



MARYLAND TRANSPORTATION TECHNOLOGY TRANSFER CENTER

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

mdt2center.umd.edu

INSIDE:

Page 2

Costs of ADA Unfunded
Mandate Will Hammer
Local Road Budgets

Page 3

EDC Webinar: Data-Driven
Safety Analysis
Costs of ADA, continued

Pages 4

Costs of ADA, concluded

Page 5-8

Our Currently Scheduled
Courses

Page 9

Agencies Pursue Paperless,
concluded

Page 10

Training Requests

technotes

Summer 2015 | Volume 32, No. 2

Agencies Pursue Paperless Approach to Project Delivery

-Construction means using technology to manage transportation programs more efficiently. **E**It also means not having to carry around 20,000 pieces of paper.

A Florida Department of Transportation project oversight engineer loaded information related to four projects—plans, manuals, specification books, standards—on a tablet computer “so he doesn’t have to carry around all that paper anymore,” said Amy Tootle, state construction final estimates engineer for the department.

Tootle is one of several speakers who shared highway agency experiences with [e-Construction](#)—the collection, review, approval and distribution of construction documents in a paperless environment—at the fall 2014 Every Day Counts summits. Through EDC, the Federal Highway Administration is partnering with the American Association of State Highway and Transportation Officials Innovation Initiative to encourage adoption of e-Construction to enhance productivity and accelerate project delivery.

“It’s just another way of doing business that brings us into the 21st century,” Tootle said. “This is a way to be more efficient, save money, save time and embrace technology.”

The e-Construction effort involves using available technologies—including digital electronic signatures, electronic communication, secure file sharing, mobile devices and web-hosted data archival and retrieval systems—to improve construction documentation management.

Saving money and time

Many state transportation departments are exploring aspects of e-Construction, while others are mainstreaming e-Construction practices. They’re finding it offers several benefits.

e-Construction Benefits

- Saves money by decreasing paper use, printing and document storage needs, allowing those funds to be allocated elsewhere.
- Saves time by decreasing communication delays and transmittal time.
- Improves communication by allowing faster approvals, increased accuracy and better document tracking, all while enhancing transparency and virtually eliminating disputes over document submittal.
- Enables construction inspectors to spend more time at the actual work site instead of handling documentation tasks away from the site.

Join in on the Data-Driven Safety Analysis Discussion!

FHWA along with the MD T2 Center
will be hosting a Data-Driven Safety Analysis
Webinar scheduled for June 25, 2015.
Read More on Page 3.

Concluded on page 9

Costs of ADA Unfunded Mandate Will Hammer Local Road Budgets

written by Tom Kuennen

Image Credit: City of Clovis

The cost of compliance with the new Department of Justice/Department of Transportation interpretation of ADA rules for pavement preservation for county and municipal governments will badly impact local pavement preservation programs, say affected agencies.

In addition to the imposition of new costs associated with this new interpretation, some local governments anticipate a retreat from high-performance pavement preservation techniques that have proven their worth locally, forcing them to revert to treatments that don't require adherence to ADA requirements.

Title II of the Americans with Disabilities Act of 1990 (ADA) requires that state and local governments make sure that persons with disabilities have access to the pedestrian routes in the public right-of-way. An important part of this requirement is the obligation that, whenever streets, roadways or highways are altered, curb ramps be provided where street level pedestrian walkways cross curbs.

Previously, pavement preservation treatments weren't considered road construction that would trigger ADA requirements. But following new guidance released last year, under the ADA, some pavement preservation treatments now require costly accessibility features such as curb ramps be installed as part of the project, while other preservation treatments don't.

Projects now deemed to be alterations must include curb ramps within the scope of a project. These include micro surfacing, thin lift overlays, open graded surface courses, cape seals, mill-and-overlays, and hot in-place recycling. Projects deemed to be maintenance, and exempt from curb ramps, include crack and joint filling and sealing, surface, chip, slurry, scrub and fog seals, concrete joint repairs and dowel bar retrofits, spot high-friction treatments, undersealing, diamond grinding, and pavement patching.



