

# LTAP MATTERS

Montana's Answer To Technical  
Education of Roads & Streets

College of Engineering  
Montana State University-Bozeman  
Bozeman, MT 59717-3910  
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April, May, June 2002

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## MACRS 2002

This year's MACRS conference was held April 2-5, 2002 in Billings, MT. Billings is always a great place to hold training. In addition to a central location where 187 people could gather to discuss roads under their jurisdiction, 37 separate companies had a chance to show their specialties and talk of solutions to problems. Many representatives from state and local agencies met to talk of policies, funding, technical design, stewardship of roads, or simply to discuss ideas. More than anything it was a chance to step back, and look at their responsibilities from a different perspective. Most counties share common problems and this conference allowed them to find solutions that have worked for others.



Jerry Forman  
Secretary/Treasurer

Eric Griffin  
President

Jack Knorr  
Vice President

President Larry Juell called the color guard. The past year has

renewed patriotism in all of us and the presentation of colors reminded the group of the past and current sacrifice of our armed forces. Jim Reno, commissioner from Yellowstone County opened the conference with an upbeat welcome. John Ostlund, past president helped plan and host the conference from the beginning right to the last banquet and MMdance band (family). His wife Christy planned the spouses program and sang with her father's music in the band.

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### ADVISORY COMMITTEE MEMBERS

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Montana Department of Transportation

**Dan Williams**  
Montana Department of Transportation

**Jack Knorr**  
Stillwater County

*continued from front page*

Presentations included Vern Peterson, same sense of humor and vast knowledge of current transportation issues. Other speakers are as follows: **Larry Juell**, President of MACRS, **Jim Reno**, Yellowstone County Commissioner, **Vern Petersen**, Chairman of MACO, Transportation Committee, **Gordon Morris**, Executive Director of MACO, **David Galt**, Director of Montana Department of Transportation, **Steve Jenkins**, Director of Montana LTAP, **Ed Larson**, Consultant Project Engineer, MDT, **Lloyd Rue**, FHWA, **Mike Randall**, Chief of Information Services for MDT, **Susan Swimley**, former Deputy County Attorney, Gallatin County, **Joe Kolman**, Bridge Engineer, MDT, **Kathy Moore**, Administrator, LCCWQPD, **Jim Stevenson**, MDT Maintenance, **Kent Barnes**, MDT, Materials, **Sam Gianfrancisco**, Montana LTAP, **Marty Basta**, Operations Manager, City of Great Falls, **Larry Zanto**, Regional Manager, Willis, **Harold Blattie**, Assistant Director of MACO, **Mike Murray**, County Commissioner for Lewis & Clark County, **Keith Stapley**, Claims Manager, Willis, **Norman Grossfield**, MACO General Council, **Glen Phillips**, FWP, **Curt Martin**, DNRC, **Alan Steinle**, Army Corp of Engineers, **Jim Edgcomb**, TSEP, **Gary Larson**, MDT, Public Lands, **Jim Anderson**, FEMA

Susan Swimley did an excellent job describing what is a county road and how to avoid taking on any more roads. As an attorney she

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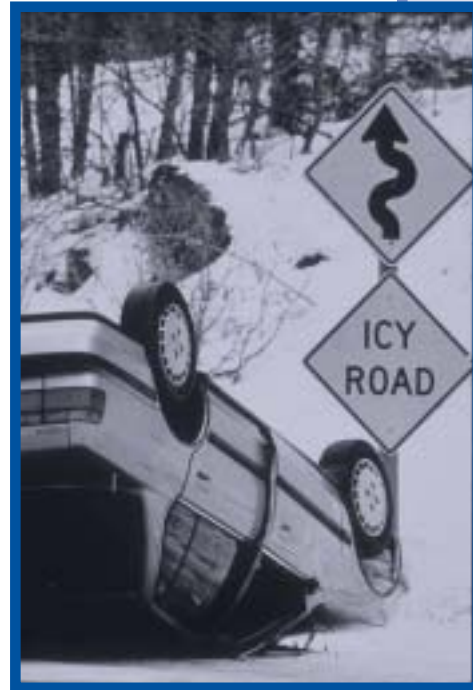
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## Calendar of Events

## Photo Contest

- **MDT Maintenance Academy** May 6-17, weekend off
- **Forklift and Loader Training** May 13-14, Miles City
- **ITE Intermountain Annual Conference** May 17-18, Jackson, WY
- **Trenching and Culvert Installation** May 21, Great Falls  
May 22, Billings  
May 23, Sidney
- **Grader Training** June 3-4, Plentywood
- **Pacific NW Snow Fighter Conference** June 3-5, Boise, ID
- **2002 National LTAP Conf.** July 27-31, Burlington, VT
- **Snow Rodeo** Sept. 4-5, Great Falls
- **MACRS District Meetings (Road Mgmt and Needs Assessment/PASER)** Oct. 1, Glendive  
Oct. 2, Billings  
Oct. 3, Fort Benton  
Oct. 7, Whitehall  
Oct. 8, Missoula  
Oct. 9, Butte  
Oct. 9-11, Butte
- **Public Works Director Mtg.** On Request
- **MT League of Cities & Towns** On Request
- **Equipment Training** On Request
- **Winter Travel/Survival** On Request
- **Leadership for New Commissioners and Technical Supervisors** On Request
- **Work Zone Traffic Control** On Request



described how to avoid the pitfalls that easily drain the counties resources on roads that clearly are and should remain private roads.

