Indiana’s Historic Bridge Inventory
FINAL Select/Non-Select List

As part of the statewide historic bridge inventory program, INDOT is now releasing the FINAL Select/Non-Select Bridge List. In fulfillment of Stipulation II.B of the Indiana Historic Bridge Programmatic Agreement (PA) executed August 11, 2006, this list identifies “historic bridges that are most suitable for preservation and are excellent examples of a given type of historic bridge.” These bridges are referred to as Select Bridges. After consideration of comments received from interested parties last fall, the Federal Highway Administration, in consultation with the Indiana State Historic Preservation Office and INDOT, reviewed and approved the final list. Please note that an updated version of Volume 4 (List of Select and Non-Select Bridges) and the updated historic bridge database are forthcoming in a few weeks.

INDOT has posted the list on the INDOT Historic Bridge Inventory website, under “Completed Inventory Documents”:

http://www.in.gov/indot/2743.htm.

All FHWA-funded bridge projects involving a Select or Non-Select bridge must now follow the stipulations of the Historic Bridge Programmatic Agreement. INDOT has made available the draft Project Development Process (PDP) for historic bridges, which is based on the stipulations and provisions of the Historic Bridge Programmatic Agreement. This PDP document can also be found on the INDOT Historic Bridge Inventory website, under “Documents for Review & Public Comment”.

If you have any questions please contact Mary Kennedy, Architect Historian, Indiana Department of Transportation at 317.232.5215. Or by email at mtkennedy@indot.in.gov.
Indiana LTAP

Indiana Local Technical Assistance Program (LTAP) was established by the Federal Highway Administration (FHWA). The purpose of the LTAP program is to translate the latest, state-of-the-art road, highway and bridge technologies into systems usable by local highway agencies. LTAP is funded by FHWA, the local agency distribution of the Motor Vehicle Highway Account and Purdue University. A newsletter is published quarterly by the Indiana LTAP office at Purdue University. It is distributed free to county, city or town road and street personnel, and others with transportation responsibilities.

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Joe Williams, Brown Equipment, vendors representative

Advisory Board Meetings

The next meeting of the LTAP Advisory Board will take place on: Thursday, May 6, 2010

Training Calendar

FREE LPA Certification Training
May 18
Jasper

AIC Budget & Finance DIPLOMA Class
May 20
Ivy Tech Community College Campus: Lawrence (Indianapolis)
          South Bend
          Evansville
          Lawrenceburg
          Valparaiso

Road Scholar Core Course #11
Road and Bridge Plan Reading
June 2
at the IACHES Conference
Indianapolis

IACT Budget Workshop
June 22
Huntingburg

IACT Budget Workshop
June 24
Munster

Roadway Safety Workshop
July 29
West Lafayette

Road Scholar Core Course #3
Road and Highway Funding
August 25
at the ISCA Conference
Plymouth

for more details on these workshops visit www.purdue.edu/INLTAP
50 Ways We Rely on the Census

1. Decision-making at all levels of government
2. Reapportioning seats in the U.S. House of Representatives (435)
3. Drawing federal, state and local legislative districts
4. Drawing school district boundaries
5. Budget planning for government
6. Distribution of over $300 billion in federal funds
7. Monitoring economic trends
8. Forecasting future transportation needs
9. Planning public transportation projects
10. Planning for hospitals, nursing homes, clinics and other health services
11. Planning health and education for people with disabilities
12. Forecasting future housing needs
13. Forecasting population trends
14. Directing funds to services for people living in poverty
15. Directing services to children and adults with limited English skills
16. Designing public safety strategies
17. Urban planning
18. Rural development
19. Land use planning
20. Charting local demographic changes
21. Understanding local and regional labor supplies
22. Estimating the number of people displaced by natural disasters
23. Assessing the potential for spread of communicable diseases
24. Developing assistance programs for low-income families
25. Determining the local impact of Base Realignment and Closure programs
26. Creating maps to speed emergency services to households
27. Making informed business decisions
28. Delivering goods and services to local markets
29. Understanding consumer needs
30. Designing facilities for the elderly, children and people with disabilities
31. Helping community foundations identify the size and nature of their service areas
32. Product planning
33. Locating factory sites and distribution centers
34. Evaluating risk and investment planning
35. Setting community goals
36. Producing economic and demographic reports about the United States and its people
37. Standardizing public and private sector surveys
38. Scientific research
39. Comparing progress between different geographic areas
40. Developing interactive maps for government and business
41. Genealogical research
42. Creating radius reports for business site location
43. Researching school projects
44. Establishing baseline demographics for medical research
45. Developing adult education programs
46. Media planning and research, background for news stories
47. Historical research
48. Evidence in litigation involving land use
49. Locating areas eligible for federal housing assistance and rehab loans
50. Attracting new businesses to an area

For more information, visit the Indiana 2010 Census Web page: www.census.indiana.edu.
This year’s County Bridge Conference focused on cost effective solutions. The goal was to provide examples of what some of the local agencies are doing and what’s working so that others may implement these ideas.

Day One of the conference was broken into three separate tracks. Participants could spend the entire day in one focus area, or move to different sessions that suited their personal needs best.

INSPECTION included sessions such as an update on the Bridge Inspection Manual, QC/QA guidelines, a discussion on Scour Critical and Unknown Foundations, and NCHRP research on alternate methods of inspection. INDOT presented bridge inspection and reporting requirements, and InspectTech provided two hours of instruction on their inspection software.

DESIGN included an INDOT Design Manual update. Sessions on current shop drawing process, ways to improve estimate accuracy using unit price history, indirect methods for evaluating existing foundation elements, auger cast in place piles, and design for construction loading were presented. Also included were case studies on concrete U beams and a discussion on the LPA process “How it Works for Designers.”

MAINTENANCE was the third and final track offered. These sessions focused on topics such as: bridge maintenance program development, structural steel and concrete repairs, bearing and joint replacement, deck patching methods and materials, and hydrodemolition and latex modified overlay materials.

On Day Two a plenary session was held. Cost effective solutions was the theme of sessions such as Economical Bridge Structure Options (Concrete, Timber, and Steel) and Bridge Inspection Costs. A GRS Bridge Case Study was presented, as well as an update from FHWA, and a research update from Purdue University School of Civil Engineering.

Indiana LTAP would like to extend sincerest thanks to everyone involved in this event. By presenting this material, we hope that we have continued to fulfill our mission by providing agencies with the tools necessary to maintain a safe, efficient and environmentally sound transportation system.

MARK YOUR CALENDAR

2011 COUNTY BRIDGE CONFERENCE
January 12-13, 2011

2011 STORMWATER DRAINAGE CONFERENCE
February 10, 2011
On February 11th, LTAP held its annual Stormwater Drainage Conference in West Lafayette. 143 participants were in attendance representing city, town and county engineers, street and highway commissioners, and public works directors as well as private consultants, surveyors, stormwater coordinators and drainage and environmental specialists.


