ILLINOIS INTERCHANGE

ILLINOIS TECHNOLOGY TRANSFER CENTER

NEW LOCAL POLICY AND TECHNOLOGY ENGINEER

I am Tim Peters, the new Local Policy and Technology Engineer in Local Roads. On November 3, 2015 I began working in this position. I am glad to have the opportunity to join a great group of people in the Bureau of Local Roads. Prior to this position, I had been with IDOT for 22 years. Before coming to Local Roads, all of my time with the department had been in the Bureau of Operations. When initially hired in 1992, I was the Communications Systems Engineer. In that role, I was responsible for the department's radio communication system. In 1998, I became the Department's Equipment Engineer. In addition to responsibilities for communications, I was responsible for specifications and coordination of issues related to trucks and equipment used by IDOT.

In 2010, I became the Department's Winter Operations Engineer. In that role I was involved in all aspects of the Department's winter operations. I also represented the department in two pooled fund research studies, one focused on winter maintenance and the other focused on Road Weather Information Systems (RWIS).

Since coming to local roads, I have been involved in policy development and a wide variety of issues. I have been a student in several of our T2 classes, and I have learned about issues ranging from the American's with Disabilities Act (ADA) to Motor Fuel Tax. I will continue, with the department's efforts, to transfer the latest state-of-the-art technology in areas of roads and bridges by translating the technology into terms understood by local and state highway or transportation personnel. I look forward to getting to know you and working together to make Illinois roadways the best in the nation.

INSIDE:

Please pass this on to other interested parties in your office.

T2 Fall Training Schedule
To see classes offered go to:
http://www.idot.illinois.gov/transportation-system/
local-transportation-partners/county-engineers-and-local-
public-agencies/technology-transfer-center/index

Illinois Department of Transportation
Bureau of Local Roads and Streets

Federal Highway Administration

THE AMERICAN'S WITH DISABILITIES ACT AND YOUR ORGANIZATION

By: Tim Peters Local Policy & Technology Engineer IDOT

The American's with Disabilities Act (ADA) was signed into law on July 26, 1990 by President George W. Bush. In the 25 years that have passed since the ADA was signed into law, it has had many effects on our society. Unlike some laws that require immediate compliance, the ADA was written to allow the transition to compliance to take place over an undefined period of time. While full access to all facilities has not been achieved, there has been a significant amount of change in the level of access available to people with disabilities.

The ADA has specific requirements that impact public agencies. The ADA required all public agencies to perform a self-evaluation of their facilities for compliance. Roads, highways and sidewalks are considered facilities. The self-evaluation should identify barriers in programs & activities that prevent persons with disabilities from access. The standards for most items highway agencies deal with are covered either in Public Rights-of-Way Accessibility Guidelines (PROWAG) or the Illinois Accessibility Code. The goal of agencies should be to provide equivalent access to the maximum extent feasible.

For agencies having a total of 50 employees, the ADA contained more requirements. The total of 50 employees includes both full and part-time employees. An agency with more than 50 employees must have a person that is responsible for handling complaints regarding ADA issues.

The person handling the complaints is commonly referred to as an ADA coordinator. They must also have a defined process for handling these complaints. The complaint is referred to as a grievance. Also, they are required to have a transition plan. The transition plan explains how they plan to move from their current state identified in their self-evaluation to compliance. A transition plan is a living document and it is expected to change to reflect changes in facilities, changes in budgets and changes in the community.

Failing to comply with the requirements the ADA placed on communities puts the communities in weak positions if they are sued or if complaints are filed with either federal or state authorities. There are examples where judgments and consent decrees have been issued forcing communities to make improvements.

There are many resources available for communities to develop self-evaluations and transitions plans.

Although an agency may not be in compliance with these today, they should strongly consider self-evaluation and development of a transition plan. Chapter 8 in the IDOT Bureau of Local Roads and Streets Manual provides information on self-evaluation and transition plans. IDOT also has staff people in both the districts and the central office that can assist local public agencies with issues related to ADA. There are also many resources available on the Internet to help communities comply with the law and effectively meet the needs of the citizens they serve.

