

Transportation Education Demonstration Pilot Program UVM Transportation Research Center

Overview of the **Transportation Systems Institute (TSI)**

June 30, 2012

The TRC partnered with Vermont Technical College Technology Extension Division (VTC TED) to successfully implement the Transportation Systems Institute. This program was created to address the needs of incumbent state transportation workers within Vermont, New Hampshire and Maine.

A *needs assessment* was conducted of VT, NH & ME Departments of Transportation consisting of 41 structured interviews with DOT officials conducted by an evaluation specialist contracted for by the VTC TED. In response to the key research question, "What do you think is the biggest challenge facing this DOT in the next 5 years?" the almost universal response was "*Obtaining necessary funding and replacing the knowledge and experience lost through retirement.*" In response to a question on what are the critical skills needed by the workforce to meet the needs of the DOTs in the next 5 years, the responses were varied but "management, leadership and communications" skills were most frequently cited. When asked for clarification, responses were "getting people to work effectively together, building collaboration, communicating effectively

In 2010, the first cohort of participants were selected from DOT employees in Vermont, New Hampshire and Maine (5 from each state). Fourteen participants finished the program. Based on the needs assessment and introductory work with the participants, TSI training modules were led by Vermont Technical College professionals and outside experts and included the following curriculum elements:

<ul style="list-style-type: none">• Leadership Styles & Workplace Principles• Systems & Organizational Change• Coaching & Feedback• Conflict Management• Trends & Topics in Transportation• Public & Government Relations• Government Project Finance• Adult Learners, Meetings, & Mentoring	<ul style="list-style-type: none">• Train the Trainer• Attitude, Motivation & Customer Services Skills• Technical Project Management• Having Difficult Conversations• Ageism• Managing & Optimizing Group Processing• Critical Thinking• You Can't Do it Alone
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In evaluating their experience in the TSI program:

- 60% of the participants agreed that the Institute had increased their knowledge base on critical issues.
- 50% of the participants agreed that the Institute changed their thinking.
- The majority (70%) of participants agreed that the Institute helped them to better understand their role in the workplace.
- 60% of participants agreed that the Institute changed their individual behavior.

- 70% participants agreed that the Institute provided an increase in their skill level.
- 50% of participants agreed that the Institute changed their understanding of diversity.
- More than half (56%) of the participants confirmed that the Institute made them realize there is a need for additional training in the workplace.
- 100% of participants agreed they would recommend this program to other colleagues.

Based on participant feedback, some curriculum modifications were made and a new cohort was chosen (12) to participate in the program in 2011.

Participants came from diverse backgrounds and positions:

MAINE

Contracts Engineer
 Superintendent of Highway Operations
 Transportation Planning Analyst
 Policy Development Specialist
 Assistant Bridge Maintenance Engineer
 Public Service Manager – Civil Engineer IV
 Human Resources
 Civil Rights Office

NEW HAMPSHIRE

Municipal Highways Engineer,
 Bureau of Planning & Community Assistance
 Right of Way Engineer
 District Engineer
 Assistant Traffic Engineer - Bureau of Traffic
 Program Specialist
 District Construction Engineer
 Chief of Final Design
 Financial Analyst
 Civil Engineer IV

VERMONT

Quality Assurance & Technical Development Engineer
 District Transportation Administrator
 IT Manager
 Structures Design Engineer
 Right of Way
 Local Transportation Facilities Program
 Administrative Services
 Maintenance Transportation Administrator
 Highway Safety & Design

At the conclusion of the second cohort training the two cohorts were brought together for three-day programs (June 2011, November 2011 and May 2012). The purpose of these sessions and the coaching that transpired between the sessions was to work with the participants on projects and efforts to convert the learning from the TSI into actionable work and effort within their home agencies while maintaining a tri-state learning community.

In the spring of 2012, VTC TED piloted a modified curriculum for eleven municipal leaders and planners in transportation, with design assistance from TSI participants. In a three-day session in March and a follow up session in May the participants look at strategies for state and local agencies to work more collaboratively together to:

1. Address permitting processes
2. Streamlining funded projects, fed – state – local
3. Share common messages and vision
4. Involve federal people and DOTs in a system discussion
5. Getting town, state and FHWA together to change and streamline processes with federal programs
6. Improve and speed up the hiring and review of engineering services

Tropical Storm Irene was used as a case study to provide context for the discussion. For the state DOT TSI cohort members this was an opportunity to explore how to work more productively with their municipal level counterparts.

A review of the value of the TSI for participants was captured in a video presentation by VTC TED that was presented as a showcase at the National Transportation Workforce Summit in April 2012.