



MINUTES

Clear Roads 2007 Technical Advisory Committee Summer Meeting:

Pooled Fund Project #TPF-5(092) - Test and Evaluation of Materials, Equipment and Methods for Winter Highway Maintenance

Tuesday and Wednesday, July 31 and August 1, 2007
Edgewater Hotel, Madison, WI

Attendees:

Adam Padilla, Colorado DOT	Mike Lashmet, New York DOT	Leland Smithson, AASHTO
Dennis Burkheimer, Iowa DOT	Diana Clonch, Ohio DOT	Bob Blackburn, Blackburn & Assoc.
Shane Larson, Illinois DOT	Lynn Bernhard, Utah DOT	Ed Fleege, Blackburn & Assoc.
Dennis Belter, Indiana DOT	Allen Williams, Virginia DOT	Kim Linsenmayer, CTC & Assoc.
Paul Brown, Massachusetts DOT	Mike Sproul, Wisconsin DOT	Colleen Bos, CTC & Assoc.
Tim Croze, Michigan DOT	Cliff Spoonemore, Wyoming DOT	Tom Martinelli, CTC & Assoc.
Linda Taylor, Minnesota DOT	Rudy Persaud, FHWA – D.C.	
Tim Jackson, Missouri DOT	Steve Martinelli, WisDOT	

Materials Distributed:

- Agenda
- Clear Roads budget
- Clear Roads administration contract discussion paper
- Effectiveness of anti-icing strategies talking points
- Winter Safety Campaign driver behavior messages
- Winter Safety Campaign sample marketing materials
- Winter Safety Campaign materials presentation
- Scan Proposal Form for Joint AASHTO/FHWA International Technology Scanning Program
- Winter Maintenance Peer Exchange attendee list
- Winter Maintenance Peer Exchange roles list
- Winter Maintenance Peer Exchange ideas/challenges list
- Winter Maintenance Peer Exchange draft agenda
- Winter Maintenance Peer Exchange attendee map
- Product Evaluation Survey responses for winter 2006-07
- Calibration Accuracy of Manual and Ground-Speed-Controlled Salters presentation
- Multiple Blade Plow presentation
- PNS pooled funds research proposal
- US DOT flyer on Nationwide Differential Global Positioning Systems
- Winter maintenance pooled funds flyer

Tuesday, July 31st

Welcome and Meeting Objectives

Chairperson Dennis Belter kicked off the day and with introductions of all attendees and a review of objectives:

- review proposal scores and select a vendor
- hear updates on research projects underway
- plan for future research and marketing efforts
- share state experiences

Three new members joined Clear Roads and were attending this meeting for the first time: Mike Lashmet from New York, Paul Brown from Massachusetts and Allen Williams from Virginia.

Kim Linsenmayer let folks know that Colleen Bos will be taking over as the main administrative contact with CTC for Clear Roads.

Scoring Results and Discussion:

Steve Martinelli from Wisconsin DOT Purchasing joined us for this portion of the meeting. Prior to this meeting, each TAC member had received, reviewed and tentatively scored four proposals in response to the two Clear Roads RFPs issued this spring. Steve led a discussion of the scores, giving TAC members an opportunity to adjust their scores if desired.

RFP 262060: Development of Standardized Test Procedures for Carbide Insert Snowplow Blade Wear

- Braun Intertec Corporation was the only proposer.
- Everyone agreed that the proposal met the requirements. Braun Intertec will be awarded the contract.

Project Champion: Lynn Bernhard

Subcommittee: Tim Croze, Tim Jackson and Brad Osborne (Iowa DOT)

This subcommittee will need to determine the following:

- What the vendor needs are for testing once the contract has been awarded.
- Which states are going to have the testing done.

RFP 262059: Development of Standardized Test Procedures for Evaluating Deicing Chemicals

- Montana State, Braun Intertec and Michigan Tech submitted proposals for this project.
- Montana State received the highest scores and will be awarded the contract.

Project Champion: Shane Larson

Subcommittee: Dennis Burkheimer, Cliff Spoonemore, Dennis Belter, Lee Smithson and Linda Taylor will serve on the subcommittee.

>>Action Items

- *Steve Martinelli:* Award the contract for RFP 262060 to Braun Intertec and RFP 262059 to Montana State.
- *CTC & Associates LLC:* Work with project champions, investigators and Steve Martinelli to complete the contracting process.
- *Shane Larson:* Work with CTC, subcommittee and investigator to get project going once awarded.
- *Lynn Bernhard:* Work with CTC, subcommittee and investigator to clarify outstanding issues and get contract signed.

