

SHOULDER MAINTENANCE: DON'T DEFER IT

By Stephanie R. Fishman, Project Assistant, Technology Transfer Center, University of New Hampshire

In the rush to complete projects before winter, some municipalities may have postponed shoulder work. However, deferral can result in shoulders that don't serve their purposes, which are just as important through the winter as they are the rest of the year. Those purposes are to:

- Provide side support to the pavement.
- Drain water away from the pavement into ditches.
- Provide a safe area for emergency use by vehicles.



While best completed in autumn, some shoulder work can be performed in winter, barring a long spell of sub-freezing, snowy weather. If the weather doesn't cooperate, best get to the work as soon as shoulders dry out enough to sustain repair in spring.

Drainage

To fulfill their drainage purpose, shoulders must not be higher than the pavement edge, and the shoulder slope should be steeper than the pavement slope. These characteristics are necessary to drain snowmelt as well as rainfall.

On high, rutted, or inadequately sloped shoulders, snow and ice may accumulate near the pavement-shoulder junction, creating a "dike" there. As rain and melting snow and ice drain from the road, the dike on the shoulder will direct the flow longitudinally along the pavement and shoulder at the junction, creating a mini-ditch.

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



Illinois Department of Transportation Bureau of Local Roads and Streets



FROM THE DESK OF...



The Illinois Technology Transfer (T2) Center along with 57 other Local Technology Assistance Program (LTAP) Centers recently submitted our Program Assessment Report (PAR) to the national headquarters. The PAR is a quantitative evaluation of the services provided to local agencies over the preceding calendar year.

In 2006, the IL T2 Center held 171 training courses covering 38 different topics. We had over 6,100 enrollments that resulted in 4,786 students attending courses. This equates to 22,741 participant hours and is the highest total since the Center was formed. We expanded the number of courses and topics this year in order to cover more areas of the state. As we develop next years training program, the training survey will help



Illinois Technology Transfer Training Attendance

identify locations and training needs. If you are willing to host a training course and will ensure 30 - 40 attendees, please contact Roy Williamson at (217) 785-2350 or Roy.Williamson@illinois.gov. This will allow Roy to effectively target training courses to ensure maximum enrollment.

The Illinois Interchange Newsletter is distributed to over 4,000 people including all county engineers, 1,530 municipal engineers, 1,468 highway commissioners, and 30 international organizations. Nationally, LTAP Centers' total circulation includes over 500,000 people. Besides newsletters, the LTAP Centers also distribute or loan publications and videos. In 2006, the IL T2 Center distributed 5,750 items.

The IL T2 Center continues to expand our program with the help of Illinois local agencies, the Federal Highway Administration, and the Illinois Department of Transportation. For the complete details on the National LTAP program go to www.ltapt2.org/. Please contact the IL T2 Center with any questions or comments about this report or any other issue.

Kwin Burke

Kevin Burke III, P.E. T2 Program Manager

2006 IL Technology Transfer Center Courses



🛙 Workplace Safety 🖩 Highway Safety 🗆 Infrastructure Management 🗆 Workforce Development

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As you know, this is a bad place to collect water, for the road is vulnerable here. Water will enter cracks in the pavement at the junction, as well as soak into the adjacent gravel or turf shoulder, where it will gain access to the road base and subgrade.

As the water migrates beneath the pavement and experiences freezethaw cycles, it loosens and softens the base and subgrade material. Traffic loads displace the material by flexing the pavement into the soft spots. Quite quickly, the flexing pavement develops potholes and alligator cracks, further access points for water to accelerate the road's deterioration.

Support and Emergency Access

Shoulders that slope too greatly, however, tend to erode. Erosion will expose the pavement edge. Lacking support, the edge may crumble under vehicle loads. Once again, water gains a path to the road base and subgrade.

Eroded shoulder materials may accumulate in ditches, where they can impede ditch flow. As detailed in the fall 2002 Moving Forward, damming water in a ditch is as bad for your road's base and subgrade as diking it at the pavement-shoulder junction.

As an emergency pull-off for vehicles, a steep and eroded shoulder may make a driver's bad situation worse. Furthermore, a shoulder that drops off from the pavement edge can "trap" an errant vehicle's right tires, which may result in a loss of control or rollover as the driver attempts to regain the pavement.

