



# Colorado LTAP

## Pilot Car Certification Changes to Requirements



In August of 2007, CDOT announced that there would be changes to the pilot car certification process. The last 17 months passed quickly and the deadline for meeting these new changes is now upon us. Prior to this new rule, people just had to take and pass an exam in order to receive certification. Now, though, people must attend training and then take and pass a test to get their certification. The transition period for compliance is ending and all certifications issued prior to June 2008, under the old system, will expire on December 31, 2008.

### When to use a Pilot Car

CDOT has published a report Rules and Regulations of the Colorado Department of Transportation Pertaining to Transport Permits for the Movement of Extra-Legal Vehicles or Loads 2C.C.R. 601. This publication has a lot of specific information on requirements for pilot escort drivers, pilot escort cars, and insurance requirements among other information. If your agency has employees with pilot car certifications, this is an important resource. Part of CDOT's website is also dedicated to providing

information on getting permits for extra-legal vehicles and loads. You can find the guide and additional information at <http://www.dot.state.co.us/TruckPermits/BulletinBoard.cfm>. You can also contact the CDOT Permits Office at 1-800-350-3765.

According to section 4-14 and 4-15 of this document, an extra-legal vehicle or load that is over the maximum limits listed for length must use a pilot car escort.

1. If a vehicle or load is greater than 85 feet when traveling on mountain two lane highways there must be a pilot car positioned in front.

2. If a vehicle or load is greater than 110 feet when traveling on all two lane highways that are not mountainous, the pilot escort vehicle must be in front.

3. If the vehicle or load is greater than 115 feet when traveling on a four lane highway, the pilot car must be positioned in the rear.

4. If the extra-legal vehicle or load has an overhang that is more than 15 feet in the front or more than 25 feet in the rear, must have a pilot car escort.

 **LOOK INSIDE**  
**The Importance of Training**

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### Routing Slip

After reading this issue of Colorado LTAP, please initial below and pass it along to the rest of your staff.

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The Colorado Local Technical Assistance Program is sponsored by the Federal Highway Administration, the Colorado Department of Transportation, and the University of Colorado at Boulder.

The Colorado LTAP Newsletter is published quarterly. Articles, pictures and comments are welcome.

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## Director's Note

Each year Colorado LTAP conducts an annual needs assessment survey. The results of this survey help determine focus areas for future training and project development.

All surveys received by the September 30th deadline were put into a drawing for one of ten \$25 Visa gift cards. Winners were randomly selected from all submissions.

Your help is necessary to develop our program as the most beneficial transportation resource possible. We would like to thank everyone that responded for their cooperation and commitment to helping make this program better and more beneficial to local agencies.

Congratulations to the following survey drawing winners:

Patrick Lothamer - Town of Severance  
Mike Salyards - Philips County  
Johann McKee - Town of Moffat  
Cheriece Edwards - City of Trinidad  
Bill McClure - Town of Center  
Bill Welborn - Peterson Air Force Base  
Tom Huston - City of Fruita  
Crestina Martinez - Costilla County  
Danny White - City of Craig  
Arta Wray - Routt County

The Town of Snowmass Village's *Culvert Drop Inlet Improvement* was Colorado's state winning project of the 2008 "You Show Us" contest. Their design will be featured in the "Ideas that Work" section of the next issue of this newsletter. This issue features the Regional winner of the contest, Nebraska's *Flexible Bridge Object Markers*, details on page 10.

## Quotes of the Day

"The middle of the road is where the white line is - and that's the worst place to drive."

- Robert Frost

"Greatness is a road leading towards the unknown."

- Charles de Gaulle

"You know more of a road by having traveled it than by all the conjectures and descriptions in the world."

- William Hazlitt

"The best road to progress is freedom's road."

- John F. Kennedy

"If you don't know where you are going, every road will get you nowhere."

- Henry A. Kissinger



<http://ltap.colorado.edu>

Visit Colorado LTAP online today for online training, class registration, free lending library, and more.



**Congratulations to the twelve participants that graduated from the Roads Scholar program in the October 23rd Safety on the Job class in Castle Rock!**

## The Value of Training

### Earn an Above-Average Return on Investment

*Edited from EARNING ABOVE-AVERAGE ROI ON YOUR SNOW AND ICE CONTROL TRAINING, Salt & Highway Deicing, Vol. 45 No. 3, Summer 2008*

While scrimping to meet lean budgets, inexperienced snowfighting managers sometimes succumb to the mirage of “savings” by axing snow and ice training. They invest in personnel budgets, equipment and materials and shortchange training.

