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**Transportation Association of Canada  
Soil and Materials Standing Committee**  
Sunday September 26, 2010  
Dalhousie University, Sexton Campus  
“B” Building Rooms B226 – B227

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**Welcome and introduction:**

The meeting began at 9:15 am. Mark Popik welcomed everybody, with introductions of all members present at the meeting. The SMSC roster was circulated for members to update information.

**Adoption of the Agenda**

Minor modifications to the agenda were suggested.

- Motion to approve minutes: Daryl Nixon
- Seconded by: Tim Smith
- All in favour.

**Approval of Meeting Minutes – Spring 2010**

Hugh Donovan went through the main points of the Spring 2010 meeting minutes. Some discussions were held on the effort moving forward with recruiting geotechnical experts to the standing committee.

- Motion to approve spring minutes: Brent Marjerison
- Seconded by: Lyle Treleaven
- All in favour

**Review of 2010 Fall conference**

- ❖ Development of New Technologies for Classification of Materials (Wednesday Afternoon. Session will be in the Nova Scotia Ballroom D, 2<sup>nd</sup> Floor, Marriott. Five presentations will be heard for this session. Hugh Donovan will chair this session.
- ❖ New Realities with Recycling Materials (Tuesday Morning). Session will be in Suite 303, Level 3, WTCC. Four presentations will be heard for this session. Daryl Nixon volunteered to chair this session.
- ❖ Lowering the Carbon Footprint of Concrete (Tuesday Afternoon). Session will be in Windsor Room 2, Main Floor, Prince George Hotel. Six presentations will be heard for this session. Sherry Sullivan volunteered to chair this session.
- ❖ Geotechnical Challenges in a Design-Built Environment Discussion Panel (Wednesday Morning). The Discussion Panel will be in the Halifax Ballroom A, 2<sup>nd</sup> Floor, Marriott. Expert panel for this session includes representative consultants from EBA, Stantec,

Golders, Thurber, and Qualitas (SNC). The session will be chaired by Daryl Nixon from EBA Engineering (Tetra Tech).

### **Planning for the Spring 2011 Meeting**

In general, committee members agree with the idea of continuing with a combined update session. As the update session in 2010 was held during the PSC meeting time, in the Spring 2011 the updates will Sunday afternoon, as part of the SMSC meeting. These updates will restrict the amount of time available for an information session.

Motion to continue with a joint update session for the two standing committee: Tim Smith

Seconded by: Lyle Treleaven

All in favour.

Executive will try to arrange for a presentation from the SHRP2 program. The presentation should focus on specific theme related to the standing committees. Ideas for presentations include:

- ❖ Self Consolidating Concrete (Sherry Sullivan and Keith Foster)
- ❖ Geotechnical topics to promote discussion (Daryl Nixon)
  - Techniques in Instrumentation of In-situ soils

### **Planning for the TAC 2011 Fall Conference**

TAC is soliciting sessions for the 2011 conference in Edmonton. The conference will be held September 11 – 14<sup>th</sup>, 2011. Topics for planned sessions for this conference include:

- ❖ Information session for the PADMG project;
- ❖ Advancements in Testing Procedures of Materials;
- ❖ Geosynthetics “Useful for Building on Past Successes” for Soil Treatment;
- ❖ Moisture Effects on Subgrade Soils;
- ❖ Frost heave mitigation alternatives;
- ❖ New alternatives in dust control;
- ❖ Impact of Climate Change on Transportation infrastructure materials;
- ❖ Risk Management in the geotechnical area.

### **Task Group and Council updates**

*Chief Engineers Council (Mark Popik/ Ahmed Shalaby)*

- ❖ CEC has recently experienced a fairly large turn-over in membership. The council has a commitment to improve communications with standing committees, as well as within their own council member agencies. The council as 17 projects currently underway, with another 11 projects under development.

