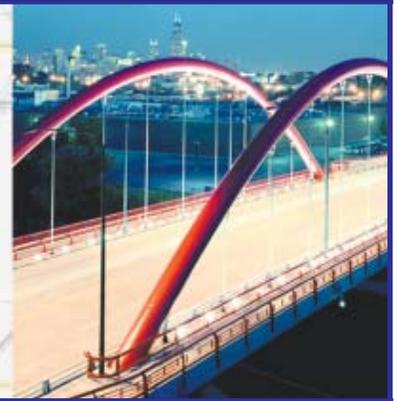


Illinois Interchange



Illinois Technology Transfer Center

Vol. 13 No. 4 Fall 2005

Swords Into Plowshares

by Bob Barrett, Soil Nail Launcher, Inc.

The British military developed a compressed air launcher to deploy nerve gas. This device could send quart-size nerve gas canisters 7 miles. When nerve gas warfare went out of style, a civilian company acquired the launcher and modified it to launch steel bars. It will shoot a 20 foot long bar fully into the ground.

The U. S. Forest Service (USFS) brought this device to the United States for a demonstration project. State DOT personnel from Colorado,

Washington and Oregon participated in the demonstration and evaluation. It was concluded that the Soil Nail Launcher could quickly and economically repair landslides, wall failures, abutment and wing wall failures and provide emergency scour protection.

The Soil Nail Launcher accelerates a 1.5-inch steel bar up to

220 miles per hour. These massive bars are 20 feet or more in length. As these high-speed steel projectiles enter the earth, it appears a shock wave is created, causing the soil to “jump away”, allowing the bar to pass without significant abrasion. The soil



then collapses onto the bar, creating a powerful bond. Tests show this bond to be much greater than with percussion-driven nails. Pull-out tests indicate bond strength can be

as high as 40 PSI. In tests with galvanized bars launched into gravel stockpiles, the retrieved bars showed little loss of galvanization.

Launched nails can be solid bar, threaded bar, or hollow bar. The hollow bars can act as horizontal drains. The bars can be plain, galvanized or epoxy coated.

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



Illinois Department of Transportation
Bureau of Local Roads and Streets



Federal Highway
Administration



From the Desk of . . .

I recently returned from the National Local Technology Assistance Program Association's (NLTAPA) annual conference held in Dubuque, IA. This conference provided an opportunity for the Illinois Technology Transfer Center (IL T² Center) to interact, discuss, and learn with the other centers from across the country and several international centers. The conference opened with a business

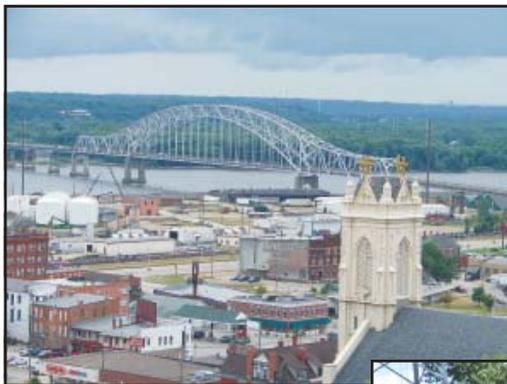
meeting that was followed by two days of educational seminars. Topics ranged from "Tire Repair and Safety Training" to "E-mail Etiquette". The Federal Highway Administration updated the conference on the new transportation bill (SAFTEA-LU bill has now been signed) and the impact to the NLTAPA.

The most interesting item was not a formal presentation; it was the people who attended the conference. Every center stressed the importance of providing their local officials with the training and information vital to a successful highway agency. Every Center has a unique structure and set of skills; furthermore, every Center is willing to share their expertise with others across the world. The NLTAPA

has the resources available to provide timely, innovative solutions to many problems that local highway agencies encounter.

When you contact the IL T² Center, not only are you relying on my staff and the department's experts; you are also relying on the NLTAPA experts. After attending my first NLTAPA conference, I am confident that the IL T² Center has the cooperation of every other Center. As always, please do not hesitate to contact us with any questions.