Investments in snowfighter training can earn your highest return-on-investment (ROI) – if you do it right. Curtailing training is short sighted and likely to create problems that end up costing more than the investment in proper training.

#### **BENEFICIARIES OF SNOW AND ICE CONTROL TRAINING**

The fact of the matter is: almost everyone associated with snow and ice control operations benefits from training. Our customers benefit from snow and ice training - customers include all roadway users and those who depend on them, such as:

- Commuters, shoppers, friends and family
- Businesses and manufacturers
- Service providers including governments, schools, emergency medical crews, taxi/bus patrons
- “Our children and grandchildren” concerned with inheriting a livable world

Most of these groups benefit by having some mobility options during and after snow and ice events. Highway users see additional benefit from fewer accidents that may result from improper snowplow

operation or highway treatment. Roadside neighbors can benefit by not having physical or chemical damage that results from untrained operators who do not have the required operational skills. Environmental benefits accrue by minimizing the use of, and controlling migration of, snow and ice control materials and other substances that can and do cause damage.

Agency operations benefit from training, allowing government managers to achieve:

- Reduced operational costs
- Improved operational efficiency and effectiveness
- Proper knowledge and job skills
- Improved morale and attitudes
- Employee development
- Organizational and personnel safety
- Tort liability mitigation
- Positive public and media image
- An assured and happy future for the agency

Training mechanics keeps equipment productive: less downtime, less repair costs and longer service lives. Training enables operators to know and perform proper preventive maintenance procedures. Proper operational training on equipment will result in less damage to the equipment and other features. Agency infrastructure is likely to last longer as a result of the proper use of ice control materials and other infrastructure maintenance

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### Colorado LTAP Advisory Committee Members

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**TRAINING:**

It is an investment in a valuable commodity that produces high returns.

From "The Value of Training" by Steve Muench, Ph.D. PE

Training is an investment.

General accounting standards classify training as an expense.

However, training is really an investment: an organization typically invests up-front to train its employees (in the form of enrollment fees, travel expenses and opportunity cost of the employee's time) and, in return, expects future returns (in the form of increased knowledge, skills and productivity). As with any other investment, if the returns outweigh the investment, training is a worthwhile endeavor.

Training is also an investment from the employee's perspective. It was researched that "the effect of an hour of training on productivity growth is about 5 times as large as the effect on wage growth" (Loewenstein and Spletzer, 1998).

Therefore, employers "reap almost all the returns to company training" (Bartel, 2000). Employees generally view training as either a gift from the employer or at least a sign of commitment on the part of the employer, which is important to job satisfaction (Barrett and O'Connell, 2001). Increased job satisfaction is difficult if not

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## The Value of Training

### Earn an Above-Average Return on Investment

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techniques.

#### Training and Safety Improvements

Agencies should create records allowing them to identify costs and track the changes they seek and achieve through training. Different operations have different metrics. For instance, investment in training resulted in a significant reduction in the accident/incident rate (accidents/incidents per million snow and ice miles driven) of the New York State Department of Transportation (NYSDOT) snow and ice control fleet of snowplows. In the early 1990's, the department was mandated to change from two-person snowplow operation to one-person snowplow operation. The Department initiated and executed a comprehensive training and certification program focused on operational safety. In the transition snow and ice season, the accident/incident rate declined by 33% from previous years. In the following year, the accidents dropped another 33%. That training program required training and certification on the heavy dump truck, various plow wing configurations and One Person plowing.

Since that time, NYSDOT has instituted training/certification programs for all equipment used by the Department. Those programs are available on line at: <http://nysdot.gov/portal/page/portal/programs/trans-maint-train/eval-guides>.

True benefit/cost data associated with training efforts is hard to come by. The Utah Department of Transportation Research and Development Division report, *The Development and Evaluation of a High-fidelity Simulator Training Program for Snowplow Operators* (November, 2004) looked at the results of a high fidelity snowplow simulation training program in terms of post-training accidents vehicle repair costs and fuel efficiency by comparing simulator trained operators with those who did not receive the simulator training. Although the data was limited, those results were projected to calculate monetary savings. The report is available at:

<http://www.dot.state.ut.us/main/uconowner.gf?n=200412141531561>.

The Arizona Transportation Research Center undertook a similar study of simulator training, *Snowplow Simulator Training Evaluation Final Report 585* (November, 2006) and used similar measures of effectiveness as Utah. Although based on limited data, the results and trend for less accidents, less vehicle repair costs and less fuel consumption associated with simulator-trained operators is apparent. That report is available at: [www.azdot.gov/TPD/ATRC/publications/project\\_reports/PDF/AZ635.pdf](http://www.azdot.gov/TPD/ATRC/publications/project_reports/PDF/AZ635.pdf).