In Clovis, California, hot chips are spread on rubberized asphalt in advance of slurry surfacing to complete cape seal.



Image Credit: City of Clovis

At Fedora and Sunnyside street in Clovis, existing condition (left) with eight-month-old cape seal at right; new ADA regulations will greatly reduce the amount of cape seals city will be able to install, to the detriment of taxpayers and road users.

The survey was conducted in May by Ding Cheng, Ph.D., and Gary Hicks, Ph.D., of the California Pavement Preservation (CP2) Center at the University of California-Chico, in conjunction with FP2 and the California Chip Seal Association. Nearly 260 road professionals answered – of whom 62 percent were from local agencies, and 25 percent from state or federal agencies -- and the survey found that over 63 percent of respondents believe the new interpretation of what is considered alteration and what is considered maintenance will greatly impact their ability to maintain their roads.

Preservation treatments like micro surfacing, cape seals, thin and ultrathin HMA, and in-place recycling now are considered by the new rules to be alterations that will require curb ramps and amenities. Over

FP2 Inc. maintains that because the advisory arbitrarily distinguishes between similar treatments for purposes of application of the ADA, the practical effect will be to drive public agencies to the pavement preservation treatments which don't require costly curb cuts, regardless of whether those are the right treatments for their roads. This now is being demonstrated in the field.

Furthermore, it was discouraging to FP2 and its allies to see that civil engineering practice and experience did not play a role in determining which rehab treatments fell into what category (see FP2: ADA Technical Guidance Driven by Public Perception, not Engineering Principles, Summer 2014, pp 9-13, visit fp2.org for back issues).

Survey Shows Danger

A survey this spring of local governments in California shows the damage that the ADA guidance will do to cash-strapped local governments that now must recalibrate their pavement preservation programs to accommodate the cost of compliance, or change strategies completely.

continued on page 3

How many crashes on a roadway are too many crashes? Today, there are methods to answer this question that has plagued transportation professionals for years. With limited funding available to address transportation needs, professionals are constantly challenged to make decisions maximizing the return on investment. Evaluating a roadway in terms of generally accepted guidelines is not sufficient. Decision makers need to determine if a roadway will perform satisfactorily in terms of crashes – now, and into the future. Advances in highway safety analysis can provide more reliable information for effective investment decisions.

A new initiative entitled Data-Driven Safety Analysis (DDSA) was created under the third round of the FHWA Every Day Counts (EDC). The objective of this EDC-3 initiative is to incorporate safety performance into all highway investment decisions, by broadening implementation of predictive and systemic safety analysis. DDSA has many benefits:

Informed Decision-Making: By quantifying the safety impacts associated with roadway planning and design, transportation professionals, elected officials, and the general public can make more informed decisions by weighing safety with other project goals.

Optimizing Investment: With limited resources, agencies need to maximize the safety benefit of every transportation investment. By applying the most current analytical methods, agencies have powerful tools to optimize investments and the safety of all users.

Improved Safety: State, Local, and Tribal agencies can proactively apply safety countermeasures at roadway locations identified as having the highest potential for improvement, effectively reducing fatalities and serious injuries.

This EDC Exchange will highlight how local agencies are integrating safety performance into highway investment decisions. This Exchange will be of interest to transportation professionals involved in design, environment, local public agency coordination, planning, and safety.

Please join FHWA, the Maryland Local Technical Assistance Program Center and the Maryland Department of Transportation for a presentation on DDSA via a live webinar on June 25, 2015 from 2:00 pm to 4:00 pm Eastern Time.

[Register Now!](#)

**These webinars are meant to be participated at hub locations with numerous persons at each hub - this encourages local discussions on the topic. If you have a location you would like to be a hub requests can be submitted to Carly Keane at ckeane@umd.edu (link sends e-mail).

Costs of ADA,
(continued from page 2)

90 percent of respondents said they currently use these treatments, but 54 percent said they'd no longer use them in the face of the new ADA interpretation.