Kevin Burke
T² Program Manager



Swords into Plowshares . . .

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One of the major advantages to this method is that launched soil nails are functional immediately. An excavation that could take a week or more with traditional nails can be stabilized in a day or less with launched soil nails. Construction projects can be completed well ahead of schedule where nailing is on the critical path.

Launched nails can be used to stabilize fill and cut slope failures on highways and railroads as well as vertical excavations for construction projects. Pavement and guardrail and trackage can be left undisturbed.

Railroad slopes and failing walls can be repaired without interference with train traffic and only one lane closure is needed on highways.

Nails can be inserted horizontally to create tiebacks so that whalers can be added to stabilize failing piling walls. Failing bin, crib and wing walls can be saved with launched nails.

These nails can anchor erosion mats on slopes and they can support steel mesh and shotcrete on permanent in most environments. Launched nails are ideal for temporary applications and



may be considered permanent in most environments.

Visit www.soilnaillauncher.com or contact Bob Barrett at 970/270-4624 for more information.

Calendar of Events

Illinois Public Service Institute	October 2-7, 2005	Effingham, Illinois
IACE Fall Meeting	October 5-7, 2005	Peoria, Illinois
Illinois Traffic Engineering and Safety Conference	October 19-21, 2005	Urbana, Illinois
TOI Educational Conference	November 13-16, 2005	Peoria, Illinois
Illinois Bituminous Paving Conference	December 1, 2005	Champaign, Illinois
92nd Transportation & Highway Engineering (THE) Conference	February 21-22, 2006	Champaign, Illinois
NACE Annual Meeting	April 9-13, 2006	Grand Rapids, Michigan
APWA North American Snow Conference	April 30 - May 2, 2006	Peoria, Illinois
APWA Illinois Chapter Conference	May 3-5, 2006	Peoria, Illinois

MSE Walls Hold Their Own on Upgrade 74

By Chris Maushard, P.E., Illinois Department of Transportation, District 4

Construction on the I-74 improvement is progressing into its third full construction season. Many new and innovative construction techniques and design features have and are being employed for the improvement. One important structural element that is being used extensively throughout the reconstruction in Peoria and East Peoria is the retaining wall. Retaining walls are required on the project in order to fit the proposed through lanes and ramps within the existing right of way and within the geometry of the mainline pavement, ramps, and structures. The proposed I-74 improvement features the construction of approximately 88 retaining walls of various lengths and heights throughout the length of the project. Several retaining wall types are being utilized in the construction of the walls. The decision on what type of wall to be used for each location is based on soil type, proximity to right of way, proximity to other proposed roadway features, design loading on the wall, wall height and length, and mass of soil to be retained.

One of the most economical and stable type of wall that is being constructed at many locations project wide is the Mechanically Stabilized Earth (MSE) Wall. Mechanically Stabilized Earth is a reinforced soil retaining wall system that was developed approximately 40 years ago in France. The concept behind the design

of an MSE Wall is simple. Instead of regarding soil as a mass to be contained by a resistive force, the soil itself is reinforced behind a wall to become an integral part of the entire wall structure. The wall behaves as a gravity structure in an integral unit with the retained soil that not only gives strength to the entire soil mass, but also provides structural flexibility throughout the reinforced soil mass.

The MSE system is comprised of three basic elements: a fascia panel, a reinforcing steel strap, or geogrid system tied to the back of the fascia that extends horizontally into preselected and compacted soil backfill. The interaction among the facing panels, reinforcing steel, and the selected backfill forms a block-like structure that can be used to support elevated roads, bridge structural elements, retain large amounts of fill, or similar applications.

The fascia is typically a series of interlocking precast panels that are affixed to the reinforced steel strap or geogrid system. The fascia is used to provide a smooth vertical face to the wall and to retain and channel any water infiltration caused by a rise in groundwater elevation or by a storm



event. Alternatives to using the precast panels are a welded wire mesh material that extends the entire height and length of the wall or a cast-in-place wall facing. Generally, the wire mesh option is used for walls that will not be visible to motorists and do not require an aesthetically pleasing appearance.