#### WHO NEEDS TRAINING?

The answer to this is, perhaps different than expected: everyone involved in winter maintenance that we possibly can. A list of groups may include:

- Equipment Operators / Wing People
- Supervisors
- Managers
- Support Staff
  - Radio/Dispatch People
  - Office Staff
  - Toll Collectors
- Police
- Media
- Customers
- Legislative/Executive bodies

The need for training for some of these groups may not be readily apparent. However, each agency group needs to know their role in winter maintenance and how to perform their duties effectively. Police agencies are really a partner in snow and ice operations and they should be aware of agency treatment policies and the best way to describe snow and ice road conditions. The last three bullet items are a little bit of a stretch in terms of actual training. It is more a process of providing targeted information of value.

#### WHAT TRAINING TOPICS ARE APPROPRIATE FOR WINTER MAINTENANCE PERSONNEL?

In this case the answer is: it is absolutely agency specific. Appendix C-1 in the FHWA Report "Winter Maintenance Technical Peer Exchange: A Final Report"

is a fairly complete list of training topics that are applicable to operators, supervisors and managers. That list is available at:  
[http://www.saltinstitute.org/snowfighting/winop-resources/training\\_topics.doc](http://www.saltinstitute.org/snowfighting/winop-resources/training_topics.doc). Other agency groups need to know agency snow and ice control policy, how to interact with the public and their specific duties in the event of major snow and ice events.

## HOW DO WE PROVIDE EFFECTIVE TRAINING?

Before getting into the specific training forums, a brief discussion of some components of adult learning theory may be appropriate. First of all, we must recognize that learning is very individualistic, in that everyone receiving training has his or her own learning characteristics, experience base and style response. It is up to the instructor to look at audience characteristics in a general way, and try to use techniques that are likely to be effective.

An effective learning situation should be:

- Purposeful
- Based on Student Experience
- Multifaceted
- Active in Process

We need to ensure that training is done “on purpose.” Try to determine the goals or motivations of the group; show them how the training will support those goals. These may be career goals, safety goals, topic interest goals, and others.

All learning is by experience, but learning takes place in different forums and in varying degrees of richness and depth. If a learning experience can be made to be challenging, and involve feelings, thoughts, memory of past experiences and physical activity, it will be much more effective than simply trying to push something into a student’s memory.

Variety in the learning experience is important. Using combinations of verbal, conceptual, perceptual, and problem solving elements can make the learning experience more effective.

Adult learners require an active process. That is, to react and respond emotionally (inwardly and/or outwardly) or intellectually to what is being presented. Presenting material in a way that evokes those responses is challenging, but doable.

Beyond the theory stuff there are some practical tips for effective training:

- Training must be customized/group specific.
- The closer to 1 on 1, the better; “class size” matters.
- Subject matter should be meaningful and useful.
- Uniformity of message within an agency is essential.
- Trainers should be knowledgeable and credible.
- Use peer trainers to the extent possible.
- Feedback within and after training is essential-
  - Testing (oral and written)
  - Small group discussion
  - Training evaluations by students

There are a variety of training forums available for snow and ice training. The following are a few in the more or less order of effectiveness:

### OJT (On the Job Training)

This is the most common form of training and is where a trainee learns a task or skill by actual performance. This is a common method for learning how to operate various pieces of equipment. The modern model for OJT involves specified training and certification requirements before being allowed to “fly solo” on a piece of equipment (see the NYSDOT training and certification program reference above).

### Mentor Training

This is where a more senior or higher level employee is assigned to work with a “trainee” or lower level employee to develop job skills, knowledge and confidence that support career advancement and/or other goals. In order for this to be effective, it must have defined content, schedule and duration.

### Tailgate Training

This is training at the crew level. Here, a supervisor, or crew member, is assigned to become familiar with a small segment of agency policy, safety policy, task performance or other item that is of particular interest or importance to the crew. On a scheduled basis, the crew meets and discusses the “topic of the

impossible to quantify, but intuitively we know it is important in retaining good employees.

When calculated using sound methodology, training has been shown to provide significant return on investment: on the order of 5% to 200%.

Training is a valuable commodity that, if viewed as an investment rather than an expense, can produce high returns. While it is true that training costs money and uses valuable employee time and resources, studies tend to show training provides a positive return on investment. Therefore, although training might seem like a luxury expense in tight financial times, it is, in fact, one of the most sure and sound investments available.