*Education and Human Resource Development Council (Lynne Cowe Falls)*

- ❖ Knowledge Management Primer, the council's first pooled project has been delivered and in addition to the document (which is out to letter ballot) the consultant delivered a web tool for self-assessment of agency's status in KM. Promotion, marketing and distribution mechanisms are under discussion with the secretariat and Board.
- ❖ Presentation given to the council by Brendan Nugent (Austroads) on a marketing program in Australia/NZ to attract high school and university students into Road Engineering. "Use your powers for good". Tremendous results in website hits.
- ❖ TRAC program undergoing some renewal at AASHTO and a member of the council will sit on the Board of TRAC. Seat will be for a 2 year term and MTO will take the first seat.
- ❖ First round table discussion held at the Council on the topic of the 'Effects of Computer Access and Social Media on the Workplace'. Carl Clayton shared computer usage statistics for Stantec that indicated a huge increase in traffic to Google mail, facebook and other sites but there doesn't seem to be a decrease in productivity. Long discussion ensued.

*Environment Council (Al Widger)*

- ❖ An update of the Environment Council meeting was given to the standing committee.

*Asset Management Task Group (Al Cepes)*

- ❖ An update of the Asset Management Task Group was given to the standing committee.

*Climate Change Task Group (Tim Smith)*

- ❖ Presentation provided in Appendix A. The Task Group circulated a survey to be completed by committee members. Also, a request for reports/publications be forwarded to the Task Group members that discuss the economic impact of climate change.

**Committee Sponsored Projects**

*Road Network Performance Measures Guidelines (Brent Marjerison)*

- ❖ Will provide. Rural roads over 70 km/hr. Stantec is the consultant hired. 50 % draft by December 17, 2010.

*Canadian Adaptation MEPDG Guide (Guy Tremblay)*

- ❖ Discussed draft report on the Traffic Calibration study. MEPDG User group will allow all users of the program, including Consultants.

*Pavement Assets Design & Management Guide (Marta Juhasz)*

- ❖ The guide will have 15 chapters, with many of the chapters already reviewed. All Chapters are to be submitted in draft by the end of the year, with a full draft expected by April 2011.

*Recycling Materials and Processes (James Hoyt)*

- ❖ As mentioned in a recent article of TAC news, TAC is undertaking the development of a best practices guide for the use of recycled materials in road building projects. The guide will assist agencies in determining what type of recycled materials is available and their potential use in road construction projects. A project steering committee is currently being formed and work on the terms of reference, which is expected shortly. Sponsors include New Brunswick, Nova Scotia, Ontario, PEI, Quebec, Saskatchewan, Edmonton, Montreal, Saskatoon, and Winnipeg. Total funding for this project is ~\$83, 500. James Hoyt will be the Standing committee representative for this project.

*Green Guide for Roads (Sandy Brown)*

- ❖ Working on terms of reference. Ready by early October, issued to be mid-October. Consultant to be selected by mid-January, with first meeting at the TAC Spring meetings. \$157,000 was raised from 22 contributors. Estimate completion on May 2012.

*Perma-Frost Guide (Said Kass)*

- ❖ Completed by EBA, and Laval University. Discussions were held by the steering committee about holding workshops on Perma-frost issues.

**Working group updates**

*Recycling Materials and Processes (Mark Popik)*

- ❖ Update for sponsored project already provided earlier. Nothing further to report at this time.

*Material Durability (Lynne Cowe Falls)*

- ❖ Nothing new to report. Requested everyone to review the workshop minutes to see if there are any suggestions to move forward with a potential sponsored project. Further discussion expected for the Spring Meeting.

*Alternative Pavements/ Warm Asphalt (Sandy Brown)*

- ❖ Continues to evolve, with changes to the industry. Recent RFP (FHWA/Asphalt Institute NCHRP 498) investigating long-term performance of Warm-Mix Asphalt. Working group has been asked to explore the possibility of a potential sponsored project.

### *Climate Change (Daryl Nixon)*

- ❖ The working group decision to focus on impact on Climate Change on Soils and Materials. Nothing new to report.

### *Geotechnical (Hugh Donovan)*

- ❖ The initial effort was to recruit more geotechnical experts to the committee. Several companies have been approached, with great interest by them.