Budget

Kim Linsenmayer provided an overview of the Clear Roads budget, including amounts committed and obligated, amounts contracted, and estimated planned expenses. Thanks to the addition of new members in 2007, there is much more money than expected available in the budget. Kim noted that as Clear Roads grows (14 members now) the costs of meetings are rising. Clear Roads will need to set aside more money for travel for these meetings.

There were a couple of corrections to the budget.

- Utah had sent a check for their obligation for 2007, so that needs to be bolded on the Budget Overview.
- Under the expenses incurred Marketing for 2006 was listed twice. The second one should be corrected to 2007.

>>Action Items

- *CTC & Associations*: Correct budget as noted.

Web site

Kim Linsenmayer showed the group the redesigned Clear Roads Web site, which is still available at www.clearroads.org.

- New look
- Navigation changes: Addition of winter maintenance e-news and product evaluation results, separation of research and partnership projects.
- Winter Safety Campaign materials will be available through a link on the navigation bar.
- New members only section for sensitive and draft materials. Contact Colleen Bos (colleen.bos@ctcandassociates.com) if you need the user name and password.

Linda Taylor suggested that each state could share information by posting it in the members only area of the Web site. For example, the members could post their salt contracts for review by the others. Ideally members would be able to update their own information.

Kim let the group know that the Web site, including its code and content, belong to Clear Roads. The files can be transferred to another host easily if necessary in the future.

The TAC discussed whether or not Clear Roads should/could be trademarked. Mike Sproul indicated that he had some experience and could look into this.

The group noted that Clear Roads may need a subcommittee to help guide CTC on content for the Web site in the future.

>>Action Items

- *CTC & Associations*:
 - Check on the potential to allow states to edit content on the members only section of the site.
 - Add bookmarks on the Links/Resources page to jump down to sections within the page.
 - Look at page/site counts after sending announcements about the site to the listserv.
 - Post Clear Roads logo and letterhead template on the Web site in the Members Only section.
- *Mike Sproul*: Check on trade marking Clear Roads.
- *TAC members*: Send Kim the names and e-mail addresses of anyone else you think should be notified of the winter maintenance e-news (who may not already subscribe to the snow and ice listserv).

Administration and Marketing Contract and Activities

Dennis Burkheimer led a discussion on the growth of Clear Roads and what level of service it wants CTC & Associates to provide as it grows.

Current contract covers baseline activities, such as:

- Meeting planning (all details to carry out two face-to-face meetings and several conference calls)
- Research Support (problem statement coordination, RFP development, contracting, invoices etc)
- Marketing (website and recruitment support)
- Administration (maintaining budget and membership details; TAC communications)

When the group was smaller, the budget supported the baseline as well as some additional tasks initiated by CTC, such as the e-newsletter. As the group grows, more of the budget will be consumed with the baseline tasks and the extra tasks will not be possible within the budget.

After some discussion, CTC left the room so that the group could candidly discuss their thoughts.

The group decided to increase the annual amount allocated for CTC's work in the contract to cover the additional support activities. CTC will submit a proposal for these activities, along with estimated costs, for review by the TAC. Mike Sproul will work with WisDOT Purchasing to amend the contract in the amount decided by the TAC. Below are the additional activities that the group would like to consider including in CTC's annual contract obligations:

- The bimonthly Winter Maintenance E-News.
- A new Clear Roads Brochure.
- At least one magazine article per year.
- Annual summary of winter maintenance research available on the TRB papers CD.
- Two page briefs of completed Clear Roads research projects.

In addition, the group decided to have CTC support TAC efforts by writing reports of progress on projects handled internally by the TAC. Since this would also require additional funding, and the TAC is unsure of how many projects like this will arise each year, the TAC asked CTC to submit proposals for the time and cost involved on a project-by-project basis.

The TAC identified two reports for CTC to begin work on this fall: winter safety campaign activities report and concept vehicle activities report. CTC will work with Dennis Burkheimer to clarify what's needed in these reports and then will submit an estimate of costs, including the hourly rate, for the TAC to consider. Mike Sproul will work with WisDOT Purchasing to amend the contract.

