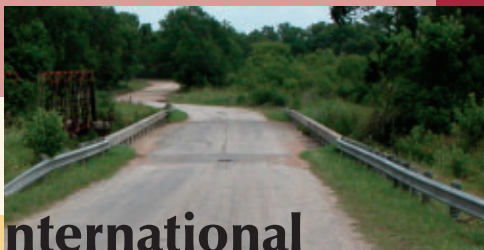


## *Preliminary Program*



# **9th International Conference on Low-Volume Roads**

**June 24–27, 2007**

**The Austin Marriott at the Capitol  
Austin, Texas, USA**

### **Conference Hosts**

Center for Transportation Research (CTR) at The  
University of Texas at Austin  
Texas Department of Transportation  
Federal University of Rio Grande do Sul, Brazil  
University of Pretoria, South Africa  
Tongji University, China  
Swinburne University of Technology, Australia

### **Conference Sponsors**

Bureau of Indian Affairs, U.S. Department of the Interior  
Engineer Research and Development Center, U.S. Army  
Corps of Engineers  
Federal Highway Administration, U.S. Department of  
Transportation  
Forest Service, U.S. Department of Agriculture  
U.S. Environmental Protection Agency  
National Academy of Sciences  
National Academy of Engineering  
Institute of Medicine  
National Research Council

**[www.TRB.org/Conferences/9LVR](http://www.TRB.org/Conferences/9LVR)**

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**TRANSPORTATION RESEARCH BOARD**  
*OF THE NATIONAL ACADEMIES*

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## Steering Committee for the 9th International Conference on Low-Volume Roads

Chair	Michael T. Long
Members	E. Dean Carlson Ronald W. Eck Anthony R. Giancola Mustaque Hossain Cheri F. Marti Mark J. Nahra Cesar A. V. Queiroz Patrick T. Sullivan
Liaisons	Achille Alonzi Albert J. Bush III James Kozik Jolanda P. Prozzi Christopher Solloway I. Paul Sunwoo
TRB Staff	G.P. Jayaprakash

The **Transportation Research Board** is a division of the National Research Council, which serves as an independent adviser to the federal government on scientific and technical questions of national importance. The National Research Council, jointly administered by the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine, brings the resources of the entire scientific and technical communities to bear on national problems through its volunteer advisory committees.

**T**he 9th International Conference on Low-Volume Roads will examine new technologies and new techniques in the planning, design, construction, operation, maintenance, and administration of low-volume roads. Emphasis will be on discussing case studies and finding practical solutions to common road problems.

This series of international conferences began in 1975 and has been held every four years since. Organized by the Transportation Research Board (TRB) and sponsored by the Low-Volume Roads Committee, the conference is hosted by the Center for Transportation Research (CTR) at The University of Texas at Austin. Conference cohosts are the Texas Department of Transportation; the Federal University of Rio Grande do Sul, Brazil; the University of Pretoria, South Africa; Tongji University, China; and Swinburne University of Technology, Australia.

The conference provides a unique opportunity for engineers, planners, administrators, and researchers to exchange information and explore the benefits of recent research and practical case studies related to low-volume roads. Conferees from many nations and environments will participate and share information in face-to-face dialogue.

The conference is cosponsored by the Bureau of Indian Affairs, U.S. Department of the Interior; the Federal Highway Administration, U.S. Department of Transportation; the Forest Service, U.S. Department of Agriculture; the Engineer Research and Development Center, U.S. Army Corps of Engineers; and the U.S. Environmental Protection Agency.

The conference will be held at the Austin Marriott at the Capitol in downtown Austin, Texas, USA. **The conference language is English (two preconference workshops will be presented in Spanish).** Proceedings of the conference will be published and distributed to all participants at the time of registration.

