



**MARYLAND
TRANSPORTATION
TECHNOLOGY
TRANSFER CENTER**

Local Technical Assistance
Program (LTAP)
University of Maryland at
College Park

mdt2center.umd.edu

INSIDE:

Pages 2-6
Our Currently
Scheduled
Courses

technotes

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Roadway Management Conference

The MD T2 Center, Maryland's Local Technical Assistance Program (LTAP), along with the other LTAP Centers in the Mid-Atlantic region, are seeking input about reviving the Roadway Management Conference (RMC).

The RMC was intended for practitioners who construct and maintain state, county, and municipal roads and streets. These individuals face many challenges, such as stormwater management, continuing budget constraints, and experienced employees retiring. The RMC was designed to help these practitioners prepare for and successfully address such challenges.

A short online survey has been developed to help determine if the RMC should be revived and to make programming and logistical decisions about this event. Please take a few minutes and provide your feedback. Your input is needed!

To complete the survey, visit [Roadway Management Conference Survey](#)



Welcome Patrice!

We are happy to announce and welcome Patrice Abrams to our staff. Patrice comes to us from the State of Maryland Department of Housing and Community Development.

She will be assisting the Center with day-to-day tasks and will be our welcoming face at our on-site courses. Patrice is married with three children, a girl and two boys. She is a family-orientated person, enjoys sports and being a team mom for her kids sport teams.

Be sure to say hello if you see Patrice!



The following courses are currently scheduled and we are still adding to the list! For more information or to schedule a class, contact Janette Prince at 301.405.6535 or register online at www.mdt2center.umd.edu.

BASIC DRAINAGE

Location: MD T2 Center at College Park, Maryland

Date: March 8, 2017

Time: 8:30am - 3:30pm

This course instructed by Ed Stellfox emphasizes the importance of good drainage with discussions of water and its effects on roads, problems caused by improper drainage, and ways to handle these problems. It covers types of drainage facilities, ranging from ditches, culverts, subdrains, inlets and end structures. Their uses, materials, installation and maintenance as well as erosion control are addressed. It also introduces geosynthetic drainage applications. The following topics will be covered: importance of drainage, characteristics of water, system maintenance, drainage principles, surface and subsurface drainage, ditches, driveways, drainage culverts – materials and placement, headwalls, endwalls and inlets, erosion control, and geosynthetics in drainage.

Professional Development Hours: 6.0.

Registration Fees: \$99 for all participants.

ASPHALT ROADS - COMMON MAINTENANCE PROBLEMS

Location: MD T2 Center at College Park, Maryland

Date: March 29, 2017

Time: 8:30am - 12:30pm

Municipal employees with road maintenance responsibilities should understand the causes of common maintenance problems on asphalt roads and be familiar with proper repair materials and methods. This course instructed by Ed Stellfox discusses causes and repair procedures for common problems such as cracking, potholes, rutting, corrugations, etc. The procedures cover materials, equipment, and techniques for lasting repairs. Also included, a brief discussion of surface treatment.

Professional Development Hours: 4.0.

Registration Fees: \$69 for all participants.

HIGHWAY CAPACITY MANUAL PE REVIEW

Location: MD T2 Center at College Park, Maryland

Date: April 4-6, 2017

Time: 8:30am - 4:00pm

This class is designed for individuals who want to review the Highway Capacity Manual in preparation for taking the PE Exam. The three-day course will review traffic flow characteristics, interrupted, and uninterrupted flow. Sections cover will include the procedures for signalized and unsignalized (two way, all way, and roundabouts) intersections, freeway facilities, freeway, multilane, weaving, ramp, and rural highways. Emphasis will be placed on explaining the principles behind the HCM and making sure the participants are familiar with the Manual. The class will participate in a series of manual exercises and workshops to improve their familiarity with the procedures.

Who Should Attend: Engineers who are planning to take

the PE Exam as well as staff who wish to become familiar with the Highway Capacity Manual.