The I-74 project employs the use of cast-in-place facing for the majority of the MSE Walls. The cast-in-place option allows the District to maintain the grid/fin and limestone aesthetic treatments on the wall face as well as provide for a more uniform texture and color on concrete wall faces project wide.

The reinforced steel straps or geogrid system is basically a series of straps that run the length of the wall and extend out horizontally at a calculated distance from the fascia into the soil mass. The series of straps

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MSE Walls Hold Their Own On Upgrade 74 . . .

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are placed at predetermined elevations throughout the height of the wall. The wall derives its strength and stability from the frictional interaction between the straps and the soil mass. The strap and soil system performs well in a variety of soil and climatic conditions. It performs particularly well in seismic zones, due to the built-in flexibility of the system, which allows for some movement without distressing the structure. It can also tolerate a certain amount of settlement, making it a desirable solution even in relatively poor subsoil conditions.

The compacted soil backfill generally consists of a granular, free

draining material. The material is placed in controlled and compacted lifts between each series of reinforced steel straps. The lifts are of such height that the overall plumbness of the wall can be maintained. Advantages to using the granular material are that the compaction of the granular soil can be achieved with less effort than that of a cohesive soil, which aides in maintaining uniformity in the wall. The use of granular fill also ensures that the wall system maintains positive drainage.

The design of each MSE wall during the Phase II portion of the project was a straightforward exercise. The designer specified location, line and grade of each wall, and provided existing soil information in the plan set. The Department has a listing of

pre-approved wall suppliers who took the information from the plans and designed a wall system through the contractor during the construction phase of the project. The completed design and shop drawings were submitted to the Department for review and approval no later than 90 days prior to beginning construction of the wall. All submittals were sealed by an Illinois Licensed Structural Engineer. Compensation to the contractor for the design, material, and labor was paid for in a single pay item. Measurement for that pay item was in units of square meters of exposed cast-in-place wall facing. The MSE wall has proven to be an economical and structurally sound alternative to more complex wall applications for the I-74 project.

ICE - In Case of Emergency

A statewide initiative is underway to encourage Illinois residents to save "In Case of Emergency" entries in their personal cell phones under the acronym "ICE". By entering "ICE" into your mobile phone book, users can log the name and number of someone who should be contacted in an emergency. It would be especially helpful if the ICE contact knows the medical history or other pertinent information. The information could be easily accessed by emergency personnel at an accident scene or in the hospital emergency room to contact a family member or friend, who could provide potentially life-saving medical details about the

incapacitated victim. All first responders (emergency personnel, police, firefighters, emergency medical technicians-EMTs, hospital personnel and other emergency workers) are encouraged to look for ICE numbers when helping individuals who are unconscious or otherwise unable to provide personal information. Research suggests people recover quicker from the psychological effects of their loved one being hurt if they are involved at an earlier stage and they can reach them quickly.

(This article was reprinted from the Illinois Emergency Management Agency's News Bulletin, September 2005, Volume 1, Issue 4.)



The National Highway System: A Commitment to America's Future

by Rodney E. Slater, Federal Highway Administrator, Federal Highway Administration

In the transportation field, we conduct our business - and often measure our success - using tangible elements like concrete, asphalt, and steel. Yet, transportation is really about something equally vital: people.

Transportation is about people and how they go about their daily lives, how they get to work, how they get to market, how they get their children to school, how they get to visit family and friends, and how they pursue happiness.

At the Federal Highway Administration (FHWA), we are committed to providing a safe, modern, and efficient transportation system to serve the American people. The National Highway System (NHS) is the centerpiece of that effort.

As the cornerstone of tomorrow's highway network, NHS will function as the backbone of our nation's 21st century transportation system. As a key component of President Clinton's initiative to rebuild America, NHS will help provide the means for our nation

to remain strong and prosperous.

