CITY OF FORT WAYNE PUBLIC WORKS MAGAZINE
2007 DEPARTMENT OF THE YEAR
Winner, Civic entrepreneurs Fort Wayne Public Works and Utilities Department’s quantifiable approach to problem-solving enables public works to deliver better service to one-third more customers with the same number of employees.

By Stephanie Johnston

You can’t make your department do more with less if you don’t know how it’s working to begin with.

That’s the situation in which Public Works and Utilities Director Greg Meszaros found himself in 2000, when newly elected mayor Graham Richard challenged managers to make Fort Wayne, IN, the first city in the country to implement “Six Sigma.” The quality-improvement program includes six steps designed to analyze and fine-tune processes to eliminate defects in products and services.

A 20-year department veteran, Meszaros knew the same principles that saved manufacturing giants like Motorola and General Electric millions of dollars could be used to remove more water from sludge. Speed up pothole repairs. Eliminate excess inventory. Get better service from contractors.

He was right. Seven years later, the department has saved taxpayers $10 million. Having proven they can avoid or eliminate expenses, managers earned the credibility they need to ask for—and receive—approval for initiatives that are improving the entire city’s infrastructure system, including:

• A 66% stormwater utility rate increase to fund a $17 million flood-prevention program
• A proposed $21 million bond to buy out the operations of a private drinking water and sewage treatment provider, which would leave just 15% of residents to be served by private utilities.

The department identified and tackled more than 30 processes—far more than any other city department—that were unnecessary, redundant, or inefficient.

People + Technology = Improvement

Anyone who’s ever been involved in a quality management or benchmarking program knows the process lives or dies on the ability to gather and analyze data, and to foster open, honest communication among all parties.

continued on page 7
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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Advisory Board Meeting
The next meetings of the LTAP Advisory Board will take place on:
Thursday, July 24, and Thursday, October 23, 2008 at 10:00am
The meetings will be held in the LTAP Center Conference Room

Indiana LTAP Training Calendar
2008

APWA Click, Listen & Learn
Delta Force Readiness
Public Works Leaders
May 15
LTAP Center
West Lafayette, IN

Road Scholar Core Course # 3
Highway Funding
June 4
IACHES Annual Conference
Indianapolis, IN

APWA Click, Listen & Learn
Developing a Successful Fleet Replacement Program
June 12
LTAP Center
West Lafayette, IN

APWA Click, Listen & Learn
Municipal Stormwater Self Audit
How-to-Guide
June 26
LTAP Center
West Lafayette, IN

Road Safety Workshop
July 30
University Plaza Hotel
West Lafayette, IN

Road Scholar Core Course # 2
Liability & Risk
August 27
ISCA Annual Conference
Angola, IN
Crown Point Mayor David Uran’s Office of Special Events recently initiated an Employee of the Month Program that will award one hard-working employee with an honorary plaque to be hung in city hall. The first 2008 Employee of the Month, Bill Unwin, Street Department Superintendent, was formally announced on Jan. 7th.

Unwin, who has been with the city for over 6.5 years went above and beyond the call of duty during the week of December 15, 2007, when he assisted an extremely distressed resident who was snowed in and unable to shovel her driveway. Unwin fielded the call and calmed the resident down. He went to the house immediately and explained to the resident that he could not plow her driveway during city time, but promised to come over right after work and shovel on his own time.

“I went right after work and it only took 20 minutes to shovel the driveway. It only took 20 minutes to do something nice for someone right before the Holidays; and in this day and age the little things to help your fellow man get overlooked. I am not afraid to use my own time to help someone solve a problem, it was just the right thing to do,” Unwin continued.

The resident was extremely thankful. “She tried to pay me for it, but I kept insisting that it isn’t the fact of being paid, but helping her out that was more important,” said Unwin. He checked on the resident a week after his service, and even took time to give her information for local plowing and mowing contacts that could assist her.

The snow season in December 2007 wasn’t the first time that Unwin assisted a Crown Point resident. During the past few fall seasons, he has raked leaves for an elderly resident on his own time.
Roadway Quality Management Program
Part 3 - Importance of Quality Contracts & Specifications

Alan Kercher, P.E., Delaware T2 Center Consultant

Over the years, the T2 consultant has worked as an expert witness investigating many failed construction projects. Virtually all of them had one thing in common – poorly prepared contract documents. Although it is impossible to prepare a perfect set of contract documents and to perfectly inspect a construction project, a quality set of contract documents and a thorough inspection program will go a long way to minimize problems during construction. Part 3 of this series will discuss contract documents and Part 4 will discuss inspection.

In order to properly maintain any roadway system, all required pavement maintenance and rehabilitation or other activities such as utility work within the right-of-way must be properly constructed. Additionally, new roads must meet reasonably high quality standards. A poorly built road can deteriorate quickly and thereby become a money pit that will drain the municipality of precious funds for many years to come. Since these additional maintenance problems must be added to the already strained maintenance budget, the results could be financially devastating. Therefore, any successful roadway quality management program must include well-prepared contract documents and thorough inspection to ensure that all new roads, as well as preventive maintenance and rehabilitation projects, are properly constructed.

The importance of contract documents and construction inspection cannot be overstated. We do not live in a perfect world, and mistakes do happen and errors are made. Also, some contractors have a tendency to take advantage when possible. Although it may be hard to believe, short-cuts in construction happen way too often. This “short-cut” phenomenon is similar to drivers speeding when there is no one enforcing the speed limit. There must be a safety net to protect the taxpayers. Contract documents and construction inspection will help to ensure that the taxpayers receive a dollar’s worth of goods and services for every dollar spent.

