

ON THE MOVE

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From the Director's Desk: Annual Pavement & Materials Conferences Pave the Way to Improved Roads, Streets & Infrastructure Facilities

Approximately five hundred city, county, and state public works engineers and employees, along with contractors and materials suppliers, took advantage of recently held conferences to learn how to design, construct, and maintain pavements and infrastructure facilities that perform better and last longer. These conferences focused on improved designs, materials, construction and maintenance procedures and practices. The conference presentations also covered improved methods and materials to meet the mounting needs with regard to pavement preservation and rehabilitation at both the state and local agency levels.

The **3rd Annual Utah Portland Cement Concrete Pavement (PCCP) Conference** held January 29, 2004, focused on the latest techniques for designing and testing concrete to ensure quality pavements and long term pavement performance.

In addition, presentations were given covering innovative contracting practices and life cycle costing procedures that meet the goals of road users, that is: get in, get out, and stay out as we preserve, rehabilitate, and reconstruct pavements under traffic.

Newly developed techniques for designing, placing and constructing ultra-thin PCC pavements, as well as, information on how to effectively accommodate traffic and businesses while reconstructing a high traffic volume urban arterial roadway were also presented. This latter presentation covered the perspectives of the designer, project manager, and contractor.



The conference also, showcased FHWA's High Performance Concrete Testing & Demonstration Trailer. The proceedings of this conference are available in electronic format by contacting Mitzi McIntyre, Director of the ACPA, Utah Chapter at (801) 556-9561 or by e-mail at [mcintyre@utahacpa.com].

The **29th Annual Utah Asphalt Pavement Conference** began with informative presentations by Utah DOT Executive Director John Njord and FHWA Division Administrator David Gibbs, addressing the funding outlook for highways for the next several years. The Utah Department of Transportation was also commended for the proactive steps they have taken in implementing the use of SuperPave to enhance flexible pavement performance.

A highly interesting presentation was given on the past, present, and future of the asphalt paving industry and the measures that have been taken and are currently being taken to meet

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the challenges that highway agencies and the industry face today and will likely face in the future.

In addition to these presentations, concurrent sessions were offered providing valuable information on design and materials, construction, and maintenance of asphalt concrete pavements. These concurrent sessions covered the implementation of the new 2002 AASHTO Pavement Design Guide, SuperPave technology, Stone Matrix Asphalt (SMA) pavements, improved cold in-place recycling materials and procedures, Asphalt 101 (performance graded asphalt cements), quality asphalt paving procedures and improving pavement smoothness along with current pavement management practices.

As with the PCCP Conference, the proceedings of the 29th Annual Utah Asphalt Pavement Conference are being made available in electronic format by contacting the Utah LTAP Center at 1-800-822-8878 or downloading from the Utah LTAP Center Web site at

[www.utaht2.usu.edu].

The **46th Annual Utah ACI Concrete Conference** was held March 11, 2004, at Utah State University and like the previously cited conferences provided timely and valuable presentations and information on innovations in concrete technology and construction practices.

Concepts and techniques given by James Anderson in his presentation on "4 x 4 Concrete Pavement Construction," (that is 400 psi flexural strength concrete in four hours) offer much to highway agencies and contractors faced with reconstructing a heavily trafficked highway facility in a single work shift and turning it back to traffic with minimal delay.

The presentation by Tony Kojundic on Crackless High Performance Concrete offers much in the way of improving concrete durability and performance in bridge decks and other concrete infrastructures elements.

Robert Zellers gave an informative presentation on the present and

future of fiber reinforced concretes. This provided another valuable tool in the toolbox of improved concrete technologies.

The issue of cracks in concrete and using integral waterproofing to provide watertight structures was well addressed by Brian MacNeil of Vancouver, B.C.

The presentation by Corey Wistrom on self-consolidating concrete offered a highly advantageous material for constructing structural elements with close rebar spacing and forming constraints.

Much is also being done in the area of stamping, stenciling, staining, and coloring of concrete to make it more esthetically and architecturally pleasing. Materials, techniques, and construction procedures associated with this technology were well covered by Scott Maxfield. This concrete technology adds another tool that appears to be useful to the efforts of providing context sensitive solutions to highway projects.

Conference proceedings can also be



Legislative & Regulatory Update

Local Road Coordinator (LRC) Represents Local Agency Interests to FHWA

excerpts from www.naco.org

The Local Road Coordinator (LRC) is a local government professional identified by the Utah FHWA Division Office Administrator to serve as a representative on matters associated with the local roads program in Utah. The suggested duties of this coordinator include:

1. Exchange and distribution of information with peers through a wide variety of methods;
2. Coordinate and conduct periodic state- and area-wide meetings and conferences with local, state, and FHWA representatives to discuss federal highway program issues and proposed regulations affecting local governments;

3. Pursue technical session/workshops Utah LTAP Center

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in conjunction with meetings and conferences to promote technology deployment of new products, processes, and programs. This includes working closely with local LTAP Centers in pursuing such sessions;

4. Serve on special statewide committees; and
5. Actively participate in state association meetings.

The LRC for Utah is Clyde Naylor. Mr. Naylor has held this position for several years, in addition to his responsibilities as Utah County Public Works Director, County Engineer, and County Surveyor. He works closely with not only the FHWA to represent the needs of local agencies to the Federal government in regards to the local roads



program. He also serves as a member of the Utah LTAP Center Advisory Board to help guide the activities we undertake to meet the needs of local Utah agencies.