## **REGISTRATION**

Conference information can be obtained online at [www.TRB.org/Conferences/9LVR/](http://www.TRB.org/Conferences/9LVR/)

Early registration for the conference is encouraged. **The registration fee is \$425.00 if received by May 1, 2007, and \$475.00 thereafter.**

### *Registration by mail*

Detach the completed registration form (pages 17–20) and mail it with check or money order to

Jan Slack  
The University of Texas at Austin  
Department of Civil, Architectural,  
& Environmental Engineering  
ECJ Bldg., Room 6.10 (C1761)  
Austin, TX 78712-0278  
USA

### *Registration by web*

<http://www.cae.utexas.edu/9LVR/index.htm>

Office hours are 8 a.m. to 4 p.m., U.S. Central Time, Monday through Friday. For information or to register, contact Jan Slack, registration coordinator, at [jan@mail.utexas.edu](mailto:jan@mail.utexas.edu), phone: 512-471-4771, fax: 512-475-7314 (24 hours).

Payment can be made by check or money order payable to The University of Texas at Austin. If paying by credit card, please note that UT Austin accepts only Visa, MasterCard, or Discover.

## **CONFERENCE LOCATION**

The conference will be held at the Austin Marriott® at the Capitol in downtown Austin. The hotel is one of Austin's premier facilities, with ample and spacious meeting rooms and accommodations and an extensive business center; it is within walking distance to downtown entertainment and restaurants.

A Hotel Accommodation Form is provided in this brochure on pages 21–22. Complete the form and send it directly to the hotel. The deadline for receipt of reservations is Saturday, June 2, 2007. After this date, rooms and group rates are subject to availability.

The accommodations form should be mailed to

Group Room Coordinator  
Austin Marriott at the Capitol  
701 East 11th Street  
Austin, Texas 78701 USA

For hotel information, telephone 1-512-478-1111, or call toll free 1-800-648-4462. To obtain the conference room rate of \$85.00 per night, single (\$15.00 for each additional person) + 15% tax, please use the reservation code: **LVRLVRA** for single or double room; **LVRLVRB** for triple or quad room.

## CONFERENCE FORMAT

The three-day conference will include more than 80 presentations organized into 18 lectern sessions and one poster session. Authors from every continent will share their expertise about low-volume roads, on topics ranging from administration and planning to design and maintenance. The plenary session will be webcast on the World Wide Web.

The papers have been selected for quality and pertinence to low-volume road systems. Of the presentations, 46 will be given by authors from the United States and 34 will be contributed by authors from other countries. This mix assures a truly international perspective.

Seven preconference workshops will provide in-depth treatment of new developments. Attendees also can select one of the three half-day field trips. An optional postconference field trip to the Texas Transportation Institute is offered for an additional fee. Several social events during the conference will allow participants and their companions to interact and exchange information.

## PROCEEDINGS

The conference technical papers will be published as *Transportation Research Record: Journal of the Transportation Research Board, No. 1989*. The two-volume conference journal is included in the registration fee. Additional sets will be available on-site to registrants for \$47.50. The postconference price will be \$95.00, with a 25 percent discount for TRB affiliates. Orders can be submitted by mail to

Transportation Research Board  
Box 289  
Washington, DC 20055, U.S.A.

A check or money order in U.S. dollars must accompany the order and should be made payable to the Transportation Research Board. TRB will also accept Visa, MasterCard, or American Express.

Payment must be in U.S. funds drawn on a U.S. bank or by international money order. The charge for airmail delivery to destinations outside North America is \$8.50. Additional information can be obtained from the TRB Publications Sales Office at (202) 334-3213 or online at [www.TRB.org/bookstore](http://www.TRB.org/bookstore).

## PRECONFERENCE WORKSHOPS

Each preconference workshop will be presented if at least 20 participants register. Fees will be returned if the workshop is cancelled. The maximum registration for each workshop is 75 participants. **Registration for each half-day workshop is \$35.00 and for each full-day workshop is \$70.00.** Please register separately for the workshop(s) of your choice on the Registration Form.

