both types of PAM dosing systems worked well. There was some evidence that flocs formed after PAM treatments were intercepted by the dam slope. The porous baffle with 10% open pore space was significantly more effective than the baffle with 45% open pore space, but only when no PAM was added. The PAM treatments were highly effective and should be relatively simple and economical to use to reduce turbidity in pumped water. The final report is available online at: www.ncdot.org/doh/preconstruct/tpb/research/download/2007-02finareport.pdf.

CTE Staff Receive TRB Committee Appointments

Members of the CTE staff have been recognized with appointments by the Transportation Research Board (TRB) to serve on two standing committees related to environmental issues.

CTE’s director Dr. E. Downey Brill, PhD was recently appointed to the ADC10 Environmental Analysis in Transportation committee. This committee’s work focuses on the natural and human environmental impacts of transportation projects and systems. ADC10 emphasizes protection and enhancement of the environment as an integral part of transportation planning, decision-making, and mitigation strategies, policies, and processes, as well as multidisciplinary impact considerations. Brill succeeds CTE associate director James Martin, PE who served on ADC10 for the previous nine years. More on the committee’s activities is available at its website www.itre.ncsu.edu/ADC10.

CTE research associate Ann Hartell will serve on the ADD20 Committee on Social and Economic Factors of Transportation beginning this year. The scope of ADD20 includes direct and indirect social and economic effects of transportation systems, both within the transportation corridor and within the larger regions affected. The committee considers those effects bearing on present and future transportation needs and services. ADD20 committee information is available at http://trb-socialeconomic.com.

Findley Named CTE Student of the Year

Daniel Findley, a PhD candidate in civil engineering at NC State University, was honored as CTE Student of the Year for 2008. He was recognized at the annual awards banquet for the Council for University Transportation Centers held January 2009 in Washington, DC. The awards are sponsored by the Research and Innovative Technology Administration (RITA) of the US Department of Transportation.

Findley first developed an interest in transportation as a student intern with the North Carolina DOT. “Transportation is an appealing field to work in because it touches all of our lives in a significant way,” said Findley. “Transportation is such a large factor in just about everything we have and do, but most people don’t realize how much of an impact it really has.”

Findley’s current research focuses on the economic impacts of access management; the primary goal being to complete a before and after study of the installation of access management techniques using business data. Visit www.cte.ncsu.edu to learn more about CTE Students of the Year.
What's Coming Up?

September 13-17, 2009
International Conference on
Ecology & Transportation (ICOET)
Duluth, MN
www.icoet.net/ICOET2009.asp

October 20, 2009
CSS National Dialog Workshop
Austin, TX
www.cssnationaldialog.org

November 9, 2009
DOT-HUD-EPA Partnership for
Sustainable Communities Webcast
www.cte.ncsu.edu

December 7, 2009
CSS National Dialog Workshop
Portland, OR
www.cssnationaldialog.org

For more information and future events, visit www.cte.ncsu.edu/cte/events.

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speakers and audience participants
tackled a range of issues affecting
infrastructure including demographic
changes, development patterns,
funding, rising energy costs and
natural disasters. Speakers included
the former mayor of London (UK)
Ken Livingstone, architect and
planner Andres Duany, columnist
and author David Brooks, and US
Senator Chris Dodd (D-CT). North
Carolina’s Congressional Delegation
discussed the state of our infrastruc
ture and what new federal infra-
structure investment priorities and
funding will mean for the state.

For more information on the
Institute for Emerging Issues, visit
http://ncsu.edu/iei.