

**NORTHEASTERN DISTRICT MEETING – MAY 22-24, 2013
NORTHAMPTON, MA**

TECHNICAL PRESENTATION ABSTRACT BRIEFS

Presenter Geography Key	New England Section (Home Section)
	Upstate Section
	Met Section
	Outside District

Wednesday 1-2:30 PM

**Session 1A - The Transportation Profession - Staying Current
Moderator: Cole Fitzpatrick, UMass Amherst**

Presenter/Author: Deanna Kennedy, Owner, Creator, Celia Vine

Leveraging Social Media in Today's Workplace

Social media has become a very broad term in today's world. This presentation will highlight the best practices for establishing a professional presence on specific social media streams, as well as how to leverage it to make the most of your business goals and objectives, including getting ahead.

Presenter/Author: Gordon Meth, PE, PTOE, Traffic Director, RBA Group

The Future of Transportation Certifications

This presentation will describe existing certification programs offered by the Transportation Professional Certification Board, and will describe additional certification programs that are currently under discussion for the future.

***Authors/Presenter: David S. Hurwitz, Ph.D., Assistant Professor
School of Civil and Construction Engineering, Oregon State University***

Integration of Professional Practice into Undergraduate Curriculum

This research project determined the core concepts for isolated and coordinated traffic signal systems and synthesized student and practitioner conceptual understanding of them. This presentation discusses validated clinical demonstration interviews with

approximately 50 students and 25 early career engineering professionals to investigate, characterize, and synthesize their understandings of traffic signal operations.

Authors/Presenter: Ian McKinnon, MS Civil Engineering, UMass Amherst

Explaining the Addiction and Benefits of Social Media in Today's World

What's the big deal about Twitter, Instagram, and Foursquare? This presentation discusses how social media is addictive along with the negative and positive benefits of transportation professionals 'being connected' 24/7.

Wednesday 3-4:30 PM

Session 2A - Transportation in the 21st Century - How Do We Get There?

Moderator: W. Hibbett Neel, ITE International Vice President Candidate

Presenter/Author: Kevin Heaslip, Asst. Professor, Civil & Environmental Engineering, Utah State University

Platooning Safety and Capacity in Automated Electric Transportation

Results of Automated Electric Transportation (AET) models show that when platooning is initially safe, very high vehicle flows are possible. For example, over 12,000 vehicles/hour for initial speeds of 30 meters/second and 10 vehicle platoons. This presentation discusses the challenges associated with ensuring safety under an emergency braking standard that requires very small communication delays and, most importantly, tight braking variances between the vehicles within a platoon.

Author/Presenter: Aliyah Horton – ITE Headquarters

MAP 21 and Beyond

This presentation will discuss the opportunities and challenges of the recently enacted MAP 21 Federal legislation for transportation engineers and will update attendees on the status and outlook for passage of national legislative initiatives.

Authors/Presenter: Dana Roscoe, Principal Planner, Pioneer Valley Planning Commission

Knowledge Corridor Insights

This presentation will highlight how the Knowledge Corridor came about and will describe its evolution over time. He will describe the multi-state Corridor, its

components and the major benefits of the project that brings together several university and community stakeholders in the western part of New England.

Thursday 9-10:30 AM

Session 3A - Traffic Operations Options - Multi-Modal Analysis
Moderator: Mayer Horn, Director of Transportation Planning, GPI

Authors/Presenters: Eleni Christofa and Robert Jay Campbell, Department of Civil and Environmental Engineering, University of Massachusetts, Amherst

Impact of Bus Stops on the Capacity of Signalized Intersections

Bus operations, and more specifically the presence of bus stops, are critical in determining the carrying capacity of signalized intersections. The findings of this study suggest that new adjustment factors need to be added to the 2010 HCM calculation of saturation flows to accurately account for bus dwell time and bus stop location.

Author/Presenter: Frederick A. Moseley, PE, Vice President, Fay, Spofford & Thorndike

Utilizing Urban Street Multi-Modal Portion of the 2010 HCM

FHWA recently requested a multi-modal analysis for an urban corridor improvement project using the Urban Streets sections of the 2010 Highway Capacity Manual. This will summarize our experience with the new analysis along with lessons learned and provide a summary of analysis packages/software that agencies are currently using.

