

DRAFT Minutes

AASHTO Winter Maintenance Technical Service Program (WMTSP) Committee Meeting

July 18, 2009

Skipjack Room #362, Loews Annapolis Hotel, Annapolis, Maryland

Attendees

Rick Nelson, NV DOT, AASHTO Region 4, Chair of WMTSP

John Burkhardt, IN DOT, TRB Winter Maintenance Committee Chair

Mark DeVries, McHenry County, Illinois, Maintenance Superintendent, APWA representative

Bill Hoffman, NV DOT, AASHTO HSCOM Snow & Ice Task Force Leader

Wilfrid Nixon, U of Iowa, TRB Surface Transportation Weather Committee Chair

Greg Parker, Johnson County, Iowa, County Engineer, NACE representative

Paul Pisano, FHWA, Road Weather Management Program, Team Leader

Lee Smithson, AASHTO SICOP Coordinator

Introductions

Chairman Rick Nelson opened the meeting with a review of the agenda. No additional items were added or none were deleted.

Looking to the Future

- Bill Hoffman reviewed the outcomes from an NCHRP 20-07(268) Project entitled "AASHTO Highway Subcommittee on Maintenance Strategic Plan" held on June 8th and 9th, 2009 in the Washington DC offices of the National Academies. The SCOM current strategic plan was adopted in 2001 in coordination with its parent committee, the Standing Committee on Highways (SCOH). SCOH, in turn, was updating its strategic plan to bring it into alignment with the recently adopted AASHTO Strategic Plan. SCOH identified 10 of the 22 AASHTO strategic plan objectives as being particularly relevant for SCOH's adoption. SCOM could include some or all of the 10, it could include other items from the AASHTO plan, or it could select additional goals or initiatives from outside of either the SCOH or AASHTO plan as relevant to its intended purposes. The workshop developed a draft strategic plan for the entire SCOM committee to consider at the meeting this coming week. Bill handed out the draft "SCOM Organizational and Functional Matrix" and explained the five Technical Working Groups and the four Strategic Focus Areas. This matrix appears as attachment #1 to these minutes. He explained how "Snow and Ice" fits into the "Highway Safety and Reliability" Technical Working Group.

- Bill next reviewed the “Best Practices in Winter Maintenance 2009 Domestic Scan” that was conducted in April 2009. Five states, Colorado, Indiana, Minnesota, Utah, and Virginia, three cities, Denver, Ft. Collins, Grand Junction and the E-470 Toll Road Authority were visited. The objective of the Scanning Tour was to seek out and study the progress that State and local highway agencies were making in advancing the latest technology in the area of winter roadway maintenance. Ironically the scanning team got caught on the road during a major winter ice storm in Colorado when even the best practices were not sufficient to overcome the challenges. Bill discussed how these incidences tend to discourage those that aren’t totally sold on using pro-active measures. WMTSP discussed that forecasts will not be 100% accurate, the benefit of using more than one VAMS, and the value an agency receives when they have a well trained maintenance staff to deal with a missed forecast by quickly linking all the elements together and coming up with an effective operations plan. Snow and ice control operations are the hub that keeps the transportation wheels turning, starting with selection of the most accurate road weather forecast, determining the appropriate response and working with all the other transportation disciplines, speaking their language and understanding how to be an effective part of that bigger system. Post storm reviews are an essential step in this learning process. The 2009 Scanning report is nearing completion and will be posted on the SICOP web site this summer. *ACTION ITEM—work on crafting a message that shows WMTSP recognizes the budget problems, the need to cut back, yet still be capable of doing what needs to be done by finding cheaper and sustainable ways, using best practices, optimized decision making and maintaining an environmental awareness.*
- Rick discussed focus areas of the PIARC Technical Committee B.5, “Winter Service”. He is the working group leader for Issue: B.5.1, Improve winter maintenance and operation information. The selected strategies the committee will be addressing in 2010-2011 will be taking a critical, high level look at the flow of data and information between the source and user from a systems perspective and considering the process of winter service management including a look at the electronic systems that assist the management process. The B.5 Technical Committee is focusing on outcome based work involving multi-discipline agencies and sustainable winter services, both are consistent with many aspects of the US DOT Road Weather Management Program. WMTSP is in a unique position with representation from FHWA, state and local agencies, NACE, APWA, and other research consortiums and has experience from international and domestic winter maintenance scanning tours, to catch hold of what’s going on, what’s needed to improve efficiency and effectiveness of winter operations. Further WMTSP has demonstrated it knows how to achieve technology transfer and get others to take ownership and implement new ideas and ways of doing business. WMTSP focus for the future needs to build on and promote successes we see being accomplished by our international and domestic partners such as MN DOT best practices in market research, IA DOT using automatic vehicle counts and speed monitoring in performance measuring, CO DOT windshield photos to determine LOS, and the vision of the ITS to describe the big picture and wire it together.