Asked if the new ADA interpretation would lead to deferred projects, 65 percent of respondents said it would; 55 percent said it would increase the cost of roads by 20 to 40 percent, 34 percent by 40 to 60 percent, and 11 percent of respondents believe they will see 60 to 80 percent increases in their road costs.

Nearly 70 percent of respondents said the new ADA guidance will cause them to shift away from treatments that have worked well in the past, and 75 percent said it would lead to deferred maintenance.

"The new interpretation of what is considered as alteration and what is considered as maintenance will affect agencies' ability to maintain roads," Cheng and Hicks say. "Agencies may decide to no longer use surface treatments, such as micro surfacing, cape seal, or in-place recycling, if they require the installation of curb ramps. The technical advisory will cause agencies to defer preservation projects, and increase project costs by 20 to 40 percent or more."

concluded on page 4

Abandoning Success

These results are underscored by experience in the field. “Due to the ADA technical guidance, the City of Clovis will have to make major changes in our pavement preservation program, and move away from cape seals,” said Ron Fujinami, public utilities construction manager, Clovis, Calif.

A cape seal is a chip seal topped with a slurry seal. “The benefits from using a cape seal include a very smooth surface with an increased durability by sealing the subbase,” says the Cornell Local Roads Program. “Often the use of a chip seal is not popular with the public because of the rougher ride and loose stones. With the addition of the top treatment – a slurry seal – the road ends up with a smooth surface that binds any loose aggregate, reducing stone loss and vehicular road noise.”

Cape seals are a relatively low-cost option for heavily trafficked roads, and for minor cracking. The National Park Service utilizes cape seals for its roadways where appropriate. Cape seals can extend the life of a pavement six to eight years, and polymer modified cape seals may extend pavement life up to 10 years in ideal situations, Cornell says.

Previously, Clovis utilized slurry seals almost exclusively to prolong pavement life, but added cape seals to its maintenance “tool box” after extensive research, and they’ve performed very well for the city and its taxpayers. But now, the ADA guidance will force Clovis to significantly cut back on use of cape seals, which now require curb ramps, and return to the lesser-performing slurry seals, which don’t.

“Before cape seals, we’d been using slurry seals for a long time as the main treatment for our residential streets,” Fujinami told Pavement Preservation Journal. “They were effective to a point, but once the street reached a condition of excessive cracking, the city ran out of options. We found ourselves pushing the slurry seals beyond what we should have because we didn’t have anything else to put down on the street.”

But in 2007 streets manager Jim Chase and Fujinami attended a CP2 Center conference at which they learned about rubberized cape seals – in which a chip seal incorporating rubberized asphalt binder is topped with a slurry seal – and decided to try them in Clovis.

“In 2007 we implemented a rubberized cape seal as a pilot project, with great success,” he said. “Today, seven years later, those streets are still performing. We then surveyed our streets to find candidates for rubberized cape seals. They exceeded our expectations, even on heavily cracked pavements, and residents were satisfied.”

Since then, Clovis – in the San Joaquin or lower Central Valley running down the middle of the state – has cape-sealed approximately 150,000 sq. yd. of pavement the past few years, but an increase over previous years. But compliance with the ADA guidance will change all that.

“In 2006 and earlier, after which we began with rubberized cape seals, any street that was no longer treatable with slurry seal would be left to deteriorate,” Fujinami said. “Following this latest ruling, we may soon regress back to pre-2006 days, where we have no treatment for residential streets beyond slurry seal. This appears to be the case with other agencies in California’s Central Valley, where rubberized cape seals are used extensively.”

“This recent DOT/DOJ interpretation changing long-standing FHWA practices threatens to take away several cost effective maintenance ‘tools’ for government agencies,” said FP2 executive director Jim Moulthrop, P.E. “In Clovis we see that the right treatment, for the right road, at the right time, is put at risk by the new ADA guidelines, which can even lead to no treatment if it’s perceived that the right treatment would lead to unaffordable capital improvements. This is counterproductive to road maintenance programs achieving ADA goals, and flies in the face of the pavement preservation mandate of our federal surface transportation legislation, MAP-21.”