Author/Presenter: Leon Goodman, P.E., PTOE, Transportation Consultant, Past International ITE President, Sudbury, MA

The Staged Rail Trail Conversion, Pedestrian/Bike and Bus Rapid Transit

Boston's Metropolitan Area Planning Council (MAPC) looked at the feasibility of using the ROW of the inactive Central Massachusetts RR for a shared use (bicycle/pedestrian) path and a dedicated busway. This presentation provides ideas that address some of the key ROW and travel time issues...possibly leading to achievement of the joint use objectives on a staged, community-serving, environmentally acceptable basis that might be applicable in other similar situations.

Presenter/Author: Ruth Fitzgerald, AICP Fitzgerald & Halliday, Inc. and Dale Gozalkowski, CHA Companies

**The Lake Champlain Bridge Story
Extraordinary Collaboration on a Broad Scale/Technical Solutions through
Collaboration**

In October 2009, the historic Lake Champlain Bridge connecting Vermont and New York was closed without warning, leaving travelers with a 100 mile detour--an enormous hardship. This presentation discusses the extraordinary collaborative measures undertaken to restore the facility as quickly as possible.

Strong collaboration helped produce solutions to avoid impacting valuable protected resources. Also, an extensive program of commemoration of the demolished bridge was developed to mitigate its loss, leading to the opening of a new bridge in late 2011 with the support and celebration.

Author/Presenter: Nathaniel Cabral-Curtis – Public Involvement Specialist, Howard/Stein-Hudson

Effective Public Involvement Leads to On-time Project Delivery

HSH has been closely involved in supporting transparent, responsive and thorough public involvement efforts for the of the Commonwealth of Massachusetts \$3 billion Accelerated Bridge Program (ABP) to significantly reduce the number of structurally deficient bridges within the state.

Author/Presenter: Rodney C. Emery, PE, PTOE (MA, ME, NH, RI ,FL), Ground Transportation Manager, JACOBS

Managing design tradeoffs between Road Users at the Route 79/I-195 Interchange in Fall River, MA

This presentation will tell the story of how MassDOT proposes to reconstruct the Route 79/I-195 Interchange in Fall River. The project requires the removal of a 1,400-foot elevated freeway section carrying 40,000 ADT and replacing it with at urban boulevard.

Thursday 11:00 AM – 12:30 PM

Session 4A - Sustainability in Transportation - What Are We Doing About It?

Moderator: Dan Dulaski, Northeastern University

Author: G. Wade Walker, PE - Director of Transportation Planning, Presented by Ted DeSantos, Director of Transportation Services, Fuss & O'Neill

Creating a Successful Public Involvement Program to Implement a Nationally-recognized Green Lanes Project

A community-led tactical urbanism exercise in the Broad Avenue Arts District in Memphis, TN led to national recognition from the Green Lanes Project. This presentation will outline the design challenges of engineering an effective cycle track in this context.

Author/Presenter: Jeralee Anderson, Ph.D., P.E., LEED-AP, PE - Director of Greenroads Program

The Greenroads Project Rating Program

The presentation offers insight into sustainable design and construction practices and the Greenroads Certification process for transportation projects. The presenter will provide an overview of the Greenroads Rating System and give case examples of successfully certified projects.

Presenter/Author: Mark C. Budosh, PE, Project Engineer, Barton & Loguidice, P.C.

E. Genesee St. (Syracuse) Connective Corridor Phase 1

The City of Syracuse, in partnership with Syracuse University (SU), has invested significant resources in creating a true bicycle, pedestrian and transit corridor that connects and revitalizes major portions of downtown Syracuse and University Hill.

Author/Presenter: Wayne Feiden, FAICP, Director of Planning and Development, City of Northampton, Massachusetts

Sustainable low-cost implementation success stories from Northampton, Massachusetts

In the last few years Northampton, has developed a sustainable transportation paradigm. New rail trails, roundabouts completed and under design, a major safe-routes-to-schools project, and a traffic calming and bicycle and pedestrian orientation helped Northampton win bronze ratings as a “bicycle-friendly” and a “walk-friendly” community are discussed in this presentation.

