



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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PASS IT ON

After you have read this newsletter, copy what you need for your files and **pass it on** to other interested readers in your department:

2nd Annual Safety Congress

Every year more than 50,000 people are injured and more than 1000 people die in highway work zones. This is an increase of 26% in recent years. Motorists, pedestrians and workers are all at risk. The statistics are astonishing but, by using dependable and reputable methods, highway work zone tragedies can be prevented. (From the National Safety Council)



"You need to get recognized for good work you do, an audit is the beginning," Gene Wilson, Director of Wyoming T2 Center, explained.

This February the 2nd Annual Safety Congress, held in Great Falls, addressed those "dependable and reputable methods." The first day's classes were instructed by LTAP's Director Steve Jenkins and Field Engineer Sam Gianfrancesco on Work Zone Training & Certification and Work Zone Flagging Certification.

Speakers during the second day of the Congress included Pierre Jomini, MDT, covering highway crash statistics and safety engineering improvement programs. Harry Lauer, private safety consultant, discussed need for data collection regarding the proposal for Montana Federal Hazard Elimination Program for Local Roadways.

Concluding the first day was Lloyd Rue, FHWA, explaining MUTCD revisions and importance of the engineer judgment factor in signage. Jenkins wrapped up with an informative cattle guard session.



Gene Wilson (left), Wyoming T2 Center, discusses safety statistics with Pierre Jomini (right), MDT

Beginning the final morning of the Safety Congress Gene Wilson, Director, Wyoming T2 Center, asked the participants, "Does your county have a Safety Plan?" Wilson proceeded to explain his

(continued on Page 3...)

ADVISORY COMMITTEE MEMBERS

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Jack Knorr

Stillwater County

Making the Case for GDL

Reprinted by permission from AAA,
MountainWest, Jan/Feb 2003

Many folks are surprised to find that the number-one cause of death for teenagers is motor vehicle crashes. Even more surprising, or perhaps startling, is that some 60 percent of teenage passenger deaths occurred in crashes in which another teenager was driving. In a nutshell, young drivers are over-represented in all crashes--making up less than 7 percent of all licensed drivers, but involved in 20 percent of all crashes and more than 14 percent of fatal crashes.

Many states have experienced significant results in lowering the accident rate among young novice drivers through Graduated Drivers Licensing legislation. GDL laws are based on the premise that driving is something that is learned by doing and, by decreasing the exposure to risk while learning the skills to drive, crashes caused by young drivers will likewise be decreased.

Unfortunately, Montana and Wyoming are two of only three states remaining that have not enacted some form of a GDL system. (Hawaii is the third.)

STEP BY STEP

GDL laws are tailored to the needs and life-styles of each state, but the most effective ones consist of a step-by-step process that allows new drivers to gain experience gradually before receiving an unrestricted license. For example, young drivers start with a learners permit, then graduate to a restricted or probationary license and finally on to a full unrestricted license.

In the learners permit stage, teens accumulate supervised, behind the wheel experience over a specific amount of time--preferably at least six months--before earning a restricted drivers license.

In the most effective GDL systems, the restricted license allows teens to drive unsupervised, but controls high risk factors, such as the number of teen

passengers in the vehicle, as well as limiting late-night driving.

Research indicates that removing passengers from a car driven by 16 to 19 year olds reduces the overall crash risk by half, and a high percentage of all teenage motor vehicle deaths occur between P.M. and 6 A.M.

Teens would earn an unrestricted license after successfully completing both stages.

States that
have
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THE RESULTS ARE IN

States that have implemented GDL systems have seen a significant reduction in teen crashes. AAA will be working in the 2003 legislative sessions to pass GDL legislation in Montana and Wyoming. Currently House Bill 226 in Montana and House Bill 0080 in Wyoming address the issue of teaching our teens to drive. You can do your part as well, by letting your legislative representatives know where you stand.