Conditions to Repair

Shoulder repairs slow roadway deterioration and reduce shoulder erosion, thus preventing more costly roadway repair and minimizing the amount of sediment that reaches ditches and streams. Municipalities should repair dirt or gravel shoulders that exhibit one or more of the following conditions:

- The shoulder is higher than the pavement edge.
- The surface shows ruts or corrugations more than 1 inch deep.
- The slope is too close to level to promote good drainage.
- Cuts and gullies have exposed the pavement edge.
- There is more than a 2-inch dropoff to the shoulder from the pavement edge.

Weather permitting, municipalities should repair asphalt shoulders if they are cracked or if a seam has opened between shoulder and travel surfaces.

How to Repair Them

Municipalities can correct poor conditions on dirt and gravel shoulders by reshaping and replenishing.

Reshaping corrects the first three conditions above: high places, ruts and corrugations, and slopes that are too close to level. With a motor grader, crews should shape and smooth the shoulder to the appropriate slope and compact it to ensure that it is not higher than the pavement edge. **Replenishing corrects** the final two conditions above: cuts and gullies, and drop-offs.

After reshaping and compacting the shoulder, crews add, spread, and compact additional gravel.

Shoulders must support vehicle loads. Their materials, therefore, should be similar to those of the road base. Before reshaping and replenishing, it may be necessary to remove organic debris, clays, silts, and other unsuitable materials. Repair of asphalt shoulders is similar to repair of asphalt pavements. Suitable weather is required to seal cracks on the shoulder and gaps between shoulder and pavement.

Reprinted with permission from The Pennsylvania Moving Forward Newsletter, Volume 20, No. 4. Original article was provided by the University of New Hampshire Technology Transfer Center Newsletter, Fall 1999.



CHICAGOLAND APWA EXPO

byJoel Koenig, Publicity Chairman, Chicago Metro Chapter of the APWA



Vendors have more room to show off their equipment and supplies at this years Expo

Plans are in place for a new and expanded Chicagoland APWA Expo and Rodeo. The Chicagoland APWA is moving the rodeo and conference to the brand new Renaissance Convention Center in Schaumburg, IL, just down the street from District One headquarters. The event will take place on May 23rd and 24th, 2007 as part of the celebration for National Public Works Week. With more space and a new venue, the organizers are expecting more exhibitors with larger vender displays, lots of great educational sessions and a brand new course for the Rodeo.

Many activities and events are planned for the 2007 Expo and Conference. In addition to the exhibit hall, opportunities for learning and observing will be taking place during the two-day event.

Vydas Juskelis, the Director of Public Works for the Village of Villa Park is the General Chairman for the 2007 Expo and Conference summed up the excitement he feels about the event this way, "This year's Expo will take us to another level. Never before have we had an opportunity to put so many exhibitors together at one location. The education sessions will have something for everyone from the Directors and Engineers to our valuable front line staff. I hope everyone can make it out to the Schaumburg Convention Center for at least one of the days."

Steve Weinstock, the DPW of Schaumburg, IL, is heading up the education program committee. The committee has developed a full schedule of classes in the mornings for both days. Classes are planned to include programs in Fleet Maintenance, Public Works Management and Engineering. Certificates are being awarded for PDHs,. All of these sessions are included in the \$25 daily registration fee.

The Expo continues to be a showcase for our Northern Illinois snow fighters. Glenn Andler, the Director of Public Works in Mt. Prospect is planning another torturous course for this year's contest. The new course will challenge all drivers this year as none of them has yet to test it out.

Driving skills will be on display for all to see as the Renaissance Center backs to the Northwest Tollway (I-90) and the course can be seen by the office dwellers across the highway.



Moving to Schaumburg is expected to challenge the Snow Plow and Loader teams at the 2007 Rodeo

ECOCAT — ECOLOGICAL COMPLIANCE ASSESSMENT TOOL by Karen Miller, Illinois Department of Natural Resources

EcoCAT, the Ecological Compliance Assessment Tool, was developed to help state agencies and units of local government initiate consultation under the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Interagency Wetland Policy Act of 1989. These laws require government agencies to consult with the Illinois Department of Natural Resources before authorizing, performing, or funding any action that disturbs the land, water, or air. Consultation will determine if an action is likely to modify an Illinois Natural Areas Inventory Site, adversely impact state threatened or endangered species or their essential habitats, or-if the action will be performed or funded by a state agencymodify or destroy wetlands.