Agenda Day 1:

8:30am Introduction

9:00am Traffic Flow Characteristics

10:30am Signalized Intersections

1:00pm Signalized Intersections Continued

2:00pm Manual Workshop

3:15pm Unsignalized Intersections

4:30pm Adjourn

Agenda Day 2:

8:30am Unsignalized Intersections Continued

10:00am Manual Unsignalized Intersection Workshops

11:00am Multilane Highways

1:00pm Freeway Basic Sections

2:30pm Multilane/Freeway Basic Section Manual Workshops

4:30pm Adjourn

Agenda Day 3:

8:30am Weaving

10:30am Ramps

1:00pm Weaving and Ramp Manual Workshops

2:45pm Freeway Facilities

3:30pm Two Lane Rural Roads

4:30pm Adjourn

Professional Development Hours: 18.0

Registration Fees: \$299 MD Local Government and \$310 all other registrants.

SEAL COATES, OIL AND CHIP, SLURRY SEALS, MICROSURFACING AND OTHER METHODS OF PRESERVING YOUR ASPHALT PAVEMENTS

Location: MD T2 Center at College Park, Maryland

Date: April 12, 2017

Time: 8:30am - 3:30pm

This course is the first step in making your asphalt pavements last longer at lower costs. The course instructed by Ed Stellfox covers preventive maintenance treatments such as chip seals, slurry seals, and micro-surfacing and discusses when and where each technique could be effective. It presents application methods, including preparation, materials, equipment, operations and safety, along with practical tips on how to avoid trouble. This course is open to municipal officials, road commissioners, supervisors, and superintendents; public works and maintenance personnel; equipment operators; and city or town managers.

Professional Development Hours: 6.0.

Registration Fees: \$99 for all participants.

Continued on page 3

Our Currently Scheduled Courses

(continued from page 2)

ASPHALT RESURFACING

Location: MD T2 Center at College Park, Maryland

Date: April 19, 2017

Time: 8:30am - 12:30pm

This course instructed by Ed Stellfox reviews the various asphalt mixes, their components and their uses. Asphalt resurfacing procedures are covered, including preparation, material, equipment, operation and safety. Special emphasis is placed on proper rolling and compaction of the asphalt overlay. Superpave mix design is discussed as well. Municipal officials, road commissioners, supervisors, and superintendents; public works and maintenance personnel; equipment operators; and city or town managers are encouraged to attend.

Professional Development Hours: 4.0.

Registration Fees: \$69 for all participants.

TO SIGNALIZE OR NOT TO SIGNALIZE (SIGNAL WARRANT & INTERSECTION CONTROL ANALYSIS)

Location: MD T2 Center at College Park, Maryland

Date: May 3, 2017

Time: 8:30am - 4:00pm

This one-day course instructed by Dane Ismart will cover the eight MUTCD signal warrants:

Warrant 1: Eight-Hour Vehicle Volume

Warrant 2: Four-Hour Vehicle Volume

Warrant 3: Peak Hour

Warrant 4: Pedestrian Volume

Warrant 5: School Crossing

Warrant 6: Coordinated Signal System

Warrant 7: Crash Experience

Warrant 8: Roadway Network

The course will also cover warrants for four-way stops as well as alternatives to traffic control signals. A detailed discussion of the advantages and disadvantages both in the terms of capacity and safety of various types of traffic controls will be presented. The basis for both the installation and the removal of traffic control devices will be covered.

As part of the course, workshop problems will be given to the class participants. The class will be provided intersection field data and will determine if signals are warranted for the sample intersections. After completing the workshops, MUTCD signal warrant analysis software will be demonstrated and the workshop problems will be evaluated based on microcomputer analysis. This course is designed for traffic engineers and transportation planners involved in the design and planning of corridors and intersections.

Professional Development Hours: 6.0.

Registration Fees: \$110 for all participants.

ASPHALT RECYCLING

Location: MD T2 Center at College Park, Maryland

Date: May 10, 2017

Time: 8:30am - 12:30pm

This course discusses the advantages of asphalt recycling as part of your road maintenance program. It covers techniques for recycling asphalt pavement, including surface recycling, hot mix recycling (both in plant and on-site), and cold mix recycling. The course instructed by Ed Stellfox emphasizes cold mix recycling, full depth reclamation, reviewing materials, equipment and operations. It also presents recent examples of asphalt recycling projects in several states. The following topics will be discussed: advantages; review of techniques -materials, equipment, and operations for surface recycling, hot-mix recycling, cold-mix recycling, and full depth reclamation.