*Excerpts from **The Value of Training** summary by Steve Muench, Ph.D. PE, of a chapter in his PH.D. dissertation, University of Washington, 2004. For more information, please contact [stmuench@u.washington.edu](mailto:stmuench@u.washington.edu).*

## Did You Know?

*Educating* is not the same as *training*.

To **educate** is to increase intellectual awareness of a subject.

To **train** is to make someone proficient at the execution of a given task.

*James C. Georges*

**Need a little  
Extra cash?  
Your  
knowledge  
is worth  
something.**

Our center is continuing its program to encourage local participation in the publishing of Colorado LTAP's quarterly newsletter. We would like the recipients of our newsletter to benefit from all the knowledge local agencies have in the areas of roadway maintenance, design, and construction. We are offering **\$50.00** to city, town, or county employees that submit an article that is chosen to be published in our newsletter. Articles can address current methods and procedures, best practices, innovative techniques, or projects in the transportation industry. Content should contain as much detail as possible, but we can provide assistance in editing and writing the final version. We request articles not promote any particular product. *Photos are encouraged.* To submit articles and/or photos, include author name and contact info, and mail or email to [cltap@colorado.edu](mailto:cltap@colorado.edu)

## The Value of Training

### Earn an Above-Average Return on Investment

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week" for about 15 minutes so that everyone has a clear understanding of what is required.

#### Peer Training

This is where an active worker, that has exceptional topical skills or knowledge, is brought in to train people of his or her same level. The peer trainer may be from another location within the agency or hold a similar position in another agency. By avoiding the personnel culture dynamic of the same work location, the training is usually more effective.

#### Skill/Knowledge Based Certification

As with the OJT model above, programs and requirements are coming on line that provide training and /or materials that allow people to study/receive training with the goal of taking a test and receiving certification in a particular discipline. In the private sector, the Snow and Ice Management Association (SIMA) provides a certification program to its member contractors that has both training and testing requirements. Some of the Local Technical Assistance Program (LTAP) centers offer certifications for people who receive specified training and complete a test for specified roadway related topics, including snow and ice control.

#### Training Centers and Academies

A number of highway agencies have dedicated training facilities (in-house or cooperative) where people are sent for intense multi-week training on a variety of highway maintenance topics and equipment operation. Snow and ice control is typically one of the topics offered.

#### Classroom/Workshops/Conferences

This is generally what people think of when they refer to training. In order for this to be effective, the class size should be limited to about 30 people or less. This makes it easier for interaction between the instructor and other class members. A major benefit of this type of training occurs when the class members come from diverse locations and agencies. By structuring the

program in a way that people are encouraged to talk with each other about the topic at hand, there will be additional learning benefit. If larger classes are unavoidable, roundtables and activities to get people talking with each other are helpful. A reasonably complete snow and ice control training program suitable for classroom training (free for the download) can be found at:

[www.saltinstitute.org/snowfighting/training-ltap.html](http://www.saltinstitute.org/snowfighting/training-ltap.html).

#### Rodeos and other Competitions

These events can be useful training and public relations tools. The key is to structure the program in such a way that more than just mechanical driving skills are the basis of the event. There should be some classroom type of activity with a required test at the end. The results of the test in combination with the driving score should be the basis of the final ranking of the competitors. In addition to what was covered in the classroom, questions could be based on agency policy documents and training manuals. Other elements of the competition could include: installing tire chains, spreader calibration, pre-operations check of plow trucks and material spreaders, efficient loader operation, etc.

#### Computer Based Training (CBT)

In this case, being last on the list doesn't mean that this is least effective - it is just the newest form of available training. AASHTO has developed an excellent 5-part series of self-administered, computer based programs on snow&ice/winter maintenance topics. This Clear Roads series is available for purchase thru the APWA bookstore, (<http://www.apwa.net/bookstore/category.asp?Category=Snow+and+Ice+Control>), or can be loaned from Colorado LTAP's free lending library.

The *Clear Roads* computer based training programs can be customized easily by any agency for its own purposes. Individuals can log on and off at their own pace and progress through the course until complete. There are quizzes built into the training programs.

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# What's New in the LIBRARY?

All videos, publications and CDs in the LTAP lending library are available for checkout for a two-week period, free of charge. To check out materials or request a library catalogue, contact the Colorado LTAP office at 1-888-848-5827. Below is a list of most recent materials added to the library. Our library materials can also be ordered online at: <http://ltap.colorado.edu/ltaplibrary>

## New CDs

### Location

### Title

#### CD DDD

#### *Doing Due Diligence: What Lawyers Want Public Works Directors to Know*

Why is it important to do due diligence? You reduce risk for your agency. Are your current practices as comprehensive as they should be? Learn how due diligence can help you avoid common complications that occur daily in public works projects both in the planning and delivery stages. From APWA's Click, Listen & Learn online training program - this topic was presented on July 22, 2004. Handout materials are included on the disk.