For the last four decades, the Interstate Highway System has helped America's economy flourish and its people thrive. Now, as we enter the post-interstate highway era, the United States needs a transportation system that will sustain our economic strength and enhance our competitiveness in the global marketplace.

Since the beginning of interstate highway construction in 1956, our population has grown and shifted, our economy has changed, and our needs as a nation have evolved. To meet these demands and to extend the benefits of the Interstate Highway System to areas that are not served directly by it, we responded to the mandate of Congress and developed the concept of a national highway system as a way of focusing federal resources on the nation's most important roads. In 1995, Congress approved NHS. As a result, America can move forward.

The development of NHS was truly a grassroots effort. Although the landmark Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) provided that certain key routes, such as the Interstate Highway System, be included in NHS, most of NHS was not specified. So, we worked closely with our state and local partners, such as transportation departments and metropolitan planning organizations, to identify key routes. They, after all, know best how

their roads function and how these roads fit into their overall transportation plans. We also worked with the private sector and our colleagues in the other agencies of the Department of Transportation (DOT).

We also made it clear that NHS is not another system of interstate highways. In fact, beyond the interstate segment, NHS consists mostly of existing two-lane roads, and about 98 percent of all roads in NHS already have been built. Yet those roads are vital. The 256,000 kilometers (km) of NHS include only 4 percent of the nation's roads, but they carry more than 40 percent of all highway traffic, 75 percent of heavy truck traffic, and 90 percent of tourist traffic.

The advantage of NHS is that it encourages states to focus on a limited number of high-priority routes and to concentrate on improving them with federal-aid funds. At the same time, the states can incorporate design and construction improvements that address their traffic needs safely and efficiently.

With NHS, states can choose from a range of improvements. They can make operational changes, such as a program to locate and remove stalled vehicles that are impeding smooth traffic flow. States can employ available technological improvements, such as Intelligent Transportation Systems (ITS), which will help reduce congestion and keep traffic moving without

(continued on page 7)

NHS Facts

About 98 percent of all roads in NHS have been built. The 256,000 kilometers (km) of NHS include only 4 percent of the nation's roads, but they carry more than 40 percent of all highway traffic, 75 percent of heavy truck traffic, and 90 percent of tourist traffic.

National Highway System . . .
(continued from page 6)

major, roadway expansion.

NHS also will help us meet the challenges of global economic competition by enhancing our different modes of transportation, increasing America's productivity, and bolstering its economy.

Our transportation infrastructure no longer can be a collection of individual modes competing with one another. Instead, it must be a unified system with each mode complementing the others. Increasingly, intermodal carriers rely on all forms of transportation to deliver goods and services to consumers in the most efficient manner possible. NHS fulfills that goal by serving 198 ports, 207 airports, 67 Amtrak stations, 190 rail/truck terminals, 82 intercity bus terminals, 307 public transit stations, 37 ferry terminals, 58 pipeline terminals, and 20 multipurpose passenger terminals. By providing these essential linkages to other modes, NHS creates a seamless transportation system for the rapid movement of people and products.

NHS reaches virtually every part of our country. About 90 percent of America's population lives within 8 km of an NHS road. All urban areas with a population of more than 50,000 and 93 percent with a population of

between 5,000 and 50,000 are within 8 km of an NHS road. Counties that contain NHS highways also host 99 percent of all jobs in our nation, including 99 percent of manufacturing

thrive in the increasingly competitive international marketplace.

In addition, NHS will help us confront the problems of traffic congestion by targeting current and projected bottlenecks.

Whether you are a shipper living by the principle that time is money or a commuter trying to get to and from work with a minimum of difficulty, congestion is an economic drain. The estimated economic loss due to congestion in our major urban areas is \$40 billion a year. NHS will help relieve that tremendous burden, increasing economic efficiency and improving the quality of life for all of us.