**SUNDAY, JUNE 24, 2007, 8:30 A.M.–NOON**

### **WORKSHOP 1 (W1)**

#### **World Bank's Road Economic Decision Model (RED) (Spanish)**

RED is a consumer surplus model for evaluating investments in roads with traffic volumes between 50 and 200 vehicles per day. The model estimates vehicle operating costs and speeds, performs an economic comparison of investment alternatives and maintenance options, calculates switching values, and allows for assessing risk. This workshop (*a*) focuses on the RED model objectives, development, and characteristics through an overview of the evaluation modules and (*b*) presents case studies to illustrate the workings of the RED model.

**SUNDAY, JUNE 24, 2007, 8:30 A.M.–NOON**

### **WORKSHOP 2 (W2)**

#### **Best Management Practices for Design and Maintenance of Low-Volume Roads (English)**

This workshop addresses the key issues for building low-volume roads in a long-term, cost-effective, and environmentally sensitive manner. Addressing very low-volume roads in particular, the workshop will summarize key best practices for building a good, user-friendly, and lasting road. These include good planning, location, and road management; maintenance; and design details including surface drainage, drainage crossing design, use and improvement of materials, stable slope design techniques, and erosion control.

**SUNDAY, JUNE 24, 2007, 8:30 A.M.–NOON**

### **WORKSHOP 3 (W3)**

#### **Best Practices for Safety Improvements on Low-Volume Roads (English)**

Fatal crash rates are higher on local rural roads than on other functional classes of roads. Cities, towns, counties, and tribes are responsible for building and

maintaining much of the road mileage in the United States. These local governments constantly face the challenge of implementing cost-effective road safety improvements. This workshop addresses best practices for safety improvements on low-volume roads in the broadest sense. Presentations will be made on best practices in technology, procedures, and training—with emphasis on practical applications—for low-volume road safety.

**SUNDAY, JUNE 24, 2007, 1:30 P.M.–5:00 P.M.**

#### **WORKSHOP 4 (W4)**

##### **World Bank's Road Economic Decision Model (RED) (English)**

RED is a consumer surplus model for evaluating investments in roads with traffic volumes between 50 and 200 vehicles per day. The model estimates vehicle operating costs and speeds, performs an economic comparison of investment alternatives and maintenance options, calculates switching values, and allows for assessing risk. This workshop (*a*) focuses on the RED model objectives, development, and characteristics through an overview of the evaluation modules and (*b*) presents case studies to illustrate the workings of the RED model.

**SUNDAY, JUNE 24, 2007, 1:30 P.M.–5:00 P.M.**

#### **WORKSHOP 5 (W5)**

##### **Best Management Practices for Design and Maintenance of Low-Volume Roads (Spanish)**

This workshop addresses the key issues for building low-volume roads in a long-term, cost-effective, and environmentally sensitive manner. Addressing very low-volume roads in particular, the workshop will summarize key best practices to build a good, user-friendly, and lasting road. These include good planning, location, and road management; maintenance; and design details including surface drainage, drainage crossing design, use and improvement of materials, stable slope design techniques, and erosion control.

**SUNDAY, JUNE 24, 2007, 1:30 P.M.–5:00 P.M.**

#### **WORKSHOP 6 (W6)**

##### **Disaster Responses for Low-Volume Roads (English)**

This workshop will include presentations by U.S. and international experts demonstrating the importance of low-volume roads in the 2005 New Orleans evacuation, as well as the management of the repair of

hurricane-damaged low-volume roads in the Southeastern United States and techniques to deal with flood-damaged low-volume roads in New Zealand. The workshop will cover all aspects of low-volume roads and disasters from risk analysis to contract management to repair techniques. Individual presentations will be followed by an open panel session allowing the audience to discuss the subject with the presenters.

**SUNDAY, JUNE 24, 2007, 9:00 A.M.–5:00 P.M.**

### **WORKSHOP 7 (W7)**

#### **Design and Construction**

#### **of Surface Treatments (English)**

This workshop will offer a comprehensive examination of surface treatments and seal-coat technologies, with an emphasis on design and construction aspects. The workshop presenters are national and international experts who will discuss treatment types; asphalt and aggregate selection, properties, and testing; design and specifications; application and constructability; construction equipment; inspection; and quality control. The information will draw on a balanced combination of local and worldwide best practices and findings from recent research.