### **Soils & Materials Executive Elections**

Nominations were opened for a new secretary for the Soils and Material Standing Committee executive. The only nominee for the position was Lyle Treleven of EBA Consultants (Tetra Tech). Hugh Donovan made the nomination.

All were in favour.

### **External Organization Updates**

*LTPP (Ralph Haas)* – Update attached in Appendix B. Requested time at the Spring meeting dedicated to discuss what is in the database, and how the information can be used.

*CTAA/CUPGA (Sandy Brown)* – upcoming conference November 28 – December 1<sup>st</sup>, 2010.

*PIARC (Mark Popik)* – Provided in Appendix C.

### **Other Business:**

Daryl Nixon mentioned that Burt Pulles of EBA Engineering had passed away. Mr. Pulles was a member of both the Soils & Materials Standing Committee, as well as a Past Chair of the Pavements Standing Committee.

### **Past and Future Conferences (All) -**

TAC Spring Technical Meetings – Ottawa, Ontario, April 14 – 18<sup>th</sup>, 2011

TAC 2011 – Edmonton, Alberta, September 11 – 14<sup>th</sup>, 2011

CTAA/CUPGA – Edmonton, Alberta, Nov 28 – Dec 1, 2010

Pavement Evolution 2010 – October 25 – 27, 2010

ACI Fall Conference – Pittsburgh, October 26 – 28, 2010

ACI Spring conference

OHMPA Conference – December 8<sup>th</sup>, 2010

SWIFT – September 11-14<sup>th</sup>, 2010

90<sup>th</sup> Annual TRB – January 23 – 27<sup>th</sup>, 2011

10<sup>th</sup> Annual TRB Low Volume Roads Conference – Florida, June 2011  
26<sup>th</sup> PIARC World Road Congress – Mexico City, Mexico, September 26 – 30<sup>th</sup>, 2011  
OGRA “Municipal Road Technologies” – February 2011  
10<sup>th</sup> International Conference on Concrete Pavements – Quebec City, July 8 – 12<sup>th</sup>, 2012  
International Conference of Managing Pavement – Chile, November 2011

### **Adjournment**

The meeting was unanimously adjourned at 2 pm. The meeting was followed by a tour of the Dalhousie University facilities.

APPENIDX A

Climate Change Task Group Presentation

APPENIDX B

Update on LTTP Activities

## **UPDATE ON LTPP ACTIVITIES**

Briefing Note for Joint Pavements and Soils & Materials Committee Meeting in Halifax,  
September 26, 2010

By Ralph Haas  
Member, TRB's LTPP C'tee

LTPP has been in existence for 20 years and a massive amount of data has been collected on Traffic, Materials, Environmental Effects, Condition, Performance, M & R and Specific Design Features. As well, several hundred products have been developed. The total investment to date is over \$800 million.

LTPP Standard Data Release 24 has been available since January, LTPP DataPave Online continues to provide a centralized forum for customers, FHWA is moving forward with future activities including a continuation of data collection on over 500 sections still in service and on updating the current Strategic Plan on data analysis (see subsequent note), and FHWA continues to provide a Customer Support Service Centre. The latter is a particularly valuable activity and handles about 4 to 5 queries per day. Unfortunately, over the past decade, Canadian agencies have made very limited use of this resource (only about 70 requests overall from provinces and universities). As well FHWA continues to operate the LTPP IMS (housed in a super computer server at FHWA's Turner Fairbanks Highway Research Centre) which includes the Data Base plus raw data files, distress maps, materials ref. library inventory, analyses products, software tools, etc., etc.

The current Strategic Plan for LTPP Data Analysis has been in existence for nearly 10 years. A major updating initiative, sponsored by the TRB LTPP Committee and supported by FHWA's LTPP Team (led by Aramis Lopez), recently occurred in terms of a 3-day Forum (late Aug. and early Sept.) in Irvine California where 50 invited participants developed new and revised problem statements as input to a new Strategic Plan. The results are currently being compiled by TRB's Robert Raab, and a draft is expected to be available for the forthcoming LTPP Committee meeting and the Expert Talk Group on Special Activities Meeting in Washington in November. Canadian participants in the Forum were Ralph Haas, Susan Tighe, Frank Meyer and Jerry Hajek.