Outreach & Discussion of Other Agency Winter Maintenance Projects that involve WMTSP members

- Paul Pisano distributed “FHWA Road Weather Management Program Roadmap—FY 2007-2011” and spent considerable time discussing its content. What happens in the new reauthorization will determine what gets accomplished and how soon. He also handed out and discussed “USDOT Road Weather Management Program Update, July 2009” which appears as attachment #2 of the minutes. He also summarized the July 2009 report “Concept of Operations and Implementation Options for MDSS/MMS Data Exchange”, attachment #3 to these minutes.
- Bill Hoffman provided an update on the Aurora program (see attachment #4 to the minutes). Bill is the new chairman of the Aurora program. Next Aurora meeting is September 29-30, 2009 in Des Moines, Iowa.
- Lee Smithson provided an update on the Clear Roads program (see attachment #5 to the minutes). Next Clear Roads meeting is July 29-30, 2009 in Madison, Wisconsin.
- John Burkhardt, Chair of TRB Winter Maintenance Committee and Wilf Nixon, Chair of TRB Surface Transportation Weather Committee discussed the role of their TRB Standing Committees in identifying research gaps, writing research problem statements and partnering with other TRB and AASHTO Committees and state DOTs to gain support for NCHRP funding to carry out the research. Both committees are writing articles for the November-December 2009 TR News which will totally focus on winter maintenance operations. The Surface Transportation Weather Committee is working with the Office of the Federal Coordinator for Meteorology (OFCM) to organize a national weather seminar in 2010.
- Mark DeVries discussed the highlights of the APWA Snow Conference April 27-29, 2009 held in Des Moines, Iowa. Attendance was excellent with a record amount of new vendors. Evaluation sheets showed attendees felt the technical program was excellent. APWA Winter Maintenance Committee which Mark chairs is now doing the planning for the April 2010 Snow Conference which will be held in Omaha, Nebraska. APWA now has numerous certification programs in place and a Certification Committee is working on expanding their offerings. McHenry County, Illinois (where Mark is superintendent) is requiring any person applying chemicals to be certified to work in McHenry County. Training material for certification includes best practices they have learned from others. APWA is offering click-listen-and learn training on winter chemicals. APWA is offering all AASHTO CBTs for sale in the APWA bookstore.
- Greg Parker reported on NACE activities. NACE made all the AASHTO CBTs available to the LTAP distribution center so they could be provided to the local LTAP agencies. The counties are in need of performance measures and management training to show their Boards.
- Paul Pisano reported that seven abstracts prepared by WMTSP members had been accepted by PIARC. Papers had been subsequently written and translation is progressing. AASHTO, TRB and FHWA are designing a large booth for the PIARC meeting in Quebec City. Rick Nelson wrote an article on coordination and cooperation which was published in the April 2009 issue of Routes/Roads Magazine.

Project Review of SICOP Program

- Lee Smithson reported on the CBDT Revisions & Development project is moving along and that he had received excellent feedback from various state DOTs on the updated version of the

AI/RWIS CBT and the five CBTs on operations published in cooperation with Clear Roads. Several state DOTs requested the five CBTs be made accessible via internet. The contractor has developed a web based version and is testing it in Iowa and North Dakota. It is anticipated a new CBT will be development to incorporate the results of NCHRP 6-17 (see discussion later in the minutes).