Professional Development Hours: 4.0.

Registration Fees: \$69 for all participants.

TRAFFIC SIGNS

Location: MD T2 Center at College Park, Maryland

Date: May 17, 2017

Time: 8:30am - 12:30pm

This half-day course instructed by Ed Stellfox will cover the regulations and guidelines for traffic signs including; regulatory signs, warning signs, and guide signs. A review of the Manual on Uniform Traffic Control Devices (MUTCD) will also be covered. An in depth discussion of sign examples, installation and maintenance, as well as sign management will be covered.

Professional Development Hours: 4.0.

Registration Fees: \$69 for all participants.



Continued on page 4

TRAFFIC ENGINEERING FUNDAMENTALS

Location: MD T2 Center at College Park, Maryland

Date: May 22-25, 2017

Time: 8:30am - 4:15pm

This course instructed by Dane Ismart and Juan M. Morales, P.E. condenses what was the five-day Traffic Engineering Short Course into a new four-day course.

Agenda Day One:

8:30AM Introduction

9:00AM Traffic Engineering Terms and Design Year Traffic

10:00AM Site Impact Analysis

1:15PM Safety Principles and Crash Principles

2:45PM Principles of Access Management

4:15PM Adjourn

Agenda Day Two:

8:30AM Intersection Analysis and Geometrics

10:15AM Signal Timing

1:15PM Arterial and Freeway Analysis

3:00PM MUTCD

4:15PM Adjourn

Agenda Day Three:

8:30AM Roundabout Basics

9:45AM ITS Overview

11:00AM Traffic Calming

1:30PM Pedestrian Safety

3:00PM ADA Accessibility

4:15PM Adjourn

Agenda Day Four:

8:30AM Temporary Traffic Control Standards and Guidelines

9:45AM Component Part of a TTC Zone

11:00AM Traffic Control Devices

1:30PM Traffic Control Devices, continued

3:00PM Work Zone Impact Analysis

4:15PM Adjourn

Audience: This course is geared towards anyone with an engineering background and/or traffic engineering responsibilities in a related field. Also junior level traffic engineers, transportation planners, highway designers and city/county engineers.

Professional Development Hours: 24.0.

Registration Fees: \$399 MD local government and \$420 all other registrants

ROAD SURFACE MANAGEMENT

Location: MD T2 Center at College Park, Maryland

Date: June 7, 2017

Time: 8:30am - 3:30pm

This course instructed by Ed Stellfox provides participants with the basic concepts of road surface management including inventory, distress identification, condition survey, strategies, programs, budgets, and field surveys. A Road Surface Management Systems software demonstration will also be conducted during this course.

Professional Development Hours: 6.0.

Registration Fees: \$99 for all participants.

ROAD DIET WORKSHOP

Location: MD T2 Center at College Park, Maryland

Date: June 13, 2017

Time: 8:30am - 4:00pm

The course instructed by Dane Ismart covers the design, safety, and operations of road diets. Road diets, although they come in many different designs, reduce the number of through lanes and allocate excess roadway width to parking, bicycle lanes, freight movements, and transit operations.

The classical design reduces a 4-lane undivided highway to three lanes consisting of one through lane in each direction and a continuous two lane left turn in the middle. A road diet may also reduce the widths of lanes as well when appropriate. The advantages, disadvantages, various road diet configurations, guidance, and criteria for determining the feasibility of implementing a road diet are discussed.

Safety and operational considerations as well as examples of actual case studies are part of the course. The after results of example corridors that are renovated and redesigned as road diets are presented. The course is concluded with the class broken up to teams that work on a corridor problem and present their solution and road diet design.

Audience: This Workshop will be of interest to Engineers, Transportation Planners, Pedestrian and Bicycle Coordinators, Safe Routes to School Coordinators, Local Public Agency Coordinators, and Transportation Alternatives Program Managers.

Professional Development Hours: 6.0.

Registration Fees: \$110 for all participants.