These consultation requests should now be submitted to EcoCAT, IDNR's on-line website, at http:// dnrecocat.state.il.us/ecopublic.

EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions may be in the vicinity of protected natural resources. Users receive a natural resource review report that either terminates consultation if no resources are in the vicinity; or lists resources that may be in the vicinity and identifies the IDNR staff member who will review the project submittal.

EcoCAT flags resources that may be 'in the vicinity' by using the following buffers:

- Aquatic resources within two miles
- Terrestrial animals and INAI sites within one mile
- Terrestrial plants within onehalf mile
- Wetlands within 250 feet

Because a resource is flagged does not necessarily mean that it will be adversely affected by the action. However, the potential is there and the action will be evaluated further. Similarly, because the resource buffers are very general, IDNR may

evaluate resources located farther away if the proposed action or the life history requirements of a species warrant doing so.

The actual distribution of endangered and threatened species is never known with certainty. Because some species are migratory, require very large territories, or are highly mobile, a natural resource review showing no protected resources does not guarantee that no T & E species are in the vicinity of a project. An EcoCAT review reflects the information existing in the Natural Heritage Database at the time of the inquiry; it should not be a substitute for detailed site surveys or field surveys required for environmental assessments. Always keep in mind that if any protected resources are encountered during a project's implementation, compliance with applicable statutes and regulations is required.

The EcoCAT home page provides detailed instructions on how to use the site. It is recommended that you read them before submitting a project for the first time.



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2006 IDOT CO-ENGINEER OF THE YEAR MICHAEL WIATER, REGION 1, DISTRICT 1



Dianne O'Keefe, Deputy Director of Highways, Region 1 Engineer (left), Michael Wiater, and Eric Harm, Deputy Director of Highways, Assistant Chief Engineer.

Mike Wiater has been with the department since the summer of 1985. The district rotation program gave him experience in the Bureaus of Construction, Materials, Design and Maintenance.

Upon completion of his rotation, Mike joined the Bureau of Construction and has been a resident engineer on a wide variety of projects. Major projects have been the widening and reconstruction of Archer Avenue in Summit, resurfacing and bridge reconstruction projects on sections of I-57 and I-80, and reconstruction and widening of U.S. Route 30 and U.S. Route 45 in Frankfort. Mike is currently a

ENGINEER OF THE YEAR Nominees

Jan Twardowski, Region 2 District 2

Ken Lang, Region 2 District 3

- Brian Trygg, Region 3 District 5
- Kyle Armstrong, Region 4 District 6

Glen Bushur, Region 4 District 7

Jeff Abel, Region 5 District 8

Susan Poe, Region 5 District 9

Chuck Crim, Central Office Bureau of Local Roads & Streets

Resident Engineer on the Kingery reconstruction project.

The Kingery reconstruction included 65 lane miles of new PCC pavement, 22 bridges, new overhead lighting, retaining walls, drainage work and traffic signals. Several factors contributed to the complexity of the project. Part of the project was in Indiana necessitating the use of Indiana Standard Specifications for that portion.

A prime contractor on the reconstruction defaulted on a \$33 million overhead bridge contract resulting scheduling issues with ongoing and subsequent projects. Mike was involved with communication with the various bonding companies and coordinated efforts when a new contractor was assigned to the contract. In addition, this same project experienced a beam collapse during beam erection. Mike worked with the Bureau of Bridges and Structures to formulate, evaluate and implement new steel erection procedures.

Mike's coordination and communication abilities have been successful in avoiding and mitigating construction conflicts. A portion of the Kingery project abuts the Tollway, and he has facilitated coordination to ensure smooth operations between the two highway systems.

Mike, your exceptional efforts, especially in respect to the Kingery reconstruction, make you an ideal corecipient of the Engineer of the Year for 2006.

2006 IDOT CO-ENGINEER OF THE YEAR OSMER OSMAN, REGION 3, DISTRICT 4

Osmer began his career with IDOT in 1989. His first experiences were in the Bureau of Planning, and later with the Bureau of Construction. Through his hard work and dedication, he has successfully taken on increasingly complicated challenges.