Jim Stevenson of MDT has become very well known for his experience and expertise on chip seals. His presentation and manual should serve as a model to the counties for surfacing jobs in the future.

Vendors serve a special niche in the conference. Their displays are colorful and full of hope and ambition. They provide solutions to many problems including what could be the best source of wholesome entertainment for several days in Billings. Many thanks to those involved in making this conference truly memorable.

The sacrifices of all these presenters to prepare and clear their schedules to attend are greatly appreciated by the MACRS group. We hope you will join us again next year at Fairmont Hot springs on March 31 through April 3, 2003. Below is a list of MACRS officers and District Representatives.

<b>President</b> - Eric Griffin (406) 447-1636	<b>Vice President</b> - Jack Knorr (406) 322-5336
<b>Secr./Treas.</b> - Jerry Forman (406) 232-1970	<b>MACo Rep.</b> - Bill Gibbs (406) 256-2735
<b>MACo Rep.</b> - Rick Seiler (406) 228-4233	<b>MACo Rep.</b> - Richard Miller (406) 683-3780
<b>District 1 Rep.</b> - Tim White (406) 889-3702	<b>District 2 Rep.</b> - Richard Miller (406) 683-3780
<b>District 3 Rep.</b> - Russ Albers (406) 622-5123	<b>District 4 Rep.</b> - Carl Bagley (406) 654-2429
<b>District 5 Rep.</b> - Duane Schaak (406)-342-5675	

# 1st Annual Safety Congress A Great Success

The First Annual Safety Congress was held at the Great Falls Civic Center on February 19-21, 2002. The City of Great Falls and the Montana LTAP sponsored the congress.

Each participant received a Work Zone Package that with the following elements.

## Signs:

- Road Work Ahead
- Be Prepared to Stop
- Flagger Symbol
- End Road Work
- Left, Right Lane Closed Ahead
- Double Transition
- One Lane Road Ahead

## Chanelizing Devices:

- 28" Cones

## Sign Supports:

- MDT All Terrain-Spring Loaded Flagger Paddle

## Vests

**This package was an excellent value because.....**

The following topics were covered:  
Work Zone Package Training and Certification  
Stemple Pass – Speed Zone Investigation  
Sign Vandalism  
Blain County Bridge; Liability  
MUTCD; Millennium  
Basic Signing; Low Volume Roads

The Safety Congress was excellent for anyone involved in permanent or temporary signing. As stated by Mike Wiles, Ravalli County Road Supervisor "Thank you for the effort expended on the Safety Congress. It was very beneficial to Ravalli County. We also appreciate the work zone package we received, it will certainly enhance safety for our roadway workers."



Each county that was represented at the 1st Annual Safety Congress received a Work Zone Package as listed below. There are more packages available but to get one a representative must attend the Second Annual Safety Congress

### Work Zone Package - under \$2000

#### Signs

Road Work Ahead	W20-1	4	@	\$70	\$280
Be Prepared to Stop	W 20-7b	2	@	\$70	\$140
Flagger Symbol	W 20-7a	2	@	\$70	\$140
End Road Work	G 20-2a	2	@	\$70	\$140
Left, Right Lane Closed Ahead	W 20-5	1	@	\$80	\$80
Double Transition	W 4-2R	1	@	\$105	\$105
One Lane Road Ahead	W 20-4	1	@	\$70	\$70

#### Chanalizing Devices

28" Cones		20	@	\$10.30	\$206
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#### Sign Supports

MDT All Terrain-Spring Loaded		6	@	\$71	\$426
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Flagger Paddles		2	@	\$51	\$102
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Vests		2	@	\$30.4	\$60.8
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		2	@	\$31.5	\$63.00
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<b>Total</b>					<b>\$1,812.8</b>
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## Spouses Enjoy Activity Program During the MACRS Conference

The spouses program was a great success this year. There were 18 women who participated. The first day they got to step back into history and take a tour of the Moss Mansion. It is an elegant, old world home, a place of infinite charm and beauty. Lunch was served in the basement of the Mansion and then on to the Yellowstone Art Museum. The Museum is a rich tapestry of the visions and voices of the American West. From the first photographs of Montana to the most recent works by modern-day pioneers, the Museum tells the story of this rich and colorful region in a way you will always remember.

On the second day the Ladies met to listen to Sandra West-Powell, a murder mystery author from Billings. She talked to them on "How to Write a Novel." We should expect to be reading some grand books in the near future! Then on to C.J.'s for a lovely lunch. Leaving C.J.'s they went to the Rimrock Mall to "shop till they dropped"!

The women couldn't say enough of how much they enjoyed everything and we do hope that next year more will participate in the program.