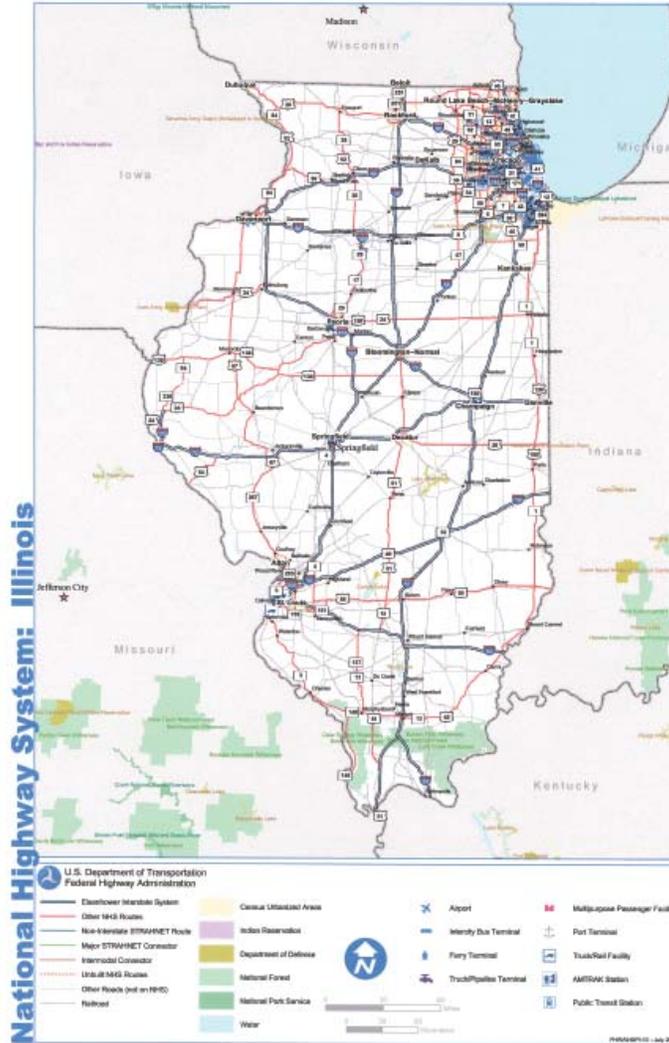
NHS consists of five parts. The first component is the almost 70,000-km Interstate Highway System, which accounts for almost 30 percent of NHS.

The second component includes 21 congressionally designated high-priority corridors as identified in ISTEA. These corridors total 7,200 km.

The third component is the non-interstate portion of the Strategic Highway Corridor Network, or STRAHNET, identified by

the Department of Defense in cooperation with DOT. It totals about 25,000 km. These corridors and the interstate highways are critical strategic links. Operation Desert Storm demonstrated again that the ability to move troops and equipment via highways to

(continued on page 10)



What is NIMS?

The National Incident Management System (NIMS) was developed to provide a system that would help emergency managers and responders from different jurisdictions and disciplines work together more effectively to handle emergencies and disasters. Most incidents are handled on a daily basis by a single, local jurisdiction at the local level, often by fire personnel, EMS and law enforcement. But even for incidents that are

relatively limited in scope, coordination and cooperation among the responding organizations makes for a more effective response.

When the NIMS is adopted and used nationwide it will form a standardized, unified framework for incident management within which government and private entities at all levels can work together effectively. The NIMS provides a set of standardized organizational structures such as the Incident Command System

and standardized processes, procedures and systems. These processes and procedures are designed to improve interoperability among jurisdictions and disciplines in various areas — command and management, resource management, training, communications.

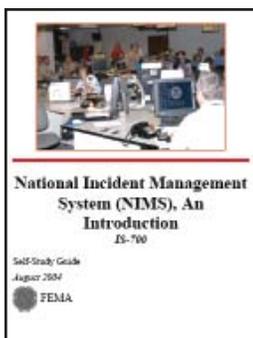
(This description was taken from the Federal Emergency Management Agency's NIMS web site – www.fema.gov/nims/.)