Through his involvement with the I-74 reconstruction in the Peoria area, he was instrumental in ensuring a quality-built project, and that accurate information was provided to the public in a timely manner. During the I-74 reconstruction, Osmer was assigned as Acting Construction Engineer. In addition, two new field engineers were assigned to the project. Osmer performed his duties of Field, Engineer and Acting Construction Engineer while bringing the new field engineers up to speed on the project.

Osmer has great communication



Joseph Crowe, Deputy Director of Highways, Region 3 Engineer (left), Osmer Osman, and Eric Harm, Deputy Director of Highways, Assistant Chief Engineer.

and coordination abilities. Because of those abilities, he has been able to keep projects on schedule, and alleviate potential dilemmas before they become problems. This was exhibited on the I-74 project several times.

Osmer, your outstanding job of

coordinating this project with all stakeholders, and ensuring its overwhelming success makes you deserving of being co-recipient of Engineer of the Year for 2006.

(below) Engineer of Year Nominees



2006 IDOT TECHNICIAN OF THE YEAR PAULA GREEN, REGION 3, DISTRICT 4

Paula began her career with IDOT in 1974. She has been the Lead Environmental Coordinator since 1986. She has been responsible for development and approval of environmental documents for major projects such as I-155, IL-336, US-34, US-67, I-74 Reconstruction, and most recently the IL-29 project.

Overseeing the environmental process for the IL-29 project has been very complex. The final alignment travels though some of the most environmentally sensitive areas in the district. It includes wetlands, forests, bald eagle nesting area, endangered species, nature preserve, flood buyouts, CREPs and IDNR land. Her extensive research in mitigation options facilitated development of an overall plan that was instrumental in obtaining approval from the regulating agencies. This project achieved recognition by receiving a national environmental award, the Example Ecosystem Initiative Award for 2006.

Paula is considered an expert in the department concerning environmental issues and public involvement.



Joseph Crowe, Deputy Director of Highways, Region 3 Engineer (left), Paula Green, and Eric Harm, Deputy Director of Highways, Assistant Chief Engineer.

As a result, she has worked hard to help the department move forward with Context Sensitive Solutions efforts. Paula volunteered to help develop the department's new CSS Awareness class, and teaches this class statewide.

Paula's hard work and dedication maker her a very deserving recipient of Technician of the Year for 2006.



Paula also received the FHWA IL Division Office Environmental Stewardship Award for her work this past year on IL-29.

TECHNICIAN OF THE YEARNomineesSteve Rosato, Region 1 District 1Terry Wendel, Region 1 District 1Terry Wendel, Region 2 District 2Connie Lindenmier, Region 2 District 3Terry Laughlin, Region 3 District 5Ben Stone, Region 4 District 6Clint Bergbower, Region 4 District 7Dosker Meyer, Region 5 District 8Steve Warner, Region 5 District 9Drew Christopher, Central Office Bureau of Bridges & Structures

IACE ENGINEERS OF THE YEAR

By Craig Fink, Dewitt County Engineer

Each year the Illinois Association of County Engineers recognizes certain members who excel at being active in the Illinois Association of County Engineers, active in their community, and exemplary in their work for their county government. The selection for the award is based on a vote by the recipient's peers who are the IACE members in each respective zone. This year's awards were presented at the 93rd Annual T.H.E. Conference which was recently held at the U of I's Champaign-Urbana campus on February 20th and 21st.



The 2006 IACE Zone I Engineer of the Year is Craig Cassem. Craig is the County Engineer for Grundy County and he has served in that capacity since January 1990. Craig received his B.S.C.E. from the University of Illinois. Prior to working at Grundy County, he worked for Metcalf and Eddy, Inc. for 7 years, Edwin Hancock Engineering Company for 2 years, and Beling Consultants, Inc. for 2 years. Craig serves approximately 37,500 constituents in Grundy County where Morris is the county seat. He is responsible for 138 miles of county highway and provides engineering and other assistance for an additional 539 township road miles.



