

13th Annual

Minnesota Pavement Conference

February 12, 2009

*Continuing Education and Conference Center
St. Paul campus
University of Minnesota*

Sponsor:

Transportation Engineering and Road Research Alliance (TERRA)

Co-Sponsors:

Minnesota Department of Transportation
Minnesota Local Technical Assistance Program (LTAP)
Department of Civil Engineering, University of Minnesota
Minnesota City Engineers Association
Minnesota County Engineers Association
Minnesota Street Superintendents Association
Minnesota Public Works Association
State Aid for Local Transportation
Local Road Research Board (LRRB)
Pavement Research Institute (PRI)

Hosted by:

Center for Transportation Studies
University of Minnesota



UNIVERSITY OF MINNESOTA



Conference Objective

At the 13th Annual Pavement Conference, we will present sessions that look at current practices that implement new pavement research and technology. National and local trends and innovations will be examined to expand our understanding of pavement challenges and solutions.

Who Should Attend

City engineers, county engineers, public works officials, street superintendents, maintenance superintendents, managers, design engineers, consulting engineers, and others interested in pavement issues.

Registration and Fees

The early registration fee for the 13th Annual Minnesota Pavement Conference (postmarked by February 2) is \$135. The late registration fee (postmarked after February 2) is \$150. Your registration fee includes instruction handout materials, lunch, and refreshment breaks. You are encouraged to register early to take advantage of the lower fee.

A refund, minus \$30, will be issued if you cancel by February 2. No refunds are available after this date. A full refund will be issued if the University of Minnesota cancels the conference.

Professional Development Hours (PDHs)

Attendees of the conference may receive six professional development hours.

Continuing Education Units (CEUs)

Participants who attend the entire conference will receive 0.6 CEUs signifying six hours of program participation. One (1.0) CEU is defined as 10 hours of participation in an organized continuing education program. A CEU certificate will be sent to each participant after the conference. The University of Minnesota Transcripts Office maintains a permanent record of CEUs earned.

Location

The conference will be held at the Continuing Education and Conference Center on the University of Minnesota's St. Paul campus.

Continuing Education and Conference Center
1890 Buford Avenue
St. Paul, Minnesota 55108

www.cce.umn.edu/conferencecenter

Parking

Parking is available adjacent to the conference center, lot S104 for \$6.00 per day or in the fairgrounds lot across the street for \$3.75 per day. Parking is also available in the Gortner Ramp (hourly rate).

Accommodations

A block of sleeping rooms have been reserved at the Radisson Hotel Roseville, 2450 N. Cleveland Avenue, Roseville, MN 55113, 651-636-4567, rate of \$99 plus tax for a single or double occupancy. In order to receive this special rate you must make your reservation by **February 3, 2009**, and identify yourself as a participant of the University of Minnesota Pavement Conference. Reservations made after the specified deadline will be accepted on a space and rate available basis.

Complimentary shuttle service to the Continuing Education and Conference Center is available.

For Further Information

Shirley Mueffelman
University of Minnesota
353 Classroom Office Building
1994 Buford Avenue
St. Paul, MN 55108

Phone: 612-624-4754

E-mail: cceconf2@umn.edu

Disability accommodations will be provided upon request. This publication is available in alternative formats upon request. Please call 612-624-3745.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

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PROGRAM

7:30 a.m. **Registration –**

Continental Breakfast

Moderator: *Tim Worke*, Director,
Highway and Transportation Division,
Associated General Contractors of
Minnesota, and Co-Chair of TERRA

8:00 **Welcome**

Thomas K Sorel, Commissioner, Minnesota
Department of Transportation

Presentation – Annual Conference Pavement Award

Doug Schwartz, 2008 Award Winner

8:30 **Building Success and Avoiding
Surprises: The Use of Risk
Analysis and Decision Making**

Frequent and highly publicized cost
and schedule overruns, and the volatility
in the financial markets, the public, as well
as federal, state, and local elected officials,
are increasingly skeptical about the ability
of public agencies, authorities, and
organizations to efficiently manage projects.
In recent years, several techniques have

been developed to assess projects' costs
and schedule, financial feasibility, and
opportunities for public private partnerships.
The presentation will provide an overview of
these various techniques and case studies
from around the country.