**Fair Market Value**

Poorly prepared contract documents create an un-level playing field. Inferior documents make it easier for a contractor to submit an extremely low bid in order to secure the contract but then perform inferior work or write as many change orders as possible to make a profit on the project.

At the very least, inferior contract documents can lead to poorly constructed infrastructure that will require more maintenance, but could also lead to very costly reconstruction due to premature failures, as well as, possible litigation of claims for monetary damages that could be submitted by the contractor.

It is very important to realize that there is a fair market value for any project to be constructed properly. The best long term policy is to require that work be performed correctly. However, it will require that agencies pay the fair market price. Well-prepared contract documents along with thorough inspection will definitely help to level the playing field so that quality-conscious contractors can submit an honest bid on a project and have a reasonable expectation of winning the bid.

**Project Variables**

No two construction projects are identical. They are influenced by many factors which change from one project to another. Some of the factors include:

**Owner’s project team** - owner’s representatives, engineers, inspectors and testing personnel

**Weather** - temperatures, precipitation and wind

**Construction site** - subsurface conditions including types of soils, rock, underground drainage characteristics and buried utilities; topography; surface drainage; above-ground utilities; existing structures

**Contractors** - variables include the level of experience and knowledge of the personnel assigned to the project, especially the site superintendents; subcontractor utilization; co-ordination with utility companies; types of materials used and material suppliers; type of equipment used; new technologies

Simply put, not all project teams are equal, not all contractors are equal and not all construction sites are equal. Therefore, not all contract documents can be the same. As such, it is imperative that all of the unique requirements for a project be fully captured in order to create a well-prepared set of contract documents.

**Experience Pays**

Since all projects are not created equally, contract documents cannot be created equally. Developing contract documents is not a simple cut and paste endeavor. It requires not only engineering knowledge but
construction experience. Therefore, contract documents cannot be mass produced using untrained personnel spitting out “cookie-cutter” documents. They must be developed by experienced, knowledgeable personnel who take a fresh view of each project.

Whether municipalities decide to use in-house personnel or outside consultants, the preparers must have the requisite knowledge and experience to prepare in-depth contract documents. The preparer must be looking for the unique characteristics and identifying and clearly defining the specific requirements that will make the project successful. Basic knowledge of public works projects is simply not sufficient.

The Contract

The following is a brief overview of the parts of a contract. A contract typically contains three main parts:

1. Bidding and Contractual Documents

Bidding and contractual documents include the bidding notice (advertisement), instructions to bidders, scope-of-work, bid proposal, bonding/security requirements, non-collusion affidavit and the contract “agreement.”

Since the success of any construction project is communications, it is strongly recommended that a pre-bid meeting be held during the bidding period. The main goal of this meeting is to carefully explain:

- intent (goals) of the owner
- details of the scope-of-work, especially clarifying complex issues such as utility coordination or important technical issues such as to allow for proper curing of a recycled pavement base course prior to paving over it with hot mix asphalt
- review the intended schedule
- identify potential issues such as planned community events, detours, maintenance of traffic, etc. that could influence the contractor’s cost
- allow bidders to ask questions so that everyone can hear the answers

It is recommended that this meeting be mandatory and that the minutes of the meeting should become an addendum to the bidding documents.

2. Conditions of the Contract

The conditions part of the contract establishes the rights, responsibilities and relationships of all the parties involved in the contract. This part of the contract typically contains two sections: General conditions and Supplemental conditions. General conditions, commonly referred to as the boiler plate, are generic in nature spelling out many legal items including the owners’ and contractors’ responsibilities; bonding and insurance requirements; payments to the contractor; suspension of work and termination. Supplemental conditions modify or expand the general conditions as necessary to meet the unique requirements of a project.

These first two parts of the contract documents set the ground rules for how the contract will be bid and administered once the contract is awarded. In order to minimize disputes with the contractor, careful planning is required when creating these documents. Some of the concepts that must be carefully dealt with include: changed conditions and change orders; exculpatory clauses; liquidated damages; notices; payment; scope-of-work; suspension of work. The municipality’s legal counsel should provide guidance in these areas.

3. Technical Specifications

The specifications are basically the cook-book instructions for the contractor. Elements of a specification include describing the minimum requirements for the quality of materials and workmanship, as well as, how the work is to be measured and paid for.

Although there are different types of specifications, the most commonly used format for municipal public works projects is the DOT standard specifications. When using the DOT construction standards, all the specifications will become part of the contract documents. Therefore, a separate set of special provisions are required to modify or add to specific parts of the “boiler-plate” standards to meet the unique requirements of an individual project.

Another variation of standard specifications that is commonly used is to include only the specific sections of the standard specifications. The sections are retyped and modified by the preparer, if necessary to meet the unique requirements of an individual project. This way, a special provisions section is not needed. The intent is to provide only the information needed for the specific project.

When utilizing standard specifications, too often, special provisions necessary to adequately address specific needs of a project are not included or are inadequate. Similarly, when project-specific specifications (without special provisions) are used, modifications necessary to meet the unique requirements of a project are not made. As stated earlier, it is imperative for municipalities to ensure that the personnel they have selected, either internally within the agency or an outside consultant, be familiar with the unique requirements of the specific project, as well as, having sufficient in-depth knowledge and experience.
Project Review

Prior to receiving the bids from contractors, the municipalities typically hold the upper hand. If they make changes to the bidding documents, competitive forces will hopefully result in fair market value for the cost of the change. However, once the project has been awarded, the contractor usually has the advantage when changes are made. The contractor can try to claim additional compensation due to a variety of reasons. So, in effort to minimize potential problems and costs during construction, the contract documents should be carefully and thoroughly reviewed.