The 2006 IACE Zone II Engineer of the Year is Jerry Schauf. Jerry is the County Engineer for Piatt County and has served in that capacity since 1990. Jerry received his B.S. in Engineering Technology from Southern Illinois University, Carbondale in 1971. He worked for LAMAC Engineering Company until 1978, when he became the County Engineer in Warrick County, IN. He was first appointed County Superintendent of Highways in Wayne County, IL on January 1, 1980. Jerry provides service for approximately 16,400 constituents in Piatt County where Monticello is the county seat. He is responsible for 85 miles of county highway and provides engineering and other assistance for an additional 668 miles of township roads.



The 2006 IACE Zone III Engineer of the Year is Bill Boyd. Bill is the County Engineer for Union County and he has served in that capacity since 1990. Bill has a broad array of experience in various engineering positions including work in the private sector and outside the civil engineering arena prior to joining the county engineering ranks. Bill provides service for approximately 18,300 constituents in Union County where Jonesboro is the county seat. He is responsible for 96 miles of county highway and provides engineering and other assistance for an additional 438 miles of township roads.

IACE Scholarship Winners

Each year the Illinois Association of County Engineers awards scholarships to existing University of Illinois Civil Engineering students. This year four scholarships were awared to: David Galey (William Fremd High School), David Simpson (Edwardsville High School), Kevin Spitz (Buffalo Grove High School), and John Zeman (Vandalia Community High School). Craig Fink, IACE President, and Professor Bill Buttlar, University of Illinois - Urbana/ Champaign, presented the student their scholarships at the THE Conference in February.



FHWA IL DIVISION ENGINEER OF THE YEAR



Norm Stoner, Illinois Division Administrator (left) and J.D. Stevenson

Each year, the FHWA IL Division awards an Engineer of the Year from the Division Office. This award is in memory of the professional contributions, excellence in work ethic, and strength of personal character exemplified by Dennis Johnson.

J.D. Stevenson is well deserving of the Illinois Division's Engineer of the Year Award. Over the past year, J.D. has demonstrated an excellent work ethic and a high-level of professional service as FHWA's Planning, Environment, & Right-of-Way Team Leader. He has worked closely with IDOT and MPO representatives in developing new processes to further advance numerous planning and environmental related initiatives.

J.D. continuously assists IDOT and the MPOs in addressing key transportation issues. He works closely with Federal, State and local agency staff and guides

them on making improvements to existing processes and implementing new processes. J.D. epitomizes integrity and always represents FHWA in the utmost professional manner.

ADAPTIVE CONTROL SOFTWARE – LITE Eddie Curtis, P.E., Traffic Management Specialist, FHWA HOTM/Resource Center

Research and development for traffic signal control has been primarily focused on second-by-second central control since the mid 1960s when the Urban Traffic Control System (UTCS) was developed. Adaptive traffic signal control has been emerging slowly in the United States since the mid 1980s. Adaptive algorithms such as SCATS (Sydney Coordinated Adaptive Traffic System) developed in Australia during the early 1970's and SCOOT (Split Cycle Offset Optimization Technique) developed in the UK have gained traction in the united states in addition to the OPAC and RHODES adaptive algorithms developed by the FHWA in the early 1990s.

While adaptive traffic control systems have shown significant improvements over typical Time of Day traffic signal timing strategies. It is uncertain whether the benefits of these systems justify the cost; which, typically range \$10,000 - \$40,000 per intersection. In 2001 the FHWA set out to develop a low cost adaptive traffic signal timing system that could take advantage of the closed loop architecture estimated to comprise 90% of the traffic signal systems in the United States. The result of the FHWA research effort was Adaptive Control Software Lite (ACS-Lite).

ACS-Lite is a low cost adaptive traffic signal timing strategy developed for closed-loop traffic signal systems that typically utilize field masters to control coordination along arterial routes. ACS-Lite uses the NTCIP communication standard and was developed through a public private partnership between the FHWA, Siemens, University of Arizona, Purdue University and four traffic signal control manufactures: Econolite, Eagle, Peek and McCain. ACS-Lite has been field tested in four locations and is nearing it's inaugural deployment phase. The field tests have yielded impressive results with annual cost savings of as much as \$757,000 resulting from reductions in delay, stops and fuel consumption. The cost to deploy ACS-Lite is anticipated to be typical of what a routine traffic signal retiming project costs estimated in the range of \$1800-\$3200 per intersection depending on infrastructure needs.