If you have any questions or concerns you would like to share with Mr. Naylor, he can be contacted by e-mail at [ucpw.clyde@state.ut.us].

REPAIR or REPLACE ?

The Question Regarding Settled Concrete Curb & Gutter, Sidewalks, Pavements

excerpt from an article from Concrete Stabilization Technologies

Concrete Stabilization Technologies (CST) of Denver, Colorado offers an economical solution for restoring settled concrete structural facilities to their original position instead of replacing them. Vertical realignment and stabilization of settled structures is accomplished by injecting expanding polymers below the bottom surface of concrete slabs and asphalt pavements, foundations, and spread footings. The pressures exerted by the expansive polymers lift the structures to the desired grade elevation and stabilize the facility within acceptable tolerances.



Drainage conditions before curb and gutter repair work was done.

The Utah DOT has used the injection stabilization technique to raise settled bridge approach slabs and faulted concrete pavement slabs to their original position, thus, avoiding costly and time consuming replacement procedures. Several cities and counties in Utah have followed Utah DOT's lead in using the technique to lift and stabilize concrete curb and gutter sections, pavement sections, and sidewalks. The expanding polymer injection technique also can be used to lift and stabilize structure foundations, concrete floor slabs, and other structural elements.

When structures and other facilities settle, the problem is often located in the subsurface layers under the structures. Many times fill materials under the facility have not been properly compacted during construction, or a subsurface layer is simply too weak to support the loads. When these conditions are suspected, CST utilizes a dynamic cone penetrometer to locate the depth and thickness of weak layers. Steps are then taken to densify the weak layers by injecting the expansive polymers at strategic locations within the



weak layers.

The expansive polymers stabilize and strengthen the weak layers, thus providing adequate load carrying capacity. The expansive polymer, when injected, not only lifts the structural element to proper grade but also fills all voids, thus stabilizing the element and providing adequate foundational support. Subsequent settlement is virtually eliminated.

Lifting and aligning faulted and settled curb and gutter sections have proven to be a money saving tool for

several municipalities in Utah and surrounding states. During the past four years, projects have been successfully completed in Brush, Colorado; Douglas, Wyoming; and Holladay, Utah. Early in 2002 Taylorsville, Utah initiated a test project to evaluate the cost benefits of the polymer injection technique. This project showed fifty percent savings over the cost of conventional remove-and-replace procedures. Subsequent projects have been awarded and completed during 2003 as a result.

Further information regarding the expandable polymer injection technique can be obtained by contacting Concrete Stabilization Technologies Utah representative Kent A. Nichols at 801-540-1244 or Roy Mathis at 888-306-9191 in CST's main office in Denver.



Curb and gutter conditions after repair.



"4x4 Concrete"

An innovative mixture that develops flexural strength in just 4 hours after placement.

excerpt from an article in Concrete Construction, December 2001

When the California Department of Transportation (Caltrans) needed a concrete pavement that would deliver a surface ready for traffic in 4 hours, different admixture manufacturers experimented with various combinations to try to achieve this goal.

Finally, Master Builders came up with what they call "4x4 Concrete," an innovative mixture that develops 400-psi flexural strength in just 4 hours after placement. This material costs about half as much as current fast-setting hydraulic cement concrete and can be produced with standard locally available materials.

Chumo Construction recently placed over 500 cubic yards of this new mix on a remove-and-replace job for the California Department of Transportation with great success. Tom Pyle, Chief, Office of Rigid Pavements & Structural Concrete with Caltrans, and James Anderson, engineering service western manager for Master Buildings, were asked to discuss this new development in high-early-strength concrete for paving repair.

When asked why Caltrans needed a 4-hour turnaround for concrete paving, Mr. Pyle replied that [California] has serious traffic challenges. In Los Angeles County, contractors can be fined as much as \$1000 for each minute they are late in reopening a freeway. California commuters have little patience for highway workers, and there is a tremendous need for fast work. [Not unlike elsewhere in the country], many of the concrete freeways in the state were built in the late 1960s with a 20-year design life. These freeways were overachievers since many are still in service, but they are now in need of repair and rehabilitation.

Pyle continued by indicating that Caltrans needed more than the market currently provides with respect to fast-setting, high-strength paving mixtures. When Caltrans and the ACPA went to producers and manufacturers and stated their need, they were told that their

requirements for an economical mix with 400-psi flexural strength in 4 hours would be easy to meet with current technology. Unfortunately, the reality was that not one mixture that fit the bill was submitted to ACPA.