### **FIELD TRIPS**

The conference offers the choice of three field trips. Each trip will depart at approximately 7:00 a.m., Tuesday, June 26, 2007. The field trips are open to spouses and guests for an additional fee. Please see the registration form for other spouse and guest programs at the conference.

All times shown are approximate. Updated details will be posted later.

*Note:* Each field trip is scheduled to depart from and return to the host hotel at approximately the same time on June 26, 2007. Registrants can participate in only one of the field trips. Please indicate your choice of field trip on the enclosed Registration Form.

#### **Field Trip Option 1: Canyon Dam Spillway**

The field trip to Canyon Dam provides an opportunity to see the results of severe flooding and the low-volume road that was washed out during the 2002 flood. The gorge that participants will hike was created by the floodwater. Participants will see the dramatic



erosion effects of water, which scoured the solid rock chasm for three days.

This will be a morning in the sun with some hiking. If you plan to attend this field trip, bring comfortable shoes (e.g., hiking boots or sneakers), sunscreen, and a hat. Participants will be required to sign a liability release.

Depart from host hotel: 7:00 a.m.

Return to host hotel: 2:30 p.m.

### **Field Trip Option 2: Chip Seal Demonstration**

A visit to Comal County with the staff of the County Engineer's office will provide participants with an opportunity to see new low-volume road construction and a chip seal demonstration and to participate in a Q&A session with local experts concerning chips, emulsions, and other materials used in the process.

Depart from host hotel: 7:00 a.m.

Return to host hotel: 2:30 p.m.

### **Field Trip Option 3: Selah—Bamberger Ranch Preserve**

The field trip to Bamberger Ranch will be an opportunity for participants to see low-volume roads, drainage systems, and low-water crossings within the ranch, as well as the amazing environmental recovery of the ranchland. The property owner has gone to great lengths to return the land to its original state, back to a time before cattle grazing and farming activities had removed all the native grasses, trees, and plants.

In the late 1970s, David Bamberger was on the board of the American Zoo and Aquarium Association (AZAA). Zoos at that time were experiencing problems with survival of endangered species because of inbreeding and lack of genetic diversity. AZAA asked Bamberger if he would donate land and participate in a captive breeding program to preserve a species from extinction through monitoring and maintaining diverse genetic material in one place. Bamberger donated 1 square mile (643 acres) to the Species Survival Program and AZAA chose the scimitar-horned oryx as the best candidate.

Depart from host hotel: 7:00 a.m.

Return to host hotel: 2:30 p.m.

## **LOCAL AREA INFORMATION**

The city of Austin, Texas is located on the bank of the Colorado River in central Texas, where rich black lands meet scenic hills. A hub of culture, government, and industry, Austin also is considered the live music capital of the world and has become a favorite place for musicians and music fans alike.

Austin was founded in 1839 by five mounted scouts seeking a site for a new capital city of the Republic of Texas. The site, then called Waterloo, was renamed in honor of Stephen F. Austin, the “father of Texas.” In September 1839, archives and furniture of the Texas government were transported from Houston to Austin by 50 ox-drawn wagons. Today Austin is accessible via three major corridors: Interstate 35, U.S. Highway 290, and U.S. Highway 183. In addition, nine airlines operate out of 25 gates at the Austin Bergstrom International airport, providing nonstop flights to more than 30 U.S. cities and international airports.

Conference arrangements are being handled by the Center for Transportation Research at The University of Texas at Austin. The conference will be housed at the Marriott at the Capitol in downtown Austin.

## **TRAVEL**

### **By Air**

Nine airlines operate out of 25 gates at the Austin Bergstrom International Airport, providing nonstop flights to 34 U.S. cities. Nonstop services between Austin and many international airports, such as Dallas–Fort Worth and New York, make Austin a one-stop destination for many international flights through these hubs.

### **By Bus**

SuperShuttle and the Route 100 airport bus provide access to Austin Bergstrom International Airport. Downtown Austin and Austin’s main tourist destinations are well served by a high-quality bus service.