#### CD AGA

#### *Application of Ground Anchors and Soil Nails in Roadway Construction*

This CD/Publication includes five multimedia presentations that describe and explain the principles of science and engineering related to the construction of ground anchors and soil nail wall systems.

#### CD WR

#### *Winter Roads: Effective Use of Chemicals*

This two-hour visual and audio CD-ROM program will cover the basics of chemical and abrasive usage for snow and ice control, review new chemicals, and help you gain an understanding of how pre-wetting and anti-icing can be effective for improved safety of local and state roads. Join our featured speaker, Don Walker, P.E., Director of the Wisconsin LTAP Center at the University of Wisconsin-Madison, as he covers topics such as snow and ice impacts on road safety, the basic use of salt and sand, pre-wetting and anti-icing, and alternative chemicals including magnesium chloride, calcium chloride, and more. Here is your chance to get your whole team informed and engaged about winter road treatment and safety.

#### CD DESI

#### *Developing an Effective Snow and Ice Program*

In this two-hour audio-visual CD, you will discover the key aspects to running a top-notch snow and ice control program from two of the industry's top municipal experts. Learn how media and public relations, equipment procurement and maintenance, chemical product selection, planning, policies, and training must all be integrated for optimal success. Don't miss out on these successful winter maintenance strategies.

#### CD RSP

#### *Ready, Set, Plow! Tips and Tasks for Preparing Your Fleet for Snow Season*

Winter weather is an annual force to be reckoned with. Learn how to plan ahead to ensure that both your equipment and plow operators are up to the task. This program features checklists, tips on alternate vehicle usage, and how to stretch your budget dollars.

#### CD TFRS

#### *Training First-Rate Snowfighters*

Put an end to persistent and inadequate snowfighting once and for all! If you didn't attend the 2005 North American Snow Conference, you can still experience the excitement of being onsite. This program discusses how to get the most value from your snowfighter training program. Training resources will be identified, as well as key concerns and practical tips for training both experienced and inexperienced snowfighters.

## New DVDs

Location	Title
DVD WSWS	<i>Working Safely with Snow Plows and Other Snow Removal Vehicles</i>
This video will show many different examples of snow removal vehicles such as: CDL, tractors, pick-ups, pilers, and sanders. Includes tips on dry runs and not hitting fixed objects. Pre-inspection and emergency preparedness are also incorporated into this program as well as techniques to preserve the vehicle from being damaged.	
DVD CRI	<i>Conflict Resolution- Industrial</i>
Whenever two or more people come together, eventually they will experience conflict. Give your employees the skills to work toward a solution in a productive, positive way. Techniques and strategies to limit the damage and disruption are discussed in this straightforward video as well as: Consequences of conflict and how it can disrupt the workplace, The common causes of workplace conflict and how to recognize them, Diffusing disagreements before they get out of hand, How collaboration can be a tool in resolving conflicts.	
DVD FAS	<i>First Aid Safety</i>
In most facilities, not a day goes by without some type of injury occurring. It can be as minor as a small cut or as serious as a chemical burn. But any injury can be painful and affect an employee's work performance - as well as their life off the job. This video demonstrates to employees that knowledge of basic first aid can often limit the severity of any type of injury, or even prevent a death. This video includes: Cuts and bleeding; Muscle pulls and sprains; Burns; Broken bones; Shock; Artificial respiration / CPR; and AEDs (Automated External Defibrillators).	

DVD ST	<i>Slips, Trips, And Falls: Updated</i>
Slips, trips, and falls account for more workplace injuries every year than any other type of accident. Teach your employees to recognize, prevent, and avoid potentially hazardous situations. This program covers: - Why slips, trips, and falls occur; fall physics - Common causes of accidents (wet and oily surfaces, ice, poor visibility, stairway, ladder, storage hazards); how to fall safely - Techniques to avoid slips, trips, and falls - The importance of safety shoes	