--Wes Choc, President, AAA MountainWest

2nd Annual Safety Congress continued from Page 1



Above: Lloyd Ruet (left), FHWA, and Jack Knorr (right), Superintendent, Stillwater County Road/Bridge Department

Below: Harry Lauer (left), Private Safety Consultant, and Mike McCormick (right), City of Missoula



Road Safety Audit and Road Safety Audit Review programs that have met with success in Wyoming, South Dakota, and Arizona.

Jenkins followed with PART V: MUTCD and Basic Signing involving Low Volume roads. The Congress concluded with Jenkins covering liability during his Blaine County Bridge presentation.



Steve Jenkins, LTAP Director, covering MUTCD: PART V changes. "...going from should, shall, may to standard, guidance, advisory."

Work Zone Packages, valued over \$1800, were distributed by LTAP's Sam Gianfrancesco, to each county represented. Fred Feller, City of Great Falls, commented on the high quality of the signs distributed and how much his county used the package material issued last year. With limited county budgets, these Work Zone packages were an added value to assist with safety in Montana's work zones.



Fred Feller (left), City of Great Falls discusses safety issues with Sam Gianfrancesco (right), LTAP Field Engineer

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National Work Zone Awareness Week April 6 - 12, 2003

The fourth annual National Work Zone Awareness Week will be held during the week of April 6-12, 2003. A press event will take place at Freedom Plaza, Washington, DC, at 10:00 a.m., on Tuesday, April 8. For more information about National Work Zone Awareness Week 2003, check out the links below:

ATSSA's [National Work Zone Awareness Week 2003 web site](#)

FHWA's [National Work Zone Awareness Week web site](#)

Saving Dollars

As postage and printing costs keep rising, please let us know if you are getting duplicate LTAP newsletters: 1-800-541-6671. Thanks for your help!

MACo Report

by Ray Barnicoat

On January 15, 2003, the annual MACo Loss Control Conference was held in Helena. One of our speakers, Dan Dunlap, Special Agent for the Drug Enforcement Administration (DEA), did a session on Methamphetamine Lab issues. Both Steve and I thought it would be a good idea to give you information shared with us by Mr. Dunlap.

Mr. Dunlap told us that Meth Labs are common in Montana and can be found almost anywhere. He said, "There is no profile to age, gender or economic status of drug producers. Meth Labs can be in homes, motel rooms, outside in campgrounds, along the roadside, camp trailers and truck campers."

There is no set profile that will describe what a lab looks like. He told us that mobile labs are becoming more popular because they are harder to detect and locate. It is important for you to inform your crews that they need to be aware that waste products from labs can show up anywhere.

Road crew employees need to keep an eye out for suspicious activity. If they see suspicious containers, such as large quantities of iodine or large amounts of Sudafed along the roadway, they should report it as soon as possible. They should not investigate on their own. Doing so could put them at risk of personal harm. There are over 50 chemicals used to produce Meth. Many of the chemicals that are being produced will put a horse down.

For more information or training on this issue I suggest you contact your Sheriff.

Annual Calendar 2003

January	February	March																																																																																																																																												
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Some dates & locations subject to change. Call Donnetta Bohman, LTAP, 1-800-541-6671 or 406-994-6100 to confirm.

Calendar of Spring Events

MACRS Annual Meeting

Fairmont Hot Springs, Montana

April 7-10

Work Zone Flagging & Traffic Control Training

Glendive, MT - 2003 Carney Conference Center April 15, 2003

Miles City, MT - 217 N. 4th April 16, 2003

Billings, MT - Bungalow Room at Howard Johnsons April 17, 2003

Bozeman, MT - Comfort Inn, 1370 N. 7th Ave April 21, 2003

Region 8 Meeting & Road School

April 24-25, 2003

Utah

MDT Training Academy, Advanced Work Zone

Afternoon Workshop, Helena, MT May 5, 2003

Morning Workshop, Helena, MT May 6, 2003

Gravel Roads

Miles City, MT, Community College May 7-8, 2003

Boulder, MT, Boulder Hot Springs May 21-22, 2003

Drainage Classes

Kalispell, MT, West Coast Kalispell Center May 12, 2003

Missoula, MT, Ruby's Inn May 14, 2003

Butte, MT, Copper King Hotel May 15, 2003

Click, Listen & Learn (CLL) is a workshop training program brought to you by the American Public Works Association (APWA) and cosponsored by the Local Technical Assistance Program (LTAP).

