



Research News

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RECENT HAPPENINGS



Gerald McCarthy Retiring as NETC Coordinator

After ten years as NETC Coordinator, Gerry McCarthy will be retiring at the end of June 2005. He and his wife will reside in Rhode Island where they have built a new home. Although the commute from Rhode Island is too far for regular work, Gerry will continue to assist the CTI staff person who assumes his role.

Gerry's steady presence, dedication and expertise will be truly missed by all.

Advisory Committee Develops Action Plan at Three-Day Program Review Meeting

At a three-day meeting held in late fall of 2004, the NETC Advisory Committee explored a host of topics relating to improving the Consortium's effectiveness. The discussions have been synthesized into an Action Plan that provides a framework for improvements in the operation of NETC in the years ahead. The meeting was held at the Nathan Hale Inn on the University of Connecticut campus.



L to R: Gerry McCarthy, James Sime, Bill Ahearn, Denis Boisvert, Denise Saunders, Lisa Aultman-Hall, Stephen Pepin, Dale Peabody and Colin Franco.

Advisory Committee to Recommend \$600K in Research to the Policy Committee for the FY2006 Research Program

The Advisory Committee selected five research projects for recommendation to the Policy Committee for the Consortium's FY 2006 research program. The research will address: mechanistic-empirical pavement design, the enhancement and integration of infrastructure management systems to support integrated management decision-making, default dynamic modulus values for New England, preventative maintenance and timing of applications, and the development of winter severity indices for New England for improved planning of the allocation of resources for winter operations.

NETC Selects Semi-Finalists for the First "TRANSPORTATION RESEARCH CHALLENGE"

Two research proposals have been selected by the Consortiums' Advisory Committee as semi-finalists in NETC's Transportation Research Challenge:

"Fix It First: Utilizing the Seismic Property Analyzer and MMLS to Develop Guidelines for the Use of Polymer Modified Thin Lift HMA vs. Surface Treatments"

-submitted by Dr. Walaa Mogawer, University of Massachusetts Dartmouth and Dr. Jo Sias Daniel, University of New Hampshire

"Basalt Fiber-Reinforced Materials for Retrofit and Precast Civil Infrastructure Applications"

-submitted by Dr. Richard Parnas, University of Connecticut and Dr. Sergio Brena, University of Massachusetts, Amherst

The Transportation Research Challenge was established by the Consortium to encourage its member universities to collaborate on cutting edge research addressing the New England region's transportation problems. NETC will provide up to \$103,000 in funding that is to be matched by the winning university.

Watch the NETC website home page for future announcement of the challenge winner!!!

Glenn Roberts Replaces James Moore on NETC Advisory Committee

Glenn Roberts has replaced James Moore on the NETC Advisory Committee. James Moore is Assistant Director of Project Development for NHDOT. Glenn Roberts is the Chief of Research for NHDOT's Bureau of Materials and Research.

NY DOT and NETC to Continue Collaboration on Funding of Research Projects

Through participation in the New England Transportation Consortium's pooled fund project, the New York State Department of Transportation will collaborate with the New England Transportation Consortium in funding the following research to be awarded in FY 2005:

- Development of Load Displacement Curves for the Design on Drilled Shaft Rock Sockets
- Safety of Reflective Median Barriers
- The Use of Microscopic Simulation Modeling to Analyse Roundabout Operational Characteristics
- Measurement of Adhesion for Metallized Steel
- Graphic-Aided Dynamic Message Signs to Assist Elder Drivers' Message Comprehension
- Warrants for Exclusive Left Turn Lanes at Unsignalized Intersections
- Evaluation of Alternative Traffic Simulation Models for Analysis of Traffic Impacts of Highway Construction and Rehabilitation Projects.



