

LTAP MATTERS

Montana's Answer To Technical
Education of Roads & Streets

Montana State University-
Bozeman

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Montana Association of County Road Supervisors 2000 Annual Conference

by Steve Jenkins, LTAP Director

Havre, Montana gave a warm welcome to County Commissioners and Road Supervisors this April at the annual Montana Association of County Road Supervisors (MACRS) meeting. Hill County Commissioner, Pat Conway opened the conference, hosted by the Havre Holiday Village Mall. Participants received two days of training and enjoyed sharing new ideas with equipment suppliers and other counties.



It was decided that District Representatives would be selected to align with Montana Department of Transportation (MDT) districts. This will provide a more even distribution of representatives and the ability to interact with MDT officials on secondary road issues.

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99 President Richard Miller (right) arranged and conducted the 2000 meeting. Current President John Ostlund (left) of Yellowstone County looks forward to a year of service and leadership in the year 2000.

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A Roadside Attraction

Vandals take costly toll on highway signs

compiled from Great Falls Tribune, March 20, 2000

Each year in Montana, thousands of road signs are stolen or blasted by gunfire. Counties and the state spend hundreds of thousands of dollars annually to replace stolen road signs and repair bullet-riddled ones, money that could be spent to fix potholes.

More importantly than the money, Montana road maintenance officials say is that lives are at stake. In other states, motorists have died as a result of missing or unreadable signs, sparking a movement nationally to fight the nonchalant attitude toward road sign thievery and destruction.

State officials say, that Montana is ripe for a tragedy if it doesn't join the fight. "The majority of signs in the backcountry are blown to hell, and I just don't understand that," said Eric Griffin, Public Works Director for Lewis and Clark County. Opportunity certainly presents itself in the 75,000 to 100,000 signs that guide motorists on the 8,700-mile state highway system.

Neither the National Transportation Safety Board nor the Federal Highway Administration keeps tabs on how much money the problem is costing individual states, in cash or lives lost. But in an unscientific survey, Duane Smith, Associate Director for Outreach at the Center for Transportation Research and Education at Iowa State University estimated the total cost of vandalism at \$274 million, or roughly \$5.5 million per state

Statewide, the Department of Transportation spends about \$125,000 replacing and repairing signs. A large interstate exit sign can cost \$250. "We have the impression often that people don't realize what those signs are worth," said DOT Spokesman Dennis Unsworth. A stop sign would be something in the

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MACRS 2000 Annual Conference

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Newly elected officers included:

President - John Ostlund, Yellowstone County
Vice President - Larry Juell, Sweetgrass County
Secretary - Russell Huotari, Richland County



*Entertainment was provided by Bullhook Bottom Barbershop Chorus.
 An underground tour of Havre was also provided.*

Training topics chosen for the conference enabled transportation officials to deal with current issues. Discussion yielded solutions to "Maintenance of Unpaved Roads Near Wetlands." There was also discussion on secondary road maintenance issues, employment practices, road inventory and gas tax, bridge funding and FEMA assistance.

Some of the best interaction and solutions came from discussions on *Recycled Asphalt Pavements* and *Leadership*. Several counties had innovative ideas on the use of rotomilled asphalt. Stillwater, Yellowstone and Missoula counties have all used this product extensively. Communication between work crews, Road Supervisors, and Commissioners was covered with representatives from each group demonstrating their unique communication skills.

District Representatives

Northern District -

Mark Trask, Prairie County
 Russ Albers, Chouteau County District #2
 Tom Nielson, Fergus County

Southern District -

Jack Knorr, Stillwater County
 Duane Schaak, Treasure County
 Ted Coffman, Madison County

MACo Representatives -

Bill Gibbs, Yellowstone County
 Eric Griffin, Lewis & Clark County
 Nick Seiler, Valley County

2001 Conference Host -

Donald Bohne, Missoula County

Once again I am reminded that the energy and synergy that comes from meeting together can be used to solve common problems and learn new ideas.



The rich MACRS heritage is shown in this picture of MACRS past presidents.

"YOU SHOW US - 2000"

Eligibility & Awards

Montana LTAP is pleased to announce the "You Show Us - 2000" contest! This is your chance to enter a project you are proud of, and your chance to compete with other counties and other states in the region. We know the projects are out there. We've seen in past "Show Us" contests what innovative crews can do with little money, some spare parts, and a lot of thought and ingenuity. You just have to let us know what you've been doing, so enter now.

This is a contest about sharing ideas, learning from others, and having an opportunity to brag a little.

This contest is open to any county in the State of Montana. The winner of the state contest will compete with other state winners in the seven-state area to determine a regional winner.

Awards will be presented at the 2000 County Road Advisor's Conference to be held in Rapid City, South Dakota on October 25 and 26. State winning entries will be collected and placed in a separate journal. Please limit your entries to two per county. Contest winners may be eligible for free registration and hotel accommodations at the conference.