The program is designed to save local agencies money and time by making arrangements to participate directly with APWA. You simply go on-line at [www.apwa.net/education/cll] and follow the directions available at the click of your mouse!

These workshops are conducted over the Internet as well as by phone so that interested individuals can participate from across the nation. The visual portion of the program is transmitted over the Internet and the audio portion is transmitted over the phone lines. This format makes it easy for any agency to put on a *Click, Listen & Learn* workshop. All that is needed is a meeting room with Internet access and a telephone system with a speakerphone. Workshops are two hours in length and normally run from 9:00 a.m. to 11:00 a.m. MST.

Upcoming CLL Workshops

April 9, 2003: Selection of Consultants

May 22, 2003: Managing the Public Response -

How to Keep Your Foot Out of Your Mouth

June 18, 2003: Where Does Public Works Fit into Smart Growth Planning?

Summer Events 2003

June, 2003

Equipment Training On Request

*Loader

*Forklift

*Motor Grader
(Gravel Roads)

July, 2003

July 27-31

LTAP International Convention, Honolulu, Hawaii

Fall Events 2003

Snow Rodeo, September 3 & 4 Great Falls, MT

MACRS - Signing & Safety, September 30, October 2, 7, 8, 9

"Fellow Road Supervisors:

I encourage you to make your voices heard with your local legislators. If you need additional information or just want to talk about what is going on in Helena, please contact me at 322-5336 or Eric Griffin at 447-1636. We will be happy to bring you up to date. Your voice is very important to these issues. Please contact your commissioners and legislators and let them know how we feel.

See you at Fairmont. The conference looks to be a good one."

Jack Knorr

Vice President, MACRS

Dial 511 for Road Conditions

Times are changing. When we headed to grandma's, we looked out our window to check the weather, hoping for the best.

Nowadays we have the ability to pick up the phone and dial 511 to find out the latest road condition. If your phone company does not support 511, call 1-800-226-7623 (both numbers are toll-free). If you want to check mountain passes, just go to www.mdt.state.mt.us/travinfo on your computer. There are updated photos of passes and road conditions throughout the state.

Montana Department of Transportation partnered up with Meridian Environmental Technology, Inc., and Western Transportation Institute to make these upgrades possible.

If your travels take you cross-country, go to www.fhwa.dot.gov/ and check out the National Traffic and Road Closure Information web site as well as the Scenic Byways web site.

The Federal Highway Administration noted in a recent news release that each year adverse weather conditions have caused 544 million hours of time lost; 470,000 people were injured; and deaths totaled 6,600. Travel safety is common sense and now instead of looking out the window, just pick up the phone or click on a web site.

Steel Tube Sign Posts

Lloyd Rue, FHWA, sent the following table to answer questions regarding use of Perforated Square Steel Tube Sign Posts that were asked at the 2nd Annual Safety Congress:

Acceptable Uses of Perforated Square Steel Tube Sign Posts, per request of Saint Louis Steel Products

14 Gage posts are fabricated from ASTM A653 SQ Grade 50, Modified to "Grade 55", certified to 414 MPa min yield¹

12 Gage posts are fabricated from ASTM A653 SQ Grade 40¹

Post Size Mm x mm (in x in)	One Post in a 2.1-m Path							
	Standard Soil				Weak Soil			
	With Anchor Base ⁽²⁾		Direct Burial		With Anchor Base ⁽²⁾		Direct Burial	
	2.10 mm ⁽³⁾	2.66 mm ⁽³⁾	2.10 mm ⁽³⁾	2.66 mm ⁽³⁾	2.10 mm ⁽³⁾	2.66 mm ⁽³⁾	2.10 mm ⁽³⁾	2.66 mm ⁽³⁾
63.5 X 63.5 (2.5x2.5)	---	yes	---	---	---	yes	---	---
57.2 x 57.2 (2.25x2.25)*	yes	yes	yes	yes	yes	yes	yes	yes
50.8 x 50.8 (2.0x2.0)*	yes	yes	yes	yes	yes	yes	yes	yes
44.5 x 44.5 (1.75x1.75)*	yes	yes	yes	yes	yes	yes	yes	yes
38.1 x 38.1 (1.5x1.5)	yes	yes	yes	yes	yes	yes	yes	yes

