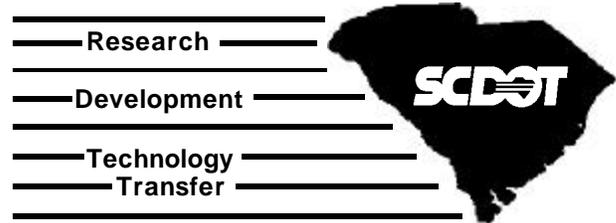


The RD & T Newsletter



A Publication of the South Carolina Department of Transportation
Research and Materials Laboratory

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SCDOT Conducts Its First Research Peer Exchange

The Federal Highway Administration (FHWA) mandates that states conduct Peer Exchanges to receive Federal funds for research. The purpose of the exchange is to improve the quality of states' research programs through reviews and discussions of research practices and management processes. The requirement, contained in 23 CFR Part 420.207, stipulates that each state must host a Peer Exchange every three years with the first exchange to be held by the end of 1998.

The state highway agency hosting the exchange selects a team, usually three to five members knowledgeable about state research programs, to conduct an in-depth review of their research program and management process. The team may consist of representatives from the



Participants in the SCDOT Peer Exchange

research units of other states, other agencies, universities, or the private sector. The format of the exchange is at the discretion of the host state.

The SCDOT's Research Unit hosted its Peer Exchange on September 21-24, 1998. Invited members of the team were:

- Al Crawley, Mississippi DOT,
Moderator
- Lamar Caylor, Georgia DOT
- Roger Port, FHWA – Missouri
- James Sime, Connecticut DOT
- Mike Stanley, North Carolina DOT

(Continued on Page 2)

SCDOT Conducts Its First Research Peer Exchange.....	1
Central Laboratory Observes 75th Anniversary.....	3
SCDOT Participating in "Southeastern Fatal Crash " Pooled-Fund Study.....	3
AASHTO National RAC Meeting Held in Nashville	4

(Peer Exchange -- Continued from Page 1)

The Research Unit initially identified in writing emphasis points to help focus the process on subjects meaningful to the Department. This information, along with documentation describing the SCDOT's research procedures and program, was forwarded to team members for review prior to their arrival.

During the exchange, SCDOT research personnel and each team member gave a short presentation on their respective research programs. The team also interviewed more than nineteen DOT, FHWA, and University staff involved in DOT related research. The interviews followed an open discussion format and provided the exchange team an opportunity to listen to concerns, successes, technical accomplishments, and suggestions as well as answer questions from those interviewed.

A final report describing the activities of the exchange was jointly prepared by the members and Department research personnel. The observations and suggestions made by each team member, and actions each planned to take to improve their research program were listed. A few of the items noted by the Research Unit to improve the Department's program were:

- improve customer awareness of on-line research and product information services available for their use;
- utilize a "champion" for each research project;
- increase efforts to make Principal Investigators aware of project deadlines and completion dates to facilitate timely reporting of results;

- develop and distribute "bullet" type summaries of studies conducted by the Department or other states or agencies;
- highlight long term goals or needs when soliciting research topics.

The SCDOT Peer Exchange was successful because of the time and effort of the team members and the professionalism they exhibited throughout the process. Also, those interviewed contributed greatly to this success. In essence, of all the activities, presentations, and discussions during the Peer Exchange, the interviews with Department personnel from other units was probably the most beneficial. Several concerns were noted and suggestions made that when addressed, will improve the SCDOT research program. ♦

Recycling Facts



Did you know ...

- ☺ Every day Americans use enough steel and tin cans to make a steel pipe running from Los Angeles to New York and back.
- ☺ Each person in an office on average uses 2.5 pounds of paper each week.
- ☺ Only five recycled soda bottles makes enough fiberfill for one ski jacket.
- ☺ If only 15 % of U. S. college students used mugs instead of disposable cups every day, we'd eliminate more than a billion cups a year.

Central Laboratory Observes 75th Anniversary



The SCDOT's Research and Materials Laboratory observed its 75th anniversary on November 17, 1998.

The milestone was marked with an appropriately decorated cake that was ceremoniously carved and consumed by lab employees.



Research and Materials Engineer Richard L. Stewart cuts the Lab's 75th Anniversary cake as (L to R) Joe Peoples, Andy Johnson, Kristy Wise, Cynthia Burdick, and Ben James observe.

Research and Materials Engineer Richard L. Stewart, who presided over the brief celebration, noted the tremendous strides that had been made in materials testing and research since the division was established in 1923, only a few years after creation of what was then called the State Highway Department.

"The quality of our highly trained personnel and vast improvements in equipment and testing techniques has dramatically improved the efficiency of our operations," he said. Whereas only a few people staffed the lab in its early years, there are now 90 employees working in the Central Lab and the three district labs around the state.

Stewart, who has served as Research and Materials Engineer since 1976, observed that as of the anniversary date the Central Lab had tested 1,289,192 construction material samples. ♦

SCDOT Participating in "Southeastern Fatal Crash" Pooled- Fund Study

The SCDOT is participating in a regional pooled-fund study titled, "Southeastern Fatal Crash Study." The Georgia DOT is acting as lead state for this study. Other participating states are Alabama, Florida, Kentucky, Mississippi, North Carolina, and Tennessee. The main objective of the study is to identify and quantify the factors contributing to fatal crash occurrences in the eight southeastern states, and to identify potentially effective countermeasures.