In a concurrent session instruction on Win TR-20 was provided by associates from Christopher B. Burke Engineering Ltd (CBBEL).

LTAP would like to thank the following organizations for supporting this event: Advanced Drainage Systems, Best Equipment, International Pipe Consultants LLC, M.D. Wessler Associates Equipment Marketing Co. and the staff of CBBEL, Ltd..

EnviroCert International, Inc. presents
May 10-15, 2010
Review Courses and Exams for

- CPESC - Certified Professional in Erosion and Sediment Control
- CPSWQ - Certified Professional in Storm Water Quality
- CESSWI - Certified Erosion, Sediment, and Storm Water Inspector
- CMS4S - Certified MS4 Specialist

Location:
Banning Engineering Facility
853 Columbia Road
Plainfield, IN 46168

Hosted by:
Indiana Department of Environmental Management and Indiana Association for Floodplain and Stormwater Management

Instructors:
Lori Gates, CPESC, CPSWQ, CMS4S, Senior Resource Planner, CBBEL, Ltd.
Jennifer Hildebrand, CPESC, CPSWQ, CESSWI, CISEC, National Storm Water Manager, Weis Builders, Inc.

Dates:
May 10 - CMS4S Review Course
May 11 - CPESC Review Course
May 12 - CESSWI Review Course
May 13 - CPSWQ Review Course
May 14 - Exams (all certifications)
May 15 - Exams (all certifications)

Seating is limited, please register early.

Visit www.envirocertintl.org for more information on the application process and for information on the requirements to sit for each exam.
March 22, 2010

Re: Group IV “Call for Projects”

This is to notify you that the Indiana Department of Transportation (INDOT) will be accepting applications for federal funds for local projects located in counties and towns with population less that 5,000 (based upon the U.S. Census Bureau’s 2000 data) and are located outside the urbanized area of Metropolitan Planning Organizations (MPOs). Each Local Public Agency MUST designate a Certified Employee in Responsible Charge as defined in Chapter 10 of the *INDOT-LPA Process Guidance Document*. Certification classes have been offered over the past year and will be offered again in May to allow for this certification.

Eligible applicants must electronically submit applications to INDOT at mcales@indot.in.gov. **INDOT must receive application(s) by midnight on May 21, 2010.** Project selections will be made on or about July 29, 2010.

An applicant may submit a maximum of one (1) new application in addition to applications requesting an increase for existing projects. An applicant may submit a maximum of 8 pages of supporting documents with each application. The maximum award from this “Call” to any applicant for the Group IV program is $3,000,000 in federal funds or the total amount available in its district, whichever is less. See page 10 of the *Procedure for Local Federal Aid Programs* for eligibility criteria.

Applications from communities which owe INDOT money which is more than 60 days past due will not be considered. An LPA which resolves its past due account will be eligible for award. An LPA may contact the appropriate INDOT District Local Programs Coordinator to discuss its past due account.

<table>
<thead>
<tr>
<th>District</th>
<th>Contact</th>
<th>Telephone</th>
<th>e-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crawfordsville</td>
<td>Mike Wink</td>
<td>(765) 361-5295</td>
<td><a href="mailto:mwink@indot.in.gov">mwink@indot.in.gov</a></td>
</tr>
<tr>
<td>Fort Wayne</td>
<td>David Armstrong</td>
<td>(260) 969-8277</td>
<td><a href="mailto:darmstrong@indot.in.gov">darmstrong@indot.in.gov</a></td>
</tr>
<tr>
<td>Greenfield</td>
<td>Shahnaz Afzaal</td>
<td>(317) 467-3973</td>
<td><a href="mailto:safzaal@indot.in.gov">safzaal@indot.in.gov</a></td>
</tr>
<tr>
<td>LaPorte</td>
<td>Marcia Blansett</td>
<td>(219) 325-7564</td>
<td><a href="mailto:mblansett@indot.in.gov">mblansett@indot.in.gov</a></td>
</tr>
<tr>
<td>Seymour</td>
<td>Brandi Fischvogt</td>
<td>(812) 522-5649</td>
<td><a href="mailto:bfischvogt@indot.in.gov">bfischvogt@indot.in.gov</a></td>
</tr>
<tr>
<td>Vincennes</td>
<td>Jaclyn Foote</td>
<td>(812) 895-7393</td>
<td><a href="mailto:jfoote@indot.in.gov">jfoote@indot.in.gov</a></td>
</tr>
</tbody>
</table>
The following documents are posted on INDOT’s website (www.in.gov/indot/div/projects/LPASection):

1. Procedure for Local Federal Aid Programs (including list showing assigned INDOT district).
2. Inventory of Group IV projects, including current amount of federal funds allocated.
3. Group IV application.

Based upon the current inventory of Group IV projects and the amount of federal funds allocated to them, INDOT will award approximately $25,000,000 in federal funds. Funds are available for new projects in federal fiscal year 2014 and beyond. INDOT will try to keep existing projects on their existing schedule. The funds will be apportioned to INDOT’s geographical districts based on the population of the eligible Group IVs. The approximate amount available in each district is listed below.

<table>
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<tr>
<th>District</th>
<th>Federal Funds</th>
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<tr>
<td>Crawfordsville</td>
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<tr>
<td>Fort Wayne</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>Greenfield</td>
<td>$3,600,000</td>
</tr>
<tr>
<td>LaPorte</td>
<td>$3,800,000</td>
</tr>
<tr>
<td>Seymour</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>Vincennes</td>
<td>$4,100,000</td>
</tr>
</tbody>
</table>

If you have any questions regarding the application process, please contact the Local Programs Coordinator for your district.

Sincerely,

John E. Jordan
Director
Local Programs Division
Join the Build for the Future Campaign and be Recognized for Your Use of ‘Green’ Materials

Using recycled materials like asphalt shingles, foundry sand, tires, reclaimed concrete or asphalt pavement, and compost in infrastructure projects reduces the need to extract and process natural resources, which can reduce emissions of greenhouse gases and other environmental pollutants, save energy, and even save money. U.S. Environmental Protection Agency is working with many stakeholders, including the Federal Highway Administration to foster sustainable materials management in construction activities.

EPA Region 5 established the Build for the Future campaign to provide recognition to local road building agencies that are already using some recycled materials and to encourage them to consider using more. Those who join will have access to a free, easy-to-use online tracking system and will receive a “Climate Profile” reflecting the greenhouse gas emission reductions associated with using recycled materials. These documented environmental benefits can be shared with community residents, business leaders, and local government officials.

HOW DOES THE PROGRAM WORK?
State and local road building agencies are invited to join the Build for the Future campaign via EPA’s WasteWise program (www.epa.gov/wastewise). WasteWise is an EPA voluntary partnership program that encourages partners to reduce waste and buy recycled-content materials.