RESEARCH HIGHLIGHTS

NETC 03-5: Evaluation of a Field Permeameter as a Longitudinal Joint Quality Indicator



Graduate and undergraduate students test the longitudinal joint on I-93 SB in Plymouth, NH with the field permeameter. To date, nine sites in NH, CT, and ME have been tested with the permeameter. The sites incorporate different construction techniques (joint sealer, pinched joint, infrared joint heater) and different types of mixtures (12.5 mm, 19mm, 25mm).

Field testing around New England will continue this summer to develop permeability criteria for longitudinal joint quality.

The team is looking for additional test sites for 2005.

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NETC 02-6: Sealing of Small Movement Bridge Expansion Joints



Shear test on foam sealant using Instron testing machine.

Based on analysis of relevant existing expansion joint sealing systems, this research will contribute to the development of durable joint sealing material design for small movement bridge expansion joints in New England states. An appropriate, recently developed polymer will be selected as a potential sealant material. Its suitability will be evaluated by laboratory validation testing.

Dr. Ramesh B. Malla, P.I., University of Connecticut
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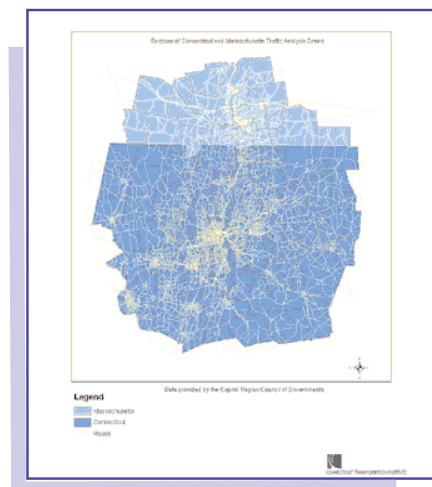
Research Highlights - cont'd. on page 4

NETC 04-5: Network-Based Crash Prediction Using GIS

Darrell Smith, a computer programmer for the Connecticut Transportation Institute, is currently assisting Dr. John Ivan and research assistant, Dr. Thomas Jonsson, with this project using ArcGIS 9.0. Mr. Smith is in charge of assembling, identifying, calculating and exporting all data associated with road links and Traffic Analysis Zones within the study area (see map at right) which includes sections of Massachusetts and Connecticut.

The analysis variables created with this data are used to create crash prediction models with special focus on modeling by crash type and using GIS data to enhance predictions.

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FY05 Research

Watch in the near future for *Calls for Proposals* for these 9 projects:

05-1	Develop Base Resistance Load-Displacement Curves for the Design of Drilled Shaft Rock Sockets	\$100,000
05-2	Safety of Reflective Median Barriers	\$100,000
05-3	Analysis of Roundabout Operational Characteristics Utilizing Microscopic Simulation Modeling	\$ 75,000
05-4	Characterization of the Rate Constant of Pozolan Available Alkalis	\$ 60,000
05-5	Measurement of Work of Adhesion Between Paint and Metallized/Galvanized Steel	\$ 75,000
05-6	Employing Graphic-Aided Dynamic Message Signs to Assist Elder Driver's Message Comprehension	\$ 60,000
05-7	Warrants for Exclusive Left Turn Lanes at Unsignalized Intersections and Driveways	\$ 70,000
05-8	Evaluation of Alternative Traffic Simulation Models, Including CA4PRS, for Analysis of Traffic Impacts of Highway Construction, Reconstruction and Rehabilitation Projects	\$100,000
05-9	Financing Intermodal Transportation in New England	\$ 50,000
	Total =	\$691,000



WEB SITES

For updates on "Reauthorization": www.AASHTO.org

For what's happening around the country with "511": www.ops.fhwa.dot.gov/511/

For the status of NETC funded research, to contact PIs, or to obtain copies of NETC research final reports: www.netc.uconn.edu

The editor welcomes the submission of articles, issues of interest and useful web links, as well as updates and photos of current research projects, for inclusion in future issues of *Research News*. Reprints of articles must be accompanied by publication name, date, author and any other pertinent information for assigning proper credit.

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