Entry Instructions

Entries should be no longer than two typewritten pages and will include the following, if applicable:

1. County information:
 - County Name
 - Contact Person
 - Address
2. Problem statement
3. Discussion of solution
4. Labor, equipment & materials
5. Cost
6. Savings/benefits

(Photographs are encouraged!)

Mail your entries to:

"You Show Us 2001" Contest
 Montana LTAP
 Montana State University-Bozeman
 PO Box 173910
 Bozeman, MT 59717

The deadline for entries is August 15, 2000.

For more information, please call (800) 541-6671.

Purpose

This is a contest about sharing ideas, learning from others, and having an opportunity to brag a little. This is a showcase for your project. Don't be shy. It's really pretty easy to enter. Using the format instructions below, you just write a few paragraphs and take a few photographs.

Having trouble thinking of the right project? Well, it's the one the crew built, it's working great, and the commissioners even mentioned it in their last meeting. It was that project that saved your county money and made the operation a little quicker, easier and safer. It can be a piece of machinery or part of a piece of machinery. It can be a construction project, a system or a different way of doing things. It can be almost any project your county and your crews created or thought up as long as it meets the criteria of safer, easier, and more efficient.

If you don't have the time or need some help preparing the entry, give our center a call and we will try to help. If your project isn't entered, it can't win. More important, if it isn't entered, our state may not have the best entry in the regional contest.

We look forward to your entry!

Fluorescent Yellow Green Warning Signs For Schools, Pedestrian & Bicycle Crossings

by, Cherie Kittle FHWA

BACKGROUND

The Federal Highway Administration's (FHWA) Office of Transportation Operations continues to optimize the performance of the transportation system by ensuring consistency on our roadways.

In 1992, the FHWA initiated a pilot study in conjunction with the National Park Service which examined the effects of the new color signs on motorist behavior at five pedestrian and bicycle crossings in the Washington, DC, area. Results indicated an increase in motorists slowing and stopping for pedestrians and bicyclists and conflicts decreased.

In 1993, FHWA conducted a 2-year study nationwide to evaluate this color on pedestrian, school, and bicycle crossing signs. A total of 57 jurisdictions were given permission to experiment in this study; 24 jurisdictions completed the experimentation and provided final reports. Our review of the studies and data indicate that fluorescent yellow green (FYG) warning signs improved the conspicuity of the sign message and motorists were able to recognize the sign from greater distances than the standard yellow warning sign. Many studies did not find significant changes in speed data, but motorists frequently commented that the signs caught the attention of the driver from a greater distance and were more aware of what was going on around them.

On June 7, 1996, a Notice of Proposed Rulemaking was published proposing the adoption of FYG as an optional color for pedestrian, school, and bicycle crossing signs. A total of 141 comments were received with 100 favorable comments received from local governments, including police departments and public school systems, in addition to special interest groups and the general public.

On June 19, 1998, a Notice of Amendment to the Manual on Uniform Traffic Control Devices (MUTCD)

was published in the Federal Register which adopted FYG for optional use for warning signs related to pedestrian, bicycle, and school applications.

COLOR BACKGROUND

Fluorescent yellow green was one of four unassigned colors that the FHWA had reserved for future applications. Studies indicate that fluorescent retroreflective materials are detected with higher frequency, and recognized with greater accuracy at further distances, than the corresponding standard highway colors. This is due to its greater luminance contrast with its surroundings. Pedestrian/bicycle-motor vehicle crashes continue to be a safety problem on our roads. FHWA believed a unique, unassigned color would be most effective in altering motorist behavior and reducing conflicts with pedestrians and bicyclists.

SAFETY BENEFITS

The use of FYG for pedestrian, bicycle, and school applications supports the Department of Transportation's Strategic Safety Goal to promote public health and safety by working toward elimination of transportation-related deaths, injuries, and property damage.

FYG also supports the FHWA strategic goal that targets pedestrian/bicycle as a national priority because this type of crash accounts for 15 percent of all fatalities. The plan calls for an improvement (reduction in number, rate, and severity) in this area.

Recent physical fitness trends promote walking and bicycling. Emphasis must be placed on utilizing state-of-the-art retroreflective fluorescent signage materials to better communicate with motorists that pedestrians and bicyclists are using the roadway with them.

Pedestrian and bicyclists represent significant areas of concern in transportation that would be well served by a unique color for traffic control devices.

This is not a stand alone effort, but part of our overall goal of optimizing performance through innovation, technology, communications, and partnering with the local community.