Mr. Anderson responded by saying that they knew Caltrans needed a concrete paving mixture that could perform in the field. Currently available products with high early strength and a fast set time are expensive and, in some cases, unpredictable. That's why Master Builders developed this new concrete mixture concept that allows fast placement and repair of concrete pavement with conventional concreting materials and procedures.

Typically, Portland cement pavement mixtures cannot achieve this early-strength without sacrificing workability, placeability, and finishing time. Portland cement-based concrete mixtures usually require a minimum of 24 hours, and frequently 5-14 days to gain sufficient strength to allow a return to service.

In recent years, when fast turnaround was required, engineers have used fast-setting hydraulic cement concrete (FSHCC). These materials have had mixed reviews, particularly in larger-scale applications.

Caltrans wasn't about to let anybody out on the mainline before they could show competence. So, suppliers were required to build a trial slab, which was then tested for strength and setting time. Once Caltrans was convinced that the Master Builders "4x4 Concrete" performed well in the field, they proceeded to use it in a \$5 million concrete paving job.

Mr. Pyle explains how the new concrete was developed. Caltrans concrete laboratory experimented for months with many cements and admixtures but could not find a mixture that worked in the 50-60 degree F temperature range. The Master Builders "4x4 Concrete" mixture has given Caltrans what they were looking

for: 400-psi flexural strength in 4 hours at 60 degrees F. It is workable for up to 30 minutes, provides a smooth finish, and is also user-friendly for bridgework because it has an 8-inch slump and a non-chloride accelerator (important for corrosion protection).

"Caltrans challenged us to provide a cost-effective, user-friendly material. The additional goal was to develop a solution using conventional and locally available materials; 4x4 Concrete emerged as the answer to this challenge," stated Mr. Anderson. He continued by explaining that, "based on selected, readily available portland cement, the concrete achieved 400-psi flexural strength within 4 hours of placement. The water-to-cementitious material ratio was held to less than 0.40. Slumps averaging 5-7 inches in the trial mixtures and placing and finishing were consistently excellent. The mixture includes a combination of high-range water reducing admixtures, nonchloride accelerators, hydration-controlling retarders, and re-engineered mix designs. It is significantly less expensive than currently available FSHCC."

When Mr. Pyle was asked how the concrete contractor who worked with the new mixture felt about the product he replied that, "the local concrete contractor told us that the concrete was very easy to place and finish. The contractor also was pleased, as was Caltrans, with the rideability of the finished pavement." Mr. Anderson added that, "several concrete producers have been able to successfully duplicate the original performance of this mixture."

You can learn more about 4x4 Concrete at [www.masterbuilders.com] or by calling Master Builders, Inc. at 1-800-MBT-9990.



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2003 Work Zone Safety Facts

excerpt from [http://safety.fhwa.dot.gov/facts_data/newslet.htm]

The U.S. roadway system's positive trends have plateaued at a fatality rate that is the lowest in history at 1.5 deaths per 100 million miles of travel (down from 5.5 fatalities in 1966). However, that's still not good enough. In 2002, almost 3 million people were injured and 42,815 people died on our nation's roads. The number of annual roadway fatalities had remained virtually unchanged (40,000-42,000) for the past ten years, but now there is an upward trend.

How Significant is the Work Zone Safety Problem? With more than a 55% increase in work zone fatalities between 1997 and 2002, work zone safety is a growing roadway safety concern. In 2002, there were 1,181 work zone fatalities; this figure represents 2.8% of all roadway fatalities for the year. Four out of every five work zone fatalities were motorists.

In all, there were 117,567 work zone crashes and over 52,000 people were injured in work zone crashes (1.8% of all roadway injuries).

Can You Put This in Perspective?

- One work zone fatality every 7 hours (3 a day)
- One work zone injury every 15 minutes (143 a day)
- Financial loss of \$3 Billion from work zone crashes in 2001

What is the FHWA Doing to Solve This National Safety Problem? FHWA is actively pursuing improved work zone safety through a multifaceted approach in the fields of engineering, education, enforcement, and coordination with public safety agencies (police and fire). FHWA also partners with a variety of organizations that are interested in improving roadway safety such as the American Association of State Highway and Transportation Officials (AASHTO), State Departments of Transportation, the American Traffic Safety Services Association (ATSSA), the American Road and Transportation Builders Association (ARTBA), Texas Transportation Institute (TTI), the Institute of Transportation

Engineers (ITE), the National Utility Contractors Association (NUCA), the International Association of Chiefs of Police (IACP), the National Association of County Engineers (NACE), the American Public Works Association (APWA), the Governors Highway Safety Association (GHSA) and LTAP Centers nationwide.