More than 55 million Americans, approximately18% of our population, have disabilities. People with participate in a wide variety of programs, services, and activities provided by federal, state and local government.

This includes many people who became disabled while serving in the military. By the year 2030, it is estimated approximately 71.5 million baby boomers will be over age 65. They will need services and facilities that meet their age-related physical needs. People with disabilities are present in all areas of the state, both rural and urban. You should consider how your organization has dealt with the requirements of the ADA. This is a good time to complete or update your organization's documentation required for compliance with the ADA.

ILLINOIS PUBLIC SERVICE INSTITUTE

By: Robert Scott, Chairman IPSI Advisory Council

We are pleased to invite you to attend the 14th Annual Illinois Public Service Institute (IPSI) to be held October 4 through October 9, 2015 at the Keller Convention Center in Effingham, Illinois. The IPSI Planning Committee has carefully planned a program built to address the challenges faced by public service professionals representing communities of all sizes. The IPSI course is divided into three 1-week sessions focusing on leadership development, service excellence and personal supervisory skills. The sessions are non-sequential and one may begin the three-year cycle at any time. Complete registration information including the fees are included in this packet. The tuition is $695 and does not include lodging. The hotel rates are approximately $99 per day. Institute activities begin with registration on Sunday afternoon and end at noon on Friday. Classes are held from 8:00 AM to 5:00 PM daily with the exception of Monday when classes extend into the evening. Participants are expected to attend evening functions that include: classes, group meals and activities. Wednesday afternoon and evening are considered "free time" to makeup for the long day on Sunday.

There is a wide variety of activities available for participants looking for opportunities to get better acquainted with their peers from across the state. The Advanced Institute is now offering IPSI graduates an opportunity to sign up for any single day or combination of days that best fits their training inter-est.

This will replace of the traditional offering of two and one-half days, IPSI graduates will see this as perfect opportunity to reconnect with IPSI colleagues or join others from your organization to support their IPSI experience and benefit from attending sessions together. There will be separate registration forms that allows for daily pricing that will cover meals, class materials and instruction. Continuing education credit is available as well as college credit through Southern Illinois University and Northern Illinois University. Both Universities will offer up to three hours of academic credit in an independent study format at either the undergraduate or graduate level for completion of each year of the Institute. Information about college credit and continuing education credit will be available at the beginning of the Institute.

IPSI continues to grow and to maintain the best possible learning environment, we must limit the number of people registering for their first year to a maximum of fifty. In recent years, there have been people that were not able to register because the class was full. So keep in mind that the class size is limited and register early.

If you have any questions, please contact Mary Bender or call at 231-797-5536.

ROAD DIETS-LESS IS MORE

By: Rebecca Crowe, FHWA Office of Safety

We live in a world that requires more. More highway lanes to move traffic. More band-width to run our computer applications. More energy to power our screens. We also live in a world where more is harmful: more people are killed in road-way crashes in the United States than most anything else, ranking in the top 15 causes of death for the past 30 years (National Highway Traffic Safety Administration (NHTSA), "Traffic Safety Facts Research Note: Motor Vehicle Traffic Crashes as a Leading Cause of Death in the United States, 2008 and 2009," DOT-HS-811-620 (Washington, DC: 2012)

Of the multiple safety treatments from which an agency can choose to ad-dress this problem, what if one of them involved not increasing but rather reducing the number of travel lanes? That solution exists, and it is called a "Road Diet."

Four-lane undivided highways have a history of relatively high crash rates as traffic volumes increase and as the inside lane is shared by higher-speed through-traffic and left-turning vehicles. A classic Road Diet converts an existing four-lane undivided roadway segment to a three-lane segment consisting of two through lanes and a center two-way left turn lane (TWLTL). The configuration also provides an opportunity to allocate excess roadway width to other purposes, including bicycle lanes, on-street parking, or transit stops.