2000 Calendar of Events

Safety Management	July 13, Missoula, MT August 10, Billings, MT
Highway Capacity Workshop-MDT	July 17-21, Helena, MT
Sign Vandalism	August 9, Laurel, MT August 11, Miles City, MT August 16, Hamilton, MT September 5, Conrad, MT
Leadership/Crew Supervision	On Request August-September
11th Annual Equipment Operator Training Workshop & Snow Rodeo	September 6-8, Great Falls, MT
Montana Association of County Officials (MACo)	September 24-27, Havre, MT
MACRS District Meetings-Communication & Leadership of Commissioners, Road Supervisors and Crews	October 2, Missoula, MT October 3, Great Falls, MT October 4, Billings, MT October 5, Miles City, MT
Montana League of Cities and Towns Annual Conference	October 11-13, Missoula, MT
FHWA Region 8 County Road Advisor's Conference	October 25-26, Rapid City, SD

A Roadside Attraction

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neighborhood of \$100 apiece." Not all of the damage is the work of criminals. Wind and accidents cause their share of repairs.

Both county and state officials said even more vandalism occurs on county roads. They are located in less populated areas, so shooters and thieves are less likely to be spotted.

Griffin, said \$20,000 to \$25,000 is spent in Lewis and Clark County annually to maintain signs. He could not say how much was directly related to vandalism, but he knows it's significant. Mark

Peterson, head of the Cascade County department that oversees sign maintenance, said the county spends more than \$9,000 a year in sign materials alone and \$33,000 when wages and equipment are included. Not all of that is the result of vandalism, but most of it is.

Even if county officials wanted to, Peterson said, they couldn't afford to replace all of the signs that are in bad shape.

Note: LTAP is offering Sign Vandalism Workshops in August and September. See above calendar for location nearest you.

Thanks Jerry

Steve Jenkins, LTAP Director

After 11 years of service, Jerry Foreman is retiring from his position on the LTAP Advisory Board. As long as I have been conducting Advisory Board meetings and



asking for input, Jerry Foreman has been providing good advice. I don't remember a meeting that Jerry has missed in his years of service on the board. He has been instrumental in providing GIS training at the MACRS conference and has encouraged me to provide a full workshop on GIS. Currently, LTAP is working with Trimble Navigation and the Utah T2 Center to provide that training.

Jerry has also provided advice on the Gravel Road course and other county issues. Whether it be Jerry or his other brother Jerry Backland - please stay in touch and thank you for all your support.

New Videotapes and Publications

Videotapes

SW-127

PaveCool: Asphalt Pavement Cooling Tool Version 2.0 – PaveCool is a program to calculate the cooling curve of a lift of Hot Mix Asphalt and evaluate the time available to effectively compact the lift. (*System Requirements: Windows 95 or NT*)

p-409*

Fast-Track Paving: Concrete Temperature Control and Traffic Opening Criteria for Bonded Concrete Overlays, Volume II: HIPERPAV User's Manual – This report serves as a user's manual for the HIPERPAV System. In it is included an introduction, system requirements and installation, use of HIPERPAV, interpretation of analysis results, and a sample application module. (*CD-ROM is included in this report*)

Publications

p-250*

TRR1652 – Seventh Annual Conference on Low Volume Roads 1999 (Volume I and II)

p-410*

Fast-Track Paving: Concrete Temperature Control and Traffic Opening Criteria for Bonded Concrete Overlays, Volume III: Addendum to the HIPERPAV User's Manual – This report contains color illustrations and an update of the information in the User's Manual.

p-361*

Insights into Pavement Preservation, January 2000 – Aims to make clear what pavement preservation is- and what it is not.

p-408*

Fast-Track Paving: Concrete Temperature Control and Traffic Opening Criteria for Bonded Concrete Overlays, Volume I: Final Report – This research focuses on modeling early-age behavior of both concrete pavements and BCO's subjected to stresses from moisture and thermal changes. It includes the development of a two-part versatile, comprehensive set of guidelines that provides direction in the proper selection of design and construction variables to minimize early-age damage to the pavement. The first part of the guidelines are intended to identify design and construction inputs that are most likely to lead to good results. The second part is comprised of complex models designed to predict early-age behavior. The end product from this research is a comprehensive software package term HIPERPAV. (*HIPERPAV CD-ROM also available*)

p-556*

An Introduction to the Deep Soil Mixing Methods as Used in Geotechnical Applications – This report traces the historical development of the various propriety Deep Mixing Methods (DMM) and provides a structured summary of application. It also compares the applicability of DMM with other competitive forms of ground treatment and improvement. The report focuses on methods, equipment, procedures and properties of the treated soil. It also describes the natures of the market in North America, Japan and Scandinavia.

Did You Know.....

- The cruise liner, Queen Elizabeth II, moves only six inches for each gallon of diesel that it burns.
- More people are killed annually by donkeys than die in air crashes.
- There are at least a half-million more automobiles in Los Angeles than there are people.

Request for Videotapes & Publications

The publications and videotapes listed in the LTAP Quarterly Newsletter 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 of the advertised tapes by calling toll-free (800) 541-6671. Contact Jaime Jackson if you have any questions or concerns.



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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, new 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.

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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