New partners are asked to submit baseline data via a new online system called RETRAC. Using RETRAC, partners can easily document their successes and calculate the associated environmental benefits. Partners are also asked to set goals and annually report additional uses of recycled materials or other waste reduction practices.

After receiving the baseline data, EPA Region 5 will recognize each partner’s leadership and commitment to the use of recycled materials. Partners who use RETRAC to quantify progress towards goals will receive additional recognition from the Agency, including the opportunity for an on-site visit. Reporting partners are also eligible for national awards and recognition from EPA.

WHY SHOULD YOU JOIN?
Is your state or local government developing a climate action plan? Are you looking for “green” projects or activities? The Build for the Future campaign will allow you to measure the climate benefits related to your use of recycled materials and receive recognition from EPA Region 5 for your leadership in sustainable materials management. Region 5 will also ensure partners receive up-to-date information on the use of recycled materials, including new specifications, case studies, fact sheets, webinars and user guidelines.

If you would like additional information please contact:
Susan Mooney
U.S. EPA Region 5 (LM-8J)
312-886-3585
mooney.susan@epa.gov

Did you know:
- For every 1,000 cubic yards of foundry sand used in road base, more than 140 million BTUs are saved?
- Recycled asphalt shingles, which are at least 20 percent asphalt binder and contain mineral aggregate, can be used in HMA mixes to offset virgin asphalt?
“Where structural modifications are necessary to achieve program accessibility—as in the addition of curb ramps—the DOJ (Department of Justice) regulation requires State and local governments that employ 50 or more staff members to develop a transition plan that provides for the removal of the barriers at issue. With respect to pedestrian facilities, the DOJ regulation imposes a specific construction requirement. This requirement directs each jurisdiction to include in its transition plan a schedule for providing curb ramps where pedestrian walkways cross curbs and specifies a priority for locating them at:

- State and local government offices and facilities;
- transportation;
- places of public accommodation (private sector facilities covered by title III);
- places of employment; and
- other locations (for instance, along routes used by residents with disabilities).”

DOJ’s Title II Technical Assistance Manual notes that curb ramps may not be required at every existing walkway if a basic level of access to the pedestrian network can be achieved by other means, e.g., the use of a slightly longer route.

Action items listed in a community’s transition plan, including the installation of curb ramps at specified existing pedestrian walkways, were to have been completed by January 26, 1995. Entities that have not finished this work should review and update their schedules and place a high priority on accomplishing the work necessary to complete plan items and elements.

Other priorities that need to be included are qualified citizen requests, high use areas such as hospitals, medical centers, shopping districts and other high use community facilities such as community centers, arenas, parks and entertainment locations.

The DOJ.gov website has a complete list of the many cities and letters from DOJ & DOT related to access in Public Rights-Of-Way settlements.

Until next time, keep up the good work I trust you are doing.

Michele S. Ohmes & Maddie, Author, Consultant, Trainer, and Keynote-Motivational Speaker can be reached at michele@michele-able.com. Or visit her website at www.michele-able.com.
The 2009 Manual on Uniform Traffic Control Devices (MUTCD) has new standards and options for Street Name signs. Specifically there are requirements for street name lettering size and case. New options for color and the use of route shields have also been added to the 2009 MUTCD.

The lettering for names of streets and highways on Street Name signs shall be composed of a combination of lower-case letters with initial upper-case letters. Lettering on post-mounted Street Name signs should be composed of initial upper-case letters at least 6 inches in height and lower-case letters at least 4.5 inches in height. On local two-lane streets with speed limits of 25 mph or less, 4-inch initial upper-case letters with 3-inch lower-case letters may be used. See Table 2D-2 below from the 2009 MUTCD.

<table>
<thead>
<tr>
<th>Type of Mounting</th>
<th>Type of Street or Highway</th>
<th>Speed Limit</th>
<th>Recommended Minimum Letter Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Initial Upper-Case</td>
</tr>
<tr>
<td>Overhead</td>
<td>All types</td>
<td>All speed limits</td>
<td>12 inches</td>
</tr>
<tr>
<td>Post-mounted</td>
<td>Multi-lane</td>
<td>More than 40 mph</td>
<td>8 inches</td>
</tr>
<tr>
<td></td>
<td>Multi-lane</td>
<td>40 mph or less</td>
<td>6 inches</td>
</tr>
<tr>
<td>Post-mounted</td>
<td>2-lane</td>
<td>All speed limits</td>
<td>6 inches*</td>
</tr>
</tbody>
</table>

* On local two-lane streets with speed limits of 25 mph or less, 4-inch initial upper-case letters with 3-inch lower-case letters may be used.

Additionally, Section 2A.13 has details regarding layout of the words and numbers on the signs.

The change to upper and lower case signs should occur as roads are constructed or reconstructed or as part of a systematic upgrading program in accordance with 23 CFR 655.603. When a non-compliant device is replaced or refurbished it shall be replaced with a compliant device per the Introduction of the 2009 MUTCD. A compliant device meets the all the standards of the MUTCD including size, retroreflectivity, height, lateral offset and breakaway requirements.

A new requirement is added to expand and limit the only acceptable alternatives to green for the background color of Street Name signs to blue, brown, or white to eliminate a wide variation in practice among jurisdictions. The white background is only allowed with a black legend. A new OPTION is also added allowing the border to be omitted, as is common practice for post-mounted street name signs.

Only alternatives to the green background color for Street Name signs are blue, brown, or white*

* A black legend shall be used if a white background is used, otherwise the legend color shall be white.
A new option is added allowing the use of a route shield on a Street Name sign to assist road users who might not otherwise be able to associate the name of the street with the route number. This information is helpful to unfamiliar road users who may be attempting to find their way back to a numbered route and who do not recognize the street name.

The 2008 Indiana MUTCD (IMUTCD) is being updated and a new IMUTCD will be issued within 2 years that is in substantial conformance with the 2009 MUTCD. The “shall” requirements listed above will not be altered in the IMUTCD. The IMUTCD may be found at: [http://www.in.gov/dot/div/contracts/design/mutcd/mutcd.html](http://www.in.gov/dot/div/contracts/design/mutcd/mutcd.html)


Dear Local Agencies,

In the coming weeks, your highway/street department will receive a copy of the Sign Retroreflectivity Guidebook. This toolkit has been compiled by the FHWA to help you learn about the new requirements and how to be in compliance.

This publication can also be downloaded from our website at the following link:


The CD-ROM that accompanies the toolkit will arrive in the mail.

If you have any questions regarding this resource, please contact our office at 765.494.2164

Larry Lee, City of Lebanon
Street Commissioner

Larry began working for the city of Lebanon part-time in the summer of 1974 and went full-time in 1977 after finishing school. He was appointed Street Commissioner in 1992. Larry has worked for four great mayors and is happy to be currently working with mayor Huck Lewis. He serves as secretary for the Indiana Association of Street Commissioners and is also active in many city projects in Lebanon.