Three key components of the review process should be:

**Constructability review** - a review from the contractor's point of view – has all the information been provided necessary to properly construct each element? Potential problems to look for include potential site (spatial) conflicts; conflicts between the drawings and the specifications and conflicts within the drawings or the specifications; missing or incorrect construction details; missing or incorrect specifications.

**Bid-ability review** - a review from the bidder's point of view - has all the information been provided necessary to bid the project? Potential problems to look for include missing or conflicting bidding instructions; missing or incorrect bid items and quantities; improperly defining measurement of pay items and method of payment.

**Claims prevention review** - identify conflicts, missing information, etc. necessary to eliminate change orders. The reviewer should read the contract assuming everything has gone wrong and should be looking for ways to protect the municipality during litigation.

The following is an example of extremely poor construction. Due to use of improper backfill material and lack of adequate compaction, a sink hole quickly occurred. Unfortunately, inadequate investigation and design prior to preparing the contract documents along with poorly prepared contract documents and no inspection made it legally difficult for the municipality to determine fault and rectify the problems. The contractor stated that the documents and the design were faulty. He stated that he only did what he was told to do. A partial list of potential factors included possible high water table; poor soil conditions; inadequate pavement design; type of backfill to be used; method and level of compaction; and type of pipe and inlet box connections (joint seals).

**Figure 1** - shows the street and curb is sinking not only at the curb but along the pipe trench.

**Figure 2** - shows the soil behind the curb sinking and that grass was not properly established. Unfortunately, the T² Consultant receives many calls for projects similar to this case. Not every problem can be prevented by utilizing quality contract documents, but many problems can be prevented or more easily resolved when a project is well-thought out and expectations are clearly defined.
The department addressed the first challenge by hiring a part-time quality consultant, sending managers to Six Sigma training, and installing Quality Companion 2 software by Minitab Inc., State College, PA, on project team leaders’ computers. The Windows-based software presents statistical analyses in a very readable form. This was particularly helpful in projects involving complex mechanical systems, like analyzing how each of the 40-year-old wastewater treatment plant’s eight operators ran its centrifuges.

“We finally convinced operators we could see what they were doing, and that what they were doing made a difference,” says Cheryl Cronin in Richard's book (see “Web extra” on page 8), which chronicles the department’s journey. As water pollution control plant superintendent, she led a seven-employee team that focused on increasing waste-activated sludge processing.

In one year, operators stabilized sludge thickness and were removing 55% more volatile solids. Now the city is selling Class A sludge rather than paying to have it carted away and incinerated.

Red Tape = Communication Breakdown

As part of his Six Sigma training, streets superintendent Bob Kennedy spent many hours charting where potholes occur, how long they take to fix, and how they’re fixed. While the department was meeting its goal of 24-hour repairs 77% of the time, some repairs lingered much longer.

Last year, only one of 753 repairs exceeded the 24-hour goal. In addition to having supervisors pick up complaints three times a day, rather than once, the department bought lighting so second- and third-shift crews can work at night. The department also assigns dispatchers to repair potholes on weekends and holidays when regular crews aren’t working, and assembles a special crew for repairs during leaf-collection season.

Employees are rewarded individually, and as a group, based on performance target averages set each year by a joint union-management committee. In 2002, each employee was awarded at least $200. In 2008, the productivity bonus for achieving the 3.5-hour repair goal ranges from $100 to $900. Similarly, wastewater treatment plant operators who pass the state licensing exam receive an extra 65 cents/hour.

Employees aren’t the only ones involved in improving city services.

The city's solid-waste hauler was asked to help lower the number of missed pickups from 4900/year, a process that involved a team of two city employees and three employees of National Serv-All...
of Fort Wayne. Because National Serv-
All had its own system for measuring
customer satisfaction, it had to tweak
its processes to collect data that the city
could input into its Six Sigma framework.
But since each missed pickup cost the
company $80, it had an incentive to
cooperate.

“We saw the need for improvement, and
understood the goals, and it’s worked
very well,” says Municipal Services
Manager Bob Young. “We do a better
job of quantifying processes.”

Missed garbage pickups fell from about
100/week to the current rate of about 70,
a significant improvement considering
that 6000 households have been added
since the project began.

**Leveraging Technology =
Measurable Results**

If he had to do it all over again, Meszaros
says, he'd use Lean Six Sigma—a slimmer
down version of the Six Sigma process—
and work into the more complex version
of the program.

So far, 39 employees have received a
Six Sigma “Black Belt” designation, and
92 are “Green Belts.” To ensure the
department continues to apply process-
 improvement solutions, one employee is
a certified Lean Six Sigma instructor.

Managers thinking of launching a quality-
 improvement program shouldn't expect
results if they're going to just dabble
in it. “You can't delegate this culture
change,” he says. “Do a comprehensive
deployment, and implement it from the
top down.”

To maintain momentum, a department
should work hard to have a designated
information technology employee
oversee integration of all computer
systems that involve infrastructure
assets. Since process-driven programs
measure success quantitatively, software
must facilitate the sharing of information
between work management and asset-
tracking systems.

In 2005, the department wrote a six-
point strategic plan that includes
“making wise and timely investments
in technology to enhance performance.”
Since late 2006, the department has been
transferring asset data into the work
order, inventory, customer relationship
management, water, sewer, storm,
and street modules of Infor’s Hansen 8
software suite. Employees soon will be
able to click on any layer of the city’s
geographic information system to get
a real-time picture of the status of any
given asset, whether it’s a road, water
main, or traffic light.

By tracking the time and materials spent
on these assets, the department will be
able to provide cost-based accounting
for all maintenance functions.