10 Tips for Driving Safely in Work Zones

1. **Expect the unexpected!** Normal speed limits may be reduced, traffic lanes may be changed, and people may be working on or near the road.
2. **Slow down!** Speeding is one of the major causes of work zone crashes.
3. **Don't tailgate!** The most common crash in a highway work zone is the rear end collision...leave two car lengths between you and the car in front of you.
4. **Keep a safe distance between your vehicle and the construction workers and their equipment.**
5. **Pay attention to the signs!** The warning signs are there to help you and other drivers move safely through the work zone. Observe the posted signs until you see the one that says you've left the work zone.
6. **Obey road crew flaggers!** The flagger knows what is best for moving traffic safely in the work zone. A flagger has the same authority as a regulatory sign, so you can be cited for disobeying his or her directions.
7. **Stay alert and minimize distractions!** Dedicate your full attention to the roadway and avoid changing radio stations or using cell phones while driving in a work zone.
8. **Keep up with the flow of traffic.** Motorists can help maintain traffic flow and posted speeds by merging as soon as possible. Don't drive up to the lane closure and then try barge in.
9. **Schedule enough time to drive safely and check the radio, TV and Web for traffic information.** Expect delays and leave early so you can reach your destination on time. Check the National Work Zone Safety Information Clearinghouse [<http://wzsafety.tamu.edu>] for information on work zone delays throughout the

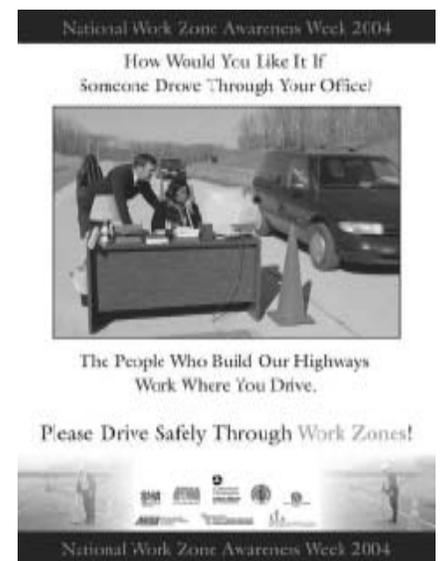
country.

10. **Be patient and stay calm.** Work zones aren't there to personally inconvenience you. Remember, the work zone crew members are working to improve the road and make your future drive better.

Feel free to share these tips with community members to help reduce the risk to local agency road workers during the upcoming road work season!

National Work Zone Awareness Week April 4-10, 2004

As part of the 5th annual National Work Zone Awareness Week, Administrator Mary E. Peters will ask motorists to understand that the roadway is a workplace for hundreds of employees who toil, at great risk, to improve and expand the transportation network.



This Work Zone Safety Week poster is available to download at [http://safety.fhwa.dot.gov/facts_data/newslet.htm].

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Emulsion Cold In-Place Recycling

A Good Idea, But Better

excerpt from [www.kochpavementsolutions.com]; used with permission

Two thirds of our country's highways are in fair or poor condition. 18,000 miles of urban freeways will need to be replaced or rehabilitated within the next 5 years. Sources of quality aggregates are dwindling. What's the solution? Many highway departments have used cold in-place recycling (CIR) as a sound, cost-effective way of solving some of these problems.

A recent survey by the Rocky Mountain Asphalt User-Producer Group of all states showed that while many states are using CIR with success, they are plagued with some consistency problems. One of the biggest concerns was the lack of standard design and testing methods. In many locations, off-the-shelf materials and generalized procedures have been routinely used for recycling all types of bituminous pavements.

To address this problem, Koch Materials Company developed ReFlex emulsion cold in-place recycling to turn CIR from black art into a rational, engineered process with faster and easier constructibility, better road performance and more reliable results. ReFlex CIR combines early strength with long term durability. ReFlex CIR can be the solution for partial depth rehabilitation of severely distressed pavements with structurally sound bases and good drainage. To protect the new ReFlex pavement, a surface treatment can be applied earlier than with traditional CIR.

Why Recycle? The cold in-place recycling process can cost-effectively solve a number of problems. It can remove thermal and reflective cracks, reestablish crowns, maintain clearances and curb heights, improve poor aggregate gradations, improve pavement quality with additives, be higher quality than the original pavement, reuse existing materials, minimize need for new

materials, minimize lane closure time, have excellent public acceptance, and give a new, smoother, black surface. And when it has reached the end of its life cycle, the recycled pavement can be recycled itself.

Recycling should be considered when a pavement is at the end of its design life; when it exhibits alligator (fatigue) cracking, thermal cracks, raveling and potholes; where there are low clearances on bridges and overpasses; or where curb heights are a concern. Rural roads, busy city intersections, and interstate highways all may be excellent candidates. For the best results, the design should be based on the local materials and conditions.

