

## Announcement and Call for Papers

# INTERNATIONAL CONFERENCE ON SUSTAINABLE CONCRETE PAVEMENTS: PRACTICES, CHALLENGES, AND DIRECTIONS

September 15–17, 2010—Sacramento, California



*SUSTAINABLE STRATEGIES FROM RAW MATERIAL PRODUCTION TO LONG-TERM SERVICE*

### ORGANIZED BY

Federal Highway Administration  
National Concrete Pavement Technology Center

### AND SPONSORED BY

American Association of State Highway and Transportation Officials  
American Concrete Pavement Association  
California Department of Transportation  
California Pavement Preservation Center at California State University, Chico  
Cement Association of Canada  
Federal Aviation Administration  
International Society for Concrete Pavements  
Portland Cement Association  
Transportation Research Board  
University of California Pavement Research Center  
University Transportation Center for Sustainable Transportation Infrastructure  
at Michigan Technological University

## BACKGROUND

The majority of concrete pavements in the U.S. interstate and primary systems are now being designed to provide a service life of at least 40 years without requiring significant repair or rehabilitation treatments. While these new pavements are being designed and constructed using sound technical know-how, it is not clear that adequate attention is being paid to ensure that they are implemented in a sustainable manner. Best-practices guidance on sustainable practices is not readily available to pavement design engineers, specifiers, and constructors.

**Green Solutions**  
**Eco-Friendly Practices**  
**Reduced Carbon Footprint**  
**Less Environmental Impact**  
**Life-Cycle Assessment**  
**Best Practices**  
**Smarter Pavement Designs**

Sustainable construction is of recent origin. However, its importance in the future evolution of our civilization cannot be denied. *As resources diminish globally and the environment comes under increasing stress, the adoption of sustainable design and construction practices is an important strategy to meet the needs of the present without compromising the ability of future generations to meet their needs.*

Recently, increasing attention is being paid to balancing the economical needs for infrastructure development and the engineering strategies to be employed with the need for environmental stewardship. With respect to pavement construction, many new terms and phrases have been introduced in the everyday lexicon of concrete pavement and materials technologists—green highways, environmentally responsible solutions, LEED (Leadership in Energy and Environmental Design), life-cycle energy and emissions analysis and assessment, social and environmental benefits, carbon footprint, and ecological footprint.

For concrete pavements, sustainability-related considerations can be introduced at the design and engineering phase, in material selection, during construction, while in service, and ultimately at the end of the pavement's life. *Sustainability-related considerations must be integrated throughout the life cycle of a pavement.* Although there is a strong desire, and in some cases a mandate, to incorporate sustainability considerations in new concrete pavement design and construction and in the management of existing concrete pavements, procedures and guidelines for doing so are neither widely accepted nor clearly understood.

To provide highway and airport agencies and the industry with the most current information on sustainability considerations for concrete pavements, a 2 1/2-day conference is being organized as a part of technology transfer activities under the Advanced Concrete Pavement Technology (ACPT) Products Program that operates within the Federal Highway Administration (FHWA). The conference will provide an international forum to discuss the sustainable attributes of concrete pavements by presenting existing technologies, emerging research, approaches to measuring energy and environmental impact, user considerations, and international practices and experience. The forum will present improved and innovative processes for achieving sustainable concrete pavements throughout the pavement's life cycle.

## CONFERENCE TOPICS

Papers and conference presentations are solicited both nationally and internationally on a wide range of topics dealing with best practices for building new sustainable concrete pavements and for sustainably managing and preserving existing highway and airfield concrete pavements. Papers on international best practices and future directions are especially welcomed. Papers and presentations dealing with emerging issues related to these topics are also encouraged. Specifically, papers are solicited on the following topics:

1. Sustainable strategies for concrete pavements
2. Sustainable concrete materials
3. Optimizing concrete mixture design procedures that result in sustainable concrete pavements
4. Optimizing pavement design procedures that result in sustainable concrete pavements
5. Construction practices for sustainable concrete pavements
6. Sustainable pavement preservation, rehabilitation, and recycling strategies for managing concrete pavement networks
7. Adoption and implementation of environmental life-cycle assessment for sustainable concrete pavements
8. Identification and quantification of environmental and social considerations for sustainable concrete pavements

9. Sustainable concrete pavements in the urban environment
10. Next-generation materials and techniques for concrete pavements

## PRELIMINARY TECHNICAL PROGRAM

The conference program will consist of about 30 peer-reviewed papers and selected invited presentations for practice-oriented forums. Highlights of the conference will be case studies from U.S. and international highway and airport agencies and industry. The tentative technical program is given below:

Tuesday September 14	Wednesday September 15	Thursday September 16	Friday September 17
	<i>Group Breakfast</i>	<i>Group Breakfast</i>	<i>Group Breakfast</i>
National Concrete Consortium Meeting	PLENARY SESSION Invited Presentations—U.S. and International Directions	Sustainable Practices for Concrete Pavement Construction	Advancements in Sustainable Concrete Pavement Technologies
	Sustainable Concrete- Making Materials in the Era of Depleting Resources— Part 1	Sustainable Practices for Concrete Pavement Preservation	Life-Cycle Assessment Tools and Case Studies
	<i>Group Lunch</i>	<i>Group Lunch</i>	<i>End of Conference</i>
	Sustainable Concrete Mixtures—Meeting the Needs of Workability, Dura- bility and Strength	Sustainable Concrete- Making Materials in the Era of Depleting Resources— Part 2	
	FORUM 1: Sustainable Concrete Pavements— Agency Practices and Direc- tions Where, How, Why?	FORUM 2: Sustainable Con- crete Pavements—Industry Initiatives, Innovations, and Directions	
<i>Reception</i>	<i>Group Dinner</i>	<i>Dinner on Your Own</i>	

## PAPER SUBMISSION AND PEER REVIEW

Paper acceptance for the technical sessions will be based on peer review of manuscripts. Presentations and manuscripts must not be of a commercial nature, and must not have been previously published. Papers will be limited to the lesser of 25 pages or 7,500 words (each table and figure will count as 250 words) and should be single-spaced using Times Roman 12 pt font. They should be submitted as a PDF file or WORD document, either format not to exceed 10 MB in size. The final paper will be submitted as a WORD document not to exceed 10 MB in size. The papers should include both conventional and SI units, the primary unit being the author's preference. Written permission will be required for photographs and for reprinted images.

Each selected paper will be reviewed by members of the Technical Program Subcommittee of the Conference Steering Committee. Final selection will be made after the completed papers have been reviewed. All papers selected for presentation will be distributed to conference attendees in printed and CD conference proceedings.

All first authors will need to register by *May 31, 2010*, for their papers to be included in the final program, and authors' presentations (MS PowerPoint) must be received by *August 1, 2010*, to be included in the final program, without any exceptions. No presentation substitutions or modifications will be permitted on-site.

Abstract/Paper/Presentation Submission Due Dates	
October 1, 2009	Abstracts due (one page)
December 1, 2009	Authors notified of abstract acceptance
March 1, 2010	Completed papers due for review (MS WORD or PDF)
May 1, 2010	Reviews completed, authors notified of final disposition of their papers
July 1, 2010	Electronic versions of final papers due (MS WORD)
August 1, 2010	Electronic version of presentations due (MS POWERPOINT)

## REGISTRATION DETAILS (all fees are in U.S. dollars)

	Early (by May 31, 2010)	Late (by July 31, 2010)	Very Late (after July 31, 2010)
General registration	350	400	500
Government agencies (U.S. only) and full-time students	250	300	400
Authors and academia	300	350	450
Spouses	100	150	200
Exhibitors (one free registration)	1,500	1,750	2,000
Registration fees include Tuesday evening reception; breakfasts on Wednesday, Thursday, and Friday; lunch on Wednesday and Thursday, dinner on Wednesday; and break refreshments.			

## CONFERENCE HOTEL

The conference will be held at the Hyatt Regency Sacramento (Phone: 1-888-421-1442) in downtown Sacramento, California, right across from the State Capitol grounds. The conference room rate is \$130.00, single or double (per diem rate of \$114.00 or prevailing rate for U.S. government agency employees—Federal, State, and municipality), plus applicable taxes. The group reservation code for the discounted room rate is “2010 Concrete Conference.” Further details will be provided in the next release of this announcement.

## CONFERENCE STEERING COMMITTEE

Shiraz Tayabji, Fugro Consultants, Inc. (Co-Chair)  
Tom Cackler, National Concrete Pavement Technology Center (Co-Chair)  
Gina Ahlstrom, FHWA  
Randall Iwasaki, Caltrans  
Brent Trautman, Missouri Department of Transportation

Tim Smith, Cement Association of Canada  
Paul Tikalsky, University of Utah  
Sam Tyson, FHWA  
Tom Van Dam, Applied Pavement Technology, Inc.  
Leif Wathne, American Concrete Pavement Association

## TECHNICAL PROGRAM SUBCOMMITTEE

Peter Taylor (National Concrete Pavement Technology Center) (Co-Chair), Shiraz Tayabji (Fugro Consultants, Inc.) (Co-Chair), and representatives from FHWA, highway agencies, industry, and academia.

## SUBMIT PAPER ABSTRACTS TO:

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## FOR ADDITIONAL INFORMATION, CONTACT:

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**Updated information related to the conference and online registration is available at <http://www.fhwa.dot.gov/pavement/concrete/2010acptpconf.cfm>**

### ***TECHNOLOGY TRANSFER TO DEVELOP AND MANAGE SAFER, SMOOTHER, AND LONGER LASTING CONCRETE PAVEMENTS THAT INCORPORATE SUSTAINABLE TECHNOLOGIES***

Much work is in progress to create sustainable concrete pavement technologies that are cost effective and meet the user's needs for safer, smoother, quieter, and longer-lasting pavements. The findings from these ongoing and completed studies will be disseminated at the conference, and directions for future work will be defined.