*This article was reprinted with permission from the Fall 2014 issue of Pavement Preservation Journal of FP2 Inc.
For more information visit fp2.org.*

We offer courses that can help you learn some ways to either trim your budget in other areas or can teach you new fundamentals and improve how your department operates! Check out these courses on page 7 or [register online](#).

- Designing Safer Roads for Vulnerable Road Users - scheduled for September 9th-10th
- Low Cost Safety Improvements - scheduled for October 15th
- Traffic Engineering Fundamentals - scheduled for October 26th - 29th

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 by visiting us at www.mdt2center.umd.edu.

SITE IMPACT ANALYSIS

Dane Ismart

June 23-24, 2015, 8:30am – 4pm

College Park, Maryland

\$199 for Maryland local government participants

\$215 for all other participants

PDHs: 12.0

Participants will learn the standard techniques for estimating the traffic impacts of both small and large site developments. Content includes procedures for land use forecasting, trip generation, trip distribution and assignment, site impact layout design, and level of service designation. The workshop will be conducted with manual procedures, but computer software packages suitable for site impact will also be demonstrated. Participant's will receive a workbook, traffic access and impact studies, evaluating traffic impact studies, and a site impact handbook are provided. This course is designed for transportation engineers, traffic engineers, and planners concerned about the impacts of site development. Previous experience in traffic capacity or planning procedures is useful.

TRAFFIC CALMING

Dane Ismart

August 25, 2015, 8:30am – 4pm

College Park, Maryland

\$110 for Maryland local government participants

\$125 for all other participants

PDHs: 6.0

This Traffic Calming seminar is designed to present a broad-based understanding of traffic calming philosophy and measures while recognizing and preserving the function of roadways. This course is adapted toward state and local government officials and employees who are charged with enhancing roadway safety. The seminar will focus on the appropriateness and effectiveness of various traffic calming measures as well as the specifics of designing such measures to achieve their desired effect. Audio-visual presentation materials will be used, and attendees will also participate in interactive workshops where case studies are evaluated and appropriate traffic calming solutions are developed. Upon completion of the workshop sessions, the participants will present their solutions to the class. The goal of the course is that participants will leave with a basic understanding of what traffic calming is, and what issues are typically encountered when using traffic calming techniques. Students will receive a course notebook.

TO SIGNALIZE OR NOT TO SIGNALIZE

Dane Ismart

August 26, 2015, 8:30am-4pm

\$110 for Maryland local government participants

\$125 for all other participants

PDHs: 6.0

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.

FLAGGER CERTIFICATION

Juan M. Morales, P.E.

September 3, 2015, 8:30am – 12:30pm

College Park, Maryland

\$100 for all participants

PDHs: 4.0

The safety of workers, motorists and pedestrians is dependent upon the flaggers' performance. Since the flagger position involves safety, proper training is vital; flaggers are expected to pass a test to prove their proficiency and competence level. A MD SHA-approved ATSSA (American Traffic Safety Services Association) flagger card will be issued upon satisfactory completion of this course. This will be valid for 4 years and is acceptable in several states, including MD, VA and DC. The class is presented in PowerPoint© and will include a 25-question multiple choice exam and a flagger demonstration (dexterity test). Students will receive their ATSSA Flagger Certification card the day of the course (upon passing the exam). The course is intended for anyone whose actions affect safety of contemporary traffic control work zones, including traffic managers, traffic technicians, inspectors and designers.

DESIGNING SAFER ROADS FOR VULNERABLE ROAD USERS

Juan M. Morales, P.E.

September 9-10, 2015, 8:30am-3:30pm

\$199 for Maryland local government participants

\$225 for all other participants

PDHs: 12.0

Vulnerable road users (VRU) are susceptible to traffic injuries and fatalities, perhaps more so than drivers. Yet we design highways for the mobility of cars sometimes neglecting the needs of the most vulnerable, such as pedestrians, bicyclists, motorcyclists, transit users and others. This course will teach participants how to diagnose pedestrian (and other VRU) safety deficiencies and select the appropriate countermeasures to make conditions safer for all users including an overview of the American with Disabilities Act (ADA) accessibility requirements. Engineering countermeasures will be emphasized but education and enforcement countermeasures will also be covered. Upon Completion of the Course, Participants Should be Able to: Define vulnerable road users, Describe VRU needs, Diagnose crash causes and select proper countermeasures, Identify safety-related geometric design elements, and Discuss VRU safety issues and how to address them.