NIMS Training

On February 28, 2003, President Bush issued Homeland Security Presidential Directive-5. HSPD-5 directed the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS). NIMS provides a consistent nationwide template to enable all government, private-sector, and nongovernmental organizations to work together during domestic incidents.

The Federal Emergency Management Agency has developed an independent study course for NIMS Training - IS-700 National Incident

Management System (NIMS), An Introduction. This course introduces NIMS and takes approximately three hours to complete. It



explains the purpose, principles, key components and benefits of NIMS. The course also contains “Planning Activity” screens giving you an opportunity to complete some planning tasks during this course. The planning activity screens are printable so that you can use them after you complete the course.

What will I be able to do when I finish this course?

- Describe the key concepts and principles underlying NIMS.
- Identify the benefits of using Incident Command System (ICS) as the national incident management model.
- Describe when it is appropriate to institute an Area Command.
- Describe when it is appropriate to institute a Multi-agency Coordination System.
- Describe the benefits of using a Joint Information System (JIS) for public information.

- Identify the ways in which NIMS affects preparedness.
- Describe how NIMS affects how resources are managed.
- Describe the advantages of common communication and information management systems.
- Explain how NIMS influences technology and technology systems.
- Describe the purpose of the NIMS Integration Center.

You will enroll when you complete the online answer sheet for the final exam.

Hard copies of the IS-700 Self Study Guide are available from the Technology Transfer Center's Publication Library. Please request item P044.

(This description was adapted from the Federal Emergency Management Agency's web site – www.training.fema.gov/emiweb/is/is700.asp.)

Methamphetamines

Methamphetamine has experienced widespread use in rural areas of the Midwest but is also becoming increasingly popular in metropolitan areas. Use is most prevalent among teens and young adults between the ages of 12 and 30. Women are just as likely to use meth as men.

Methamphetamine stimulates the central nervous system. Users experience a feeling of exhilaration and a false sense of well being followed by a severe crash, users continue to take the drug in increasing doses, making it highly addictive.

Methamphetamine users may appear restless, anxious or paranoid. Some users exhibit aggressive behavior and impaired judgment, and they may experience hallucinations.

Is there a Meth Lab Near You?

Methamphetamine labs are often located in rural areas because of the strong odor produced by the manufac-

ture of methamphetamine. According to the Illinois State Police, some common signs of a meth lab include:



- Unusual, strong odors similar to cat urine, ether, and ammonia;
- Residences with windows covered or painted;
- Renters who pay their landlords in cash;
- Traffic - people coming and going at unusual times, especially at night;

- Excessive trash including items such as antifreeze containers, propane tanks, drain cleaner, starter fluid or duct tape; and
- Unusual amounts of clear glass containers being brought into the home.

If you suspect the manufacture of meth in your community:

- Keep your distance - labs can explode from the volatile chemical combinations used to produce the drug.
- Call local law enforcement or the Illinois State Police. If you find trash items used in the production of meth, do not attempt to dispose of them yourself.

(This article was adapted from the Illinois Attorney General's Methamphetamine Brochure.)

New Meth Training Videotapes

The Illinois Technology Transfer Center has added the following methamphetamine videotapes to its library.

V072 - Meth Lab Waste Recognition (Colorado Department of Transportation) - This video educates Adopt-a-Highway volunteers with the dangers of meth lab waste products that may be encountered during clean up. (8 minutes)

V184 - Meth Labs: California's Hidden Danger (California Department of Justice) - This video was prepared to introduce individuals to the dangers of Meth Labs by making them aware of what to look for and how they could possibly be harmed by the gases and residue of left over chemicals used in processing methamphetamines. This video will assist emergency personnel in identifying potential dangers when responding to emergency calls. (18 minutes)

V186 - Ice Age: Meth Across America (Multijurisdictional Counterdrug Task Force Training Program) - This one-hour training documentary focuses on how the illegal manufacturing, use, abuse and trafficking of methamphetamine wreaked havoc on this quiet county in the Panhandle. Video shows how to identify meth users. (60 minutes)

National Highway System . . .