- Paul Pisano reported on the ESS Guidelines Implementation/Evaluation project that the guidelines have been published. The Domestic Scanning Tour declared them successfully implemented. FHWA has given permission for AASHTO to publish the guidelines in hard copy and make them available through the bookstore if they feel the market justifies hard copy publication costs. The guidelines are already available on the SICOP website for anyone to print a copy. FHWA would like to have the guidelines kept on line even if AASHTO decides to print them in hard copy.
- Lee Smithson reported on the Promote Anti-drifting Measures With Proactive Road Design Considerations project that the SNOWMAN project had been successfully implemented in NYSDOT and that permission was currently being obtained to do a test and evaluation in Iowa this year. Lee has written a technical paper on the project and plans to present it orally and in a poster session at the PIARC Conference in Quebec City in February 2010.
- Mark DeVries reported on the Outreach to Local Government project that he has made presentations at local meetings and written several articles on winter maintenance and chemical usage which have appeared in transportation and public works magazines and the APWA Reporter. APWA published a brochure for children explaining public works and snow and ice control. He has also used the Salt Institute to make presentations to local agencies concerning salt availability and prices during the past year.
- Paul Pisano reported that little progress had been made on the “Communications Standards & Winter Maintenance “ project. A companion project is getting underway in Clear Roads (see attachment #5, CR08-01, “Development of Interface Specifications for Mobile Data Platforms on DOT Vehicles”. Paul believes more progress will be forthcoming from the federal level as the ITS program moves ahead because of the many communication standards that will be involved.
- Paul Pisano had nothing new to report on the Integrated ITS Corridor project. WMTSP will need to review the technical papers that will be forthcoming at the PIARC conference in Quebec City for clues as to what might be underway internationally.
- Lee Smithson provided an Update on 2007-2009 National Snow & Ice Peer Exchanges & 14th Snow Expo. He reported that 31 state DOTs were currently registered for the August 25-26, 2009 National Peer Exchange. Despite the economic downturn, nearly all the booths had been sold for the August 27, 2009 Snow Expo. Project champions provided the following updates on projects assigned to WMTSP from the 2007 National Peer Exchange:
 - Wilfrid Nixon reported on Guidelines for A/I & Deicing RNS #1 that little progress is being made beyond what has been already published. Clear Roads has four projects underway and is having difficulties bringing them to conclusion. He feels there is considerable already in the training material found in the CBTs and believes we need to

let Clear Roads bring their current projects to conclusion and then evaluate if we are looking at the right elements and what might be missing.

- Bill Hoffman reported on the LOS Determination RNS #3 project. He feels progress with the I-80 Coalition in the next six months will provide some answers to help guide this project.
- Bill Hoffman reported on Communication Public/Legislators RNS #5 that he will be reviewing the successes MN DOT achieved and the processes they used. He also wants to evaluate the WA DOT system and how it was effectively used with the legislature and public. Utah also has an A through F system that is showing promise. More time will be needed.
- Lee Smithson reported that for the National Winter Test Facility RNS #13 that a committee had been established and several conference calls had been held to discuss the National Test Facility. However, each time the committee meets, the project scope continues to build into more ideas and possible approaches. The project will likely receive additional direction and support at the upcoming 2009 Peer Exchange.
- Bill Hoffman reported on the Consistent Descriptions/Road Conditions RNS #15 project. Although this has been a WMTSP project for several years, other national programs like 511 will have more visibility and influence than what can be exhibited in just the winter maintenance operations area. The I-80 Coalition previously reported in this section has the potential to create a trial balloon for the United States. Consistent descriptions and road condition reporting should be discussed at the PIARC conference in Quebec City to review possible support in Canada and perhaps even worldwide.
- Lee Smithson reported on Future National Peer Exchanges RNS #18 that the 2009 Peer Exchange Planning Committee was very pleased with the support shown so far for the upcoming August 2009 Peer Exchange. The feeling is that another exchange two to three years will be appropriate.
- Paul Pisano reported on the Boiler Plate Legal Language RNS #26 project that the first page found on the Clarus website is an excellent example of boiler plate language. Probably need to still have states look at liability issues for reporting weather information, but so far what was thought to possibly happen has not happened.

WMTSP Program

- Presentation of New Projects
 - NCHRP 6-17—Lee Smithson discussed the results of NCHRP 6-17 that have now been reported in NCHRP Web-Only Document 136, “Performance Measures for Snow and Ice Control Operations”. GanTek Multi-media has developed an outline for a proposed CBT. WMTSP reviewed the outline and felt it would make a good CBT and provides material that is not included in the existing CBTs. A resolution asking for a voluntary contribution of \$2,000 from each state DOT will be presented to the HSCOM Thursday business meeting. These funds will be pooled with other CBT funds to offset the costs of preparing the new CBT. An Expert Task Group will be assembled to review program

content and work with GanTek in building the CBT. Completed CBT will be distributed to state DOTs, APWA and NACE who have made contributions to the CBT pooled fund.