## New Publications

Location	Title
50 BP	<i>Back Protection: Defending Your Safety Zone</i>
This employee handbook is one of a series of fully-illustrated employee handbooks. It covers: Introduction; Back Basics; Stay in the Game; The Zone Defense; Get a Grip on Power; Lifting; Safety; Repetitive Stress; Get Flexible; Mechanical Advantage; Summary; Quiz .	
40 ASM	<i>Advanced Surveying and Mapping Technologies</i>
This report presents a study on emerging surveying and mapping technologies. While the study was open to the broad spectrum of emerging technologies at the time, particular focus was directed toward ground based laser scanning and airborne positioning and mapping systems. Field evaluations of different laser scanner systems, over a previously mapped project, details the advantages and limitations of the instruments and software, and highlights specific conditions most favorable to ground based laser scanning methods. Testing of airborne positioning and attitude determination using global navigation satellite system (GNSS) surveying combined with an inertial guidance system (INS) was shown to provide significant efficiencies for route surveying, particularly where ground control surveys are restricted due to terrain or environmental constraints.	
20 HCS	<i>Low Cost Treatments for Horizontal Curve Safety</i>
Designed to provide practical information on low-cost treatments that can be applied at horizontal curves to address identified or potential safety problems. It describes multiple treatments w/ examples; suggests when the treatment might be applicable; provides design features; information on the potential safety effectiveness and costs. The publication concludes with a description of maintenance activities that should be conducted to keep the treatments effective. FREE copies are also available from the Colorado LTAP library or from the FHWA Report center online. Download the PDF version at: <a href="http://safety.fhwa.dot.gov/roadway_dept/pubs/sa07002/index.htm">http://safety.fhwa.dot.gov/roadway_dept/pubs/sa07002/index.htm</a> .	



## Pilot Car Certification

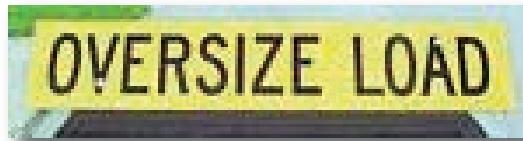
### Changes to Requirements

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#### Upcoming Training and Certification Testing

The RSA Network is the only company that has been approved by CDOT to offer the training and testing for pilot car certifications. This company has been in the industry for over 24 years. The RSA Network has committed to bring training to Colorado to meet the need of our local agencies. They will be providing about three classes per month throughout the state of Colorado. Their currently scheduled training dates and locations include:

- Montrose - January 15, 2009
- Denver - January 17, 2009
- Trinidad - January 19, 2009
- Grand Junction - February 14, 2009
- Denver - February 16, 2009



The cost for the training and testing is \$190 per person for early registration and around \$220 for last minute registrations. This certification is good for a four year period. After four years, the certification can be renewed online or through the mail. The registration fee also includes four manuals that participants get to keep for reference. The RSA Network tries to have classes scheduled three months out. If interested, please contact the RSA Network directly. Their contact information is phone: 801-838-8999, e-mail: sales@pilotcar.com, and website: www.uspilotcar.com.



## The Value of Training

### Earn an Above-Average Return on Investment

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#### WHERE CAN WE GET TRAINING HELP?

There are a number of sources of help for snow and ice training. They include:

- State / highway agencies in the area
- Local Technical Assistance Programs (LTAPs Nationwide)
- Trade Organizations (Associations of municipal officials, American Public Works Association (APWA), Colorado Association of Road Supervisors & Engineers (CARSE), Colorado Association for Road Maintenance (CARMA), etc.)
- Vendors & Consultants
- Salt Institute web site and others
- Federal Highway Administration (AASHTO Eastern Snow EXPO)

#### WHERE CAN WE SECURE FUNDING FOR TRAINING?

There are a number of possibilities for funding. They include:

- LTAP training grants (Flagger, Roads Scholar & Supervisory Skills programs)
- State Labor Departments (grants for safety training)
- Municipal Insurance Cooperatives

(risk managements grants)

- Environmental Councils (grants for environmental awareness training)
- Watershed Districts (grants for environmental awareness training)
- Federal Highway Administration

Providing employees the opportunity for training largely depends on an agency's commitment and resources. The lack of a large training budget should not diminish an agency's ability to provide effective training. Even some of the 1-on-1 training forums listed above, can be utilized with little budget impact. **All it takes is the commitment to make it happen.**

The *Salt Institute* offers a free quarterly electronic *Salt and Highway Deicing* newsletter. It helps you make better decisions in your winter maintenance responsibilities and provides even more information by active links to [www.saltinstitute.org](http://www.saltinstitute.org). If you'd like this newsletter or other salt-related information delivered automatically via a newsreader, you can subscribe to their *Salt Institute NewsCentral* service or add any of their feeds to your newsreader at: [http://www.saltinstitute.org/rss/use\\_own\\_newsreader.html](http://www.saltinstitute.org/rss/use_own_newsreader.html).



#### PILOT ESCORT DRIVER PREREQUISITES

Pilot escort driver applicants must meet the following criteria in order to attend a certification program.