# Don't shrug shoulder repair

In the rush to complete maintenance projects before winter, some agencies defer road shoulder work until spring. Putting it off can result in shoulders not serving all their purposes, which are:

- To provide side support to the pavement.
- To drain water away from the pavement and into ditches.
- To provide a safe area for motorists during emergencies.

To fulfill these purposes, the shoulder and pavement edges must be level and the shoulder slope steeper than the pavement slope. These characteristics are necessary to drain snow melt as well as rainfall.

With non-level, rutted or inadequately sloped shoulders, snowpack and ice accumulate at the edge of the pavement. Snow and ice melt faster next to the pavement and create a mini-ditch.

Water will seek the easiest path which often is underneath the pavement. Freeze-thaw cycles crack the pavement and loosen the base material beneath it. In a matter of days water penetrates further into the roadway, and freeze-thaw cycles cause additional damage, including alligator cracking several feet wide.

Shoulders with steep or eroded slopes lead to more erosion which weakens the edge of the pavement. Eroded materials travel into ditches and eventually into lakes and streams.

## When repair is required

Highway departments should do shoulder repairs in the fall to slow roadway deterioration, save money and reduce environmental damage. Dirt or gravel shoulders should be repaired that show one or more of the following conditions:

1. The shoulder surface shows ruts and corrugations over one-inch deep.
2. The slope is too flat to provide good drainage.
3. The shoulder has eroded into cuts and gullies causing cracks in the edge of the pavement and material being carried into ditches.
4. More than a two-inch drop off has developed from the pavement to the shoulder.

Asphalt shoulders need repair if they are cracked or a gap has formed along the pavement edge.

## How to make repairs:

With a motor grader, crews can shape and smooth the shoulder slope. They should compact the shoulder, ensuring level shoulder and pavement edges. Next, they should add, spread and compact granular material.

Because shoulders must support vehicles, the materials used in them should be similar to the road base. Therefore, before reshaping or replenishing, it might be necessary to remove organic debris, clays, silts and other unsuitable substances.

Asphalt shoulder repairs are the same as those applied to the roadway. Sealing gaps between the shoulder and pavement are necessary to prevent freeze-thaw effects.

Highway departments also should consider reshaping ditches. This is especially important if poor ditch drainage will affect the repaired shoulder.

# New Videos and Publications

**P-2571**

## **Designing Sidewalks & Trails for Access**

Provides planners, designers, and transportation engineers with a better understanding of how sidewalks and trails should be developed to promote pedestrian access for all users, including disabilities.

**P-2572**

## **Traffic Calming; State of the Practice**

Covers what traffic calming is and is not; history of traffic calming; toolbox of traffic calming measures; engineering and aesthetic issues, traffic calming impact; legal authority and liability; emergency response and other agency concerns; warrant, project selection procedures and public involvement; beyond residential traffic calming; and traffic calming in new developments.

**P-2573**

## **Speed Zone Guidelines**

Addresses what criteria should be used to establish the need and potential effectiveness of speed zones, and the appropriate speed limit if a speed zone is established.

**P-2574**

## **Restoring Creditability to Speed Setting: Engineering, Enforcement, and Educational Issues**

Provides a "planning guide" for those who want to sponsor multi-disciplinary speed management workshops.

**P-2575**

## **Survey of Speed Zoning Practices**

Identifies and summarizes the speed zoning practices used by agencies in the United States. Determines speed-zoning guidelines used, the type of adjustments made to speed zones, individual variations to the guidelines and the differences between the speed zoning guidelines and speed zoning implementation.

**P-2576**

## **Speed Management Resources**

Contains variety of information on speeding and speed management

**P-3004**

## **Transportation Training Resources**

### **Catalog: 2002**

Addresses professional and ethical practices for managing, conducting, and evaluating research programs and projects.

## **New Videos**

**M-133**

### **Scheduled Lives, Stressful Drives.**

*(22 Minutes)*

**SS-123**

### **How Retroreflectivity Makes Our Roads Safer.**

**SG-188**

### **Traffic Signal Management Cost Effective Street Capacity/**

**Safety.**

*(13 Minutes)*

## **Request for Videotapes & Publications**

The publications and videotapes in the LTAP library are available free or for a nominal charge upon request. Publications and Software marked \*Lending Library may be borrowed for several weeks, but must be returned to LTAP. Anyone may borrow up to three videotapes at a time rent-free for two weeks.

You may order any videos or publications by calling toll-free (800) 541-6671. Contact Donnetta Bohrman if you have any questions or concerns.

## **MUTCD Manuals**

We have received our MUTCD manuals.

- **Bound Manual:**  
*\$52.50 plus \$5.00 shipping.*
- **Chapter Separate:**  
*\$70.00 plus \$5.00 shipping.*

Please contact Donnetta at the LTAP office to order your manuals today at 406-994-6724.



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## Editorial Contributions Welcome

LTAP welcomes contributions to LTAP MATTERS. Those wishing to submit relevant material to be published in the next newsletter can submit their ideas/articles to:

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