Continued on page 6

BRIDGE MAINTENANCE INSPECTION

John Hopkins

September 14, 2015, 8:30am – 3:30pm

College Park, Maryland

\$110 for Maryland local government participants

\$125 for all other participants

PDHs: 6.0

This one day course will cover inspection of bridge maintenance. A brief summary of the topics to be covered are as follows: approach, deck maintenance, deck joints, deck drains, bearing maintenance, concrete beams, steel beams, timber beams, bridge seats and caps, piles and bents, truss maintenance, painting, and winter maintenance. The class is for the actual field maintenance worker who has to do the repairs. It is mostly concerned with what to look for from a maintenance standpoint not a structural rating perspective.

CONSTRUCTION INSPECTION FOR LOCAL AGENCY EMPLOYEES

John Hopkins

September 15, 2015, 8:30am – 3:30pm

College Park, Maryland

\$110 for Maryland local government participants

\$125 for all other participants

PDHs: 6.0

This one day session will cover some of the major duties and responsibilities of an individual responsible for the quality of a project. It will address the importance of understanding the plans, the contract, the order of operations, the materials to be used and the various quality control tests used in project inspection. This course is presented in a straight forward manner and deals with the reality of everyday factors involving contractors and agencies. Qualified field inspection personnel with one to three years of field experience are encouraged to attend; participants must possess basic math skills in geometry and algebra. *Participants should bring a calculator, scale and straight edge; notebooks will be provided.

CONSTRUCTION INSPECTION INTERMEDIATE LEVEL

John Hopkins

September 16-17, 2015, 8:30am – 3:30pm

College Park, Maryland

\$200 for Maryland local government participants

\$225 for all other participants

PDHs: 12.0

An intermediate class focuses on the construction, inspection, measurement and testing of materials associated with road way construction. Includes real-life scenarios and problems faced on the job, and covers general practices and MD standards. Qualified field inspection personnel with one to three years of field experience are encouraged to attend; participants must possess basic math skills in geometry and algebra. A test will be administered to acquire class credit. Participants should bring a calculator, scale and straight edge; notebooks will be provided.

THE NEW MD MUTCD

Dane Ismart

October 1, 2015, 8:30am-4pm

College Park, Maryland

\$110 for Maryland local government participants

\$125 for all other registrants

PDHs: 6.0

This one-day training is to enable participants to become familiar with the new MD MUTCD regarding the application of its principles to their traffic control devices in Maryland. As of February 3rd, 2012, the new Maryland Manual on Uniform Traffic Control Devices (MDMUTCD) has been officially adopted by the State of Maryland. The workshop is open to representatives of all traffic engineering and planning organizations and elected officials. Part of the workshop is also geared towards Local Administrators and Elected Officials. A series of five workshops will be provided in various regions of the State. Agenda will include compliance days for new and existing traffic control devices, new sections within various chapters of the manual, other changes in standards and guidance, procedure for experimentation and interpretation, etc. Who should attend: State and Local Transportation Engineers, Traffic Engineers, Planners, Elected Officials, and Traffic Engineering Consultants responsible for the placement and maintenance of uniform traffic control devices in Maryland. Sponsors: This workshop is presented by the Maryland T2 Center and is sponsored by The Maryland State Highway Administration (SHA) and the Federal Highway Administration (FHWA).

CONSTRUCTION MATH

Ed Stellfox

October 8, 2015, 8:30am-3:00pm

College Park, Maryland

\$89 for all participants

PDHs: 6.0

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 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.



Continued on page 7

DESIGNING PEDESTRIAN FACILITIES FOR ACCESSIBILITY

Juan M. Morales, P.E.