1. Must be at least 18 years old.
2. Must have a current driver's license for the state in which the applicant lives.
3. Must have a valid certificate of insurance or endorsement that shows "that the operator, or operator's employer, has in full force and effect not less than \$1,000,000 combined single limit coverage for bodily injury and/or property damage...".
4. Must provide a current Motor Vehicle Record for the state in which the applicant resides for the previous five years.

Applicants must *not* have any conviction of drug or alcohol related offenses and a single moving penalty deducting six points from their license.

From the Colorado Department of Transportation's *Rules and Regulations of the Colorado Department of Transportation Pertaining to Transport Permits for the Movement of Extra-Legal Vehicles or Loads 2C.C.R. 601*.

# Ideas That Work

## Saving Your Agency Time & Money

### Flexible Bridge Object Markers Buffalo County, Nebraska

#### 2008 You Show Us Contest Regional Winner

##### Problem Statement:

Inability to keep object markers (OM-3) up at bridge sites.

##### Discussion of Solution:

By use of this new object marker post spring-loaded holder the problem has basically been eliminated. It has been in use for about a year now and has worked great.

##### Labor, Equipment, and Materials Used:

Labor: 45 min. per unit;

Equipment, used: welder, drill press & band saw

Materials used: 2" sign post anchor; 1-3/4" slide in sign post; (1) adjustable spring; (1) 1-1/2" flat bar for pivot; misc. bolts.

##### Total Cost:

\$32.00 per unit

##### Savings and Benefits:

The agency has experienced significant fuel & labor savings by not having to revisit the same bridges week after week. In this area farm equipment is always getting bigger and the ability for them to safely cross the bridges without having to weave around our markers is a benefit for everyone. Note: Could be used for narrow bridge situations. Placement should be considered.

##### For more info contact:

Mike Mitchell  
Buffalo County  
9730 Antelope Ave  
Kearney, NE 68847



## Upcoming Events

### Upcoming Training

NOTE: Please contact the Colorado LTAP office for an updated schedule, or check online at <http://ltap.colorado.edu>.

#### Road Scholar Core Classes

##### Signing, Pavement Markings, MUTCD

January 27, 2009 - Frisco  
January 29, 2009 - Durango  
February 3, 2009 - Greeley  
February 5, 2009 - Colorado Springs

##### Roadway Safety & Temp Traffic Control

Grand Junction  
Denver  
Fort Morgan  
Pueblo

#### Road Scholar Electives

##### Introductory Math for Road Workers

February 23, 2009 - Glenwood Spgs  
March 2, 2009 - Colorado Springs  
March 11, 2009 - Loveland

##### Advanced Math for Roadway Workers

February 24, 2009 - Glenwood Spgs  
March 3, 2009 - Colorado Springs  
March 12, 2009 - Loveland

##### Work Zone Construction Safety

1.5 days  
March 24-25, 2009 - Denver  
March 26-27, 2009 - Grand Junction

##### Culvert Installation & Maintenance

Fort Morgan  
Colorado Springs  
Montrose

##### Road Materials: Soils Gravel

Thornton  
Pueblo  
Grand Junction

##### Heavy Equipment Training

Northeast Colorado

Remember!

You can register *online* at:  
<http://ltap.colorado.edu>

#### Supervisory Skills Classes

##### Ethics for New Supervisors

January 22, 2008 - Lakewood

##### Written Communications

January 23, 2008 - Lakewood

##### Who's Coming Thru Door Today?

##### Dealing with People

Grand Junction

##### Verbal Communications

Grand Junction

##### Developing the Leader Within

Englewood

### Workshops

##### Free Flagger Certification

April 23, 2009 - Fort Morgan  
April 24, 2009 - Fort Collins  
April 27, 2009 - Frisco  
April 29, 2009 - Grand Junction

### Conferences

##### Transportation Research Board (TRB) 88th Annual Conference

January 11 - 15, 2009  
Washington DC  
<http://gulliver.trb.org/meeting/2009/default.asp>

##### Rocky Mountain Asphalt Conference

February 18-20, 2009  
Crowne Plaza - DIA Denver  
[www.rmaces.org](http://www.rmaces.org)

##### CARMA - APWA Street Conference

April 15-17, 2009  
Grand Junction, CO  
Contact Colorado LTAP for more details.