Improvements to Safety

A Road Diet can improve safety and important benefits including the following:

- Reduced overall crashes (typically 19-47%)
- Reduced rear-end and left-turn crashes though the use of a dedicated left-turn lane
- Reduced number of lanes for pedestrians to cross
- Reduced right-angle crashes as side street motorists must cross only three lanes of traffic instead of four
- Improved traffic calming and reduced speed differential, which can decrease the potential for crashes and reduce the severity of crashes if they occur
- Simplified road scanning and gap selection for motorists (especially older and younger drivers) making left turns from or onto the mainline

Improvements to Quality of Life

The Road Diet configuration also offers a number of quality-of-life improvements, offering transportation planners the following opportunities:

- Install pedestrian refuge islands
- Install bicycle lanes when the cross-section width is reallocated
- Allocate the "leftover" roadway width for other purposes, such as on-street parking or transit stops
- Support a more community-focused "Complete Streets" environment

Other Considerations

A Road Diet can be a low-cost safety solution, particularly in cases where only pavement marking modifications are required to make the traffic control change. In other cases, the Road Diet may be planned in conjunction with reconstruction or simple overlay projects, and the change in cross-section allocation can be incorporated at no additional cost. Geometric and operational design features should be considered during the design of a Road Diet. Intersection turn lanes, traffic volume, signing, pavement markings, driveway density, transit routes and stops, and pedestrian and bicyclist facilities should be carefully considered and appropriate-ly applied during the recon-figuration for appropriate Road Diet implementation.

As with any roadway treatment, data analysis and engineering judgement are required to determine whether a Road Diet is the most appropriate alternative in a given situation.

A new publication includes safety, operational, and quality of life considerations from research and practice, and it will guide readers through the decision-making process to determine if Road Diet's are a good fit for a certain corridor. It also provides design guidance and encourages post-implementation evaluation. The guide is available at **http://safety. fhwa.dot.gov/road_diets/info_guide/**.

SMART PHONE APPS FOR LOCAL AGENCIES

By: Shaughn Kern, Technical Writer, Michigan Technological University

Increasingly, mobile apps are less about Angry Birds and more about adding efficiency in the workplace. Aside from the obvious advantage of go-ing paperless, mobile apps help users collect and analyze data while on location. This means easy, accurate data sharing among government agencies and the people they serve. Moreover, many mobile apps are free or have free ver-sions available, so the only resource required on your part is taking the time to learn the app.

The following apps are worth evaluating for those who maintain (and use!) the Illinois road system. They can be found at app stores like Google Play (**play.google.com**) and iTunes (**itunes.apple.com**) for applicable devices.

Waze Social GPS

Waze is a mixture of GPS navigation software and social media. It can tell you how to get to a destination, but its map and data incorporate the concept of "community-based mapping" where users don't just view map data; they actively report up-to-date data. Data include real-time alerts on things like traffic, potholes and other construction. Even if a destination is not selected, Waze will notify a user whenever the app is running. It also has features for adding feed-back on businesses, reporting the price of gas at various gas stations, sharing calendars and ETAs, and Facebook integration.

Waze is available for Android and Apple devices.

ArcGIS Collector

If your agency already uses ESRI's ArcGIS software, the ArcGIS Collector app lets you collect and update your data while in the field. The process involves exporting a basemap and layer from ArcGIS, collecting asset data on site, and then importing it back into ArcGIS. It also provides directions, measurements, and lo-cation tracking. Recently, the Road Commission for Oakland County used the app to collect data for demonstrating stormwater permit compliance. ArcGIS Collector is available for Android and Apple devices.

3D Plumb-bob Measurement Tool

Taking field measurements means carrying a variety of tools and a way to record the measurements – unless you have an app that accomplishes all those tasks. The Assysto 3D Plumb-bob is one such app, and it allows you to measure length, height, area, and angles. It also allows you to take a photo and save it as a 3D scene to work from later. There are several shapes of plumb-bob available, and the app settings can be calibrated to provide the output you're looking for. The 3D Plumb-bob is available for Android devices.

Invasive Species Reporting

You've probably heard of the emerald ash borer and phragmites, two of the most problematic invasive species in Michigan. However, there are other invasive species that need to be considered. For example, the sap of a giant hogweed plant can result in severe blisters, burns, and even blindness. While this may sound like a plant straight out of Jurassic Park, it has actually been reported in Northwest Michigan. For those who don't have a background in identifying plants or animals, there is an app that can make it easier to do your part in preventing the spread of invasive species. The Midwest Invasive Species Information Network (MISIN) provides a library of invasive species, and allows you to report sightings along with observations and images. You can also configure the MISIN mobile app to send custom notifications alerting you to new sightings in your area. The MISIN mobile app is available for Android and Apple devices.