## **FAMILY AND COMPANION PROGRAM**

The conference site in Austin offers the following attractions:

### **Downtown Austin Attractions**

- Congress Avenue Bridge Bats
- Red Granite Texas State Capitol
- Free tours to Governor's Mansion
- Historic walking tours
- Lyndon B. Johnson Library and Museum
- Texas State History Museum
- Austin Children's Museum
- Laguna Gloria Art Museum
- Austin Lyric Opera
- Warehouse entertainment district:
  - Restaurants, microbreweries, pubs, coffeehouses, martini and cigar bars, jazz and blues bands

### **Around Austin**

- Lady Bird Johnson Wildflower Center
- Zilker Botanical Gardens
- Umlauf Sculpture Garden
- Golf excursions
- Austin steam train
- Volente Beach
- Shopping at the Arboretum

Depending on the level of interest, the conference organizers will arrange excursions to some of these sites. A fee will be charged to defray expenses.

## **SOCIAL EVENTS**

Companions are welcome to participate in all conference social events. Please indicate on the registration form if you will be accompanied; you must pay the indicated companion fees.

The **Welcoming Reception and Registration** will be held in the conference hotel on Sunday, June 24, from 6:00 p.m. to 8:00 p.m. Attendees can meet old and new friends and will enjoy refreshments and hearty hors d'oeuvres. **Companion fee: \$20.00**

**Monday Luncheon** at the conference hotel will feature an insightful presentation on the reconstruction efforts in Iraq. Andrew Griffith, Texas Department of Transportation, will share his first-hand experiences during a 1-year tour in Iraq. **Companion fee: \$40.00**



*Texas State History Museum*

**Monday Night Dinner at the Texas State History Museum** will offer participants and their spouses or guests an opportunity to browse three floors of exhibits about Texas's remarkable history and to enjoy a catered dinner. **Companion fee: \$65.00**

**The Social Hour and Conference Banquet** will be held on Wednesday, June 27, from 6:00 p.m. to 9:00 p.m. at the conference hotel. Participants will enjoy an excellent dinner, hear a few speeches, and wish a fond farewell to newfound friends.

**Companion fee: Social Hour, \$25.00; Banquet, \$70.00**

## **PRELIMINARY PROGRAM**

**SUNDAY, JUNE 24, 2007, 8:00 A.M.–5:00 P.M.**

### **Registration**

**SUNDAY, JUNE 24, 2007, 8:30 A.M.–NOON**

### **WORKSHOP 1 (W1)**

**World Bank's Road Economic Decision Model (RED) (Spanish)**

**SUNDAY, JUNE 24, 2007, 8:30 A.M.–NOON**

### **WORKSHOP 2 (W2)**

**Best Management Practices for Design and Maintenance of Low-Volume Roads (English)**

**SUNDAY, JUNE 24, 2007, 8:30 A.M.–NOON**

### **WORKSHOP 3 (W3)**

**Best Practices for Safety Improvements on Low-Volume Roads (English)**

**SUNDAY, JUNE 24, 2007, 2007, NOON–1:30 P.M.**

### **Lunch on Your Own**

**SUNDAY, JUNE 24, 2007, 1:30 P.M.–5:00 P.M.**

### **WORKSHOP 4 (W4)**

**World Bank's Road Economic Decision Model (RED) (English)**

**SUNDAY, JUNE 24, 2007, 1:30 P.M.–5:00 P.M.**

### **WORKSHOP 5 (W5)**

**Best Management Practices for Design and Maintenance of Low-Volume Roads (Spanish)**

**SUNDAY, JUNE 24, 2007, 1:30 P.M.–5:00 P.M.**

### **WORKSHOP 6 (W6)**

**Disaster Responses for Low-Volume Roads (English)**

**SUNDAY, JUNE 24, 2007, 9:00 A.M.–5:00 P.M.**

### **WORKSHOP 7 (W7)**

**Design and Construction of Surface Treatments (English)**

**SUNDAY, JUNE 24, 2007, 6:00 P.M.–8:00 P.M.**

### **Reception**

**MONDAY, JUNE 25, 2007, 8:00 A.M.–9:45 A.M.**

**PLENARY SESSION**

Michael T. Long, Oregon Department of  
Transportation, presiding

**WELCOME**

**Keynote Address: Planning Roads  
for Rural Communities** (9LVR-0296)

Maryvonne Plessis-Fraissard, World Bank  
The plenary session will be webcast on the World  
Wide Web.