>>Action Items

- *CTC & Associations:* Develop estimates for the additional activities and report writing.
- *Dennis Burkheimer:* Follow up with CTC on needs for the report writing.
- *Mike Sproul:* Follow up on Wisconsin DOT contractual considerations

Product Evaluation Surveys

Kim Linsenmayer shared the results of Product Evaluation Survey posted on the Clear Roads Web site.

There was discussion about whether or not to distribute the information beyond the Web site. The group decided to keep the results on the Web site, along with the disclaimers that the survey is not a scientific study but rather a means for capturing and sharing state experiences with winter maintenance products.

In addition, the group recommended the following changes to the survey for the upcoming winter season.

- Add a drop-down box for users to select from when entering the product name. Include the full product name and description in the list. This will help users who have trouble remembering the product name accurately.

- Add a Date/Season entry field for specifying when the product was purchased. This will help avoid confusion as we get more results.
- Add a verification page that can be printed out, since we seem to be missing some surveys that were submitted.
- See if it's possible to add a spell check feature on the comment fields.
- Consider adding a phone interview component of the survey to increase participation.

>>Action Items

- *CTC & Associations:* Follow up on the recommended changes to the Web site and survey format noted above and send a new version of the winter 07-08 survey evaluation form to the group for review.

Computer Based Training Update

Lee Smithson provided an update on the Computer Based Training project sponsored by AASHTO.

The revised CBT (version 2) was sent out in July and covers NCHRP reports 577 (environmental) and 526 (materials and methods). It provides training for operators and supervisors on materials and maintenance. The administrative package facilitates the automated tracking of an individual's training progress.

A letter was sent out with package requesting feedback on six questions. Since Clear Roads signed up to be technical advisors, folks should send feedback to Lee.

There is still money left for CBT development but Lee is expecting an upcoming solicitation of states for additional resources.

Right now the training modules are available at www.clearroadstraining.org. However, the group decided that it would be more appropriate for the files to be housed on the AASHTO Web site.

Two new CBT modules are being released this fall, Proper Plowing Techniques and Deicing. By early next year the remaining three modules (Mitigating Blowing Snow, Deicing Chemicals, and Snow and Ice Management) should be available.

Lee also presented on the Winter Maintenance Technical Service Program four-year plan and the FHWA Road map for 2007-2011. Lee indicated that some of the outputs from their initiatives should be rolled into the CBT.

Lee passed out the brochure that describes the three major winter maintenance research organizations (SICOP, Aurora and Clear Roads) and what they each do. He recommended that the Pacific Northwest Snowfighters be added to the brochure.

>>Action Items

- *Lee Smithson:*
 - Send the pooled fund brochure to Diana Conch and Adam Padilla so they can send it to folks in the PNS group to see if they want to be involved.
 - Look into moving the CBT files from clearroadstraining.org to the AASHTO SICOP site.
- *TAC Members:* Provide feedback to Lee on the six CBT questions and whether more print documents should be rolled into the CBT.

Effective Anti-icing Strategies Project Update

Linda Taylor presented follow-up information on the Effective Anti-icing Strategies project that she proposed in January. The project had received strong support but was not funded at that time due to the high cost. The group decided to pursue national support for the project from FHWA and NCHRP.

There are two parts to the project: an update to the anti-icing manual and field testing on anti-icing practices. The project under discussion is the manual update.

As a result of the January meeting, Linda updated the proposal and developed talking points for discussing the project with FHWA. Several TAC members provided feedback on the updated proposal. Tom Martinelli sent a letter to SICOP with the proposal asking them to take a leadership role in the project.

The committee discussed what Clear Roads' involvement should be going forward. The group decided that Clear Roads should focus on completing the literature search and best practices identification tasks for the project and that ideally a partner would take on the next steps.

There was a motion to fund the proposed approach for \$40,000 and put out an RFP. However it was determined that the TAC needed additional discussion on whether or not to change the process of submitting and approving projects at the January meeting.

The TAC decided to hold off on considering this proposal for funding until January in order to determine SICOP's commitment to the project. The group will let SICOP know of Clear Roads' continued strong interest in partnering with them.

>>Action Items

- *Paul Brown*: Submit the proposal to Clear Roads for funding consideration in January.
- *Dennis Burkheimer and Mike Lashmet*: Bring up the proposal with SICOP at their next meeting.

PNS Deicing Project

Dennis Burkheimer provided an overview of a research being conducted through PNS that is very similar in objectives to some Clear Roads projects. He wanted to make sure the group was aware of PNS work on performance measures, which may be duplicative of Clear Roads efforts. It's important that Clear Roads coordinates activities with PNS.