Post Size Mm x mm (in x in)	Two Posts in a 2.1-m Path							
	Standard Soil				Weak Soil			
	With Anchor Base ⁽²⁾		Direct Burial		With Anchor Base ⁽²⁾		Direct Burial	
	2.10 mm ⁽³⁾	2.66 mm ⁽³⁾	2.10 mm ⁽³⁾	2.66 mm ⁽³⁾	2.10 mm ⁽³⁾	2.66 mm ⁽³⁾	2.10 mm ⁽³⁾	2.66 mm ⁽³⁾
63.5 X 63.5 (2.5x2.5)	---	---	---	---	---	---	---	---
57.2 x 57.2 (2.25x2.25)*	---	---	---	---	---	---	---	---
50.8 x 50.8 (2.0x2.0)*	yes	yes	yes	---	yes	yes	yes	---
44.5 x 44.5 (1.75x1.75)*	yes	yes	yes	yes	yes	yes	yes	yes
38.1 x 38.1 (1.5x1.5)	yes	yes	yes	yes	yes	yes	yes	yes

1. 413.69MPa=60,000psi. The ultimate tensile strength of the steel coil used to produce the tube should not exceed 550 MPa(79,800psi) or have an elongation measured over 50mm (2 inches) greater than 20%. The Grade 40 steel used to fabricate the 12 gage posts is expected to show strengths proportionately less, with the same maximum elongation. In any event, the steel strengths should not exceed those in this note.

2. The anchor base may or may not have a strengthening sleeve at groundline. The anchor bases shall be sized to fit closely around the post. For 63.5x63.5 posts of both wall thicknesses and 57.2x57.2x2.66 posts the anchor bases shall be made of steel comparable to that of the posts and have wall thicknesses equal 4.55 mm(7ga) or greater. For 57.2x57.2x2.10 posts and all 55.6x55.6 and smaller posts the anchor bases shall be made of steel comparable to that of the posts and have wall thicknesses equal 2.66mm (12 ga) or greater.

3. The dimensions shown is the wall thickness of the post. 2.10 mm = 14 ga and 2.66 mm = 12 ga.

*These three sizes are the only ones expected to be produced with a 14 ga wall thickness. The 38.1 x 38.1 mm post size is acceptable because it is smaller, and likely to be crashworthy.

Source: Letter, Mr. Kevin Farrell, President, Saint Louis Steel Products from Dwight A. Horne Director, FHWA Office of Highway Infrastructure, June 15, 1999

Publications, Software, Videos

Publications

p-225: *Guidelines for Geometric Design of Very Low-Volume Local roads (ADT < 40) 2001:* Guidance supplied by this text addresses the unique needs of low-volume roads and the geometric designs appropriate to meet those needs.

p-271: *An Introduction to the Deep Mixing Methods as Used in Geotechnical Applications, Volume III: The Verification and Properties of Treated Ground:* This report focuses closely on the properties of soils created by DMM and aspects of quality control, quality assurance and verification.

p-318: *Pavement Preservation Technology:* Scanning study of France, South Africa, and Australia investigating innovative programs for pavement preservation.

p-436: *Corrosion Inhibitors in Concrete; Interim Report (March 2002):*

The overall objective of this work in progress is to assess the effectiveness of corrosion inhibitors for steel in concrete.

p-903: *Traffic Calming Primer:* This report covers the most successful approach to traffic calming ideas of engineering, enforcement, education and enhancement.

