

for Concrete Pavements

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# WHAT'S NEW AT ISCP

**VOLUME 9, NUMBER** 

## **New ISCP Board Members Elected**

ISCP recently held elections for its Board of Directors. Seven ISCP directors' terms expire January 31, 2012. A total of 73 ballots were returned for these elections. The following individuals were elected by the general membership to serve five-year terms on the ISCP Board, effective February 1, 2012:

- Jake Hiller, Michigan Technological University (USA)
- Lev Khazanovich, University of Minnesota (USA)
  Somayeh Nassiri, University of Alberta (Canada)
- Bryan Perrie, Cement and Concrete Institute (South Africa)
- Tim Smith, Stantec Consulting (Canada)
- George Vorobieff, Roads and Maritime Services NSW (Australia)
- Leif Wathne, American Concrete Pavement Association (USA)

Other ISCP members receiving votes included the following:

- Juan Pablo Covarrubias Jr., TCPavements (Chile)
- Nigel Parks, PNA Construction Technologies (USA)
- Mauricio Salgado Torres, Institute of Cement and Concrete (Chile)
- Peter Taylor, National Concrete Pavement Technology Center (USA)
- Guy Tremblay, Ministere des Transports Du Quebec (Canada)
- Dan Ye, Fugro Consultants (USA)

The Society expresses deep appreciation to outgoing Board members Jamshid Armaghani of Global Sustainable Solutions (USA) and Stephan Villaret of Ingenieurgesellschaft mbH (Germany) and looks forward to their continued participation in Society activities.

ISCP would like to thank its members for participating in this election and for continued support of its mission to further engineering and technical education, scientific investigation, and research in all areas related to the analysis, design, construction, materials, maintenance, rehabilitation and management of concrete pavements.

## Frans Van Cauwelaert Named 2011 ISCP Honorary Member

The recent election of Frans Van Cauwelaert, PhD as an ISCP Honorary Member was announced at the Annual Membership meeting in Washington, D.C. on January 21, 2012. Dr. Van Cauwelaert is considered to be one of the modern leaders in the field of pavement engineering and is well-known for his rigorous mathematical solutions to pavement analysis problems as well as for his ability to put advanced pavement theories into everyday practice. A graduate of the University of Louvain (Belgium), he earned a PhD in Technical Sciences at the Federal



Polytechnic School of Lausanne (Switzerland) before embarking on a career that would lead to field work all over the world, as well as laboratory work and teaching. He ended his impressive professional career as Head of the Department of Promotion, Research and Development of the Federation of the Belgium Cement Industry (Febelcem) and wrote a book entitled "Pavement Design and Evaluation: The Required Mathematics and Applications" as a capstone to his life's work. To download a pdf of his book, please go to: http://www.pavers.nl/pdf/The%20Required%20Mathematics.pdf

ISCP is proud to be able to honor Dr. Van Cauwelaert for his distinguished service to the industry and profession.

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National Concrete Pavement Technology Center













## INDUSTRY RESOURCES

# **Visit & Connect on ISCP's Linked in Professional Networking Group**



Join ISCP's free LinkedIn group. LinkedIn is a professional business- orientated networking site (http://www.linkedin.com/home). The ISCP group was created in 2011 as an international forum and blog space to specifically facilitate concrete pavement knowledge sharing, technical interaction, exchange of information and networking between current ISCP members.

Some discussion guidelines for the blog are as follows:

- Technical questions / responses / comments on concrete pavement topics are highly encouraged.
- All questions and responses should be posted in a professional manner.
- Members should avoid republishing information from any past forums.

For questions about the policies or terms and conditions, please contact the ISCP LinkedIn moderator, Jeff Roesler at: <a href="mailto:jroesler@illinois.edu">jroesler@illinois.edu</a>. The blog may be reached at the following web address for LinkedIn members: <a href="mailto:http://www.linkedin.com/groups?mostPopular=&gid=3760764">http://www.linkedin.com/groups?mostPopular=&gid=3760764</a>.