- 2009 Peer Exchange Projects—Lee Smithson discussed the anticipated process that the Peer Exchange will likely take in developing new projects and completing 2007 Peer Exchange Projects. 2007 Peer Exchange projects were discussed earlier in the afternoon by WMTSP and results recorded on the previous two pages of these minutes. It is anticipated that new projects developed at the 2009 will be ranked then consortiums will use some type of a prioritization process to watch over them, either by taking the lead and including them into their programs or working with other consortiums to insure action is being taken so no project is without a sponsor.
- Practice Ready Papers TRB E-C126—need to work with TRB to get the seven practice ready papers posted on Committee WIKI sites and SICOP web site. WMTSP also needs to decide how to get the completed works into practice.
- Evaluation of WMTSP Program
 - A proposed Four Year Program 2010-2013 for Winter Maintenance Technical Service Program was developed and can be found in attachment #6 of these minutes. This Four Year Program is consistent with the new mission and vision of the AASHTO Highway Subcommittee on Maintenance. The first bullet of the Four Year Program, “Develop and promote performance management & performance measurement” and the four bullet in that section “Investigate methods to determine how the cultural, environmental and economic aspects of sustainability should be incorporated into performance management and performance measurement” will be a challenge for WMTSP during this four year period. Since other countries in the world experienced environmental sustainability issues before they became a focus here in the US, WMTSP will need to closely monitor activities at the 2010 PIARC Congress and particularly the Work Group B.5.2 technical papers that pertain to these issues.
 - A SICOP 4 year Program was prepared for presentation at the HSCOM Thursday, July 23, 2009 Business Meeting.
- Budget considerations
 - Lee did not have exact amounts, but voluntary contributions to both the administrative and CBT accounts from the state DOTs have been keeping ahead of expenses.

Attachment #1

SCOM Organizational and Functional Matrix				
	Strategic Focus Areas			
Technical Working Groups (Communities of Interest)	Performance Management	Workforce Development	Environmental	Research
Pavement Bridge. Roadway/ Roadside Traffic Services Vegetation Safety Appurtenances Signs, Striping Drainage Lighting Equipment Highway Safety and Reliability Snow and Ice Emergency Response	Management Systems Contract Maintenance Performance Measures	Support maintenance academies Identify innovative training Identify best practices in successIO n planning Support AASHTO workforce development efforts	Identify carbon-reducing strategies, products, materials and processes Quantify energy/carbon savmgs Identify climate change mitigation strategies Pollution prevention	Identify and track re Implementation and findings Volunteer to be pane projects

Primary Activities of each Technical Working Group

Writing Guidelines and Standards, Updating Manuals, Identifying and Communicating Good Practices, Project/Program Delivery, Website maintenance, Newsletters, Basic Governance, Technical Service Group Coordination, Write Research Problem Statements

Attachment #6

Proposed Four Year Program (2010-2013)

Winter Maintenance Technical Service Program (WMTSP)

2010

Support the new mission and vision of the AASHTO Highway Subcommittee on Maintenance by providing to the winter maintenance workforce: 1) effective and efficient training programs and technology transfer processes; 2) exposure to the latest innovations in equipment, materials, and operational/managerial techniques, and; 3) best method practices, that will improve winter operations “...to preserve and maintain a healthy and reliable highway infrastructure that meets the performance expectations of its customers” by performing the following:

- **Develop and promote performance management & performance measurement**
 - Promote activities by related groups that support performance measurement
 - Develop a performance management computer based training course that will provide foundational education and implementation guidance
 - Evaluate material in the NCHRP 6-17 project, “Performance Measures for Snow and Ice Control Operations” for inclusion in a new CBT
 - Evaluate material in NCHRP Synthesis 389, “Performance-Based Contracting for Maintenance”, published in June 2009 for inclusion in a new CBT
 - Evaluate best method practices from the 2009 US Domestic Scan *Best Practices in Winter Maintenance* for inclusion into the CBT
 - Develop metrics to assess the effectiveness of the WMTSP in educating and promoting performance management in winter operations
 - Work with related groups to determine how the activities listed above improve the safety and reliability of the highway system
- **Promote comprehensive training and professional development** for winter maintenance personnel with Computer-Based Training Programs:
 - Anti-icing/Road Weather Information Systems Computer Based Training