p-904: *Neighborhood Traffic Control:* This compilation is presented as a tool box that begins with the easiest and least costly techniques and then proceeds to the more difficult and expensive alternatives.

p-929: *Judicial Enforcement of Variable Speeds:* From NCHRP Legal Research Digest, March 2002-Number 47, IC Trans. Law, IV Operations and Safety.

p-930: *South Dakota Low Volume Roads Signing Manual:* The Standard, Guidance, Option, and Support material described in this edition of the MUTCD provides the transportation professional with information needed to make appropriate decisions regarding the use of traffic control devices on streets and highways.

p-1031: *What is Driving the Sign Inventory Boom?* Article on the GASB#34 & the Sign Inventory & Inspection Software (SIIS) Version3.

p-2371: *Innovative Approaches to Transportation--A Guidebook:* This book

is designed to assist Forest Service managers, staff, and partners in developing relationships and in maximizing participation in FHWA and FTA surface transportation programs.

p-2376: *Contract Administration: Technology and Practice in Europe:* This report combines definitions and illustrative case study examples of contracting techniques in Europe with critical analysis of the applicability of these techniques to U.S. contracting.

p-3525: *Intelligent Transportation Systems in Work Zones:* This report is to enable other regions to benefit from experience gained by state department of transportation that have been early deployers of ITS in work zones.

p-3526: *Best Practices of Rural and Statewide ITS Strategic Planning:* This document supports those agencies and groups that are beginning the process of Rural or Statewide ITS deployment planning.

Software

SW184: Culvert Management System - US DOT, FHWA, Road Weather Management Program

SW185: Maintenance of Signs & Sign Supports for Local Roads & Streets Presentation - LTAP Clearinghouse

SW186: Red Light, Green Light - DOT, FHWA, ITE

SW187: Massachusetts Bridge Technology Workshop - Speaker Presentations

SW265: Best Practices for Road Weather Management - US DOT, FHWA, Road Weather Management Program

Videos

SG198: John Deere Consolidated Industrial Safety Videotape: Time: 1:53:42, Includes Looking Back, Bypass Starting Accidents, The Figure-Stay Alert, Accidents Happen to Real People, It Always Happens to the Other Guy, Logging Accidents, Safety in the John Deere Dealership

RM723: Snow & Ice Control(Illinois): Time:48
1.Plow & Blades, 2.Spreaders & Spinners,
3.Forecasting-Chemical App, 4.Pre-storm Prep,
5. Plowing, 6.Post-Storm Clean-up

Welcome to the LTAP Lending Library where publications, videos, and software may be borrowed for two weeks and then returned to the Library. Up to three videotapes may be borrowed from the LTAP Lending Library rent-free for two weeks. Some publications are free or for a nominal charge upon request.

Call Donnetta Bohrman, LTAP
1-800-541-6671
for information or checkout procedures.

Montana Fast Facts

(from MDT)

Montana's first Highway Commission was created in 1913. It was composed of three members and had a yearly budget of \$5,000. At that time, prison inmates constructed roads.



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Bozeman, MT 59717-3910



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Approximately 1600 copies of this public document were published at an estimated cost of \$5,959 per copy for a total cost of \$1,730 which includes \$1,440 for printing and \$290 for distribution.

MDT attempts to provide accommodations for any known disability that may interfere with a person participating in any service, program or activity of the Department. Alternative accessible formats of this document will be provided upon request.

Please send us any comments or concerns you may have regarding this newsletter with your name and address in order that we may respond in a timely manner.

The Local Technical Assistance Program Newsletter is published quarterly.

Funding for this program is provided by the Federal Highway Administration through the Montana Department of Transportation, Montana State University and a portion of Montana's gas tax revenues.

This newsletter is designed to keep you informed about new publications, techniques and new training opportunities that may be helpful to you and your community.

Individuals wishing to receive future copies of the newsletter at no cost may send their request to LTAP, 416 Cobleigh Hall, PO Box 173910, Montana State University-Bozeman, Bozeman, MT 59717-3910, or call 1-800-541-6671.

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 and articles to:

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