Georgia Institute of Technology (Georgia Tech) is conducting the project through a contract with the Georgia DOT. In addition to Georgia Tech, each participating state is also entering into an agreement with an in-state university to conduct a more detailed study at the state level. Georgia Tech's role is to prepare regional summaries of individual state studies, monitor the conduct of the individual state studies to

assure uniformity of study effort, and to transfer information, knowledge, and expertise. Dr. David Clarke of Clemson University was selected to conduct South Carolina's part of the study.

A kickoff meeting for the study was held on November 17th and 18th in Braselton, Georgia. Federal, state, and university representatives met to discuss the overall research objectives, a research framework, and specific research topic areas. Each individual state study should be completed in two (2) years. ♦

AASHTO National RAC Meeting held in Nashville

The AASHTO National Research Advisory Committee (RAC) meeting was held August 2-5, 1998 in Nashville, Tennessee.

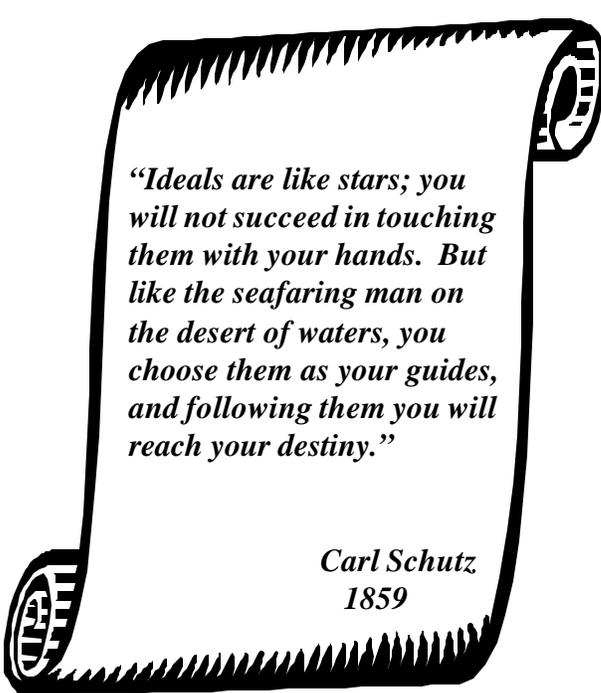


The three-day meeting was attended by representatives from Federal and State agencies as well as public and private research organizations. Some of the main topics discussed at the meeting included: 1) the passage of TEA-21 and its impact on funding of federal programs (ie. SCOR, FHWA, TRB, LTTP); 2) implementing new transportation technology; 3) management of research and development; 4) the mission of the RAC and a self-evaluation process; 5) cooperation and partnership; 6) transportation information systems; new direction of Intelligent Information Systems (ITS); and 7) discussion and experiences of state DOT's Peer Exchanges to date.

Regional breakout sessions were also held which gave each region the opportunity to discuss issues relating to their area of interest. Each region was also asked to discuss funding shortfalls in national research programs. Region 2 states expressed interest in assisting with the national programs, however, they opposed any mandatory takedowns from the state's SPR funds.

Also, Colonel Michael Mullane, retired NASA Astronaut, gave a special presentation titled "**Lessons from Challenger.**" Colonel Mullane described some of the training involved and experiences he had in space. He also related how NASA overcame many problems associated with space flight and the Challenger disaster.

Finally, it was decided that the next national meeting would be held in either Chicago, Illinois or St. Louis, Missouri. The next meeting is schedule for the year 2000. ♦



"Ideals are like stars; you will not succeed in touching them with your hands. But like the seafaring man on the desert of waters, you choose them as your guides, and following them you will reach your destiny."

*Carl Schutz
1859*

**Research Projects Started Between
July 1, 1998 and December 31, 1998**

Project No. 585, "Evaluation of Economical and Efficient Method for Corrosion Protection of Structural Concrete: Experimental Studies and Mathematical Modeling - Phase II"

Principal Investigator: Dr. Branko N. Popov, University of South Carolina

Project No. 586, "A Laboratory and Field Evaluation of Use of Waste Materials in Construction of a Rest Area"

Principal Investigator: Dr. Serji N. Amirkhanian, Clemson University

Project No. 587, "Bridge Rehabilitation Using Fiber Reinforced Polymer (FRP) Composites"

Principal Investigator: Dr. Michael F. Petrou, University of South Carolina

Project No. 588, "Load Testing for Assessment and Rating of Highway Bridges"

Principal Investigator: Dr. Scott D. Schiff, Clemson University

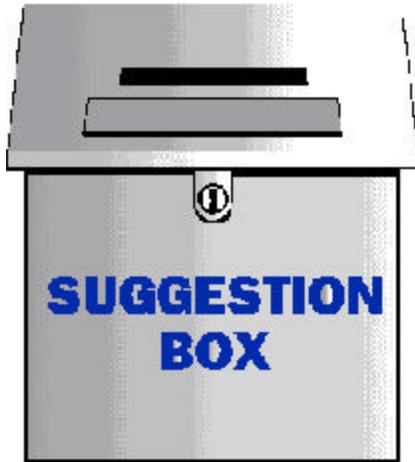
.....
**Research Projects Completed Between
July 1, 1998 and December 31, 1998**

Research Project, "Evaluation of Economical and Efficient Method for Corrosion Protection of Structural Concrete - Phase I"

Principal Investigator: Dr. Branko N. Popov, University of South Carolina

If you would like a copy of the final report for this project, please contact:

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If you have any suggestions for improving our newsletter or know of any topics that should be included, please contact Mr. Mike Sanders at (803) 737-6691. You may also mail them to the RD & T Newsletter, SCDOT, Research and Materials Laboratory, P.O. Box 191, Columbia, SC 29202.



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