In conclusion, it is strongly recommended that both the Pavements and Soils and Materials Committees plan a substantial agenda item for their spring meetings on LTPP (what it contains, what it can provide and how to make effective use of this immensely valuable resource).

## APPENIDX C

### Update on PIARC Activities

**PIARC UPDATE**  
**Prepared by Dave Hein, Chair, PIARC D2b**

**PIARC COMMITTEE STATUS**

The current cycle of PIARC is winding down culminating in the 2011 World Road Congress in Mexico City from September 26<sup>th</sup> to 30<sup>th</sup>, 2011. The work of the committee is almost complete.

The PIARC D2 Roads committee has five working groups.

- Best practices to deal with the effects of climate change on road pavements.
- Innovation in Design and Construction. A survey and general format for innovation descriptions was produced and circulated to members and their countries.
- Noise. The noise group is evaluating noise measuring and noise reducing technologies.
- Impact of Maintenance. This group is working on methods to evaluate and improve pavement maintenance techniques. .
- Reducing the Cost and Impact of Construction. This group is being led by the D2c Concrete Pavements committee.
- The D2 committee is committing to PIARC to organize and host the 2012 SURF (Surface Characteristics) conference. Gerardo Flitsch has been appointed as the chair of the organizing committee along with the chairs of D2a, D2b, and D2c along with Mark Swanlund.

In support of the committee work, we have issued a call for individual papers for the following relevant topics:

**Innovation in Road Pavements**

The introduction and fostering of innovation in transportation projects, whether in management methods or construction techniques, can produce considerable benefits when it comes to improving safety and reducing construction time and costs. The aim of technological progress is not simply to help reduce the direct costs of pavement maintenance and rehabilitation but also

to contribute to sustainable development. Papers are invited which focus on:

- examples of innovative practices that demonstrate a reduction in energy consumption or reduction in green house gas emissions compared to conventional practices;
- examples of practices and methods used by agencies to foster innovation;
- sustainable design and construction practices that incorporate high percentages (>50 percent) of recycled material content; and
- proven innovations to reduce user delay, cost of construction and maintenance.

*Proposals should not promote any proprietary commercial product but should concentrate on the benefits, implementation, documented success and benefits of adopting of the innovation.*

**Innovations in the Treatment and Use of Marginal Local Materials**

This topic is specifically aimed at the exploitation of natural materials, locally available on the site of a road project, but judged unacceptable in its existing state to comply with technical

- specifications for earthworks. Papers are invited which detail experience in the use of the following materials (i.e. on road construction sites, trial sites etc):
- materials that are changeable (i.e. materials for which the properties change with time) or friable;
- materials with particular components (sulfates, sulfurs, organic matter, etc.);
- materials that are very wet and/or very dry;
- materials that are very clayey; and

- uniform materials (single-sized), gap-graded or with an unstable structure.

### **Adaptation of Road Pavements to Climate Change**

Papers are invited which address the following topics:

- Nature of climate change impacts on road pavements;
- Policy implications, including ways to respond to the potential impacts of climate change, ways to deal with uncertainty and risks, and adaptation of design rules and specifications; and
- Development and/or implementation of adaptation strategies and related practical solutions.

### **Innovations in Construction and Maintenance of Unpaved Roads in Developing Countries**

Papers are invited pertaining specifically to unpaved roads and which focus on the following:

- Use of the technique HIMO (Labour Intensive Construction);
- Improvement of natural local materials;
- Development of new techniques for construction and maintenance.

The deadline for abstract submission is September 30, 2010.

### **FUTURE MEETINGS**

The next meeting of the PIARC D2a/D2b/D2c committee will be in Paris from October 18<sup>th</sup> to the 20<sup>th</sup>. It is expected that the majority of the technical reports will be finalized and the final program for the World Road Congress developed.