- Monitor state and local government snow and ice control practices and research programs for material to update Anti-icing/RWIS Version 2 CBT that was distributed on July 9, 2007.
 - Evaluate completed NCHRP winter maintenance research projects for either updating the existing CBT or producing a separate CBT to achieve technology transfer.
 - Work with state DOTs on refining CBTs for use in an interactive computerized classroom.
 - Maintenance Operations Training (Five CBTs developed in collaboration with the Clear Roads Consortium).
 - Obtain user feedback on their successes and problems in implementing the “Equipment Maintenance”, “Proper Plowing Techniques”, “Deicing”, “Blowing Snow Mitigation”, and “Winter Maintenance Management” CBTs distributed in 2007 and 2008. Investigate ways to improve this method of training delivery to state and local governments.
 - Evaluate completed NCHRP winter maintenance research projects for either updating the existing CBTs or producing a separate CBT to achieve technology transfer.
 - Work with state DOTs on refining CBTs for use in an interactive computerized classroom.
 - Evaluate technical papers presented at TRB’s 88th Annual Meeting held January 11-15, 2009 and the 4th National Conference on Surface Transportation Weather and the 7th International Symposium on Snow Removal and Ice Control Technology held June 16-19, 2008, and also the 12th AASHTO-TRB Maintenance Management Conference held July 19-23, 2009 for material that should be used in future revisions of the above Computer Base Training modules or in developing new CBTs.
- **Promote technology transfer:**
 - Provide technical program development and logistical support for the 14th Eastern Snow Expo (August 26-27, 2009 in Madison, Wisconsin)
 - Recruit future host State DOTs
 - Arrange and contract for facilities
 - Assist with technical program development
 - Provide other assistance as required by the AASHTO, Program Director for Engineering
 - Provide continuing technology transfer and research support for the 2009 National Winter Maintenance Peer Exchange being held August 25-26, 2009 in Madison, Wisconsin.
 - Work with FHWA, TRB, Aurora, Clear Roads and Pacific Northwest Snowfighters in identifying research and technology gaps
 - Insure research needs and technology gaps are submitted to appropriate groups or agencies for action and assist with appropriate technology transfer methods
 - Assist with program development and contract support for lodging and meeting facilities.
 - Maintain the National Winter Maintenance Peer Exchange website in cooperation with the Western Transportation Institute and update Research Needs Spreadsheet and “Progress Scorecard” as needed.

- Provide logistical and technical program development support for the World Road Association (formerly PIARC) 13th Winter Road Congress, February 8-11, 2010, Quebec City. Present technical papers written by WMTSP members.
- Investigate the feasibility of developing a WIKI site for sharing of individual winter maintenance research efforts underway
- Evaluate NCHRP 6-17, *Performance Measures for Snow and Ice Control Operations*, NCHRP Synthesis 389 *Performance-Based Contracting for Maintenance*, and NCHRP 20-68A US Domestic Scan *Best Practices in Winter Maintenance* to identify best method practices for posting on the AASHTO Center for Excellence website.
- Assist the FHWA Road Weather Management Program (RWMP) with technology transfer, implementation, and performance measures for:
 - Clarus
 - Participate in the 7th Clarus Initiative Coordinating Committee meeting (September 14-15, 2009)
 - Monitor progress and performance in the Multi-state Regional Demonstrations and assist whenever possible and appropriate
 - Encourage development of multi-agency partnerships
 - Promote Clarus successes by writing and presenting technical papers at conferences and workshops
 - MDSS
 - Participate in the 11th MDSS Stakeholders Meeting (September 16-17, 2009)
 - Evaluate needs to assist FHWA to deepen the science and improve the performance of MDSS.
 - Liaison with the Pooled Fund MDSS group and AASHTO TIG
 - Promote the implementation of MDSS to state and local agencies.
 - Monitor performance of MDSS in state and local agencies where MDSS has been implemented
 - Promote MDSS successes by writing and presenting technical papers at conferences and workshops
 - MODSS
 - Participate in MODSS Stakeholders Meetings
 - Assist with identifying barriers or technology issues and how to overcome these shortfalls
 - Promote MODSS success by writing and presenting technical papers at conferences and workshops
- **Promote Winter Maintenance International and Domestic Best Method Practices Scan:**
 - Collaborate with SSOM to organize and evaluate best method practices for winter maintenance operations (operations, equipment, and material selection, storage, blending, performance, etc.) and IntelliDrive™ for potential sites to conduct international and domestic technology scans.
 - Develop Winter Maintenance Best Practices Speakers Bureau to make presentations at national, state and local winter conferences and snow rodeos
- **Promote research and development:**
 - Collaborate with Aurora and Clear Roads Consortiums, FHWA, APWA, NACE, PNS, LTAP, and TRB's Winter Maintenance Committee and the newly formed Surface

Transportation Weather Committee to shape the various research efforts to insure it meets the needs of the winter maintenance community.