October 20-21, 2015, 8:30am-4pm

College Park, Maryland

\$135 for Maryland local government participants

\$150 for all other participants

PDHs: 10.0

Upon completion of this course the participant will be able to:

- Identify applicable laws, regulations, guidelines, and standards pertaining to accessibility for persons with disabilities.
- Know the requirements for ensuring accessibility in existing facilities vs. work in new construction and alterations.
- Identify some of the challenges in the Public Right-of-Way (PROW) faced by persons with disabilities.
- Review design elements necessary for achieving accessibility in the PROW, including work zones.
- Identify best practices.

LOW COST SAFETY IMPROVEMENTS

Mark Hood

October 15, 2015, 8:30am-3:30pm

College Park, Maryland

\$110 for Maryland local government participants

\$125 for all other registrants

PDHs: 6.0

This course provides participants with methods for implementing effective, low cost safety improvements targeted at high crash areas. It emphasizes the basic and enhanced application of traffic control devices, low cost safety improvements, and their specific safety benefit (crash reduction factors). Traffic crash data collection, identification of hazardous locations, and engineering study procedures are also discussed. Emphasis is placed on low cost solutions that may be made at the local level.

WINTER MAINTENANCE

Ed Stellfox

October 22, 2015, 8:30am – 3pm

College Park, MD

\$89 for all participants

PDHs: 6.0

This course covers all aspects of winter operations- planning and organizing, methods of snow and ice control, salt usage, and winter equipment maintenance. 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.

TRAFFIC ENGINEERING FUNDAMENTALS

Dane Ismart and Juan M. Morales, P.E.

October 26-29, 2015, 8:30am – 4:15pm

College Park, MD

\$399 for Maryland local participants

\$420 for all other participants

PDHs: 24.0

This course 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
- 9:45AM Break
- 10:00AM Site Impact Analysis
- 12:00PM Lunch
- 1:15PM Safety Principles and Crash Principles
- 2:30PM Break
- 2:45PM Principles of Access Management
- 4:15PM Adjourn

Agenda Day Two:

- 8:30AM Intersection Analysis and Geometrics
- 10:00AM Break
- 10:15AM Signal Timing
- 12:00PM Lunch
- 1:15PM Arterial and Freeway Analysis
- 2:45PM Break
- 3:00PM MUTCD
- 4:15PM Adjourn

Agenda Day Three:

- 8:30AM Roundabout Basics
- 9:30AM Break
- 9:45AM ITS Overview
- 10:45AM Break
- 11:00AM Traffic Calming
- 12:15PM Lunch
- 1:30PM Work Zones
- 2:45PM Break
- 3:00PM ADA Accessibility
- 4:15PM Adjourn

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.

HIGHWAY CAPACITY INTERRUPTED FLOW

Dane Ismart

November 3, 2015, 8:30am - 4pm

College Park, Maryland

\$110 for Maryland local government participants

\$125 for all other registrants

PDHs: 6.0

This one-day course will cover the theory and methodology of the 2010 Highway Capacity Manual for interrupted flow. The Chapters that will be covered include:

- Signalized Intersections
- Unsignalized Intersections:
 - (A) Two-Way Stops (B) Four Way Stops
- Urban Arterial

Changes in each of the interrupted Chapters of the 2010 Highway Capacity Manual will be highlighted during the lectures. The Highway Capacity Software will be demonstrated to the class using sample problems. The new roundabout capacity procedure is covered under a separate course.

HIGHWAY CAPACITY UNINTERRUPTED FLOW

Dane Ismart

November 4, 2015, 8:30am - 4pm

College Park, Maryland

\$110 for Maryland local government participants

\$125 for all other registrants

PDHs: 6.0

This one-day course will cover the theory and methodology of the 2010 Highway Capacity Manual for uninterrupted flow. The Chapters that will be covered include: basic freeway sections, weaving, ramps, multilane highways, and two lane rural roads. Changes in each of the uninterrupted Chapters of the 2010 Highway Capacity Manual will be highlighted during the lectures. The Highway Capacity Software will be demonstrated to the class using sample problems.