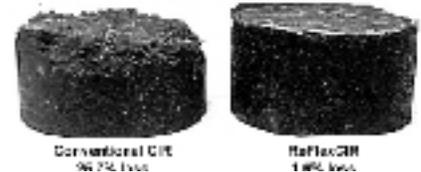
New technologies for improved performance. Koch's ReFlex emulsion CIR was developed to address some of the common complaints: raveling, thermal cracking, slow curing times, but most of all, the reliability of performance. The product's innovations include:

1. An engineered approach for CIR
2. Onsite QC monitoring & technical support
3. A new chemistry CIR emulsion developed specifically for:
 - *Better compatibility with the millings
 - *Higher asphalt binder content and film thickness
 - *Quicker, more controllable cure time
 - *Improved mix performance properties engineered for the project millings, climate & traffic

The Construction Process. In the ReFlex construction process, the surface is milled 2 to 4", and the millings are screened and crushed to minus 1½" top size. The millings are then mixed with emulsion and the cold mix is placed with

a lay down machine. The final step is rolling once the emulsion mix has set, and a quick return to traffic on the new pavement. The newly recycled pavement can be protected with additional surfacing

ReFlex CIR is More Resistant to Raveling
Gone After Laboratory Abrasion Test



as needed to meet the local conditions.

Some of the advantages of this product include:

Performance

- Improved resistance to raveling, cracking, rutting, moisture
- Longer durability
- Improved reliability

Construction

- Can be applied at lower air temperatures
- Wider temperature window, more days, more hours
- Early strength for faster construction, earlier compaction, quicker traffic return
- Uses existing equipment
- No re-roll or fog seal necessary
- Earlier application of surface (3-7 days)

Environmentally Friendly Recycling

- Safe, solventless water-based emulsion
- Little hauling
- Cold process requires no heat

Cost Effective

- Reuses existing materials
- Lower life cycle costs

Consistent Material, Pavement, and Performance

ReFlex is a registered mark of Koch Materials Company.



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UDOT Welcomes New Local Government Programs Engineer



Brett Hadley began service as UDOT's new Local Government Programs Engineer on March 15, 2004. Brett has served 10 years with the department, the last four years as a Resident Engineer in the UDOT Region 2 Construction Division. He is a Licensed Professional Engineer with a bachelors degree in both Civil Engineering and Business Administration.

As part of his new responsibilities, he looks forward to forming personal and professional relationships with the representatives of each of the local governments. Brett has enjoyed his years of service with UDOT and will bring great enthusiasm and energy to working with the cities and counties in Utah.

You can contact Brett by phone at (801) 965-4366 or e-mail at [bhadley@utah.gov].

FHWA Provides Safety Resources On-line

Crash-Tested Work Zone Traffic Control Devices Opportunities

A PowerPoint presentation is available that summarizes the requirements for the crash testing of traffic control devices in work zones. The presentation covers the four categories of devices: (1) cones, drums, delineators; (2) barricades, temporary signing; (3) barriers, crash cushions, TMAs, water-filled barriers/barricades; and (4) trailer-mounted devices. Category 1, 2, and 3 devices used on the National Highway System are required to meet NCHRP Report 350 criteria. Category 4 devices will be revised in 2006. For an e-mail or CD copy of the presentation, please contact Nicholas Artimovich in the Office of Safety Design as [nick.artimovich@fhwa.dot.gov].

This report was developed by the U.S. Department of Transportation in concert with many professional and governmental groups. Based on regional forums, focus groups, conferences and stakeholder roundtables that were held over the last several years, the report presents a vision of safe transportation for the future. It identifies seven areas for improvement and lists specific strategies for implementation to improve safety for older road users and all road users. The report is available on the DOT Web site at [<http://ostpxweb.dot.gov/policy/Safety%20Energy%20Env/Safe%20Mobility/index.html>].

Safe Mobility for a Maturing Society: Challenges & Celebrate Public Works Week May 16-22, 2004



known as public works. Instituted as a public education campaign by the American Public Works Association (APWA) in 1960, NPWW calls attention to the importance of public works in community life.

APWA encourages public works agencies and professionals to take the opportunity to make their stories known in their communities. To this end, the Utah Chapter of APWA sponsors a variety of activities during Public Works Week here in Utah.

The event culminates in the Annual APWA, Utah Chapter Awards banquet on

National Public Works Week (NPWW) is a celebration of the tens of thousands of men and women in the U.S. who provide and maintain the infrastructure and services collectively May 19, 2004 and provides recognition with awards for the public works project of the year, meritorious service, outstanding professional achievement, public works safety, merit, public works design by a consultant, outstanding Utah public works employee and the Utah APWA member of the year.

For more information on activities under the direction of the APWA, Utah Chapter, please visit their Web site [www.apwautah.org], or see our Partners information in this newsletter.