Thursday 11:00 AM – 12:30 PM

Session 4B - Adaptive Signal Control Approaches

Moderator: Frank Dolan, Bergmann Associates

Author/Presenter: David DeBaie, Senior Traffic Engineer, Stantec

Traffic Impact Fee Funding of Adaptive Traffic Control and other Traffic Signal Management

Traffic impact fees have been established through state law and local ordinances in many states within the NE District Region and could be used to provide the incremental funds for adaptive traffic control at a location. This presentation discusses how State laws and municipal ordinances need to be amended and technical support is needed to demonstrate the reasonableness of this use of Traffic impact fees.

Presenter/Author: Aleksandar Stevanovic, PhD, P.E., Rhythm Engineering, Inc.

Part 1 of 2 - Comparing Adaptive Traffic Control to Optimized Timing Plans: Simulations of Typical and Extraordinary Traffic Conditions

One of the common questions when evaluating an adaptive traffic control system (ATCS) is how well it compares to recently implemented time of day (TOD) plans. This session presents one such comparison supported by a recent micro-simulation study of InSync adaptive control and several optimized TOD plans by an expert in traffic signal control systems and simulation.

Presenter/Author: Tom Cooper, Rhythm Engineering, Inc.

Part 2 of 2 - Documented Safety Improvements of Adaptive Traffic Signals

Transportation professionals at the national, state and local levels are putting an unprecedented focus on improving road safety through anti-distracted driving initiatives, “toward zero fatalities” campaigns and other similar efforts. This presentation will focus on case studies, independently produced before-and-after results, and feedback from traffic engineers operating one such ATS technology – InSync -- at more than 800 intersections in 25 states that is verified by police departments across the U.S. to reduce crashes.

Author/Presenter: Keri Pyke, P.E., PTOE – Principal and Director of Transportation Planning, Howard/Stein-Hudson

Applying Complete Streets Principles in Constrained Environments

This presentation explores methods of providing Complete Streets in environments where the constraints include existing buildings, historic or other environmentally sensitive issues, and challenges in acquiring right-of-way to provide wider sidewalks, separate bicycle facilities, and/or transit accommodations such as BRT.

Author/Presenter: Alan Cloutier, PE, PTOE, Senior Engineer, Fay, Spofford & Thorndike

Impacts of a Road Diet on Nonantum Road, Boston, Newton, and Watertown, MA

During 2010, construction began on a road diet project on Nonantum Road involving reducing a four lane arterial road to a two lanes to improve safety and enhance mobility for all users in three Massachusetts communities. A summary of accident trends and the effectiveness of crash countermeasures will be discussed.

Author/Presenter: Steven Gayle, PTP, Senior Consultant, RSG Group, Inc.

The Challenges of Complete Streets Implementation

When Governor Andrew Cuomo signed a Complete Streets Law in August 2011, advocates for this approach to serving all users of the local transportation system justly felt that they had won a significant victory. This presentation will explore the realities of implementing Complete Streets legislation in New York, and highlight the activities of the New York State Association of Metropolitan Planning Organizations.

Author/Presenter: Douglas Prentiss, PE, PTOE Senior Principal Engineer, Fay, Spofford & Thorndike

From Structural to the Transportation Impacts of a Charles River Crossing

The Commonwealth passed a bill that that allocates \$3 billion to rehabilitate or replace 543 bridges around the State through the Accelerated Bridge Program (ABP). This presentation will address how one ABP Project, the historic Anderson Memorial Bridge turned into a road diet project and a Complete Street facility presently under construction.

Thursday 2:30 –4:00 PM

**Session 5B - The Flashing Yellow Arrow - Policies and Implementation
Andrea Bill, Traffic Safety Program Manager, Wisconsin DOT**

Author/Presenter: Jim Danila, P.E., PTOE - Assistant State Traffic Engineer MassDOT – Highway Division

Flashing Yellow Arrow – MassDOT Policy

MassDOT faces the challenge of introducing the flashing yellow arrow to a driving public that has, for the most part, never seen it in operation. This presentation will focus on MassDOT's data collection efforts, anticipated design and construction plan, public outreach, the Department's approach to modifying driver expectations, and strategies for funding Flashing Yellow Arrow implementation across Massachusetts.