Khalid Bekka, Ph.D, HDR | Decision
Economics

9:30

Minnesota's Transportation Investment Strategies

Minnesota is facing many investment
challenges to meet the transportation
needs now and in the future. Last year the
legislature passed a bill that increased
transportation funding. This presentation
will look at the impact of last year's funding
increase and Mn/DOT investment strategies
and priorities for meeting these challenges.

Tim Henkel, Mn/DOT Modal Planning and
Program Management Division Director

10:00

Break

10:30

Breakout Sessions

Annual Pavement Conference Award Winners

1998 – *Roger C. Olson*

1999 – *Eugene L. Skok*

2000 – *George R. Cochran*

2001 – *Michael Sheehan*

2002 – *Gerald Rohrbach*

2003 – *Erland Lukanen*

2004 – *Art Bolland*

2005 – *Wayne Fingalson*

2006 – *Patrick Hughes*

2007 – *Duane Blanck*

2008 – *Doug Schwartz*

BREAKOUT SESSIONS

SESSION 1

Moderator: *Tom Ravn*, Mn/DOT

Innovations in Construction Practices

This session will present on innovations in construction practices. The Sea to Sky highway in British Columbia had many technical and schedule challenges that were met using a public-private partnership and innovative practices. Alternate bidding is being used in Minnesota to help reduce the risk of material selection prior to construction. The final presentation will discuss Sweden's contracting methods that use performance specifications to reach quality and cost goals.

10:30 a.m. **Infrastructure Challenges for 2010 Winter Olympics: Sea to Sky Highway British Columbia**
David Hein, Applied Research Associates, Inc.

11:00 **Alternate Bids for Pavements**
Curt Turgeon, Mn//DOT

11:30 **Sweden's Innovative Contracting Practices and the use of Performance Specifications**
Mats Wendel, Swedish Road Administration

Noon **Lunch**

Planning Committee

Gordon Bergstrom, Minnesota Department of Transportation

Art Bolland, Minnesota Department of Transportation

Mindy Carlson, Center for Transportation Studies, University of Minnesota

Glenn Engstrom, Minnesota Department of Transportation

Philip Forst, Federal Highway Administration

Lori Graven, College of Continuing Education, University of Minnesota

Maureen Jensen, Minnesota Department of Transportation

Lev Khazanovich, Department of Civil Engineering, University of Minnesota

SESSION 2

Moderator: *Mark Maloney*, City of Shoreview

Infrastructure Investments

Mn/DOT has collected pavement management data on all county state aid roads over the last four years. This session will present the initial findings and trends seen from this complete picture of the CSAH system. Minnesota counties have implemented foamed asphalt recycling technology in recent years. This presentation will include design considerations and performance results of projects using this technology. Finally, a presentation of the current initiatives on TH 53 and MnROAD to improve the design of thin unbonded concrete overlays will conclude the session.

10:30 a.m. **Minnesota County Pavement Data**
Dave Janisch, Mn/DOT

11:00 **Kicking the Asphalt Around: Foamed Asphalt**
John Grindelund, Fillmore County
Andy Eller, Mn/DOT

11:30 **Thin Unbonded Overlays**
Mark Watson, Mn/DOT

Erland Lukanen, Minnesota Department of Transportation
Mark Maloney, Engineering Department, City of Shoreview

Roger Olson, Minnesota Department of Transportation
Thomas Ravn, Minnesota Department of Transportation
Mike Sheehan, Highway Department, Olmsted County
Gene Skok, Department of Civil Engineering, University of Minnesota

Linda Taylor, Minnesota Department of Transportation
Curt Turgeon, Minnesota Department of Transportation
Teresa Washington, College of Continuing Education, University of Minnesota
Mats Wendel, Swedish Road Administration

SESSION 3

Moderator: *Glenn Engstrom, Mn/DOT*

Intelligent Compaction

Intelligent Compaction (IC) is an emerging technology, and in some applications is ready for field compaction of pavement materials.

The first presentation provides an overview of the goals, scope, and recent findings from the FHWA strategic plan to accelerate IC implementation.

Linking Earthwork Construction will describe measurements from intelligent compaction field studies in Minnesota that demonstrate the ability of roller-integrated measurements to characterize pavement foundation materials in terms of modulus. Although there are still some shortcomings in our understanding of how to develop target values, it now appears feasible to link the roller values to modulus pavement design parameters through QC/QA specifications. Results from recent field results and thoughts for future implementation will be discussed.