FLAGGER CERTIFICATION

Juan M. Morales, P.E.

November 12, 2015, 8:30am – 12:30pm

College Park, Maryland

\$100 for all participants

PDHs: 4.0

The safety of workers, motorists and pedestrians is dependent upon the flaggers' performance. Since the flagger position involves safety, proper training is vital; flaggers are expected to pass a test to prove their proficiency and competence level. A MD SHA-approved ATSSA (American Traffic Safety Services Association) flagger card will be issued upon satisfactory completion of this course. This will be valid for 4 years and is acceptable in several states, including MD, VA and DC. The class is presented in PowerPoint© and will include a 25-question multiple choice exam and a flagger demonstration (dexterity test). Students will receive their ATSSA Flagger Certification card the day of the course (upon passing the exam). The course is intended for anyone whose actions affect safety of contemporary traffic control work zones, including traffic managers, traffic technicians, inspectors and designers.

INTERSECTION SIGNAL & DESIGN ANALYSIS

Dane Ismart

December 1-2, 2015, 8:30am – 4pm

College Park, Maryland

\$199 for Maryland local government participants

\$215 for all other participants

PDHs: 12.0

This course will have broad general coverage of at-grade intersection analysis and design features. The analysis will include signalized, unsignalized and roundabout intersections. Specific coverage will include capacity, analysis, signal warrants, queue analysis and safety selected design features. Software packages such as HCS and SIDRA will be demonstrated. This course is targeted for municipal engineers; public works directors; state, federal, and private engineers; planners, designers, and traffic engineers that may be involved in the selection and design of intersections.

ROAD SAFETY 365 WORKSHOP FOR LOCAL AGENCIES

Juan M. Morales, P.E.

December 8, 2015, 8:30am - 4:00pm

College Park, Maryland

\$100 for all participants

PDHs: 6.0

This course is designed to provide local and rural agencies with practical and effective ways to mainstream safety solutions into their day-to-day activities and project development process. This one-day workshop focuses on processes for incorporating safety into all aspects of local and rural projects, and on making safety a priority through inclusion in the traditional decision-making process - 365 days a year. The course stresses the importance of road safety, and illustrates how it can be integrated into rural/local transportation project development at all stages: planning, design, construction, implementation, operations, and maintenance. Through practical exercises and facilitator-led discussions, the emphasis is on operations and maintenance to reflect the predominant, day-to-day responsibilities of rural/local transportation agencies. The benefits and potential cost savings of safety initiatives are shown using examples from rural/local agencies. The workshop audience ranges from decision-makers to road crews. It is aimed primarily at local and rural road and public works supervisors. Others who would benefit include: elected officials, public safety advocates, State DOT personnel, law enforcement, consultants, regional and rural development organizations, municipal associations.



The Florida DOT, one of several agencies using e-Construction on design-build projects, has invested in a collaborative sharing site, mobile devices, digital signatures and form automation to improve its processes. All of the stakeholders on a construction contract have access to the collaboration site, Tootle said.

“We have workflows set up that will automatically alert people when there are signatures or approvals that need to be made,” she said. The agency’s initial investment in e-Construction was about \$1.5 million, Tootle said, but it expects to save about \$22 million a year on paper and overhead costs.

The Iowa Department of Transportation piloted e-Construction on four 2014 projects, including a small bridge replacement, a hot-mix asphalt overlay job and two major interstate reconstruction contracts. Going paperless involved using electronic project plans, contracts, specification books, standards, construction manuals, contractor payments and as-built records.

Using e-Construction yielded many benefits, said Greg Mulder, director of the Iowa DOT Office of Construction and Materials, such as reduced costs, immediate document distribution with no time or money spent on printing or mailing, and faster and more accurate contractor payments. Documents are secure but readily available for project partners to view on a variety of devices.