Larry has been married to Debbie Lee for 28 years and has two children; Daniel and Christopher, and one granddaughter; Annie Lee.

*Recipient are pictured with (left to right): John Habermann, LTAP Program Manager; Neal Carboneau, Research Manager; and Rich Domonkos, Training Specialist.*
“Today, creating and maintaining a road network is a big task – we face challenges of the economy and public demand for roads that are better, safer and greener,” said U.S. Department of Transportation Federal Highway Administrator Victor Mendez as he addressed a packed auditorium at the 96th Annual Purdue Road School’s opening session.

“It’s extremely important that the transportation community talks with each other and learns from each other, and that’s why after 96 years this event remains relevant today, congratulations,” added Mendez. This year’s Purdue Road School kicked off at Purdue University on March 9, 2010. Throughout the three-day event, 1746 members of the Indiana transportation community converged to learn about and discuss the latest ideas, developments and trends in transportation. It began with the opening session focusing on the big-picture transportation topics, where Mendez was joined by Indiana Department of Transportation (INDOT) Commissioner Michael Reed and National Association of County Engineers (NACE) President Chris Bauserman.

INDOT Commissioner Reed kicked off the program with a look at INDOT’s current initiatives. He highlighted the state’s effort to significantly reduce crossover-median crashes on Interstates by installing 150-miles of new cable safety barrier in 2009. He also brought the audience up-to-date on the rapid delivery of the new Interstate 69 (I-69) connecting southern Indiana with Indianapolis.

When Bauserman took the podium, he drew attention to a major challenge facing local transportation departments across the country: the cost- and time-consuming bureaucracy that must be navigated to complete local federal aid projects. “Designing and constructing roads has become the easy part,” said Bauserman. “The rules and regulations are what present the challenge.”

Bauserman urged transportation stakeholders to help elected officials understand the challenges of this process and advocate for a more streamlined project-approval procedure. “That way we can get back to the real business of engineering, designing and building for the people we serve,” he said.

In addition to his praise for the goals and objectives of Purdue Road School, U.S. DOT Commissioner Mendez described how recent Obama-administration initiatives have benefitted both Indiana and the country. He explained the American Recovery and Reinvestment Act has funded nearly 1,100 projects in Indiana, including $7 million in recovery funds used to install the state’s new cable safety barriers. “I’ve talked with many transportation
contractors and everybody has said the Recovery Act has allowed them to retain their business and even recall workers,” says Mendez.

Mendez also described his organization’s goals of improving transportation safety, reducing distracted driving, supporting multi-modal transportation, building greener roads and implementing energy- and cost-saving programs. “The best way to meet the challenges we face is to think creatively and push the envelope on innovation,” said Mendez.

Two award presentations followed the speaker’s opening remarks. INDOT Director of Construction Management Mark Miller joined FHWA Indiana Division Administrator Robert Tally to present the 2010 Indiana Quality Achievement Awards. These awards were presented to winners in six transportation project award categories to recognize a commitment to excellence, customer focus, innovation and safety. Then, Indiana LTAP Program Manager John Habermann presented the year’s two Master Road Builder Certifications (see page 11).

**Funding, Tools and Resources**

The focus of several sessions at this year’s Road School was connecting people in the transportation community with the funding, tools and resources they need to build better communities and transportation infrastructure. In the session Energy Efficiency and Conservation Block Grants, participants learned about grants for cities and towns with populations less than 35,000 and counties with populations less than 200,000. Nearly $5 million in funding is now available to these Indiana communities for a variety of energy-efficient retrofits of community buildings. Speaker John Deal from the Indiana Office of Energy Development encouraged attendees to learn more at www.energy.in.gov.

The well-attended Liability and Risk session was aimed at giving listeners an overview of the legal risks faced by transportation agencies and provide them with the tools they need to mitigate risk and limit liability. For example, attorney Grant Clapacs from the law firm Bingham McHale LLP described the importance of ensuring roads are properly maintained even if that duty is delegated to a subcontractor. “You can’t pass the buck,” said Clapacs. “Bottom line, you can’t get out of liability by sub-contracting work.”

**Back to Basics: Safety Analysis Tools**

Looking at the tools available for analyzing traffic safety data and programming data-driven safety improvements. Improvements to the Indiana ARIES crash database were discussed, and a step-by-step demonstration illustrating how to extract accurate crash data was provided. Representatives from the City of Lafayette then gave a first-hand example of how crash data can be used effectively at the local level. Participants also discovered many other tools and resources during Purdue Road School including how to implement new federal standards for retro-reflective signage, how to establish an urban forestry management plan and how to effectively brand a community.

**New Ideas for Multi-Modal**

Helping transportation users get around on bikes, on buses and on foot was another major topic at Road School 2010. In MPO Hot Topics, Columbus Area MPO Director Kent continued on page 19.

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Zach Dripps, Regional Planner, Michiana Area Council of Governments discusses bicycle safety programs in MPO Hot Topics.
### ATTENDANCE CONTINUES TO RISE

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2010 INDIANA PARTNERSHIP FOR TRANSPORTATION QUALITY AWARDS

MAJOR NEW/RECONSTRUCTION - RURAL: DOC HAMILTON BOULEVARD

Owner: City of Mitchell, Mayor Dan Terrell
Contractor: Crider and Crider, Inc., Brad Armstrong and Brad Bredeweg
Designer: Strand Associates, Inc., Marc Rape
Construction Engineering Services: Hannum, Wagle and Cline Engineering

The construction of Doc Hamilton Boulevard was needed for several reasons; the primary ones were public safety and emergency access. The City of Mitchell has a configuration of railroad tracks that can cause traffic delays as long as an hour. This was impacting emergency response times, access to the city’s industrial park, and production at the Lehigh cement plant.

Left to Right: Dan Keefer (FHWA), Marc Rape, Brad Bredeweg, Dan Terrell, Randy Hancock, Brad Armstrong, Mark Miller (INDOT)

MAJOR NEW/RECONSTRUCTION - URBAN: I-69 ALLEN COUNTY

Owner: INDOT Fort Wayne District, Jim Keefer
Contractor: Brooks Construction Company, Inc., Jay Woenker
Designer: DLZ Indiana, LLC., Ben Lehman, PE, LEED, AP, Lynne Leonhard, and Paul Foster

This project is a great example of partnering between INDOT, the contractor Brooks Construction, and the city of Fort Wayne. The commitment resulted in two paving crews working around the clock to place over 200,000 tons of asphalt in 5-1/2 months. Through intensive communication, coordination, and cooperation partnering worked.