SESSION 4

Moderator: *Roger Olson, Mn/DOT*

Sustainable Pavements

This session will focus on the current trend of advocating “green highways” and sustainable pavements. The search for renewable energy is turning toward using bio-mass such as corn stalks and switch grass. The first presentation will discuss the latest developments in producing additives and substitutes for asphalt from these sustainable sources. The next presentation will discuss the rehabilitation option of in situ recycling to provide a sustainable option that is safe, environmentally friendly, and cost effective. Warm Mix Asphalt technologies allow the production and placement of asphalt at lower temperatures to reduce fuel consumption and greenhouse gas emissions. Studies are being conducted to determine other possible benefits such as reduced aging and low temperature cracking. The final presentation will discuss the use of Warm Mix Asphalt during the reconstruction of several MnRoad test cells in 2008.

1:00 p.m. **TPF Intelligent Compaction Project – Overview and Recent Findings**
George Chang, Transtec Group.

1:00 p.m. **Ethanol Co-products and Bio Oil**
Chris Williams, Ph.D, Iowa State University

1:30 **Linking Earthwork Construction to Pavement Design through Intelligent Compaction**
David White, Ph.D, Iowa State University

1:30 **The Payback of Green**
Tom Kazmierowski, Ministry of Transportation Ontario

2:00 **Intelligent Compaction: Olmsted County’s Experience and Lessons Learned, including HMA IC**
Rebecca Embacher, Mn/DOT
Mike Sheehan, Olmsted County

2:00 **Warm Mix Asphalt at MnROAD**
Tim Clyne, Mn/DOT

2:30 p.m. **Break**

Moderator: *Curt Turgeon, Mn/DOT*

2:45 p.m. **Asphalt Supply in a Volatile World**

The last few years have seen dramatic fluctuations in the price and supply of asphalt and additives such as polymers. Although oil prices have dropped, the future remains uncertain. This presentation will discuss the primary drivers of supply and price volatility of asphaltic products.

Clint Rybak, ConocoPhillips

3:20

Sustainability Through People, Process, and Product Innovation

Concrete is the most widely used man-made product in the world, and is second only to water as the world's most utilized substance. This presentation will address the value and benefits of innovations in concrete technology and future trends in the industry.

Jean-Claude Roumain, Holcim, (US) Inc.

4:00

Adjourn

2009 Upcoming CTS/LTAP Events:

For registration and description of these events go to www.mnltap.umn.edu

Work-Zone Traffic Control Seminars

January – March

Minnesota Statewide Truck-Weight Compliance Training

January –April

CTS Winter Luncheon

February 11

Traffic Engineering Fundamentals

February 11 – St. Paul

Pavement Rehabilitation: Products, Processes, and Strategies

February 24 – Grand Rapids

February 26 – Mankato

February 27 – Medina

Gravel Road Maintenance and Design

March 12 – Virginia

March 17 - Mankato

March 19 – Willmar

Spring Maintenance Expo

April 14-15 – St. Cloud

CTS Research Conference

May 19-20

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Event ID# 182520

PROGRAM

Please print or type

Last Name First Name M.I.

Company/Institution

Title/Position

E-mail Address

Business Address (Street)

City State Zip

Daytime Telephone Fax Number

I do **not** want to be listed on the registrant list for distribution to conference participants.

Payment:

Enclosed is \$135 in payment of the Pavement conference fee – February 12 (*postmarked **by** February 2*)

Enclosed is \$150 in payment of the Pavement conference fee – February 12 (*postmarked **after** February 2*)

Method of Payment

Enclosed is a check or money order payable to the University of Minnesota.

The fee will be paid by my employer, enclosed is a purchase order.

Charge my credit card (please check one)

VISA MasterCard American Express Discover

Card Number Expiration Date

Signature of cardholder

Name as it appears on card (please print)

Total amount to charge

Registrations cannot be processed unless accompanied by a check, money order, purchase order, or credit card information.

Registration:

Register Online:

www.mnltap.umn.edu/Events/PavementConference

Or Mail to:

CCE Information Center
University of Minnesota
20 Coffey Hall
1420 Eckles Avenue
St. Paul, MN 55108-6069

Or Fax:

612-624-5359 (faxed registrations must be accompanied by a purchase order or credit card number).

If your check is returned because of insufficient funds, closed account, or because you have made a stop payment request, you will be charged a check-handling fee of \$20.

The information on this form is private data, used to identify and locate you, obtain payment, and enable instructors to better know their audience. Name, address, and payment method are mandatory.

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