### All current ISCP Members are eligible to join the blog.



ACPA has released a 128-page publication titled, "Life-Cycle Cost Analysis (LCCA): A Tool for Better Pavement Investment and Engineering Decisions". The document begins by discussing LCCA in general terms and then provides seven detailed, input-focused steps for conducting a single-project LCCA:

- 1. Select the Analysis Period,
- 3. Estimate Initial Agency Costs,
- 5. Estimate Future Agency Costs,
- 7. Compare Alternatives.
- 2. Select a Discount Rate.
- 4. Estimate User Costs,
- 6. Estimate Residual Value, and



Examples with detailed analyses are provided for LCCAs of a local road, highway and airport pavement. The document also covers some applications and extensions of LCCA, such as the "mix of fixes" concept, sustainability in the context of LCCA, the role of LCCA in pavement type selection, the impact of material quantity specifications on LCCA results and total ownership cost. The appendices include a deterministic LCCA worksheet, a discussion of historical oil price trends and volatility, and all current FHWA policy on pavement type selection.

The document is available for purchase in ACPA's bookstore at: <a href="www.acpa.org/bookstore">www.acpa.org/bookstore</a>.
ACPA members will soon have free access to it in the ACPA Resources Center at: <a href="www.resources.acpa.org">www.resources.acpa.org</a>

# **Announcing The 2<sup>nd</sup> Edition of the CP Road Map ... Available in February**



After 10 successful years, the Federal Highway Administration (FHWA), USA and the CP Road Map pooled fund are preparing to launch the 2nd edition of an updated CP Road Map. The 500-plus-page CP Road Map has been revised, includes new versions of Volume I and Volume II, and will be available online in February, 2012. Research tracks and problem statements have been updated to reflect today's technological and economic climate.

**introduction** The development of the CP Road Map began in 2001 and was launched in 2005, through an agreement between the FHWA and the National Concrete Pavement Technology Center (CP Tech Center) at Iowa State University, USA. The CP Road Map is a strategic plan that outlines needed concrete pavement research to help develop a comprehensive, integrated and fully functional system of concrete pavement technologies. It is a living plan with broad stakeholder involvement that guides the investment of research dollars. The team developed a database of existing research, gathered input from the highway community and identified gaps in research which became the basis for problem statements. The results are organized into a comprehensive, cohesive, strategic plan for concrete pavement research. The tracking of this research and the deployment of technologies have helped meet concrete paving challenges. In short, the CP Road Map is guiding the industry toward a new generation of concrete pavements.

**CP Road Map Update** Today, the CP Road Map is funded through a transportation pooled fund that includes FHWA and several State DOTs. As the CP Road Map has evolved and areas for improvement have been identified, the track structure has been revised and updated to better reflect current practices, to emphasize important areas of research and to reflect progress made on various tracks formed from original database tables. Objectives include:

- introduce a variety of new subtracks and problem statements
- · maintain cohesiveness with problem statements cross-referenced between multiple tracks
- remove irrelevant or outdated problem statements
- update the CP Road Map to current industry practices and up-to-date research
  omit the "phasing" structure of the original CP Road Map in order to remove the
- omit the "phasing" structure of the original CP Road Map in order to remove the impression that certain research can occur only after other research has been completed

Other than updates to select problem statements, no major changes were made to Tracks 2, 4, 5 or 6. Revisions for Tracks 1, 3, 7, 8, 9, 10, 11 and 12 include: rearranging tracks; new items of focus; emphases redirected; new or modified titles that reflect current industry practices; adding and subtracting subtitles; incorporating appendixes and tables; and more.

For a complete table (pictured left) that illustrates and compares the key differences between the original and the updated CP Road Map tracks and problem statements, plus a report on the soon-to-be released CP Road Map update, please go to:

http://www.cproadmap.org/publications/MAPbriefSept-Oct2011.pdf

For more information about CP Road Map, current and past issues of the E-News and a complete listing of the 14 Map Briefs published to date, please visit the website at: <a href="https://www.cproadmap.org">www.cproadmap.org</a>;

or contact Dale Harrington, *CP Road Map Program Manager* by phone at: 515-964-2020 or e-mail: <a href="mailto:dharrington@snyder-associates.com">dharrington@snyder-associates.com</a>.



