STATE OF DELAWARE

Department of Transportation

Nathan Hayward III, Secretary

DelDOT Research Peer Exchange
Dover, Delaware

May 17 -19, 2004

Final Report

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Overview

May 17 – 19, 2004, the Delaware Department of Transportation hosted the 2nd Peer Exchange of its research program (*the first peer exchange was held in October 1998*). Research Peer Exchanges are held periodically in every state and include participants from the state Department of Transportation (DOT), the Federal Highway Administration (FHWA), and other DOTs. The goal is for participants to exchange information and ideas with the intent of using that information to improve upon their respective programs.

The Peer Exchange held in May 2004, included a team composed of representatives from the Delaware DOT (DelDOT), FHWA, the Maryland State Highway Administration (SHA), the Pennsylvania DOT (PENNDOT), the South Carolina DOT (SCDOT), and the University of Delaware (UD). Prior to the meeting the team had an opportunity to review several documents to help familiarize them with research at DelDOT. Documents reviewed included the 1998 Peer Exchange final report, DelDOT's Research, Development, and Technology Transfer Process, a list of current research projects, and the Delaware Center for Transportation's newsletter.

The original goal of the meeting was to discuss issues regarding the implementation of research results. In order to accomplish this, the team met with DelDOT division directors, research program managers, district engineers, research committee, representatives from UD, and the Honorable Roger P. Roy, Delaware State Representative. At each of these meetings an overview of DelDOTs research program and project selection process was provided for attendees. Among other things, the team learned the following about DelDOT's program:

- The legislature provides $250,000 annually to DelDOT for research projects with UD.
- Additional funding for research projects comes from State Planning and Research funds and other internal resources if necessary.
- The annual program typically includes 6-7 new projects.
- Most projects are one-year and cost $30,000 - $40,000.
- Anyone at DelDOT can propose a research project.
- DelDOT has a Research Committee which selects the projects to be funded.

The rest of the time was dedicated to an open discussion on how the Research Program can better assist the various offices. The discussion provided an opportunity for the representatives from the other states to share some of their best practices and lessons learned. The meeting at UD included a discussion on the relationship between the university and the DOT and a tour of the lab facilities and bridge center.

Upon the conclusion of all the meetings, the Peer Exchange Team convened to discuss its findings. The findings were then presented to the various groups that the Team met with. It is important to note that although the intended goal of the Peer Exchange was to focus on implementation of research results, the bulk of the discussion ended up concentrating on marketing the program/process to DelDOT employees. The remainder of this report details the team's findings which includes highlights of DelDOT's Research Program and suggested focus areas for the next 12 – 24 months.

Team Findings

Highlights:

1. **The relationship between DelDOT and the University of Delaware** (UD) is a tremendous asset to the Research program. The University works closely with the DOT and provides valuable support in a number of areas. UD support includes holding a research forum every two years where ideas for future research are generated, and providing literature search services through the Technology Transfer (T2) Center to help reduce duplication of work.

2. **The ability to stretch limited research funding** helps DelDOT address a number of research priorities each year. DelDot funds approximately six – seven projects annually with an average cost of $30,000 - $40,000 per project. The team members found this to be remarkable and noted that in each of their respective states, research projects with state universities average close to $100,000 per project.

3. **DelDOT has a diverse research program**. Based on a review of the current research projects and from meeting with DelDOT staff, the research program covers a wide variety of the DOT's operations including environmental, pavement and materials, planning, structures and bridge, traffic and ITS, and transit research. It is clear that the program focuses on the priorities of all areas of the DOT rather than concentrating resources in one or two places.

4. **DelDOT's annual Research Showcase** (poster session) allows staff to come and learn about each research project. This type of event helps make research projects and results known to a larger audience and helps demonstrate the benefit of transportation research.

5. **The bi-annual Research Forum at UD** helps generate ideas for future projects. The research forum held in 2003 included an impressive 180 people and helped generate approximately 200 ideas.

6. **DelDOT's research process is documented** to help serve as a reference for staff that would like to better understand the program. The information is relatively brief and user friendly and can easily be distributed.

Team Findings

Suggested Focus Areas:

Although the original intent of the Peer Exchange was to discuss implementation of research results, after meeting with a number of employees and listening to their feedback, the team found the most important focus for the research program in the near term should be to **increase awareness about DelDOT's research program/process**. Implementation continues to be a challenge not just at DelDOT but for the entire research community. It is hoped that through increased involvement and support from the different functional areas, and by ensuring that the research program focuses on suppoting the priorities of the Department, implementation will become an expectation rather than a desire.