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**INDOT BEGINS ENGINEER SCHOLARSHIP PROGRAM**

In an unprecedented
effort to educate
Hoosier students and
keep talented engineers in the Hoosier
State, the Indiana Department of
Transportation (INDOT) is announcing
the creation of the INDOT Engineer
Scholarship Program.

“Indiana’s transportation system is our
state’s economic future, and to create
a world-class transportation system
we need world-class engineers,” said
INDOT Commissioner Karl B. Browning.

“INDOT’s Engineering Scholarship will
turn some of the brightest students in
Indiana into exceptional civil engineers,
and then put their engineering knowledge
to work building a better future for
Hoosiers.”

The new scholarship program leverages
federal transportation funding to offer
civil engineering scholarships to college
students enrolled at one of Indiana’s seven
Accreditation Board for Engineering and
Technology (ABET) certified engineering
colleges. Eligible university programs
include Purdue University, Rose-Hulman
Institute of Technology, University of
Evansville, University of Notre Dame, Tri-
State University, University of Southern
Indiana and Valparaiso University.

Scholarship recipients will receive more
than $3,000 a semester for up to five
years of college, including up to two
years of graduate school. Each academic
semester, INDOT will make scholarship
payments to twenty engineering
students. In return, recipients will work
at INDOT in full-time paid positions
during their college summer breaks. After
graduation, scholarship recipients
will work six months at INDOT for each
academic semester they received a
scholarship.

For more information on the INDOT
Engineer Scholarship program or to
download a scholarship application,
visit INDOTScholarship.IN.gov.

Media Contact: Megan Tsai
INDOT Office of Communications
(317) 232-8558
INDOT, in coordination with the Federal Highway Administration, the Advisory Council on Historic Preservation, and the Indiana State Historic Preservation Office, has initiated a statewide historic bridge preservation program. Project information, including the Programmatic Agreement that established this program, can be found at www.in.gov/indot/7035.htm.

This preservation program will provide incentives for bridge owners to help them retain these important historic resources and a process to streamline compliance with applicable preservation regulations, thereby better managing historic bridges in Indiana. INDOT, assisted by historical and engineering consultants from Mead & Hunt, is in the process of completing the project.

INDOT is currently looking for information from county bridge owners about existing preservation commitments that are already in place. Existing commitments would include a Memorandum of Agreement with the State Historic Preservation Office outlining rehabilitation or maintenance activities and/or the relocation of a historic bridge. Such bridges may be closed, bypassed, or in non-vehicular use.

For bridges that you have already committed to retain, please provide the following information:

- County bridge number (and National Bridge Inventory [NBI] number, if known);
- Current function/status of the bridge (open or closed to vehicular traffic, in storage, bypassed, etc.);
- Future plans for the bridge in a new location, if applicable.

Submit this information by completing the Historic Bridges Inventory Comment Form at http://www.in.gov/indot/6955.htm or send this completed letter to:

Christopher Koeppel
Cultural Resources Section – Office of Environmental Services
Indiana Department of Transportation
100 N. Senate Avenue, Room N642
Indianapolis, IN 46204
(317) 232-5161 phone
(317) 232-4929 fax
CKoeppel@indot.IN.gov

Please provide responses no later than May 15, 2008

Please feel free to pass these materials on to any additional parties who are responsible for a historic bridge and/or make additional copies if needed. We appreciate your contribution.
This year's County Bridge Conference was held on January 30-31, 2008 at The University Plaza Hotel. Of the more than 200 people attending this year's conference, CBC-2008 welcomed Municipal Managers and Engineers from local agencies across the State of Indiana along with representatives from FHWA, INDOT and various Engineering and Consulting firms. Day One of the conference introduced the County update, highlighting unique bridge projects performed by Indiana's local agencies. Bridge Maintenance techniques were also discussed on the first day, including Erosion Practices, Bridge Joint Repair, Hydro Demolition, Structural Concrete Overlays and Surface Preparation. The remainder of day one focused on Bridge Inspection updates from The Federal Highway Administration and Indiana Department of Transportation. Highlighted were lessons learned from the 1-35 Minnesota Bridge Collapse.

**ATTENDANCE HISTORY**

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Day Two of the conference heard updates from FHWA, INDOT and Purdue University. Several Case Studies were presented during day two including Carroll County Indiana Bridge north of Delphi carrying Carrollton Road over the Wabash River and Dixon Mill Road Design-Build Project in Ohio. In the afternoon attendees learned the status of the INDOT Local Federal-Aid Program and what counties need to know about LRFD. The Historic Bridge Program Update which was also a topic of interest among attendees this year. Before closing comments were read, everyone was treated to informative case studies on Emergency Pile Stabilization and Epoxy Coated Steel Corrosion.

Indiana LTAP would like to applaud the efforts of those involved in planning this year’s conference, and recognize the efforts of all the speakers and presenters. We would also like to thank the participating Vendors, as well as the offices of FHWA Indiana, INDOT and Purdue University’s Department of Civil Engineering for their continued support. For more information or to suggest ideas or topics for CBC 2009 you may contact Indiana LTAP by phone or email.