>>Action Items

No action items.

Winter Safety Campaign

Dennis Burkheimer presented a status update on the driver's safety campaign for winter.

The TAC had selected "Ice and Snow... take it Slow" as the slogan, along with a companion logo, based on the numerous ideas provided by volunteer public information officers across the country.

The PIOs developed Driver Behavior Messages around four main themes: reduce speed, safe travel around snowplows, driving maneuvers, trip preparedness.

The PIOs also developed examples of materials to be distributed to the states for their own use. Dennis distributed the samples to the TAC, including a DVD with electronic versions of the materials and additional images, radio scripts, PSA audio files, videos, etc. These electronic materials will be available on the Clear Roads Web site.

The PIOs encourage the states to consider television PSAs as a valuable tool for the campaign in the future.

Opportunities for increasing campaign visibility:

- Providing sample packets at the National Winter Peer Exchange.
- Talking to APWA and other organizations.
- Mailing samples to the maintenance engineers in all 50 states.
- Holding a National Snow Plow Driver's Appreciation week or day (not currently planned).
- Send a letter encouraging the PIOs to use the logo and messages in media campaigns for winter safety. Include some partnering ideas and suggestions for how to use the materials. Set the expectation that we hope they will participate in follow-up activities.

Dennis shared how Iowa plans to roll out the campaign. The hope is that each TAC member will go back and do something similar.

There is \$10,000 left to spend on the next steps for this project.

Linda suggested that the group conduct a follow-up survey with TAC members to see how the slogan and materials were used and to evaluate their effectiveness. Any report on the winter safety campaign should include this follow up information.

>>Action Items

- *Dennis Burkheimer:*
 - Send the names of the volunteer PIOs to Colleen so that CTC can develop a thank you letter.
 - Work with Kim on defining the eventual report on this project.
- *TAC Members*
 - Work with their individual PIOs to roll out the materials.
 - Report back to the TAC on the results of the campaign.
- *CTC & Associates:*
 - Put Dennis' presentation on the Iowa rollout in the members only section or else email it out to everyone.
 - Work with Dennis on what should be included in a report documenting the process for creating and implementing the campaign materials.
 - Work on an article for magazines such as Public Works, Better Roads, AAA etc.
 - Draft a letter from Clear Roads to the PIOs and other state maintenance engineers encouraging them to use the logo and messages in media campaigns for winter safety.
 - Draft a thank you letter for PIO participants who have already been involved.

Winter Maintenance Peer Exchange Update

The Winter Maintenance Peer Exchange will be held at the end of August in Columbus, OH, in conjunction with the Eastern Snow Expo. Dennis Burkheimer reviewed the agenda with the TAC. Currently, there are 31 states committed to attend.

Dennis Belter will be making a presentation about Clear Roads at the peer exchange. The group decided it would be helpful to distribute a summary of past and present Clear Roads projects at the meeting.

>>Action Items

- *CTC & Associates:*
 - Prepare a PowerPoint for Dennis Belter to present at this event.
 - Prepare a summary of the current and past Clear Roads projects and send it to Diana. Dennis Burkheimer will e-mail a sample format to use.
- *Dennis Burkheimer:* Send a sample of what he wants for the format of the summary noted above.

Wednesday, August 1st

Calibration Accuracy of Manual and Ground-Speed-Controlled Salters

Bob Blackburn and Ed Fleege of Blackburn and Associates provided an update on this project, which started in October 2005. This two-year project is nearing completion.

Blackburn and Associates reviewed the project activities and analysis conducted to date. Goals for this project included:

1. Documenting the accuracy of calibrated ground-speed-controller units
2. Investigating the performance of these units compared to calibrated manual spreader controls
3. Determining if ground-speed controllers accurately discharge materials and if they provide material savings compared to manual units.
4. Providing state and local agencies with the ability to determine the calibration accuracy of ground-speed materials spreaders.

Blackburn's team drew the following preliminary conclusions, which will be outlined in detail in the final report.