(continued from page 7)

airports, ports, rail terminals, and other bases for rapid deployment is essential to our national defense.

The fourth component is major Strategic Highway Corridor Network connectors. They consist of more than 3,000 km of roads linking major military installations and other defense-related facilities to the STRAHNET corridors.

Collectively, these four components, all specifically required by ISTEA, account for about 112,000 km or roughly 43 percent of the system. The fifth component is the rest of the system - about 148,000 km of important arterial highways that serve interstate and interregional travel and that provide connections to

major ports, airports, public transportation facilities, and other intermodal facilities.

As part of the NHS legislation that Congress approved last year, the secretary of transportation has the authority to modify the network, at the request of the states, to meet changing conditions and requirements.

Three years ago, FHWA celebrated its 100th anniversary. We began in 1893 as the Office of Road Inquiry, headed by General Roy Stone, a Civil War hero who fought at Gettysburg. With limited resources and a small staff, General Stone nevertheless established a commitment to partnerships, mobility, and technology. These enduring qualities remain the foundation of our success. Today, after a century of service to the American people, we have taken the

next historic step in what General Stone called "a peaceful campaign of progress and reform."

"Good roads," said General Stone, "are the highways to wealth."

President Eisenhower and Congress shared his vision when they put in motion the greatest public works project in history, the Interstate Highway System. Today, as we heed President Clinton's call to rebuild America, the National Highway System will help us continue on a march of progress that has helped make the United States the most mobile nation in history.

(This article was reprinted from the Spring 1996, Volume 59, No. 4 Public Roads Magazine.)

In Memoriam: Pal Choudry

On Thursday, August 25, 2005, Federal Highway Administration (FHWA) – Illinois Division's Local Technology Assistance Program (LTAP) Engineer, Pal Choudry, died after several months of illness. Pal was a friend, co-worker, and supporter of the Illinois Technology Transfer Center.

Born in Shilong, Bengal, India, on August 1, 1935, Pal received a bachelor's degree in civil engineering from Victoria Jubilee Institute of Technology in Bombay, India; a master's degree in civil engineering from the University of Illinois at Champaign/Urbana; and a master's

degree in mathematical systems from the University of Illinois at Springfield. He received the Disabled Person of the Year award in South Carolina. He has worked for FHWA since 1977. Pal was an active member of Church of the Little Flower, where he was on the school board, hospitality council, pastoral counsel, and was the public school religion teacher.

Our prayers and thoughts are with Pal's family: his wife, Marilyn, and his children, Peter and Anna-Maria, as they deal with their loss.

Thank you, Pal, for all you did for the Illinois Technology Transfer Center.



Pal Choudry

DOT Announces Record Low Highway Fatality Rate in 2004

The fatality rate on the nation's highways in 2004 was the lowest since record-keeping began 30 years ago, the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced today. The number of alcohol-related fatalities also dropped for the second straight year.

All told, 42,636 people died on the nation's highways in 2004, down from 42,884 in 2003. The fatality rate per 100 million vehicle miles traveled (VMT) was 1.46 in 2004, down from 1.48 in 2003. The fatality rate has been steadily improving since 1966 when 50,894 people died and the rate was 5.5.

"Drivers are safer today on our nation's highways than they have ever been, in part because of the safer cars, higher safety belt use and stronger safety laws that this Department has helped champion," said Secretary of Transportation Norman Y. Mineta. "But as long as the number of highway deaths remains as high as it is, we will keep advocating for the kind of vehicles, roads and driving habits that make people safer in their cars and trucks."

Since 2001, the number of states with primary safety belt laws has increased to 22, along with the District of Columbia and Puerto Rico, leading to an 80 percent safety belt use level, the highest ever. In addition, all states, plus the District of Columbia and Puerto Rico, now have 0.08 blood alcohol laws for drivers. Minnesota's 0.08 law took effect today, August 1.