SMART PHONE APPS (continued from pg.5)

Open Data Kit

Any type of field study requires forms to ensure that the data being collected are accurately documented, and that each person collecting data is looking for the same type of information. One solution is to create paper forms, or even document templates for data collection, but that leaves someone with the task of gathering all of the results and putting them together in one place. A more modern solution is to use an app like Open Data Kit to create a custom survey form with a server to gather and host the results. Open Data Kit supports multimedia forms that can include images, audio, and video; after the data is gathered it can be viewed on spreadsheets or on maps. Open Data Kit is available for Android and Apple devices.

Local Agencies Using Custom Apps

Some local agencies have ordered customized mobile apps to facilitate communication with the public, such as making it easier for the public to report problems in Washtenaw County, or making it easier for the Wayne County Road Commission to inform the public of winter maintenance.

Ann Arbor's "A2 Fix It"

The A2 Fix It app allows the citizens in Ann Arbor to report problems ranging from road issues (such as potholes, signs/signals, tree removal) to other civic issues (trash pickup, graffiti, illegal dumping). It only takes a few minutes to choose a category for the issue, create a title and description, and upload an image. Anyone who submits an issue receives an email notification when the appropriate department has received the report, even if the user has chosen to remain anonymous. This helps local departments get key data while demonstrating to the public that they can make a difference in their community. The app can be viewed at **a2gov.org/A2FixIt**. SeeClickFix, a company that specializes in setting up apps for citizens to report non-emergency issues to the local government, created Ann Arbor's "A2 Fix It" app. In Michigan, SeeClickFix has provided its services to Adrian, Detroit, Ingham County, Lansing, Marshall, Roseville, Southfield, and Taylor.

Wayne County's "Compass"

The Wayne County Compass is an internally-designed program that provides a map of where each of its trucks are during winter maintenance. Each salt and plow truck in the fleet has a GPS system (some even have cameras) meaning a user can view which roads have been plowed and salted. This helps Wayne County with fleet management, and helps the public better plan their commute.

The Wayne County Compass also displays data from MI Drive sensors and cameras, and the National Weather Forecast Office. These additions, combined with the truck tracking system, result in what is essentially a Google Map that shows the real-time status of the Wayne County road system.

The Compass is not downloadable mobile app, but it is designed to be very usable with a smart phone or tablet. It can be found at **compass.waynecounty.com**.

TRAFFIC INCIDENT MANAGEMENT

By: Tim Peters, Local Policy & Technology Engineer IDOT

Traffic Incident Manage-ment (TIM) is a training program IDOT developed to help first responders be safer and more effective in responding to highway incidents. To reduce and hopefully eliminate incident scene fatalities, IDOT, in cooperation with the Illinois Center for Transportation and Southern Illinois University – Edwardsville developed nationally recognized TIM training. The training is available in both an online version and an in-person class version. The online version is intended to provide participants with an understanding of the terminology and concepts, but it is not as in-depth as the full classroom version.

The program is designed to foster more effective working relationships between law enforcement, fire, emergency medical, towing, highway department and communication dispatchers that may be involved with highway incidents. The goal of the training is to provide responders with information and best practices that improve their safety at traffic incident scenes. In addition the training will improve communication, coordination, and cooperation between emergency responders throughout the state.

TIM training is a good opportunity to build the relationships and discuss procedures for emergency response with other organizations that respond to highway emergencies. The inperson classes are offered in a manner that helps participants from all disciplines involved with highway incidents to work more effectively and safely at an incident scene.

Notices for upcoming classes are sent out through IDOT's subscription service. Some of the classes are offered in the evening to accommodate the needs of volunteer fire departments. The classes require participants from multiple disciplines (law enforcement, emergency medical, fire, and towing).

If your organization would be interested in hosting a training session, please contact Gwen Montgomery at DOT.T2LRSDOT@illinois.gov to schedule and plan a class.