**AGENDA DAY 1**

- County Update: County Road 17 (Elkhart County) Indiana Avenue (City of Elkhart)
- Maintaining and Preserving Indiana Bridge Decks Using Structural Concrete Overlays / Hydro Demolition and Surface Preparation
- Myths and Realities of Steel Bridges
- Decoding the Federal Bridge Program
- The Future of the Bridge Inspection Program in Indiana
- Effective Bridge Inspection Efforts: Looking Back over the 40 years since the Silver Bridge Collapse

**AGENDA DAY 2**

- Federal Highway Update
- INDOT Update: New Specifications & Guidelines in Design
- Purdue Research Updates: “A Proposed Method to Determine the In-service Inspection Frequency of Fracture Critical Bridges”
- Case Study: Bridge Reconstruction
- Case Study: Design Build, Bridge Replacement, Dixon Mill Road
- The Status of INDOT’s Local Federal-Aid Program
- What Counties Need to Know about LRFD
- Historic Bridge Program Update
- Case Study: I-69 Bridge over the Wabash - Epoxy Coated Steel Corrosion
The 28th Annual Stormwater Drainage Conference was held at the University Plaza Hotel in West Lafayette, IN on February 28, 2008. This year’s conference focused on an update of regulations along with presentations of case studies. Tippecanoe County did an excellent job of describing a project that survived over a long stretch of time and showed that perseverance is important in project development and delivery. Some of the participants were treated to a field trip arranged by Dave Downey, West Lafayette Public Works Director, to learn about porous pavements and how it can take in water to help facilitate drainage. The day started with a high energy presentation from Bob Ash. Mr. Ash helped the attendees improve their relationship skills by encouraging humor in relationships. The ever popular computer class was offered for TR-55 Windows and HY-8. There were nearly 200 people in attendance representing 80 organizations from both the public and private sectors. We again would like to thank all participating vendors and all who planned and helped put this conference together. Additionally, a special thank you goes to Professor G.S. Rao, Professor Dennis Lyn and the Department of Civil Engineering for their continued support and effort into this annual event.

For a list of some very valuable online stormwater & hydraulic resources go to:

http://www.cbbel-in.com/gis/gisresources.html

We welcome any suggestions for topics for next year’s conference. If you have a topic of interest, please send in your suggestion by using the form on the back of this newsletter or calling us at 1.800.428.7639 or emailing inltap@purdue.edu

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### SESSION A

Regulatory Issues - Renewal of Permits for Rule 13 Compliance

Project Show Case - Perseverance - Tippecanoe County

GIS Resources/Web Resources

Update on Continuing Education Requirements for Professional Engineers in Indiana

Green Technology as it Applies to Stormwater Drainage

Porous Hot Mix Asphalt Concrete

Porous Portland Cement Concrete

Monitoring Water Quality in Drainage Ditches at Purdue Farms

Erosion Control - Observations from the Field

Stormwater Drainage Manual Completion

IDEM Authorizations for Culverts

### SESSION B

TR-55 for Windows

HY-8

Expanding Example Problem

Expanding Example Problem

Download the 2008 Updated “Stormwater Drainage Manual” at our website: www.purdue.edu/INLTAP “Resources”
### April

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**Join us at the LTAP Center or host a Click, Listen & Learn Interactive, Internet Educational Program presented by APWA! Call us for details!**

### June

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**Road Scholar Core Course #3 “Highway Funding” Indianapolis, IN**

**IACHES Annual Conference**

**Click, Listen & Learn**
- Innovative Funding
- LTAP Center
- West Lafayette

**Click, Listen & Learn**
- Developing a Successful Fleet Replacement Program
- LTAP Center
- West Lafayette

**Click, Listen & Learn**
- Municipal Stormwater Self Audit How To Guide
- LTAP Center
- West Lafayette
# Training Calendar 2008

## May

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- **12, 15**: Click, Listen & Learn
- Delta Force Readiness
- Public Works Leaders
- LTAP Center
- West Lafayette

## July

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**Don't forget, LTAP offers on-site training! Call to schedule sessions for work zone traffic control safety, defensive driving for dump truck drivers and chain saw safety!**

- **21**: Road Safety Workshop
- University Plaza Hotel
- West Lafayette, IN

**Visit our website:** [www.purdue.edu/INLTAP](http://www.purdue.edu/INLTAP)
The counting is almost done and we are pleased to announce that over 1,700 of you attended Road School this year, 300 more than last year!

The Opening Session on Wednesday began with INDOT Commissioner Karl Browning presenting his state of the state highway system report. Our featured guest speaker was Robert DeHaan, Deputy Assistant Secretary of Transportation in Washington DC, who discussed the federal perspective on future highway financing strategies. The Indiana Highway Quality Awards, which are sponsored jointly by the Federal Highway Administration and the Indiana Department of Transportation, were presented as well for six state and local highway projects completed in 2007. Our congratulations go out to all of the designers, engineers, and contractors for these award-winning projects! The traditional Road School Exhibitors Luncheon was again a popular event, and the day concluded with the Annual Welcome Reception at the University Plaza Hotel, which was also well attended. We extend our thanks to all of the consultants and suppliers who participated in these events.

Throughout the next two days, there were 43 sessions, both highly technical as well as self-improvement-oriented. Our traditional timely updates in the environmental, pavement, safety, and maintenance areas were also provided, as well as sessions dealing with improving communication and presentation skills.

Our Road School Luncheon speaker was Retired USAF Lt. Colonel Todd Beer, a Nappanee resident, who shared with us his experiences as an Air Force One pilot for two presidents. More specifically, he described September 11, 2001 from his perspective while flying President Bush in the historic unchartered environment of terrorism on our soil. We thank Todd for a memorable presentation and for his service to our country!

Road School is coordinated by the Joint Transportation Research Program (JTRP) and the Local Technical Assistance Program (LTAP) at Purdue University. A tremendous amount of time and effort goes into Road School planning. Road School Chairmen Olson Distinguished Professor Kumares Sinha, Professor Jon Fricker and Co-Program Coordinators Karen Hatke and John Habermann would like to thank the 155 local and state officials, consultants, contractors, and university faculty and staff who participated as presiders and speakers this year, as well as the staff of JTRP and LTAP. Road School could not happen without you!