Author/Presenter: Bill Lambert, PE- Traffic Engineer/Administrator, NHDOT Bureau of Traffic

New Hampshire Flashing Yellow Arrow implementation

The introduction of the Flashing Yellow Arrow (FYA) as an optional display for the permissive turn phase was intended to improve safety for this movement, but for the NHDOT, it provides an opportunity to better utilize this proven traffic engineering practice. This presentation discusses the challenges of implementing this new display and the Department's efforts to implement it throughout the state.

Author/Presenter: David Noyce, PhD, PE, University of Wisconsin-Madison

National Perspective on Flashing Yellow Arrow

Dr. Noyce will review the national research that conclusively shows the flashing yellow arrow is a device that has a solid role in imparting information to motorists about the need to yield to oncoming traffic compared to available alternative treatments.

Friday 9:00 –10:30 AM

**Session 6A - Work Zones - Making Them Safer
Moderator: Mike Wieszchowski, GPI**

Author/Presenter: Mark B. Yedlin, Director of Simulation Modeling Services, Greenman-Pedersen, Inc. Engineering and Construction Services

Construction Staging of NJ-495

This project involved the use of dynamic traffic assignment and micro-simulation models to evaluate the traffic impacts of construction staging plans for the rehabilitation of the NJ-495 viaduct over Paterson Plank Road and US 1&9. The presentation will indicate how much additional traffic diverted to alternate routes, mitigation, and construction period traffic conditions were addressed.

Authors/Presenters: Michael Sutton, Project Manager, VHB

Making Work Zones Safe for All Road Users

This session discusses MassDOT's policy that planning, design and operation of work zones shall accommodate all road users to the safest extent possible. Guidance is provided for consultants, contractors, municipalities and utilities on how to achieve a safe work zone.

Author/Presenter: Neil Boudreau, MassDOT State Traffic Engineer and Ross Sheckler, iCone Products

Benefits of Smart Work Zone Technology

The presentation will explore examples of successful SWZ projects in Massachusetts and how the technology is being used on a National level to mitigate traffic impacts associated with the loss of lane capacity during construction.

Friday 9:00 –10:30 AM

Session 6B - Managing Safety Data

Moderator: Professor John Collura, UMass Amherst

Panel discussion will focus on the issues and challenges associated with the design, deployment, and maintenance of highway safety database management and analysis systems. The session will consist of 3 panel members including individuals from Rutgers, FHWA, and UMass.

Author/Presenter: Heather Rothenberg, PhD, Researcher, USDOT Research and Innovation Technology Center, Cambridge, MA

FHWA Data Dashboard Innovations

MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), was signed into law by President Obama on July 6, 2012. Funding surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014, MAP-21 is the first long-term highway authorization enacted since 2005. This presentation will provide an overview of FHWA's Highway Safety Improvement Program as outlined in MAP-21, with a focus on FHWA's Office of Safety data efforts including its Roadway Safety Data Community of Practice data dashboard.

Author/Presenter: Robin Riessman, Associate Director, University of Massachusetts Safety Research Program – Technical Assistance Center

Meeting traffic safety data needs in a data intensive world

The Traffic Safety – Technical Assistance Center (TS/TAC) was established with the intent of providing an analytical support system to enhance current approaches to traffic safety analyses in Massachusetts. Utilizing the UMassSafe Traffic Safety Data Warehouse, this presentation will discuss the process of organizing the safety data and demonstrate the resulting analysis on multiple applied topics including work zone safety, haz-mat routing, commercial vehicle enforcement, and the development of interactive online data tools.