Left to Right: Dan Keefer (FHWA), Jay Woenker, Lynne Leonhard, Jim Keefer, Paul Foster, Ben Lehman, Mark Miller (INDOT)

BRIDGES - URBAN: WALNUT STREET OVER THE JORDAN RIVER BRIDGE RECONSTRUCTION

Owner: Monroe County, Board of Commissioners, Bill Williams, and City of Bloomington
Contractor: Crider and Crider, Inc., Jeff Crider
Designer: Beam, Longest and Neff, Jeff Parke and Mike McCool

This project included the design for the replacement of the existing Monroe County Bridges 902 and 917, the antiquated tunnel system and a portion of the tunnel adjacent to Walnut Street with a new precast concrete three-sided structure carrying 1st Street and Walnut Street over the Jordan River. This project presented many challenges from the traffic volume, maintenance of traffic, utility relocation and construction phasing. Through strong communication between BLN, Monroe County, the City of Bloomington, and the City of Bloomington Utilities, the project was completed on schedule and on budget.

Left to Right: Dan Keefer (FHWA), Jeff Parke, Mike McCool, Jeff Crider, Bill Williams, Mark Miller (INDOT)
PROMOTING PARTNERSHIPS TO IMPROVE HIGHWAY QUALITY

PAVEMENT - URBAN: 5TH STREET RECONSTRUCTION

Owner: City of Anderson, Mayor Kris Ockomon
Contractor: E&B Paving, Inc.
Mike Latchaw, Ron Rhea, Kirk Harvey, and Chad Hartwick
Designer: United Consulting, Brian Miller
This reconstruction project is located on the Anderson University Campus in Anderson. It is a major safety improvement for students. It included pedestrian islands, pavement sections the amplify vehicle noise to warn students, and the first use of LED street lighting in Indiana.

Left to Right: Dan Keefer (FHWA), Mike Latchaw, Ron Rhea, Brian Miller, Chad Harkwick, Mark Miller (INDOT)

SPECIAL PROJECTS UNDER $2,000,000: US 33/SR 109 INTERSECTION IMPROVEMENTS

Owner: INDOT Fort Wayne District, Jim Keefer
Contractor: API Construction Corp., Kirk Braun, PE
Designer: Burgess & Niple, Inc.
Robert Hasenkamp and Jason Mathias
This project improved the safety and overall operations at this high traffic intersection. It included increasing truck radii, improving sight distance, adding turn lanes, and improving transportation to Wolf Lake elementary school. Traffic was maintained throughout the corridor which was completed in less than 3 months.

Left to Right: Dan Keefer (FHWA), Robert Hasenkamp, Kirk Braun, Jim Keefer, Jason Mathias, Mark Miller (INDOT)

SPECIAL PROJECTS OVER $2,000,000: RON VENDERLY FAMILY BRIDGE

Owner: Indiana University - Purdue University, Fort Wayne
Greg Justice, Jim Keefer, INDOT
Contractor: R.L. McCoy
Designer: Engineering Resources, Inc., Kurt Heidenreich PE/SE
Construction Engineering Services:
A&Z Engineering, LLC., Jamal Anabtawi, PE
The city of Fort Wayne has long planned to extend the river greenway system from its current terminus at Johnny Appleseed Park (adjacent to the Coliseum) to Shoaff Park which is also on the river north of IPFW. This new bridge provides a combined solution to the connection needs of all of these groups, and has also become a landmark for the campus and community. The bridge was named in honor of Ron Venderly, a local entrepreneur, for his project funding donation.

Left to Right: Jamal Anabtawi, Dan Keefer (FHWA), Kurt Heidenreich, Jim Keefer, Greg Justice, Mark Miller (INDOT)
SPECIAL THANKS TO ALL OUR SPEAKERS

We would like to thank the 210 local and state officials, consultants, contractors, and university faculty and staff who participated as presiders and speakers this year. Road School could not happen without you. Just a few are...

Jeremy K. Shaffer, Vice President, InspectTech

Mike Holowaty, Manager, Office of Traffic Safety, INDOT

Rose Scovel, Senior Planner, LSL Planning, Inc.

Lili Du, Research Associate, NEXTRANS, Purdue University

K.K. Gerhart-Fritz, President, The Planning Workshop, Inc.

Summer O’Brien, Environmental Scientist, RW Armstrong

Tom Turpin, Entomologist, Purdue University

Michael Obergfell, Vice President, USI Consultants, Inc.

Jeff Mishler, President/Owner, Moonrock, Inc.

Jackie Turner, Senior Planner, RATIO Architects, Inc.

Larry Goode, Maintenance Quality Assurance Manager, INDOT

Mike Holowaty, Manager, Office of Traffic Safety, INDOT

Michael T. McBride, City Engineer, City of Carmel

Lili Du, Research Associate, NEXTRANS, Purdue University

K.K. Gerhart-Fritz, President, The Planning Workshop, Inc.
Anderson discussed the challenges his community faced when building their first federal-aid project with bike lane striping. “We knew if we didn’t stripe the lanes right the first time, we may not be able to do it right the next time,” said Anderson.

Anderson then explained the process Columbus used to design user-friendly bike lane striping that provides clear rules and guidance for both bicyclists and drivers. The guidance incorporates striping logic from the Manual on Uniform Traffic Control Devices (MUTCD) and establishes a hierarchy of traffic participants. He said adding multi-modal options like bike lanes in transportation projects will become increasingly important.

“Growth for motor vehicle transportation per capita basis has peaked,” said Anderson. “Demand for other forms of transportation is growing. We’re not talking explosive growth here, but you can expect to see a significant growth in bicycle infrastructure compared with what exists now on a percentage basis.”

Complete Streets – a transportation initiative with the goal of accommodating all transportation users – was another popular Road School subject. In a second MPO Hot Topics session Bloomington/Monroe County MPO director Josh Desmond described Bloomington’s Complete Streets program. “It helps us accommodate the public’s desire for an interactive design process and balance the needs of those ‘going through’ with those ‘going to’,” he said.

Danny Hope, Head Football Coach Purdue University

New Ideas & Developments
Sharing the latest ideas and developments in transportation added to the value of this year’s Purdue Road School. By learning best practices from around the state and across the country, Road School attendees were able to gather ideas to improve their own transportation systems – ideas that could save money, increase accountability, improve regulatory compliance and even save lives.

During How to Implement Pavement Preservation, NACE President Chris Bauserman detailed how his county of Delaware, Ohio was able to carry out an effective and cost-saving pavement preservation program. “The program began in 1996 when we had 186 miles of critically deficient roads and 126 bridges in poor condition,” said Bauserman.

Using a creative funding strategy, full-depth reclamation of deteriorated roadways, a road condition rating system and a long-term plan, Delaware County achieved their goal. “We were able to give 25-percent of our money back to our county general fund last year, and so far this year we’ve had less than 20 pothole complaints on our entire 330-mile system.”

Another innovative idea called the “Road Diet” was presented in the MPO Hot Topics session.

A road diet is a sometimes-controversial move to reduce the number of travel lanes on a roadway to lower speeds, improve travel times, increase safety or accommodate multi-modal transportation.