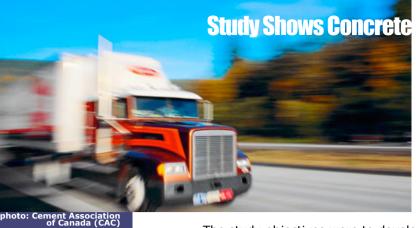
National Concrete Pavemer Technology Center



After a successful decade of research, the CP Road Map is guiding the industry toward a new generation of concrete pavements.

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## **Study Shows Concrete Handles Heavier Loads in its Life Cycle**

An Applied Research Associates Inc. (ARA) study, entitled Methodology for the Development of Equivalent Pavement Structural Design Matrix for Municipal Roadways, concluded that concrete roads can generally handle more heavy loads over their life cycles. Results indicated that asphalt and Portland cement concrete performed similarly up to 2,000 trucks a day; at higher truck traffic levels, concrete performs better and becomes a lot less expensive. The report also confirmed that the initial construction costs can be very similar, but over the long run, concrete is definitely cheaper to maintain. The study took into account the maintenance schedules of the Ontario Ministry of Transportation and the City of Toronto.

The study objectives were to develop:

- structurally-equivalent pavement designs for municipal roadways in Ontario
- appropriate maintenance and rehabilitation schedules
- a life cycle cost analysis tool to compare whole life costs of pavement alternatives (CANPav™)

The study also found that when municipalities put out a two-component bid for equivalent cross-sections and allowed the contractors to decide which ones they were going to bid, there was a reduction in bid prices because more people bid for the same work.

An especially useful tool for life cycle cost analyses is the "CANPav<sup>TM</sup> 2.0", which allows the software/ app users to compare the short and long-term costs associated with different paving alternatives for various traffic levels and subgrade strengths.

For the full report on *Methodology for the Development of Equivalent Pavement Structural Design Matrix for Municipal Roadways* please go to: <a href="http://www.rmcao.org/db2file.asp?fileid=2187">http://www.rmcao.org/db2file.asp?fileid=2187</a>.

To read Concrete Pavements and Lifecycle Costs by Sherry Sullivan,
Director, Transportation and Built Environment at the Cement Association of Canada
please go to: http://www.kenilworth.com/publications/cc/de/201105/files/94.html

For the full article on concrete and alternative pavements, by Kelly LaPointe, Daily Commercial News and Construction Record staff writer, please go to: http://dcnonl.com











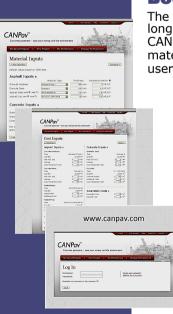
The New CANPav<sup>TM</sup> 2.0 is a free, safe, secure website where users can quickly compare the short- and long-term costs of paving materials for municipal streets and roads and commercial parking lots. CANPav<sup>TM</sup> 2.0 is unique because users have complete control over inputs and can save their own material costs in their account under "My Preferences/My Material Costs". Unique features offer the user flexibility and input control:

- Ouick cost comparisons
- Examine and compare your own designs, material and labor costs with alternative designs
- Evaluate municipal streets & roads and parking lots
- Enter your own concrete and alternate pavement designs
- Change your design and material prices in midstream
- Save and use your own cost inputs
- Store projects in the "My Saved Projects" portion of your account for future reference
- Obtain a PDF report outlining the project estimate

CANPav<sup>™</sup> 2.0 includes a comprehensive matrix of equivalent concrete and alternative pavement designs for various traffic levels and subgrade strengths, acquired by the international consulting firm Applied Research Associates, Inc (ARA). ARA made use of the next generation pavement design software, DARWin-ME, which builds upon the National Cooperative Highway Research Program's (NCHRP) mechanistic-empirical pavement design guide. CANPav<sup>™</sup> 2.0 will compare the initial construction costs, identifies the anticipated maintenance required, and computes the corresponding life cycle cost for the pavement structures over a 50-year period. To sign in/register and use this invaluable tool, please go to: http://www.canpav.com/index.php/register.