- Collaborate with NOAA's Office of the Federal Coordinator for Meteorology (OFCM) and FHWA's Weather Team to explore partnering opportunities for the purpose of building synergy with weather products between transportation sectors.
- **Provide technical assistance** to:
 - State DOTs
 - Maintain contact with research consortiums, state DOT research programs, and TRB to stay current with research underway, proposed or identified in unfunded research problem statements associated with winter maintenance.
 - Assist in locating experienced operational problem solvers
 - SICOP List-serve
 - Archive message strings
 - Develop a Speaker Resource Bank
 - Local Agencies and LTAP
 - Assist by locating experts in their problem areas
 - Develop a Speaker Resource Bank
 - NCHRP
 - Provide technical assistance in maintaining best method practices on AASHTO Center for Excellence website following guidance in NCHRP 25-25(4)
 - Maintain a listing on the SICOP website of AVL and FAST users to keep the findings of NCHRP 20-07(200), *Synthesis of Vehicle Based Winter Maintenance Technologies* current.

2011-2013

- Promote implementation of performance management & performance measurement
 - Promote activities by related groups that support performance measurement
 - Deploy and encourage state and local agencies to use the AASHTO performance management computer based training course material developed in 2010
 - Develop metrics to assess the effectiveness of the WMTSP in educating and promoting performance management in winter operations
 - Work with related groups to determine how the activities listed above improve the safety and reliability of the highway system
- Promote comprehensive training and professional development for winter maintenance personnel:
 - Anti-icing/Road Weather Information Systems Computer Based Training
 - Update as required to educate winter maintenance personnel on new materials, methods and equipment
 - Evaluate completed NCHRP winter maintenance research for either updating existing CBTs or producing a separate CBT to achieve technology transfer
 - Winter Operations Computer Based Training

- Work with Aurora to assist them with technology transfer for completed RWIS research
 - Work with Clear Roads to assist them with technology transfer for operations training needs
 - Work with APWA on establishing equipment operator certification programs
 - Performance Management Computer Based Training (finish development and implementation)
 - Identify Unmet Maintenance Training Needs and Develop Appropriate Training Programs
- Promote technology transfer:
 - Provide support for Eastern Snow Expos
 - Promote technology transfer for practice ready papers from PIARC 2010, TRB, and other appropriate sources
 - Provide support for FHWA Road Weather Management Program
 - Assist the FHWA with technology transfer and implementation support for:
 - Clarus
 - MDSS
 - MODSS
- Provide technical assistance to:
 - State DOTs
 - Maintain SICOP website and List-Serve
 - Provide message archiving
 - Offer Speaker Bureau assistance
 - Local Agencies and LTAP
 - Maintain SICOP website and List-Serve
 - Provide message archiving
 - Offer Speaker Bureau assistance
 - NCHRP
 - Provide technical assistance in maintaining best method practices following the guidance from NCHRP 25-25(4)
 - Evaluate completed research and develop appropriate technology transfer methods
- Promote research and development:
 - Follow up on the progress being made on research needs and technology gaps identified in the 2007 National Winter Maintenance Peer Exchange Final Report, <http://www.wti.montana.edu/TechnologyTransfer/2007PeerExchange.aspx>. and other research needs or technology transfer needs identified in the 2009 Peer Exchange
 - Collaborate with Aurora and Clear Roads Consortiums, APWA, NACE, PNS, LTAP, and TRB's Winter Maintenance Committee and the Surface Transportation Weather Task Force to shape the research effort to insure it meets the winter maintenance community needs.
 - Participate with PIARC B-5 Winter Services Committee by coordinating U.S. participation in topics that overlap strategic agenda items for Clear Roads, Aurora, SICOP and other projects.
- Collaborate with SSOM to organize and conduct ITS and Winter Maintenance Domestic and International Technology Scans as deemed appropriate.

- Best method practices in selected state DOTs and local governments in US
- Best method practices in salt management and outsourcing in Canada and other countries in the World

DRAFT dated July 19, 2009