CONSTRUCTION MATHEMATICS

Location: MD T2 Center at College Park, Maryland

Date: June 21, 2017

Time: 8:30am - 3:30pm

Construction inspectors may need to brush up on math skills specifically related to construction inspection, especially basic geometry, fractions, area, volume and conversions. The class lead by Ed Stellfox is a good refresher, and excellent preparation for the construction inspection class. The course was designed for road workers, foremen, superintendents, construction inspectors and supervisors in need of a refresher, especially in preparation for the Construction Inspections class. Depending on the interest of the participants, the course may cover: whole number and fractions, decimals (for measurement and payment), mixed operation fractions and decimals, formula evaluation, techniques of algebra, ration and proportion, percentage, hints for problem solving, useful formulas, square and square roots, conversion, and transportation construction examples. *Participants should bring a calculator, scale and straight edge; notebooks will be provided.

Professional Development Hours: 6.0.

Registration Fees: \$99 for all participants.

Continued on page 5

Our Currently Scheduled Courses

(continued from page 4)

TECHNIQUES FOR REDUCING CONSTRUCTION AND MAINTENANCE COSTS

Location: MD T2 Center at College Park, Maryland

Date: July 12, 2017

Time: 8:30am - 3:30pm

Counties and municipalities bear a considerable financial burden with respect to the construction and maintenance of roadways. Inflation, increasing cost of labor, materials and fuel have risen steeply in the past few years. At the same time, municipal budgets have not kept pace. It is essential to conserve resources, find energy efficient and low maintenance materials and to use more efficient techniques. This workshop instructed by Ed Stellfox, will conclude with groups of participants developing a cost control plan for a project.

Professional Development Hours: 6.0.

Registration Fees: \$99 for all registrants.

INTRODUCTION TO GEOSYNTHETICS

Location: MD T2 Center at College Park, Maryland

Date: July 26, 2017

Time: 8:30am - 3:30pm

This course is an introduction to geosynthetics, beginning with a discussion of geosynthetics, what they are, how they are made and how they can be used in a road maintenance program. The course then looks at other geosynthetics and their road system uses, including geogrids, geocells and geowebbs, presenting new materials with new applications. Designed for municipal officials, road commissioners, supervisors, and superintendents; public works and maintenance personnel; equipment operators; and city or town managers. This course instructed by Ed Stellfox, will cover the following topics: history; materials (geotextile fabrics, geogrids, geocells and geowebbs); uses and applications of drainage, erosion control, reinforcement, separation, and reflective crack control.

Professional Development Hours: 6.0.

Registration Fees: \$99 for all participants.

GRAVEL ROAD MAINTENANCE

Location: MD T2 Center at College Park, Maryland

Date: August 9, 2017

Time: 8:30am - 3:30pm

This course instructed by Ed Stellfox addresses basic maintenance techniques for unpaved and gravel roads. Topics include road materials, blading or dragging, reshaping or regrading for proper crown, regravelling, stabilization or full-depth reclamation, and dust control, with an introduction to road management techniques.

Professional Development Hours: 6.0

Registration Fees: \$99 for all participants.

SCHOOL CROSSING DESIGN & SAFETY ANALYSIS

Location: MD T2 Center at College Park, Maryland

Date: August 22, 2017

Time: 8:30am - 4:00pm

The School Crossing Design Course instructed by Dane Ismart will cover the recommended guidelines for school crossings. Various issues such as determining the school area boundaries, signing and markings for school crossing areas, and design criteria will be covered. Requirements and guidelines as covered by the Maryland MUTCD will be reviewed as part of the class. How to select treatments such as potential signalization, crossing guards, pedestrian cross walks, coverage, school speed zones and speed monitoring, location of traffic control devices, and warrants will be presented to the class. The Safe Routes to School program will be reviewed. Sources for information and school crossing information will be given to the class as well as innovative school treatments from other states. A class exercise will be conducted by the participants to demonstrate the application of the procedures and design principles for implementing school crossing treatments.

Audience: Local and state planners and designers, school officials and associations involved in school transportation, and transportation consultants.

Professional Development Hours: 6.0

Registration Fees: \$110 for Maryland local government participants, \$125 for all other participants.