The Michigan Department of Transportation, an e-Construction leader, piloted its system in 2013 on four projects worth about \$130 million. In 2014, the department used it on a \$160 million project to rebuild part of I-96 in Detroit, as well as on at least one project in each field office. In 2015, the agency is instituting the program on virtually all projects. Each year, the Michigan DOT saves an estimated \$12 million through increased efficiency and six million sheets of paper by using electronic document storage for its \$1 billion construction program, while reducing its average contract modification processing time from 30 to three days.

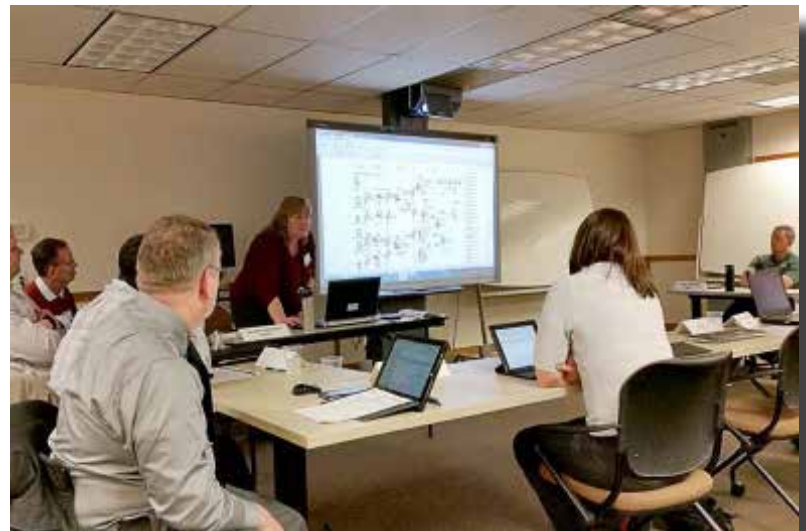
How to learn more

FHWA offers technical support and training to help the highway community adopt e-Construction, said [Bryan Cawley](#), FHWA Construction Management Team leader and head of the EDC-3 e-Construction Team. The team can assist with peer exchanges so agencies learn from the experience of states already using e-Construction.

During March exchanges, Oregon Department of Transportation staff got advice on system requirements, workflow processes and staffing from the Michigan DOT, while Delaware Department of Transportation staff met with colleagues at the Texas Department of Transportation. Both the Oregon and Delaware agencies plan to use e-Construction on pilot projects in 2015 and expand their programs statewide in 2016.

A [recording of the EDC-3 summit session](#) outlines e-Construction practices and shares agency successes. The AASHTO Innovation Initiative [e-Construction page](#) has additional resources.

This article was reprinted from Innovator (May/June issue), a publication of the Federal Highway Administration and United States Department of Transportation.



During a spring peer exchange, the Oregon DOT got advice on pursuing a paperless approach to construction contract administration from the Michigan DOT.



MD T² Center Staff

Tom Jacobs, Director

301.405.7328

tjacobs@umd.edu

Ed Stellfox, Co-Director

301.405.6369

stellfox@umd.edu

Janette Prince

Program Manager

301.405.6535

janette@umd.edu

Marc Trainum

Administrative Assistant

301.405.5312

mtrainum@umd.edu

Carly Keane

Newsletter Editor

240.304.9627

ckeane@umd.edu

MD T² Advisory Board Committee

Ed Adams	Baltimore County Department of Public Works
Greg Africa	Anne Arundel County, Department of Public Works
Brenda Alexander	College Park Department of Public Works
Dean Dashiell	Ocean City Department of Public Works
Allison Hardt	Maryland State Highway Administration
Azmut Hussain	Federal Highway Administration
Paul Kahl	Allegheny County, Department of Public Works
Stephen Kline	Town of Bel Air, Department of Public Works
Alex Moyseenko	City of Hagerstown, Department of Public Works
Dan Sanayi	Montgomery County, Traffic Engineering & Operations Section
Dennis Simpson	Maryland State Highway Administrator (Acting)
Jean Sperling	Village of Martins Additions, Chevy Chase
Eric Tabacek	Maryland State Highway Administration, Office of Traffic & Safety
Cedric Ward	Maryland State Highway Administration, Office of Traffic & Safety

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.