Author/Presenter: Evan Bossett, Lead Application Developer, The Rutgers State University of New Jersey Center for Advanced Infrastructure and Transportation

Plan4Safety (P4S) is a tool which has been developed to help traffic safety professionals access and utilize crash data in order to understand trends and help facilitate project prioritization decisions. This presentation will take a practical approach in identifying many of the issues surrounding successful implementation of crash analysis software.

Friday 11:00 AM – 12:30 PM

Session 7A - Traffic Management During Disasters

Moderator: Armando Lepore, Principal Engineer, Port Authority of NY & NJ

Author/Presenter: Michael Salatti, PE, PTOE, Vice President/Director of Transportation Services, GPI

Signal Recovery Reimbursement after Hurricane Sandy

Hurricane Sandy caused enormous destruction to the transportation infrastructure in New York and New Jersey. Mike will discuss lessons learned with the on-going reimbursement process with FHWA and FEMA in restoring the system to its optimal functionality.

Author/Presenter: Scott Orenstein, PE, PTOE, Vice President/Director of Transportation Services, GPI

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Author/Presenter: Joseph Segale, PE, PTP, Vermont Department of Transportation

Transitioning From Disaster Recovery to Building a Resilient System

VTrans is starting the transition from recovery to planning and implementing strategies that will make the system more resilient when the next disaster hits. As Policy & Planning manager, Mr. Segale has been involved in several initiatives that support this transition which will be described in the presentation.

Friday 11:00 AM –12:30 PM

Session 7B - Accommodating all users

Radha Gomez, UMass Amherst

Authors/Presenters: Amir Rizavi, PE and Paul Eng-Wong, P.E., FITE, ITE International Past President

Transportation Alternatives for the Elderly

This presentation aims to identify successful programs currently in place, and make recommendations based on discussions with Transportation Professionals within various communities. This would help create a “Toolbox” of on-going efforts by communities and local agencies to accommodate elderly mobility.

Presenter/Author: Michelle Langone Danilla, PE, PTOE, Civil Engineer

Improving Safety for Bicyclists

With the increase in bicycling and bicycle infrastructure, planners and engineers are looking to improve safety for all users. This presentation will focus on recent research results and how to apply the findings to design solutions including examples. The recent research will include the safety in numbers theory, crash analysis where possible, and before and after results.

Authors/Presenter: Kenneth Petraglia, PE, PTOE and Michael Mike Wasielewski, PE, PTOE, BETA Inc.

Roundabouts: Love Them Enough to (Occasionally) Say “No”

Roundabouts are a very efficient traffic control measure touted by FHWA as a one of its top ten safety enhancement measures. Unfortunately, the euphoria over roundabouts has led some to consider roundabout installations not suited the prevailing environment. This presentation provides a case study examining the pitfalls associated with installation of roundabout control at a key urban downtown location.

Author/Presenter: Bob Chamberlin, Senior Director, RSG Group, Inc.

Adapting a Future Highway to meet Evolving Needs

In February 2011 Vermont’s Governor Shumlin cancelled work on the Circumferential Highway (“the Circ”), a highway that had been in planning for over 40 years and had been the subject of two complete EISs. This presentation focuses on the types of improvements specified in the subsequent planning study and the accelerated progression of those improvements through scoping, design, and construction and provides insights into working with a diverse set of stakeholders, essentially the same stakeholders at the table during “the Circ” EIS, toward building consensus on multimodal improvements.

Thursday May 23 Luncheon Presentation

The Second William W. Boyer Lecture

1:30-2:00 PM

Author/Speaker: Dr. Paul Shuldiner, P.E. , Professor Emeritus, Department of Civil and Environmental Engineering, University of Massachusetts at Amherst

The Impact of Information Technology on Changing Conceptions of the Individual in Travel Demand Modeling

The objective of the lecture is to reflect on changes that have taken place over the past some seventy years in the role accorded the human element in travel demand modeling, and to speculate on how emerging data management and communications technology might impact upon this arc of change. The focus of this reflection, will be limited to but one aspect of the profoundly complex art and science of travel demand forecasting: how the individual is viewed – as a source of data; as a unit of analysis; and as the intended beneficiary. We begin with interrogating motorists on highway networks; we conclude with ubiquitous location- tracking services and texting on social networks.