- Most state DOTs are currently using ground-speed-controllers.
- Most ground-speed controllers in use are closed-loop systems.
- Number of manual controllers in service is much smaller than the number of ground-speed controllers in use.
- Calibration techniques most commonly used by state DOT agencies are those recommended by manufacturers.
- Calibration techniques used for amount of liquid dispensed by ground-speed controllers are marginal, at best.
- Only about 6% of state DOT agencies are exclusively using manual controllers.
- Theoretical discharge estimates proved highly useful in assessing the discharge capability of spreader/controller combinations.
- Performance of most controllers appears to be satisfactory.
- Variations in the performance of spreader/controller systems were noted in simulation testing.
- Controller capability is limited by the capacity of the truck-spreader system.
- Greater discharge variation was noted with open-loop than with closed-loop modes of operations.
- Considerable material usage savings can be achieved with closed-loop operations compared to manual mode of operations.
- Greater material savings between closed-loop and manual modes of operations were noted for highway scenario than for freeway scenario.

Deliverables for this project will include recommended calibration procedures. The project will be completed this fall.

The TAC had a follow-up discussion of how much to publicize the report when complete. It will definitely get sent out to DOT's, the Listserv and posted on the Web site. However, the group did not envision presenting it at conferences.

>>Action Items

CTC & Associates LLC: Post Blackburn's presentation on the members only section of the Clear Roads Web site.

Determining Effectiveness of Deicing Materials and Procedures

Ed Fleege presented an impromptu update on this project. He is working with Curt in Minnesota on establishing the sensors and data. The project was delayed this winter due to challenges with the equipment but should progress well this winter season.

>>Action Items

Linda Taylor: Set up a meeting with Ed to determine next steps on the project.

AASHTO Scan Tour Program

Linda Taylor presented an opportunity for Clear Roads to submit a proposal for consideration to the AASHTO Scan Tour Program for 2009. She had developed and submitted a proposal last year based on feedback from an International Winter Maintenance conference. The proposal was declined for 2008, but there was some feedback to suggest that the proposal would receive serious consideration for 2009.

September 28th, 2007 is the deadline for submission of the new proposal.

Rudy shared information on future federal focus on GPS and the Vehicle Infrastructure Implementation program. The VII system will be rolling out in 2011 if all goes well. This may be an area of consideration for the next proposal.

There will be opportunities at the Peer Exchange to review the proposal with the other major groups and to see if anyone wants to partner on this project. Partnerships are likely to improve the chances of getting the proposal accepted. In addition, the group agreed to better focus and narrow the goals outlined in the proposal.

>>Action Items

- *Dennis Burkheimer*: Make sure this topic is on the agenda for the next Aurora meeting so that the partnering idea is presented to them.
- *Paul Brown, Diana Conch and Linda Taylor*: Form a work group to move forward on revising the proposal to submit. Send it out to the group to review prior to the September 28th deadline.

Snowplow Design Project Update

Dennis Burkheimer presented an update on this project.

In Iowa, they have built three versions of the basic three-blade concept: carbide, scarifier and squeegee blades. They plan to build four more for 2007-08, and one of them will be an underbody plow system. Dennis plans to send out an RFI or RFP to vendors to see who might be willing to build concept plows for testing in five states (Ohio, Michigan, Iowa, Indiana, Wisconsin).

>>Action Items

- *CTC & Associates*: Contact Dennis Burkheimer to discuss what type of report of project activities is appropriate at this stage.

Wrap Up and Next Steps

There were a number of items to resolve at the end of the meeting:

1. The group reviewed the two Proposal Evaluation reports that Wisconsin DOT needed to have the group sign before awarding the contract. There were no concerns with either one, and the TAC members signed the reports.
2. Dennis Burkheimer and Tom Martinelli were honored for their exceptional contributions to Clear Roads since it began.
3. The group discussed where to hold the January meeting and how long to schedule it for:
 - Suggestion to have a couple hours or perhaps a half a day to visit the facilities in the host state, since it's a great opportunity for sharing practices.
 - Allen Williams talked about the fantastic test facility they have in Virginia. There are conference facilities available and plenty of hotels in Roanoke. Vans and a Smart Road Bus are available for shuttle service.
 - Lee Smithson mentioned the idea of planning one of the future Clear Roads meetings in conjunction with a SICOP meeting.

- Additionally, Denver, Salt Lake, Indianapolis, Peoria, St. George (UT), Cheyenne, and Jackson Hole (WY) came up as potential meeting locations.

No consensus was reached on where to meet, other than there seemed to be a preference for the western states or Virginia. The group agreed to follow up on this discussion via email to finalize place and dates.

>>Action Items

- *CTC & Associates*: Send a follow-up email on dates and locations, including estimated costs for the cities under consideration.