The following is a list of ideas which DelDOT can use to help increase the awareness of its research program/process:

- Periodically attend the District Engineers' meeting (and other as appropriate) to promote the research program and its benefits.
- Initiate a "customer service" tour to the various offices at DelDOT for the same purpose as mentioned above.
- Standardize quarterly research reports so employees become familiar with them.
- Consider a wider internal distribution of research results (e-mail notifications, posting reports on the Internet, etc.).
- Review the make-up of the Research Committee to ensure that the membership is appropriate.
- Dedicate at least one full-time position to managing the research program plus one full-time researcher at UD.
- Increase senior managers' presence in the research program to provide more top level support.
- Create a steering committee to help guide each research project. The committee should be required to have monthly contact (face-to-face, telephone, e-mail,) with the Principal Investigator (P.I.) to help ensure that the project stays on track.
- Develop a technology sheet or summary of each final research report so the results can be easily reviewed by DelDOT employees.
- Document "top accomplishments" each year to demonstrate the benefit of the research program to the department.
- Review the current research process to make sure that it continues to support DelDOT's needs.
- Develop a flow chart of the process to make it easy to understand and to serve as a quick reference for employees.

A number of these suggestions have been implemented by the members of the team in their respective programs. For example, the SCDOT has a steering committee for each project, PENNDOT requires monthly contact with the P.I., and the MD SHA requires a one-two page summary for each final research report. Each suggestion noted above should be relatively easy for DelDOT to use to help move towards the goal of increasing awareness about its research program/process.

Appendix

Peer Exchange Team:

Allison Hardt	Maryland State Highway Administration
Larry Klepner	University of Delaware – Technology Transfer Center
Wayne Kling	Delaware Department of Transportation
Dan La Combe	Delaware Department of Transportation
Bill Pogash	Pennsylvania Department of Transportation
Mike Sanders	South Carolina Department of Transportation
Rosemary Samick	Federal Highway Administration – Delaware Division

DelDOT Participants:

Mark Alexander	Canal District Engineer
Christine Bell	Director of Finance
Andy Bowman	North District Engineer
Marti Dobson	Director of Technology and Support Operations
Margaret Failing	Director of Human Resources
Keith Gray	Bridge Design Engineer
Vasuki Hiresave	Central District Engineer
Jim McNinch	Director of Maintenance & Operations
Ray Miller	Director, Delaware Transit Corporation
Dennis O'Shea	Assistant Director of Design
Ralph Reeb	Director of Planning
Brad Saborio	Civil Engineer III
Jiten Soneji	Bridge Design Engineer
Don Weber	Chief Traffic Engineer
Joe Wright	South District Engineer

Other Participants:

Nii Attoh-Okine	Professor, University of Delaware
Ardeshir Faghri	Director, Delaware Center for Transportation
The Honorable Roger Roy	Delaware State Representative

Peer Exchange Schedule

Monday, May 17

6:00 p.m.	Team greeting and informal social dinner at Dover Downs

Tuesday, May 18

8:00 a.m. – 9:00 a.m.	Team interviews DelDOT research program managers
9:30 a.m. – 10:30 a.m.	Team interviews division directors
10:30 a.m. – 11:00 a.m.	Team interviews DelDOT Chief Traffic Engineer
11:30 a.m. – 1:30 p.m.	Team travels to the University of Delaware – lunch at the Blue and Gold Club
1:30 p.m. – 2:00 p.m.	Team interviews State Representative Roger Roy and Planning Director Ralph Reeb at the DCT
2:00 p.m. – 4:30 p.m.	Team interviews University of Delaware project investigators, Lab and Bridge Centre demonstrations

Wednesday, May 19

8:30 a.m. – 10:30 a.m.	Team interviews DelDOT district engineers
10:30 a.m. – 11:30 a.m.	Team interviews DelDOT Research Committee
1:00 p.m. – 2:30 p.m.	Team assembles to prepare findings/recommendations
2:30 p.m. – 4:30 p.m.	Team presents findings/recommendations to DelDOT division directors. DelDOT Research Committee, DelDOT research program managers, and other DelDOT and DTC managers
4:30 p.m.	Adjourn