CAC and RMCAO are planning to further develop CANPav<sup>™</sup>. The program is currently developed for use in Canada and, although the default values are based on Canadian provinces, users can change all the values to make it applicable to anywhere in the world (with the exception of the maintenance and rehabilitation schedules – which will be addressed in the next version of the program). It is anticipated that CANPav<sup>™</sup> will be expanded to included a larger audience in 2012. There will be additions such as English units and a new app for the ACPA App Library: <a href="http://apps.acpa.org/apps/">http://apps.acpa.org/apps/</a>.

For questions and for more CanPav™ information, please contact
Sherry Sullivan, MASc, P.Eng, LEED AP, Director, Transportation and Built Environment at the Cement Association of Canada by e-mail at: ssullivan@cement.ca.



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http://www.rmcao.org/ db2file.asp?fileid=2187

Concrete Payaments and Lifecycle Costs

## **CONFERENCE NEWS & UPDATES**



# **10<sup>th</sup> ICCP Conference Registration is Open;**



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NFERENCE CONCRETE

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Photo: Québec's fortifications surrounding Old Québec, on a utiful site stop the cliff and overlooking the St. Lawrence River and e Fairmont Le Chatesu Frontenac, photo: Luc Antoine Couturier

ISCP and Transports Quebec proudly announce that registration is underway for the 10th International Conference on Concrete Pavements (10th ICCP) to be held in Québec City, Québec, Canada July 8-12, 2012. You may register online or by mailing a registration form from a conference brochure.

#### **REGISTRATION:**

ISCP Members, Non-Members, Full-Time Government Employees (receive Government Employee Discount), Student (receive Student discount), and Spouse/Guest, the registration DATES are:

- "Early Bird" Registration by March 31, 2012
- "Regular" Registration by June 30, 2012
  "On-Site" Registration on or after July 8, 2012

To obtain a brochure, please see below. To register online, please go to: http://www.concretepavements.org/10thiccp/registration.htm

#### **EXHIBITORS:**

The EXHIBITOR registration deadline is May 15, 2012. Space is limited to the first 30 Exhibitors.

To obtain a brochure, please see below. To register online as an Exhibitor, please go to:: http://www.concretepavements.org/10thiccp/exhibitors.htm

#### **BROCHURE:**

The new brochure for the 10<sup>th</sup> ICCP Conference is now available via mail and online! To receive the Brochure by mail, please contact:

Tim Smith, Conference Co-Chair and ISCP Board of Directors Member Phone: 613-738-6094 or e-mail: conference@concretepavements.org

Sharon Prochnow, *National Concrete Pavement Technology Center* 2711 S. Loop Drive, Ste 4700, Ames, IA 50010 USA

T: 1.515.294.3781 | F: 1.515.294.0467

e-mail: prochnow@iastate.edu

EXHIBITORS: For a brochure and Exhibitor registration forms, please contact our event organizer:

Catherine Blais, *AGORA Communication* T: 1.418.658.6755 ext. 223 or 1.866.358.6755 ext. 223

F: 1.418.658.8850 or by e-mail at: iccp2012@agoracom.qc.ca

To view the **Brochure online** and download a printable flyer, please go to: http://www.concretepavements.org/10thiccp/10th\_iccp\_flier\_jan\_12\_low\_res.pdf (1.3 MB)

For details on the 10th ICCP Conference, please go to: http://www.concretepavements.org/10thiccp/index.htm.



The International Society for Concrete Pavements (ISCP) and Tim Smith, Conference Chair, welcome sponsors for the 10<sup>th</sup> International Conference on Concrete Pavements (10<sup>th</sup> ICCP), to be held July 8-12, 2012 in Québec City, Québec, Canada. Sponsors are invited to participate and are offered four (4) levels of sponsorship: Gold, Silver, Bronze and Platinum.