If you requested a Road School Proceedings, it will be mailed to you by late May. If you did not order a Proceedings, it will also be available online at [http://www.purdue.edu/jtrp](http://www.purdue.edu/jtrp) or you may contact us to obtain a CD copy free of charge.

See you at the 95th Road School on March 10-12, 2009!
2008 QUALITY ACHIEVEMENT AWARDS

MAJOR NEW / RECONSTRUCTION - URBAN: SR – 37 Marion County

Owner: Indiana Department of Transportation, Seymour District
Contractor: Reith-Riley Construction Co., Inc.
Designer: FPPH, Inc.
Description: This project (part of MAJOR MOVES) began south of Interstate 465, exit #4, on State Road 37 and ran south to Edgewood. North and Southbound lanes were removed and replaced with additional travel lanes and 13 inch QC Portland Cement Concrete Pavement (QCPCCC) while maintaining two travel lanes in each direction during the entire construction process. Two intersections were completely removed and replaced with 24 hour High-Early concrete while maintaining traffic flow across the intersections. The project was completed ahead of schedule.

NEW / RECONSTRUCTION - RURAL: Industrial Park Drive

Owner: City of Portland
Contractor: LICA Construction
Designer: The Schneider Corporation
Description: Industrial Park Drive is located in the City of Portland and provides access to the Portland Industrial Park from US 27 (Meridian Street) and SR 27 / 67 (Votaw Street). The roadway is an integral part of the economic development of the City of Portland. Improving Industrial Park Drive provides enhanced access to undeveloped properties. The improvements have also helped reduce emergency response times and provide better access. As part of the project, an existing combined sewer lift station was replaced to increase capacity and provide easy upgradeability as the area develops.

PAVEMENT / URBAN: R & S 90701/3-1 Bremen Highway Rehab

Owner/Designer: St. Joseph County
Contractor: Reith-Riley Construction Company, Inc.
Description: Bremen Highway is a heavily traveled former state highway making it a highly visible project with stringent requirements to minimize the inconvenience on local residents along this roadway. The project is 8 mile with a 24’ lane width, with 32 drives and 3 side streets, one a dead end with additional homes. The roadway was milled 4 inches and Reith-Riley made the decision to use its paving machine to place a 4” white topping concrete overlay in one day, using the existing shoulders as their grade height allowing the shoulders to be used for local residents to have access to their homes. This was an innovative decision that made the project move efficiently and minimized the inconvenience to residents.

PAVEMENT - RURAL: SR 265 Pavement Replacement & Drainage Correction

Owner: Indiana Department of Transportation, Seymour District
Contractor: Dave O’Mara Construction
Designer: Earth Tech
Description: Austin is a small community of approximately 5000 in Southern Indiana that is on the route to historic Madison from I-65. This project removed deep ditches that lined SR 256 through town by adding a new storm sewer collection system in addition to improving the aesthetics of the town by adding sidewalks, a full depth asphalt roadway, and sight improvements to the only signalized intersection in the community. During construction, traffic was maintained throughout the duration of the project with small, minor road closures and one-lane, one-way restrictions. Partnering was the key to success.

BRIDGES - RURAL: Rehabilitation of Carroll County Bridge No. 132

Owner: Carroll County
Contractor: Wirtz and Yates
Designer: Butler, Fairman and Seufert, Inc.
Description: The Carrollton Bridge is listed on the National Register as a concrete arch bridge that was once considered too deteriorated and obsolete to be saved. Through the use of innovative engineering techniques, special materials and experienced construction engineers, the bridge was saved. The deck was widened by four feet and the arch strengthened for heavy loads, the exterior appearance of the bridge did not change significantly. This bridge is now saved from destruction and will continue to be a safe and important part of the historic fabric of the community.

SPECIAL PROJECTS - UNDER $2,000,000: R-29388-Nappanee Bike/Pedestrian Facility

Owner: City of Nappanee, Indiana Department of Transportation, Fort Wayne District
Contractor: Reith-Riley Construction Company, Inc.
Designer: Landplan Group, Inc., Indiana Department of Transportation, Fort Wayne District
Description: The project involved new sidewalks, curbs, lighting, signage, landscaping and parking improvements in downtown Nappanee. The project was on US 6 one block west of State Road 19 and serves a two fold purpose; one the beautification of the downtown area, the other to improve the functionality and safety of the downtown area along the extremely busy routes of US 6 and State Road 19. Parking capacity was increased at the off-highway lots to encourage less traffic parking on the routes. Signage and lighting were added to improve visibility and safety for both pedestrians and motorists.
We would like to thank all of the speakers and moderators who donated their time.

Lloyd Bandy, Executive Director
Asphalt Pavement Association of IN

George Hartman, Engineer
Franklin County

Kellie Walsh, Executive Director
Central Indiana Clean Cities Alliance

Jill Saegesser, Executive Director
River Hills EDD & RPC

Robert Connor, Professor of Civil Engineering, Purdue University

Connor Shaw
Possibility Place Nursery

Tom Sorel, Division Administrator
FHWA Minnesota Division

Erica Pugh, Project Manager
HNTB Indiana, Inc.

Larry Thompson, Mayor
City of Nappanee

Robert Hearn, Civil Engineer
City of Baton Rouge, LA

John Jordan, Director
Local Programs Division, INDOT

Jill Palmer, Project Manager
The Schneider Corporation
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The focus of the U.S. Department of Transportation’s (DOT) Rural Safety Initiative is to highlight available options to help reduce highway fatalities and injuries on the nation’s rural roads. This targeted national campaign will take advantage of opportunities to raise awareness of the risks drivers face on America’s rural roads and provide communities with tools and assistance to address these risks where the Department’s resources can be leveraged quickly and effectively.