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Roadway Safety Tools for Local Agencies

excerpt from [http://safety.fhwa.dot.gov/facts_data/newslet.htm]

Improving the safety of local roads is crucial for reducing highway deaths and injuries. Fatal crash rates are the highest on local roadways. A new NCHRP Synthesis 321, Roadway Safety Tools for Local Agencies, provides practical and flexible approaches to improve safety at the local level. To be successful, safety practices should be tailored to the problems and resources of each agency.

There is no one-size-fits-all safety solution. The goal is to assist local agencies to become more effective safety organizations by applying the best and

most appropriate tools to meet their needs. Its guiding principle is to examine tools and procedures that are practical, relatively easy to apply, and can be implemented by agencies with limited financial resources. Tools are defined as any ideas, practices, procedures, software, activities or actions beneficial in aiding local agencies to improve the safety of their roads and streets. User-friendly appendixes provide detailed information on each tool, its application, or references to additional information. NCHRP Synthesis 321 is available through the FHWA Product Distribution Center at

(301) 577-0818 or FAX (301) 577-1421.

You can also obtain copies of a Road Safety Audit brochure from your in-state resource: The Utah LTAP Center.

The Utah LTAP Center has marshalled a Road Safety Audit team to assist local agencies in addressing high accident locations. We are also available to assist local agencies in addressing a wide variety of road safety training and technical assistance needs. Please contact Stuart Thompson at 1-800-822-8878 for assistance.

"Spring" Into Training With LTAP Workshops

The following workshops are being offered by the Utah LTAP Center during the spring training season.

In addition, we offer workshops on-demand as instructor schedules permit. If you need training, especially flagger training, please contact us immediately to arrange a workshop for your area before the spring training season books up!

Also, don't forget that we will be teaching our flagger training course as part of the Utah League of Cities & Towns Road School, April 28, 2004.

As a service to our participants, CEU credits are available for these courses through Utah State University. Use the form provided below to register for these workshops!

ATSSA Traffic Control Technician
April 20, 8 am-5 pm (Salt Lake)
This workshop provides in-depth coverage of the responsibilities of a traffic control technician. The cost is \$75/person and includes all materials.

ATSSA Traffic Control Supervisor
April 21-22 (Salt Lake)
This two-day (8 am-5 pm each day) workshop provides in-depth coverage of the responsibilities of a traffic control supervisor. The cost is \$185/person.

Workshop dates are subject to change. Please call us or go on-line to confirm dates and availability!

Utah LTAP Center Spring 2004 Workshop Registration Form

Name: _____
Agency: _____
Address: _____
City/State/Zip: _____
Phone: _____ FAX: _____
E-mail: _____

Total Workshops Registered For: _____ Total Amount Due: _____

Method of Payment (Please check one)

- Check enclosed (made payable to Utah LTAP Center)
 Agency PO (Number: _____)
 Credit Card (Visa/MC/Discover) #: _____
Exp. date: _____

Please indicate the workshops you will attend.

- ATSSA Traffic Control Technician (\$75)
 ___ April 20 (Salt Lake)
 ATSSA Traffic Control Supervisor (\$185)
 ___ April 21-22 (Salt Lake)



What Our Partners Are Doing

More Training Opportunities for YOU!!!



Our thanks to these important partners for sharing this information and working with us in our efforts to serve the local agencies of Utah.



Utah League of Cities & Towns

If you desire more information on League activities, or to register for a League sponsored event, please call the Utah League of Cities & Towns directly at (801) 328-1601 or 1-800-852-8528 or go to their Web site [www.ulct.org].

City Streets & County Roads School April 28-30, 2004 (St. George)

It's time again for the League's annual Road School! Workshop sessions include flagger certification training, large equipment maintenance, asset management, and MUTCD update provided by Utah LTAP Center instructors and staff.

Additional workshops, taught by experts from local, state and federal agencies and industry, include: discussion of hot mix asphalt compaction; the role of public works in emergency response; how to develop and implement quality control and quality assurance (QC/QA) programs; proper right-of-way restoration; ADA requirements--federal and state perspective, legal aspects, elements of design, practical; road maintenance; deicing; environmentally safe roadwork; the practical aspects of signing; the legal aspects of being employed and the employer; drug testing requirements; resolving conflict through mediation; born male--becoming a male; safety management; defensive driving; patching asphalt and cement surfaces; setting speed limits; what you need to know about the new statewide wireless communication system; economical solutions to problems in road maintenance; pavement maintenance; the dangers of ignoring risk management, etc.

Participants will need to register as soon as possible for this conference and make their own hotel reservations. Room blocks have been arranged at the following hotels:

Ramada Inn (1440 E. St. George Blvd)
(435) 628-2828, \$60/night

Fairfield Inn (1660 South Main)
(435) 673-6066, \$59/night

Hampton Inn (53 North River Rd)
(435) 652-1200, \$72/night

BW Coral Hills (125 E. St. George Blvd)
(435) 673-4844, \$TBD/night

Crystal Inn (1450 South Hilton Dr)
(435) 688-7477, \$65/night

Holiday Inn (850 South Bluff)
(435) 628-4235, \$70-77/night

BW Abby Inn (1129 South Bluff)
(435) 652-1234, \$75/night

For additional conference details and registration information please check the League Web site.