Concluded on page 6

CRASH AND SAFETY DATA ANALYSIS

Location: MD T2 Center at College Park, Maryland

Date: August 23-24, 2017

Time: Day 1 - 8:30am - 4:00pm, Day 2 - 8:30am - 12:30pm

This day and a half course instructed by Dane Ismart will cover the following:

- Crash Data and Computation of Crash Frequency - Using several years data, establish crash rates to compare with similar locations, while explaining hazard indices, conflict analysis, and warrant analysis.
- Condition Diagramming and Collision Types - Review the process and the elements contained in a condition diagram and use police reports to identify the type, times, conditions or crashes on a collision diagram.
- Speed Analysis and Traffic Calming - Methods for conducting speed studies, including data collections, sample size, computation of mean, 85th percentile and pace speeds, and controlling speed with traffic calming techniques.
- Sight Distance Analysis - Methods for determining minimum stop and sight distances will be covered, to check whether sight distances for exercise area are adequate, or should be made improved to be adequate.
- Pedestrian Safety - Design features such as signing, marking, timing for intersection crossings, crosswalk widths, minimum sidewalk standards including radius, ramps, and specialized HAWK pedestrian crossing.
- School Crossing Considerations - Review school crossing mitigation measures including school guard criteria, school signs and markings, speed zones, gap analysis, and school crossing signalization.
- Marking and Signing Considerations - Review marking designs and requirements, including sign design and location requirements as well as both longitudinal and traverse markings specifications according to the MUTCD.
- Safety Design Issues and Mitigation - Introduce the concept of Improving safety through improved access design and applying them to identify mitigation measures for improving real and potential safety problems.
- Presentation - Following provided guidelines, each team will present their findings as part of a television interview.

This course is intended for Traffic Engineers, planners, traffic analysts, traffic signal technicians and local officials involved in the planning or design of transportation facilities.

Professional Development Hours: 10.0

Registration Fees: \$115 for Maryland local government participants, \$130 for all other participants.

PROJECT DEVELOPMENT OF FEDERAL-AID PROJECTS

Location: MD T2 Center at College Park, Maryland

Date: September 12-13, 2017

Time: 8:30am - 4:00pm

State DOTs and local agencies when developing projects involving federal-aid must follow a prescribed set of rules, regulations, and procedures. This course will cover the various steps necessary to meet the federal requirements. The course will be initiated with a discussion of categorical funds and what activities they are eligible for. A detailed presentation will be made on how the federal highway financial system works and the process that determines the amount of federal funds that will be available to the States and MPOs. Presentations will then be made on federal rules to meet planning and environmental requirements, right-of-way rules and requirements (the Uniform Act), design standards, the bridge inspection program requirements. Federal contract requirements will also be presented that discuss a broad of issues such as use of proprietary materials, contract bidding rules, contract provisions, etc. Class exercises will be used to demonstrate typical real life issues involving the development of federal-aid projects.

Who Should Attend: State DOT and local staff and officials involved in the development of transportation projects using federal-aid funds.

Professional Development Hours: 12.0

Registration Fees: \$199 MD Local Government, \$210 all other registrants.

WINTER MAINTENANCE

Location: MD T2 Center at College Park, Maryland

Date: October 25, 2017

Time: 8:30am - 3:30pm

This course covers all aspects of winter operations- planning and organizing, methods of snow and ice control, salt usage, and winter equipment maintenance. Instructed by Ed Stellfox this lesson will include usage of snow maps, formal snow plans, snow plow and salt spreader operation. This course is intended for municipal officials, road commissioners, supervisors, superintendents, public works and maintenance personnel, equipment operators, and city or town managers.

Professional Development Hours: 6.0

Registration Fees: \$99 for all participants.





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Need training but budget cuts won't allow travel? Request a class and we'll bring it to you!

We understand your training needs and the tremendous budget cuts everyone is dealing with in this economy. By logging on to www.mdt2center.umd.edu and requesting a course that 10 or more of your employees need, we'll bring our course to you. We'll need a room where your employees can learn and either a white board or bare wall for our projector and a pot of coffee for our instructor.

Requesting a course is simple, visit www.mdt2center.umd.edu and fill out our request training form or call Janette Prince at 301.405.6535 and she'll be glad to assist you.

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