The Department’s new endeavor will encompass a comprehensive approach, addressing five focus areas:

I. Safer Drivers  
II. Better Roads  
III. Smarter Roads  
IV. Better Trained Emergency Responders  
V. Outreach and Partnerships

The complete announcement for the U.S. DOT Rural Safety Initiative can be found at: http://www.dot.gov/affairs/ruralsafety/ruralsafetyinitiativeplan.htm. It contains information on rural fatalities, crash characteristics and solutions.

RURAL SAFETY INNOVATION PROGRAM

ONE COMPONENT OF THE RURAL SAFETY INITIATIVE IS THE RURAL SAFETY INNOVATION PROGRAM

The goal of the Rural Safety Innovation Program is to improve rural road safety by providing rural communities the opportunity to compete for project funding to address pressing highway safety problems. The program will allow rural communities to develop data driven, creative, locally crafted solutions to their roadway safety problems, document their efforts and outcomes, and share the results with other communities across the country. The following web link will take you to the FHWA Office of Safety, Local Programs page and links to the Federal Register Notice on the Rural Safety Innovations Program dated February 29, 2008. http://safety.fhwa.dot.gov/local_program

RURAL SAFETY INNOVATIONS PROGRAM FEDERAL REGISTER NOTICE

The US Department of Transportation issued the Rural Safety Innovations Program Federal Register Notice on February 29, 2008. Currently, FHWA is proposing to use FY 2008 funds, drawn from available portions of the Delta Region Transportation Development Program, as well as the U.S. Department of Transportation Intelligent Transportation System (ITS) program for the Rural Safety Innovation Program (funding sources discussed below). We anticipate a budget of $15 million or more to be available for the Rural Safety Innovation Program. Successful projects will demonstrate application of innovative technologies and approaches with significant potential for improving safety on eligible rural roads through infrastructure and technology improvements. It is estimated that competitive awards would be made in the range of $200 thousand to $2 million.

Phase I applications are due April 14, 2008. The DOT intends to announce qualified candidates for the Rural Safety Innovation Program in early May 2008. Phase II applications are by invitation only and will be due early July. The following link will take you directly to the Federal Register Notice which contains the complete details of funding available, eligibility, how to apply, potential project types and application evaluation criteria: (http://a257.g.akamaitech.net/7/257/2422/01jan20081800/edocket.access.gpo.gov/2008/pdf/E8-3716.pdf).

FUNDING SOURCES

Delta Region Transportation Development Program – Approximately $9.2 million in available FY 2008 funding for the Delta Region Transportation Development Program will be targeted toward funding innovative safety projects in the Delta region, which consists of 240 counties in Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee. Typical projects include innovative safety infrastructure improvements, such as cable median barriers and rumble strips; innovative intersection improvements such as roundabouts; corridor safety improvements; and adding ITS features to infrastructure. Many of these solutions are relatively low cost, allowing states the opportunity to quickly and efficiently improve safety on rural roads. For more information http://www.fhwa.dot.gov/planning/ind1308drtdp.htm

US DOT Intelligent Transportation Systems (ITS) Joint Program Office – Approximately $6 million will be available for partnerships with rural communities to test and expedite the deployment of ITS technologies and innovations that will reduce accidents on rural roadways. The Department’s ITS program focuses on providing drivers with real-time safety warnings, dynamic traffic and transit information, and advanced navigational tools to prevent accidents and ease congestion. The ITS program works collaboratively with industry to develop intelligent vehicles and intelligent infrastructure that can communicate to improve safety. Safety enhancements that are or will soon be available as a result of ITS technologies include:

Intersection and vehicle-based collision avoidance systems (i.e., sensors to provide oncoming traffic alerts, pedestrian and obstruction detection systems, dynamic message/warning signs, automatic braking systems);

Lane departure warning systems to warn drivers when vehicles leave the roadway;
Variable speed limits and roadway indicators that adjust based on conditions;

Dynamic curve warning systems to warn drivers through dynamic signs or eventually direct communication with the vehicle;

Road weather information systems that help officials know when deicing materials are needed;

Stop-sign-controlled intersection technology that provides vehicles with real-time information about gaps in oncoming traffic to help drivers make safer turns;

Emergency communications systems such as 911 dispatchers to send and receive digital pictures, video, e-mail, and text messages so that emergency personnel can respond quickly and appropriately to incidents; and,

Real-time 511 information services, traffic, weather, and navigation.

The Department will select rural partner communities with significant and quantifiable safety hazards that have identified high-impact, leading-edge ITS solutions and work with these communities to test the new technologies. Results will be evaluated and examples and best practices will be published for other rural communities that are facing similar safety challenges. Additional information on ITS applications in rural areas can be found at http://www.its.dot.gov/index.htm

FOR MORE INFORMATION

For more information on the Rural Safety Innovation Program contact John Dewar at john.dewar2@dot.gov as stated in the Federal Register Notice. The Safety Specialist or other staff in the FHWA Division Office in your State can also provide information on the Federal-aid programs and procedures: http://www.fhwa.dot.gov/field.html#fieldsites

INDIANA DEPARTMENT OF TRANSPORTATION
Driving Indiana’s Growth
News Release
FOR IMMEDIATE RELEASE
April 1, 2008

FUNDING AVAILABLE FOR SAFE ROUTES TO SCHOOL PROJECTS AND ACTIVITIES
Program promotes safety and physical activity for Indiana’s youngest students

INDIANAPOLIS – The Indiana Department of Transportation (INDOT) is asking schools and communities to propose projects and activities that make walking and biking to school safe, simple and enjoyable for Indiana school children.