Mid-year Conference April 15-16, 2004 (St. George)

For registration and hotel information, please check the League Web site.



Utah Association of Counties

For more information on UAC activities, or to register for a UAC sponsored event, please call them directly at (801) 265-1331 or go to their Web site [uacnet.pegasus.ultraservers.net].

UAC Management Conference April 21-23, 2004 (Ogden)

Registration deadline for this conference is April 12. On-line registration is available at the UAC Web site (see above). Hotel

room blocks are available by contacting the following hotels:

- Hampton Inn (\$63/night)
(801) 394-9400
- Ogden Marriott (\$69/night)
(801) 627-1190

Western Interstate Region Annual Conf. May 26-29, 2004 (Ogden)

NACo's Western Interstate Region Conferences focus on public lands and other issues critical to the western region of the U.S. by providing county officials with the opportunity to hear speakers, discuss legislation, network with other officials and exchange information on those issues. Registration is available on-line at [www.naco.org].



APWA, Utah Chapter

For more information on APWA activities please visit their Web site [www.apwautah.org]. Please note that in addition to monthly luncheons, quarterly meetings will also be held. The quarterly meetings will last about 3 hours, and will include breakout sessions. The location of each meeting will vary to accommodate more of the APWA's diverse membership.

Monthly Membership Luncheon April 22, 2004 (West Valley City)

This monthly event will be held at Stonebridge ClubHouse. The Board of Director's Meeting will begin at 10:30 am and the luncheon at 12 noon.

Public Works Week

Golf Tournament, May 18, 2004
(Stonebridge Golf Course, WVC)
Annual Awards Banquet, May 19, 2004
(Classic Choice Catering, West Jordan)

For additional information on these activities, please visit the APWA, Utah Chapter Web site and download the

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registration materials.

Quarterly Meeting

June 24, 2004 (Provo)

This event will include a Board of Director's Meeting starting at 10:30 am and be followed by the quarterly meeting from 11:30 am till 2:30 pm and will be held at Canyon Glen in Provo.



ITE, Utah Chapter

For information on ITE activities, please call Sara Colosimo with Riley Transportation; her e-mail address is scolosimo@rileytransportation.com. Please note that the monthly luncheons are generally held the third Tuesday of each month starting at 12 noon at Shanghai Gardens (7200 South 300 West, Salt Lake City, Utah).

ITE 44th Annual Section Conference May 21-22, 2004 (Jackson Hole)

The annual section meeting will be held again at the Snow King Resort in Jackson Hole, Wyoming. Early registration is recommended, and participants will need to make their own hotel reservations. Pre-conference courses are available for interested individuals. Please call Michael Sanderson at (406) 656-5255 for additional information and to register. The cost is \$50/person for ITE members and \$60/person for non-members. Registration after May 1st will need to be done on-site.

The Utah LTAP Center will be handling the vendor exhibit again this year and sponsors are welcome! Please contact Keri at 1-800-822-8878 or go on-line to the Utah LTAP Center Web site for additional information or to sign up to exhibit at this important event!



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Utah Local Governments Insurance Trust

For information on these and other Trust activities, please call Craig Bott at 1-800-748-4440. You can also e-mail Craig at cbott@ulgt.org. Also, check out their Web site at www.ulgt.org.

City Manager Association Conference April 12-13, 2004 (St. George)

Utah Clerks Association Training
April 28-30, 2004 (West Valley City)
This training will be held at the E Center and cover all areas of responsibility for local agency clerks.

Truck Roadeo April 29, 2004 (St. George)

Held in conjunction with the Utah League of Cities & Towns Annual Road School, registration is available on-line at the Trust Web site.

Utah Business Licensing Association
May 13, 2004 (Snowbird), 2-4:30 pm
Aspects of licensing home-based sales businesses will be covered.

Defensive Driving
May 18, 2004 (Logan)
May 19, 2004 (Trust)
May 20, 2004 (Washington City)
May 25, 2004 (Vernal)
May 26, 2004 (Moab)
May 27, 2004 (Trust)*

Each workshop will be held from 9 am till 10:30 am at each location unless otherwise indicated. *This training is for persons involved in vehicular accidents and will be held for an extended time (9:30 am till 12 noon).

Managing Parks & Rec. Liability
May 18, 2004 (Logan)
May 19, 2004 (Trust)
May 20, 2004 (Washington City)
May 25, 2004 (Vernal)
May 26, 2004 (Moab)

Each workshop will be held from 10:45 am to 12 noon at each location.

Understanding & Applying the New Government Immunity Act
May 18, 2004 (Logan)
May 19, 2004 (Trust)
May 20, 2004 (Washington City)
May 25, 2004 (Vernal)

May 26, 2004 (Moab)

Each workshop will be held from 1 pm till 2:30 pm at each location.