ROAD SALT & THE ENVIRONMENT

By: Tim Peters, Local Policy & Technology Engineer IDOT

Sodium Chloride, salt, is the most common deicing chemical used in Illinois. It is a powerful tool. However, it must be used wisely. Did you know that 1 teaspoon of salt contaminates 5 gallons of water to a level that the Environmental Protection Agency (EPA) says is not safe for human consumption?

This map shows areas of the state where waters are considered to be im-paired due to chlorides.
Using salt to anti-ice and de-ice roads is a common practice for road maintenance organizations. Using best management practices to reduce the amount of chloride entering the environment is important to minimizing environmental impacts while still ensuring the safety of the motoring public. Best management practices include covering salt and storing salt on impermeable material, using calibrated salt spreaders, and adjusting application rates based on conditions and using the best forecasts and information available.

To support local public agencies in this area, IDOT is offering "Snow and Ice" classes throughout the state as part of our T2 Fall Training Program. IDOT also has materials related to effective winter practices on our T2 website for local public agencies to use in their training programs.

Chloride Impairments in Illinois

Legend

— TMDL for chloride
— Chloride listed on 305b
▨ Chloride impaired 10 digit HUC
▭ County Boundaries

SIGN-UP FOR THE 2015 APWA SNOW ROADEO

The American Public Works Association Illinois Chapter will hold their 25th Annual Snow Roadeo on Friday, September 4, 2014 in Normal, Illinois. The event is designed to test and improve the skills of public works professionals in snow and ice removal. The Snow Roadeo consisted of three separate elements:

- A Written Test which measures knowledge of the rules of the road and snow and ice control procedures
- The Circle of Safety where teams are challenged to discover hidden vehicle defects
- The Obstacle Course which tested the drivers' skills as they handled a snow plow equipped vehicle through a marked course

Awards will be presented for each of the three elements. Awards will also be presented to the Best Dressed Snow Plow, which are plows painted with a snow theme.

The Snow Roadeo is supported by the Illinois Department of Transportations and the Illinois Technology Transfer Center. The Town of Normal Public Works Department will host the event.

Congratulations to the 2014
APWA Snow Roadeo Overall Winners

1st Place Circle of Safety & 1st Place Obstacle Course
City of Highland -Barkley Schhefer and Bill Aegertor

1st Place Obstacle Course
City of Highland *Barkley Schhefer and Bill Aegertor (Pictured on Page 9)*

2nd Place

City of Bloomington
Jeff Branham and Joe DeGraeve

3rd Place

City of Urbana
Robert Marsh and Honor Coleman

1st Place Written Test

City of Urbana
Ray Knight and Jason Scott

2nd Place

City of Urbana
Jon Higar and Mike Green

2nd Place
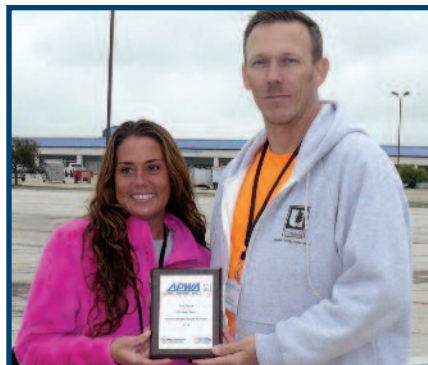
City of Urbana
Chelsea Angelo and Tony Richmond

1st Place Circle of Safety
City of Highland
*Barkley Schhefer and Bill Aegertor
(Pictured on Page 9)*

2nd Place

City of Normal
Eric Murphy and Eric Ashenbremer

The Technology Transfer (T2) Program is a nationwide effort financed jointly by the Federal Highway Administration and individual state departments of transportation. Its purpose is to transfer the latest state-of-the-art technology in the areas of roads and bridges by translating the technology into terms understood by local and state highway or transportation personnel.

The Illinois Interchange is published quarterly by the Illinois Technology Transfer Center at the Illinois Department of Transportation. Any opinions, findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect views of the Illinois Department of Transportation, or the Federal Highway Administration. Any product mentioned in the Illinois Interchange is for informational purposes only and should not be considered a product endorsement.