ACS-Lite represents a significant evolution in Traffic Signal Control technology and will prove to be an effective solution to the problem of outdated traffic signal timing highlighted in the 2005 Traffic Signal Report Card; which awarded a grade of D- to the nationally to traffic signal operations. More information about ACS-Lite is available at http://www.ops.fhwa.dot.gov/arterial_mgmt/index.htm or by sending an email to ACS-Lite@dot.gov.



T2 TRAINING CLASS SURVEY It's Time to Plan the 2007-2008 Training Program

The Bureau of Local Roads and Streets' Technology Transfer Center is soliciting local agency interest in classes for the October 2007 to April 2008 training program. Please look over the list and indicate those classes of interest to you or your personnel by filling in the blank with an approximate number of attendees your agency would send if the classes were available in your area. This survey will be used by the Center in scheduling the 2007-2008 training program. Every effort will be made to locate specific classes in areas showing the most interest. Classes lacking in interest will be dropped from this year's schedule.

Please complete this class interest survey and mail or fax it to the Center at (217) 785-7296 by May 25, 2007. If you have questions regarding class content, please call the Center at (217) 785-2350.

| Bridge Construction Inspection (2 days) | MUTCD (1 day) |
|---|--|
| Bridge Inventory Documentation (1 day) | OSHA 10-Hour General Industry (1.5 days) |
| Bridge Piling (1 day) | Pavement Construction Inspection (3 days) |
| Bridge Repair (1 day) | Pavement Maintenance (1 day) |
| Bridge Safety Inspection (1 day) | Reclaimed Asphalt Pavement (RAP) (1day) |
| Colors (1 day) (prerequisite before taking classes below) | Rehab of Streets & Highways Seminar (1 day) |
| • Managing People Effectively (1 day) | Response Handbook for Incidents, Disasters (1/2 day) |
| • Team Building (1 day) | Seal Coats (1 day) |
| • Cultural Diversity (1 day) | Small Drainage Structure Const. Insp. (2 days) |
| • Conflict Resolution (1 day) | Snow & Ice Control (1/2 day) |
| Confined Space Awareness (2 hours) | Street Sweeping (1 day) |
| Const. Materials Insp. Documentation (1 day) | Structure Info & Management Systems (SIMS) (1 day) |
| Culvert Hydraulics (1/2 day) | Surveying I-Beginning (3 days) |
| Context Sensitive Solutions (1/2 day) | Surveying II-Intermediate (4 days) |
| Documentation (3 days) | Surveying III-Construction Staking (3 days) |
| Erosion Control (1 day) | Surveying IV-Map GPS & St. Pl. Coord. (2 days) |
| Flagger Training (1/2 day) | Team Building (1 day) |
| Hazardous Material-First Responder Awareness (1 day) | Traffic Signal Maintenance (1 day) |
| HEC-RAS (3 days) | Trenching & Shoring Safety (2 hours) |
| Highway Jurisdiction/Transfers (1 day) | Work Zone Safety-Crews (1/2 day) |
| Highway Signing (1 day) | Work Zone Safety-Design (1 day) |
| Highway Engineering Principles (1 day) | Understanding Specifications (1 day) |
| Low Cost Safety Improvement Workshop (1 day) | Urban Storm Mitigation/Tree Damage (1 day) |
| MFT Accounting and Auditing (1 day) | Additional Classes |
| Contact Person | |
| | |

Agency ____

Phone Number

Illinois Department of Transportation Bureau of Local Roads and Streets



The Technology Transfer (T2) Program is a nationwide effort financed jointly by P& TTA 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. Illinois Technology Transfer Center **Illinois Department of Transportation** 2300 South Dirksen Parkway - Room 205, Springfield, IL 62764 Fax (217) 785-7296 E-mail us at T2LRSDOT@dot.il.gov Local Policy & Technology Engineer **KEVIN BURKE** Kevin.BurkeIII@illinois.gov • (217) 785-5048 Training and Graphics Specialist **AMY NEALE** Amy.Neale@illinois.gov • (217) 782-1682 Training Development Technician **ROY WILLIAMSON**

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Visit our website at www.dot.il.gov/blr/t2center.html

S GRAPHICS

Printed by authority of the State of Illinois, 03/07, 4,325

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