How to Document Use of Force Situations
May 18, 2004 (Logan)
May 19, 2004 (Trust)
May 20, 2004 (Washington City)
May 25, 2004 (Vernal)
May 26, 2004 (Moab)

Each workshop will be held from 3 pm till 4:30 pm at each location.

Citizen Planner Workshop
June 10-11, 2004 (Trust), 8 am-4 pm
Advanced registration is required. The cost for this training is \$25/person for Trust members, \$50/person for non-members.

Worker's Compensation
June 21, 2004 (Logan)
June 22, 2004 (Trust)
June 23, 2004 (Fillmore)
June 24, 2004 (Price)
June 25, 2004 (Vernal)

Each workshop will be held from 9 am till 4 pm at each location and will cover legal requirements, employee safety and OSHA, theory and practice and vocational rehabilitation.

If you have training needs, please contact the Trust and they can help you set up what you need during the assigned dates for your region.



"Serving Utah Municipalities"

Utah Risk Management Mutual Association

For more information or to register for these and other URMMA training activities, please call Joanne Glantz at (801) 225-6692. You can also check out their Web site at www.urmma.org.

Supervisor's Risk Mgmt Training
May 4, 2004 (Ogden)
May 18, 2004 (Spanish Fork)

This is required training for URMMA members.

Police Physical Fitness Coord. Training
May 12, 2004 (Location TBD)

This is required training for URMMA members.

Leadership Communication Workshop for Supervisors

April 8-9, 2004 (Cedar City)

June 10-11, 2004 (Daniel's Summit)

This is recommended training for URMMA members.

Roundtables

- Fire & Ambulance (April)
- Vehicle Safety (May)
- Law Enforcement (June)



Blue Stakes of Utah The City of Sheridan, Wyoming Opts for Full-Depth Recycling with Cement!

by Mitzi McIntyre, ACPA, Utah Chapter

The city of Sheridan, Wyoming is a small community of about 14,000 residents. Sheridan is located 15 miles from the majestic Big Horn Mountains and Big Horn National Forest in northern Wyoming. In 2003 the city completed an experimental project that recycled the existing asphalt pavement and base course with Portland cement and then placed a 3.5" concrete surface.

This project was 540 feet in length and 34 feet between curb sections. The original surface was a bituminous surface course and granular base course. The bituminous surface exhibited serious alligator cracking and potholes, causing the city to look for a permanent fix to this reoccurring problem.

The existing asphalt surface and underlying base course were reclaimed, mixed with cement and water, and then

Blue Stakes of Utah is the communications link between excavators, homeowners and utility companies and is the only Utah contact to locate and mark underground utility lines before excavation. This service is free of charge to excavators and homeowners and is funded by member utility companies. For more information, please contact W. Gary Hansen, Executive Director, at (801) 538-5700 or [garyh@bluestakes.org].

placed in two 4" lifts. Density and compaction tests were taken prior to the placement of the concrete surface, the whitetopping.

Three and one half inches of fiber-reinforced concrete were placed on top of the recycled base course, and cut on 3.5' intervals, both longitudinally and transversely with early entry saws. The saw cuts were approximately one inch in depth. Normal white-pigmented curing compound was used prior to saw cutting.

The city was extremely pleased with their new street. Not only was a long-lasting, durable concrete street created, but also no waste was created, since the existing pavement and base were recycled. For more contact Mitzi McIntyre at [mcintyre@utahacpa.com] or by calling (801) 556-9561.

Advisory Board

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Utah Local Governments Trust

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Association

The Utah LTAP Center Advisory Board meets twice annually (and as needed) to make recommendations and evaluate the effectiveness of the program.

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Utah LTAP Center Offers More Than Just Workshops

The Utah LTAP Center is best known for our many workshop offerings that assist local agencies in their training needs. But don't forget that we also offer a wide variety of technical assistance as well.

This includes assistance in re-searching and answering your questions by phone, as well as on-site field assistance in addressing local needs. We have a well-trained staff and supervised student assistants to help us expedite agency requests.

You can tap into this resource by calling us at 1-800-822-8878 or go online to [www.utaht2.usu.edu] for more information on our technical assistance services.

About the Utah LTAP Center

The Utah LTAP Center is an integral part of a nationwide Local Technical Assistance Program (LTAP) financed by the Federal Highway Administration, state departments of transportation and local transportation agencies. The Center bridges the gap between research and practice by translating the latest state-of-the-art technology in transportation into implementable products and information for the special use of local transportation agencies and personnel.

About On the Move

On the Move is published quarterly by the Utah LTAP/Transportation Technology Transfer Center at Utah State University. Subscriptions are free and are available by contacting the Utah LTAP Center. Articles may be submitted to the editor at the above address. To obtain permission to reprint any articles from On the Move, please call the Center.

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