Evansville MPO transportation planner Dave Stensaas explained Evansville’s successful effort to put Lincoln Avenue on a road diet by reducing the roadway from four travel lanes to two wider travel lanes with accommodations for bicycles and a two-way continuous left-turn lane. “After the changes, crashes have decreased from ten a quarter in previous years down to five each quarter,” he said.

Other new ideas discussed during Road School include alternate applications for aggregate – including changing paved roads back to stone – and new uses for economical roller-compacted concrete technology.

continued from page 13

By learning best practices from around the state and across the country, Road School attendees were able to gather ideas to improve their own transportation systems – ideas that could save money, increase accountability, improve regulatory compliance and even save lives.
A Dose of Inspiration
Road School participants attending the banquet luncheon on Wednesday, March 16 were treated to an extra dose of inspiration from Purdue University head football coach Danny Hope. The coach spoke about the lessons he instilled in his players over the previous football season including the importance of finishing what you start, succeeding academically and supporting your teammates. His motivating and upbeat message was well-received by the Road School audience, who recognized parallels between the challenges the Purdue football team faces on the game field and the challenges they face at their jobs every day.

Paving the Way to Success
With more than 50 sessions covering nine relevant tracks including planning, environmental issues, bridges, construction and safety, hundreds of participants at this year’s Road School were able to gain life-saving ideas, discover cost-cutting measures, learn about industry updates and much more.

By helping Indiana’s transportation community stay on the cutting edge of transportation knowledge, Purdue Road School allows leaders at the state and local levels to aggressively pursue their most important transportation goals – whatever those goals might be. The opportunity to learn, discuss, debate and share critical transportation information ensures this renowned annual event remains an engine that will drive Indiana’s transportation success both today and in the years to come.

Megan Tsai is a freelance writer specializing in transportation and engineering. She writes business communications including articles, newsletters, and case studies for companies and organizations across the country. Learn more at www.RedWagonWriting.com.

Mark your calendar! Road School will be held March 8–10, 2011.

AASHTO & NLTAPA Sign Memorandum to Continue Cooperation

AASHTO and the National Local Technical Assistance Program Association have recently signed a memorandum of understanding to continue their partnership working together to assist state transportation departments in translating federal and state initiatives to the local level.

“We are making a strong partnership better,” said Tony Kane, AASHTO’s engineering and technical services director.

There are 58 local technical assistance programs and tribal technical assistance programs in the United States. They share four common focus areas: safety, infrastructure management, workforce development, and organizational excellence.

“The local technical assistance program centers are ready to work with their individual state DOTs in these areas as well as specific state initiatives,” said Daniel Cady, NLTAPA president. “NLTAPA and AASHTO have already begun collaborative efforts to involve local technical assistance programs and local road agencies more actively in the national road safety efforts to reach zero deaths. NLTAPA member centers are in a unique position to promote the national safety initiatives at the local level, and we will work with AASHTO to identify other areas for collaboration.”

Questions regarding this article may be directed to:
editor@aashtojournal.org.
### DIRECTORY UPDATES SINCE MARCH 2010 RELEASE

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<td>Shan Gunawardena, P.E., PTOE, One Main Street., Room 740 Fort Wayne, IN 46802. Phone: (260) 427-6169. Fax (260) 427-1269 <a href="mailto:shan.gunawardena@cityoffortwayne.org">shan.gunawardena@cityoffortwayne.org</a></td>
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<td>Room 740. Phone (260) 427-6789. Fax (260) 427-1269 <a href="mailto:dave.ross@cityoffortwayne.org">dave.ross@cityoffortwayne.org</a></td>
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**VISIT:** [http://rebar.ecn.purdue.edu/LTAP/Resources/Publications.aspx](http://rebar.ecn.purdue.edu/LTAP/Resources/Publications.aspx)

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PERENNIAL PERFORMANCE
by Cindy Ratcliff

Design challenges in the landscape come in all forms: slopes, shady areas, sunny areas, dry areas, wet areas and more. It’s your job to overcome them with solutions for a functional and beautiful city landscape. This is where perennials come in. Not only do these plants offer a consistency to your overall design by coming back year after year, but they also offer a solution to each of the problems mentioned above.

The key is to match up a condition or design challenge with the right plant (emphasis here on the philosophy of “right plant, right place”). Not only should you match growing requirements of the plants to the site conditions, you should also consider how big the plants will get—a key element that will defeat design every time if ignored. And don’t forget to mix things up. While the medians you maintain need to have a consistent theme, using these same plants in downtown planters will be noticeably redundant. So look for plants with different form, texture and color.

Meanwhile, here are some suggestions to get you started with perennials to solve your toughest problems. These are designed to perform in specified conditions. Just remember that there are many more selections out there, so consult with your local nursery as you look for planting options.

IT’S SHADY
Finding plants that tolerate shade can be a challenge—especially if you want to branch out from the typical purples and blues. And if you’re dealing with a dry area that’s shady, it’s even more difficult. But not impossible. Here are some selections that will thrive in these conditions.

- Columbine (*Aquilegia hybrida*) is easy to grow and produces large, showy blooms of yellow, white, pink, blue and purple. It grows 15 to 20 inches and will bloom until the frost.
- Pigsqueak (*Bergenia cordifolia*) has a thick, glossy foliage that can sometimes have hues of bronze or purple. Its flowers emerge from the center of the plant and consist of pink clustered blooms.
- Downy yellow violet (*Viola pubescens*) is a yellow-flowered perennial that grows up to 16 inches, flowering early in the season.
- Mourning widow (*Geranium phaeum*) is a hardy plant with burgundy-black flowers that bloom early to mid summer.

In wet areas that are shady, your options get a little more diverse. Much research has been done to develop cultivars that can add some brightness to moist, shaded areas.

- Yellow archangel (*Lamiastrum galeobdolon*) will grow 9 to 15 inches tall, with plants spreading freely. These plants feature silver markings on foliage that offset yellow flowers.
- Cardinal flower (*Lobelia cardinalis*) boasts fiery red 1-inch blooms that emerge in late summer to early fall. It likes especially wet conditions and grows up to four feet tall.
- Cinnamon fern (*Osmunda cinnamomea*) grows in symmetric clumps and features cinnamon-colored hairs. It can reach 5 feet in height and attracts hummingbirds.
- Japanese primrose (*Primula japonica*) produces pink, red and white flowers in late spring or early summer. It grows up to 24 inches tall and spreads to 12 inches.

IT’S SUNNY
Bright and colorful, there are many perennials that enjoy full sun. But when you throw in dry or primarily wet conditions, you are forced to become a little more selective if you want plants to thrive. For dry conditions, especially for areas that do not have an irrigation system (think parking lot), here are a few suggestions to get you started.
Some of the most popular non-allergenic trees include the female cultivars red maple and weeping mulberry. The red maple (Acer rubrum ‘Red Sunset’) grows up to 80 feet tall and boasts red and yellow leaves in the fall. It’s a fast-growing tree that produces good shade. It thrives in full sun and won’t tolerate salt. The weeping mulberry (Morus alba ‘Pendula’) grows up to 10 feet tall and 12 feet wide. It attracts birds and should be planted in full sun to part shade.