To become a sponsor, please contact Sherry Sullivan, Sponsorship Coordinator by phone at: 416-449-3708 ext. 234 or by e-mail: conference.sponsorships@concretepavements.org

For details on Sponsorship Opportunities, please go to: http://www.concretepavements.org/10thiccp/sponsors.htm



























#### SPONSORS:

PLATINUM Holcim (Canada), Inc.

**American Concrete Pavement** Association (ACPA)
Cement Association of Canada **GENIVAR Ministry of Transportation of Ontario** National Precast Concrete Association (NPCA)

U.S. Federal Aviation **Administration (FAA)** 

**CEMEX** 

**Concrete Reinforcing Steel** Institute (CRSI)

**Canadian Airfield Pavement Technical Group** Manitoba Infrastructure and **Transportation** SIMCO

Stantec Consulting Ltd.

#### **COLLABORATORS: CP Tech Center**

**EUPAVE Federal Highway Administration** Office du tourisme de Québec **Transportation Association of Canada** 

CONFERENCE HOST:





NEWS/

VOLUME 9, NUMBER



## CALL FOR PAPERS

## **Call for Abstracts & Papers DEADLINES Digest:**

Currently through MARCH 9, 2012: CALL FOR PAPERS for the MAIREPAV 7 Conference (the Maintenance and Rehabilitation of Pavements and Technological Control), to be held in Auckland, New Zealand, August 28-30, 2012.

Currently: CALL FOR PAPERS - specifically targeting (but not limited to) durability and sustainability issues related to cement concrete pavements - for the 2nd International Conference on Sustainable Construction Materials (SUSCOM), to be held in Wuhan China, October 18-21, 2012.

## UPCOMING EVENTS CALENDAR

# **FEBRUARY**

### 16th Annual TERRA Pavement Conference

February 9, 2012 in St. Paul, Minnesota, USA http://www.terraroadalliance.org/events/pavementconf/2012/index.html

### **APRIL** 2012

### 2nd International Conference on Microstructure Related Durability of Cementitious Composites April 11-13, 2012 in Amsterdam, the Netherlands

http://microdurability.tudelft.nl/

International RILEM Symposium for Multiscale Characterization, Modeling and Simulation of Infrastructure Materials April 19-20, 2012 in Stockholm, Sweden

http://www.rilem.net/gene/main.php?base=600040

# JUNE

### 9th International Transportation Specialty Conference

Part of the Canadian Society of Civil Engineering (CSCE) 2012 conference June 6-9, 2012 in Edmonton, Alberta, Canada http://csce2012.ca/

### **Dedicated Bus and Tram Lanes Seminar and Site Visit**

June 7-8, 2012 in Paris, France http://www.eupave.eu/documents/news-items/20123101.xml?lang=en

fib Symposium: Concrete Structures for Sustainable Community

June 11-14, 2012 in Stockholm, Sweden http://www.fibstockholm2012.se/

International Congress on Durability of Concrete June 18-21, 2012 in Trondheim, Norway <a href="http://www.icdc2012.com">http://www.icdc2012.com</a>

### 7th RILEM Conference on Cracking in Pavements

June 20-22, 2012 in Delft, the Netherlands http://www.rilem2012.org

# **JULY**

#### **3rd Advanced Workshop on Concrete Pavements**

July 5-7, 2012 Lac Delage, Quebec, Canada http://www.concretepavements.org/3rdworkshop/ http://www.concretepavements.org/3rdworkshop/advanced \_workshop\_brochure\_01\_20\_2012\_web.pdf



## **10th International Conference on Concrete Pavements** Organized by ISCP, July 8-12, 2012 in Quebec City, Canada

http://www.concretepayements.org/10thiccp

For events taking place later in 2012 and in 2013, please go to: http://www.concretepavements.org/calendar.htm.



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ISCP thanks **Sherry Sullivan, Jeff Roesler, Sabrina Shields and Mick Prieur, RMCAO** for contributions to this issue.

ISCP invites ISCP members and friends to submit articles and calendar items to the Editor-in-Chief for future issues.

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Please visit the ISCP Website at www.concretepavements.org for more information about ISCP.