In 2004, VMT increased to 2.92 trillion, up from 2.89 trillion in 2003, according to the DOT's Federal Highway Administration.

"The progress we've made reflects the Bush Administration's strong commitment to improved safety. And credit must also go to those states where safety also is a high priority," said NHTSA Administrator Jeffrey Runge, MD. He announced the new fatality numbers in Buffalo, where he's a keynote speaker at the 2005 Traffic Records Forum.

NHTSA's Fatality Analysis Reporting System (FARS) also shows that, between 2003 and 2004:

- Motorcycle fatalities increased from 3,714 to 4,008, an 8 percent rise.
- Alcohol-related fatalities dropped from 17,105 to 16,694, a 2.4 percent decline.
- Rollover deaths among passenger vehicle occupants increased 1.1 percent from 10,442 to 10,553.
- Total fatalities in sport utility vehicles (SUVs) increased 5.6 percent, from 4,483 to 4,735, while fatalities in passenger cars, pickup trucks and vans decreased a total of 834.
- Twenty-seven states, the District of Columbia, and Puerto Rico had decreases in the total number of fatalities. The highest percentage decreases were in the District of Columbia (-36 percent), Rhode Island (-20 percent) and Minnesota, Montana, and Nebraska (-13 percent). The highest percentage

increases were in Vermont (+42 percent), New Hampshire (+35 percent), New Mexico (+19 percent), and Alabama and Oklahoma (+15 percent).

- Passenger vehicle occupant fatalities dropped to 31,693 – the lowest since 1992. Declining fatalities in passenger cars are consistent with more crashworthy vehicles in the fleet and increases in safety belt use.
- Pedestrian deaths declined 2.8 percent from 4,774 in 2003 to 4,641.
- Fatalities from large truck crashes increased slightly from 5,036 to 5,190.
- In 2004, 55 percent (down from 56 percent in 2003) of those killed in passenger vehicles were not wearing safety belts. This underscores the value of the need for states to adopt primary safety belt laws.

NHTSA earlier estimated that highway crashes cost society \$230.6 billion a year, about \$820 per person.

NHTSA annually collects crash statistics from the 50 states, the District of Columbia, and Puerto Rico to produce annual reports on traffic fatality trends. This early report on results from the 2004 Annual Assessment is available on the NHTSA web site at: <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/RNotes/2005/809897.pdf>

(Article taken from the National Highway Traffic Safety Administration's Press Release, August 2005.)

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

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

Illinois Technology Transfer Center

Illinois Department of Transportation

2300 South Dirksen Parkway - Room 205, Springfield, IL 62764

Fax (217) 785-7296

E-mail us at T2LRSDOT@dot.il.gov

Program Coordinator:

KEVIN BURKE E-mail: burkek@dot.il.gov Phone: (217) 785-5048

Graphics Design Systems Specialist:

AMY NEALE E-mail: nealea@dot.il.gov Phone: (217) 782-1682

Training Development Technician:

ROY WILLIAMSON E-mail: williamsonrl@dot.il.gov Phone: (217) 785-2350

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



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T² Advisory Committee

Duane Ratermann (Chairman), County Engineer
Knox County
1214 U.S. Highway 150 East, Knoxville, IL 61448
(309) 289-2514

Douglas Bishop, County Engineer
Perry County
3698 State Route 13/127, Pinckneyville, IL 62274
(618) 357-6556

Eldon Stahl, Highway Commissioner
Medina Township (Peoria County)
R.R.#1, Dunlap, IL 61525
(309) 579-3101

Olen Kibler, Highway Commissioner
Newman Township (Douglas County)
608 North Howard, Newman, IL 61942
(217) 837-2723

Ed Reeder, Director of Public Works
City of Carbondale
P.O. Box 2047, Carbondale, IL 62901
(618) 549-5302

Lynn Krauss, Director of Public Works
Village of Oak Lawn
9446 S. Raymond Ave., Oak Lawn, IL 60453
(708) 499-7816



Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

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