- **Sky blue aster (Aster azureus)** blooms late summer to early autumn and will light up the sky with bright blue and lavender blooms. It will grow to be 2 to 3 feet tall.
- **Blazingstar (Liatris spp.)** is sometimes hard to identify because it comes in at least a dozen species. But it features bright purple hairlike blooms on 2- to 5-foot stems. They take up minimal space and are appropriate for even small gardens.
- **Poppy mallow (Callirhoe involucrata)** has five-petaled flowers in a wine-red color with a white eye. It blooms all summer and has a low spread that lends itself well to cascading over retaining walls.
- **Black-eyed susan (Rudbeckia spp.)** is best known for its brown, domed center that is surrounded by bright yellow petals. It blooms all summer and grows 2 to 3 feet tall. It worships the sun and requires little maintenance.
- **Beebalm (Monarda didyma)** grows in dense clusters and blooms in bright red flowers from July to late August. It grows 3 to 4 feet tall and is a member of the mint family.
- **Blue flag (Iris versicolor)** blooms May through July with blue flowers that feature yellow and white markings. Flowers are 3 to 4 inches across and the plant grows 2 to 3 feet tall.
- **Globeflower (Trollius spp.)** is a member of the buttercup family. It grows 1 to 3 feet tall and up to 2 feet wide and flowers are gold, white and orange with spoon-shaped petals.

**AVOIDING ALLERGENS**

They may be pretty to look at, but perennial plants that produce pollen and mold spores can make people sick. If you’d like to consider some plant choices that won’t get under their skin, try some low-allergy options. Female cultivars don’t produce any pollen at all. Look for these instead of their male counterparts whenever possible. In particular, avoid using male clones that are marketed as “fruitless” or “seedless,” as these are responsible for producing copious amounts of pollen.

Sunny but wet conditions are a little harder to manage, but aren’t necessarily the result of lots of rain and sun in tandem. They are more likely the result of a sunny site with poorly drained soil. If that’s the condition in your location, consider using these plants.

- **Rose mallow (Hibiscus)** does well under moist conditions and, as a Hibiscus, it produces the largest flower of any perennial. It can grow up to 5 feet tall, but rarely requires staking. It blooms in a variety of colors, depending on variety.

**PROVEN PERFORMERS**

For more information on perennials backed up with trials and research that describes their performance, check out Michigan State University’s herbaceous perennial fact sheets at http://www.hrt.msu.edu/perennialresearch/. These are based on 10 years of research conducted by its floricultural research group. They have studied more than 500 perennial species and cultivars.

Cindy Ratcliff is freelance writer who specializes in landscape, trees, and chemicals. She can be reached at cindy_ratcliff@yahoo.com.
CHIP SEALING

This preventive maintenance technique is typically applied to low volume, asphaltic concrete pavements to avoid or defer major rehabilitation. Past research on the effectiveness of seal coating has shown that both short and medium-term benefits are associated with this treatment. Studies have shown that chip sealing’s effectiveness can be measured in relation to the initial pavement condition. Pavements in relatively poor condition were generally associated with higher initial performance jumps but lower reductions in their rate of deterioration. Pavements in relatively good condition were generally associated with lower performance jumps but greater reductions in their deterioration rates.(1)

The topic of chip seals arouses different responses from different municipalities. Many have used them for years and swear by them while others would not use them if they were free. Because the treatment can stretch dwindling municipal funds, this Tech Note identifies some benefits as well as the pitfalls.

There are two main reasons why people are dissatisfied with chip seal performance. One, people often expect too much from them. The purpose of a chip seal is simply what the name implies: it seals the surface of the pavement, repelling water which is the primary cause of pavement distress. Chip seals also can add skid resistance to worn pavement. Pavement surface integrity can be restored giving new life to a dried-out, raveling surface. The seals are typically applied to roadways under 1,500 average daily traffic (ADT). Roadways with ADT between 1,500 and 12,000 can be sealed successfully if traffic control (speed of traffic) is maintained during and after construction. Chip seals do not add structural strength to pavement. A badly alligatored surface with depressions indicates water problems or base failure that must be corrected prior to placing a chip seal. Sealing an alligatored surface probably will not hold the pavement together. In fact, the cracks will reopen, wasting the expenditure. In such cases, solve the drainage problems, then consider recycling and sealing.

The second reason for dissatisfaction is that the application was executed or inspected incorrectly. The success of chip sealing relies on the use of proper materials, equipment, calibration, weather considerations, and experienced contractors. If small problems are overlooked, big problems result.

First, consider the components of a chip seal. An emulsion is a combination of asphalt, water and an emulsifying agent. The emulsifying agent causes the asphalt to disperse in the water making a mixture stable enough for mixing, pumping and prolonged storage. Polymer modified emulsions (PME) incorporate polymers into the asphalt prior to emulsifying. PME’s have been shown to have better stone retention and longer service life than conventional emulsions. Particular problems are the charges on the emulsions and stone. There are anionic (negative charged) and cationic (positively charged) emulsions and stone. This presents the potential user with the problem of matching the charged emulsion with a stone (aggregate) of the opposite charge. Using a cationic emulsion with a cationic stone will result in a natural magnetic repulsion, which means that the stone will push away from the emulsion. This causes an immediate problem with a chip seal. The most commonly used emulsions RS-2 (E-2) and CRS-2 (E-3) and polymer emulsions RS-2P and CRS-2P are anionic and cationic respectively.

Care must be taken to choose the proper combination of aggregate and emulsion. The emulsion supplier can do a simple test to assure material compatibility. The supplier provides a letter stating that the test showed proper material compatibility.

Although most people know that concrete goes through a “setting-up” process, many don’t know that emulsions also have a setting-up process called “breaking”. The asphalt separates from the water and forms a continuous film on the pavement. Aggregates must be placed and the first roller pass accomplished before the emulsion breaks or the stone will not adhere properly.

A high percentage of fines (finely crushed or powdered material) in the aggregate causes another problem: the fine material will absorb the emulsion. If the aggregate particles are dusty or coated with clay, the emulsified asphalt may not stick.
The dust produces a film that prevents the asphalt from adhering to the aggregate. Using a pre-coated aggregate or a washed aggregate can solve this problem. Approved aggregates are AASHTO #8, #67, and #7. Washed aggregate is required to have less than 1.0% material passing the 200 sieve to meet specification.