This is the third year Safe Routes to School (SRTS) funding will be available to local communities aiming to make bicycling and walking to school safe and routine for students in grades kindergarten through eight. The federally funded program recognizes traffic congestion, fuel consumption and air pollution near our schools, coupled with growing health and childhood obesity concerns, makes walking and biking to school an attractive low-cost way for getting to and from school.

This year, INDOT will award about $2.8 million in federal money to support projects and activities that best meet the goals of the Safe Routes to School program. School principals, school district officials, local transportation agencies and metropolitan planning organizations are encouraged to work together and think about ways to promote walking and biking to school. These groups are also encouraged to work closely with other interested organizations – such as parent-teacher associations, local law enforcement agencies and health departments – when planning Safe Routes to School projects and activities.

Examples of eligible Safe Routes to School projects and activities include educational programs to teach children how to bike and walk to school safely, new sidewalks and crosswalks, and speed reduction improvements. This year, INDOT is encouraging communities to consider more non-infrastructure activities such as comprehensive Safe Routes plans, safety evaluations of potential routes to school, bike rodeos and walking school bus programs.

Applications for the Safe Routes to School program will be available on INDOT’s Web site beginning April 1, 2008. Applications will be accepted until May 30, 2008. The Indiana Safe Routes to School Advisory Committee will review the applications this summer, and INDOT will announce the awards this fall.

For more information on the Indiana Safe Routes to School program, visit www.SafeRoutes.IN.gov.

Media Contact: Megan Tsai, INDOT Office of Communications, (317) 232-8558

*Photos and brochure available upon request
EXECUTIVE DIRECTOR
APAI, Indianapolis, IN

Due to the upcoming retirement of its long-time Executive Director, The Asphalt Pavement Association of Indiana (APAI) is seeking talented candidates for this leadership role. For nearly 50 years, the APAI has helped asphalt pavement contractors throughout Indiana innovate, grow, and work with state and local government units to strengthen Indiana’s infrastructure.

Based in Indianapolis, APAI’s Executive Director works closely with an Executive Committee to advance the interests of member contractors and associate members. Priorities for this challenging, multi-faceted role include:

- Frequently interacting with Indiana legislators and their staffs, and coordinating with APAI members as needed on legislative matters
- Maintaining and growing positive relationships at the state, county, and municipal level to enhance roads and highways throughout the state
- Advancing technical, research, and scholarships/training related to asphalt pavement in Indiana
- Hands-on involvement in meetings, member service, communications, and conferences

Ideal candidates will have the following skills and experience:

- Knowledge of word processing, database development and management, spreadsheets, email and internet
- Must be comfortable with, and proficient at, public speaking
- Strong oral and written communication skills
- Ability to lift and carry 10 to 25 pounds frequently and 40 pounds occasionally

Preferred:
- Master’s degree in Civil Engineering or related field
- Research background
- Understanding of the Local Public Agency system at INDOT
- Understanding of local bridges and bridge inspections
- Ability to operate and teach the use of a variety of traffic measuring devices (traffic counters, speed radar guns, sign displays, etc.)

Additional Information:
- Some overnight travel will be required, both in-state and out-of-state.
- FLSA: Exempt (Not Eligible For Overtime)
- Retirement Eligibility: TIAA/CREF Contribution Waiting Period
- to apply, visit www.purdue.edu/hr/employment — position is now posted

RESEARCH ENGINEER
Indiana LTAP, West Lafayette, IN

Develop, promote and conduct technology transfer programs to provide training and implementation of the best practices for the operation of local roads and streets in Indiana. This will include the development of training materials and coordination with town, city, county, state federal officials and University staff to enable these programs to be effectively presented throughout the State. Research efforts will relate to these technology transfer activities. Assist Principal Investigator in preparation of all oral and written communication including manuscripts, grants, reports to sponsors and conference presentation. Develop and edit lab protocols. Make decisions regarding the identification, demonstration and education necessary to persuade local governments to adopt new and more efficient procedures. Oversee graduate and undergraduate students to ensure steady progress is being made on current projects and report progress to Program Manager.

Required:
- Bachelor’s degree in Civil Engineering, Land Surveying, Construction Management, Construction Engineering or related field
- Four years experience in engineering, planning, construction and/or engineering academia
- Must be a licensed professional engineer or able to obtain licensure within a year of start date
- Understanding of Indiana local government, state & local highway/transportation planning, design, operations and maintenance activities

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The APAI is a strong organization with progressive and supportive member companies. In addition, the State of Indiana has made a significant commitment to building its infrastructure. Growth opportunities for paving contractors in general - and APAI members in particular - makes this an exciting time to be in a leadership role in this industry here in Indiana.

To learn more about this unique opportunity, please send confidential resume and compensation requirements to:

Mr. Kevin J. Kelly
Chair, APAI Search Committee
c/o Walsh & Kelly Inc.
1700 East Main Street
Griffith, Indiana 46319
KevinK@WalshKelly.com

To advertise in “our newsletter” send information to lwc@purdue.edu or visit www.purdue.edu/INLTAP click on “classifieds” and “post a listing”
Do you have a suggestion for a future conference? Or a comment on one you attended? Indiana LTAP wants to hear from you! Fax your comments to 765.496.1176.

I attended:

- County Bridge Conference
- Stormwater Drainage Conference
- Road School

I have a suggestion for a session or topic I would like to see covered:

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______________________________________________

Other comments: ________________________________________

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