#### FALL COLORADO SUPERVISORY SKILLS GRADUATES

##### City of Golden

*Mike Councilman*

##### Teller County

*A. Brad Shaw*

#### ROADS SCHOLAR GRADUATES

##### Arapahoe County

*Scott Shafer  
Daniel Sparks  
Robert Carver*

##### Clear Creek County

*Jason Allen  
Fred Nelson  
Jeff Rabus  
Jason Wiggins*

##### Douglas County

*John Lamb*

##### Rio Blanco County

*Stan Rasmussen*

##### San Miguel County

*Tony Gallob*

##### City of Arvada

*Terry Brown  
Bill Chambers  
Jerry Cole  
Ron Mann  
Rick Marino  
Dave Scrivner*

##### City of Boulder

*Richard Lackner  
Paul Lampe*

##### City of Brighton

*Jerry Earl*

##### City of Greeley

*Lalo Martinez  
John Blatter  
Socorro Garcia  
Bill Maag*

##### City of Montrose

*Aaron Jokisch  
Eric Smart*

##### City of Olathe

*Wayne Trounce*

##### City of Rifle

*Roland Klocker*

**ACROSS**

1 A severe winter storm condition characterized by low temperatures, strong winds, and heavy blowing snow.

5 Snow and ice control practice of applying liquid chemicals to prevent the formation of frost or the bonding of snow or ice to pavement; operations usually begin before or just as a storm hits.

8 A series of metal loops capable of providing improved traction on the roadway.

10 Popular term for a very thin coating of clear ice which forms on a pavement or bridge deck surface.

11 A flow of snow down a mountainside often causing road closures.

12 Winter weather removal equipment.

**DOWN**

2 Chemical or mechanical means to break the bond between the pavement and the snow and ice on its surface.

3 Range of pavement temperatures at which chemical will effectively melt ice.

4 Ensure that you can see clearly in poor weather conditions.

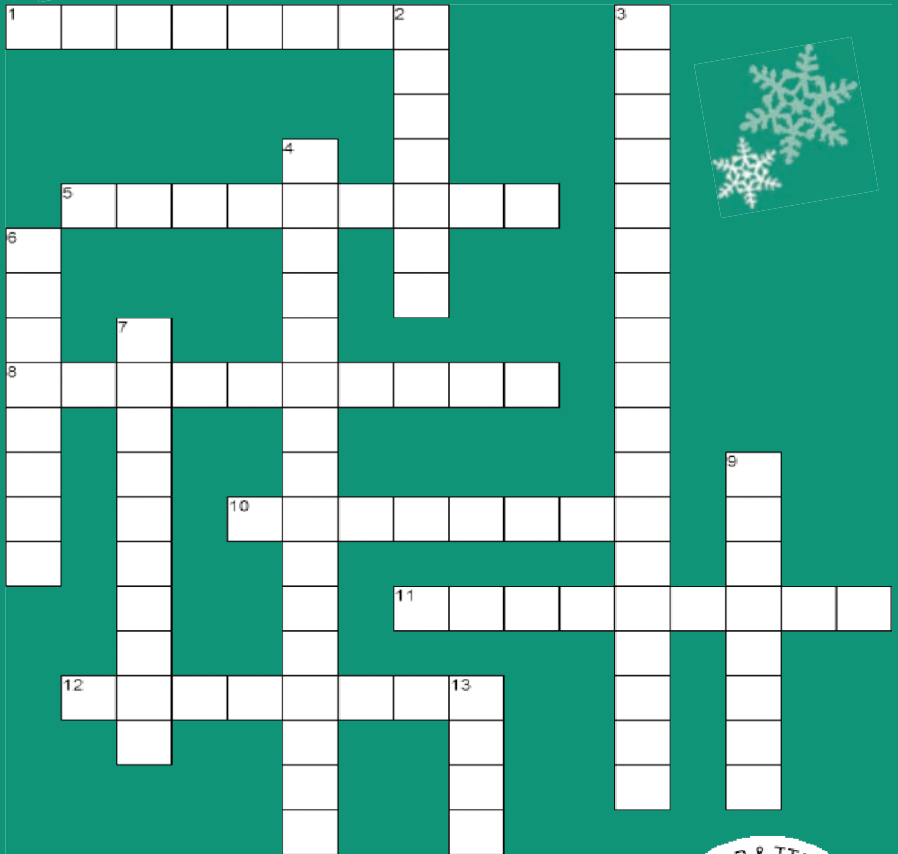
6 No matter how far you are driving or what the weather conditions, always wear your...

7 The addition of liquid agents to salt and sand. Helps the mixture stick to the road instead of blowing off to the shoulder.

9 There may be loss of this during icy slippery conditions.

13 Do this to your vehicle after snow storms to remove any material or liquid chemical buildup.

# Winter Maintenance



www.CrosswordWeaver.com



The completed puzzle can be found on our website at: <http://ltap.colorado.edu>



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