**PREPARATIONS**

Now that we understand the materials and have checked their compatibility, we are ready to start the seal coating process. Clean out the surface cracks between ¼ and 1 inch width and seal them. Clean the grass and weeds from the gutter and curb areas. The seal coat performance is only as good as the surface to which the seal coat is applied. Care should be taken to assure that the roadway is clean and free of any substances that will prevent the emulsion from bonding to the pavement. Power brooms, vacuum trucks, blowers and high-pressure water are some of the equipment and methods utilized to clean the roadway.

**APPLICATION**

The contractor must submit a chip seal design at least two weeks prior to the start of the project. It should be noted that even if you are doing the project in-house you should have a chip seal design to assure success of the application.

All equipment, distributors, chippers and rollers should be calibrated annually. The contractor, as well as the municipal equipment if being done in-house, should have a current copy of the equipment calibration. If the temperatures of the air, road surface and aggregate are above 60 degrees and rising you are ready to start. If a current calibration is not available, check the equipment as follows:

1. Check the distribution rates of both the asphalt distributor and the chipper on the small test strip to be sure you have met the design specifications.

2. Measure the area of the strip and record the level in the distributor before and after spreading.

3. Check the application rate of the spreader by placing a three foot by three foot (one square yard) flat pan under the spreader as it moves through the test area.

4. Weigh the chips on the pan, subtract the pan’s weight and you have the pounds of aggregate per square yard that has been applied.

5. Match both figures to your design and, if they are within acceptable limits, you can start work.

6. Check the color of the emulsion as it is applied. If it is black, the emulsion has “broken”, with the water separating from the asphalt too soon. Stop the project and get new emulsion. The emulsion should be creamy dark brown in color before “breaking”.

The application should be watched carefully because misaligned spray bars can cause streaking. This means some areas are getting too much asphalt (resulting in bleeding) and some not enough (resulting is loss of aggregate). If this happens, stop the project and have the spray bars recalibrated. If the pads on the roller are worn or missing, the tires will pick up the aggregate. If you see this happening, stop the project and have the pads replaced. Be sure to check the tire pressure on rubber-tired rollers because uneven pressures produce uneven results.

Rubberized chip seals are yet another way to yield high performance out of limited highway department dollars. This chip seal has the added benefits continued on page 26
CHIP SEALING continued from page 25

of having a darker color, a higher control of dust, high early chip retention, better adhesion at lower temperatures, and a more efficient sweeping surface. These features allow the rubber chip seal to be used on roads where there are higher traffic volumes and higher travel speeds. High quality asphalt cement is blended with recycled tire rubber at elevated temperatures for a specific amount of time to produce a material that has improved temperature susceptibility, flexibility, and resistance to aging.

Now that you have seen that sealing is a complicated process of many small parts, you can appreciate the need for care in choosing the correct situation and preparing surfaces correctly. By taking your time and following the procedures set forth, your efforts should result in a successful chip seal that will stretch your municipal dollars. Just don't expect this procedure to perform miracles. Chip sealing is a preventative measure. Choose candidates wisely.

TIPS FOR A SUCCESSFUL SEAL COAT

Rubber-tired rollers should be used, allowing equipment to follow contours of the road. Steel-wheeled rollers tend to crush the aggregate. This can cause the aggregate to pop out of the emulsion and also may create more uneven results.

A properly constructed chip seal should have one-half to two-thirds of a typical stone imbedded in the asphalt after the surface is rolled and cured.

Application of too much stone may also be a problem. If the mix is more stone than the emulsion can hold, the loose stone may push the adhered stone out of the emulsion under compaction.

The area can be swept after a day or two but only after the emulsion has broken. Check the emulsion by scraping the chips from the small area and inspecting the asphalt. If it is a brown color, wait. If it is black, the emulsion has broken and the sweeping may be started. To prevent loss of adhered aggregate, it is a good practice to wait as long as possible before sweeping. Through the next week, check the surface and remove any remaining loose aggregate.

Try to keep traffic off the new application for as long as possible. If road closure is not an option consider use of leader or pilot vehicles to control speed of traffic during the operations. Restricting traffic for twenty-four hours will assure a greater chance of success, but may not be realistic. Now, remove the work zone traffic-control devices leaving the loose stone signs in place for an additional week after the project is completed (in reverse order of placement) and allow traffic to follow a leader or pilot car at a slow rate of speed over the newly sealcoated pavement.

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Classified Ads

Job Listing

COUNTY ENGINEER
FRANKLIN COUNTY

Franklin County, Indiana is seeking applications for a County Engineer

EDUCATION REQUIREMENTS
Bachelor’s degree in Civil Engineering State of Indiana registered P.E.

EXPERIENCE, SKILLS, & DUTIES
Knowledge and experience in all aspects of Road and Bridge design, construction, and maintenance including drainage and storm water. Ability to design and prepare for bid a variety of local projects. Oversee and inspect construction of local projects performed by outside contractors or county highway staff. Coordinate federally funded projects with IN-DOT as well as seek out grants and other funding for projects. Be actively involved in the day to day operation of the Franklin County Highway Department.

SALARY
This is a salaried position. Some out of town and overnight trips will be required. Salary will be commensurate with experience and qualifications. Benefits include medical insurance, holiday, sick, and vacation pay after a 90 day probationary period.

CONTACT
Franklin County Commissioners
1010 Franklin Ave.
Brookville, IN 47012
765-647-4985
765-647-6926 fax
commissioners@franklincounty.in.gov

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UPCOMING ASSOCIATION EVENTS

**Indiana Association of Cities & Towns**

April 21
MMI Workshop: Managing Your City or Town Under the Tax Caps: Part I

April 29
Indiana Mayors Assistants Annual Conference

May 10-14
Municipal Government Week

May 18
Annual Clerk-Treasurers School

June 22 & 24
Budget Workshop

**Indiana Association of County Commissioners**

for more details visit:
www.indianacountycommissioners.com

District Meetings

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**Indiana Association of Cities & Towns**

for more details visit:
www.citiesandtowns.org

**Indiana Department of Roads**

April 18–21
North American Snow Conference

August 15–18
International Public Works Congress and Exposition

**Indiana Association of Cities & Towns**

for more information visit:
http://indiana.apwa.net

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April 30
Board of Directors Meeting

June 2–3
Annual Summer Conference

August 6
Board of Directors Meeting

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May 20
Budget & Finance DIPLOMA Class Level I

May 21
Budget & Finance DIPLOMA Class Level II

May 25
Auditors Spring Conference

June 7
Clerks Conference

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August 22–25
APAI-IMAA Summer Meeting

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Great Lakes District Annual Meeting

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April 22–23
Great Lakes District Annual Meeting
Planning for the 97th Annual Road School will begin soon. Is there a particular topic that you would like to see offered next year? If so, please send us your suggestions.

Our goal is to offer material that is relevant and necessary to fostering a safe, cost-effective, environmentally sound transportation system.

Your opinions count. To register a session idea:

- call us at 765.494.2164
- email your thoughts to inltap@ecn.purdue.edu
- send us a fax at 765.496.1176