**MONDAY, JUNE 25, 2007, 9:45 A.M.–10:15 A.M.**

**Break**

**MONDAY, JUNE 25, 2007, 10:15 A.M.–NOON**

**TECHNICAL SESSION 1:  
STABILIZATION 1**

Patrick T. Sullivan, Pennsylvania Department  
of Transportation, presiding

**Comprehensive Field Studies to Address  
the Performance of Stabilized Expansive  
Clays** (9LVR-0014)

Anand J. Puppala, University of Texas, Arlington  
Laureano Hoyos, University of Texas, Arlington  
Gautham Pillappa, University of Texas, Arlington  
Deepthi Vasudev, University of Texas, Arlington  
Deepthi Devulapalli, University of Texas, Arlington

**Feasibility of Copper Slag–Fly Ash Soil Mix  
as a Road Construction Material** (9LVR-0062)

Vasant Gurusiddappa Havanagi, Central Road  
Research Institute (CRRI), India  
Sudhir Mathur, Central Road Research Institute  
(CRRI), India  
Pullikanti Subramanya Prasad, Central Road  
Research Institute (CRRI), India  
Kamraj Nil Nil, Central Road Research Institute  
(CRRI), India

**Stabilization of Road Materials Using  
Nontraditional Stabilizers** (9LVR-0192)

Alex T. Visser, University of Pretoria, South Africa

**Mixing Efficiency for Stabilized Subgrades  
for Low-Volume Roads** (9LVR-0129)

Robert L. Parsons, University of Kansas  
Molly O'Connor, Black and Veatch  
Stephen Cross, Oklahoma State University

**MONDAY, JUNE 25, 2007, 10:15 A.M.—NOON**

**TECHNICAL SESSION 2:  
DESIGN**

Ronald W. Eck, West Virginia University, presiding

**Thickness Design Method for Bituminous-Stabilized Aggregate-Surfaced Roads**

(9LVR-0134)

W. James Wilde, Minnesota State University

**Development of a Simplified Mechanistic Design Procedure for Low-Volume Flexible Roads**

(9LVR-0149)

Norman D. Dennis, University of Arkansas

**Friction Reliability Criteria Applied to Horizontal Curves Design of Low-Volume Roads** (9LVR-0110)

Hernan de Solminihac, Pontificia Universidad Catolica de Chile

Sergio Vargas, Pontificia Universidad Catolica de Chile  
Bustos Marcelo, Universidad Nacional de San Juan,  
Argentina

**Correlation of CBR with Shear-Strength Parameters** (9LVR-0050)

Garry H. Gregory, Gregory Geotechnical  
Stephen Cross, Oklahoma State University

**MONDAY, JUNE 25, 2007, 10:15 P.M.—NOON**

**TECHNICAL SESSION 3:  
PLANNING**

Jolanda P. Prozzi, University of Texas, Austin,  
presiding

**Transportation Planning to Determine Low-Volume Road Standards, Long-Term Needs, and Environmental Risks and Tradeoffs**

(9LVR-0059)

Elizabeth M. Dodson, University of Montana  
Woodam Chung, University of Montana  
Keith Mills, Oregon Department of Forestry  
Rob Nall, Oregon Department of Forestry  
John Sessions, Oregon State University  
Greg Zartman, Logging Engineering International, Inc.

**Evaluating the Accessibility of High-Altitude Valleys: An Application to the Andean Region of San Juan, Argentina** (9LVR-0157)

Juan Enrique Marcet, Escuela de Ingenieria de Caminos de Montana, Argentina

Anibal Leodegario Altamira, Escuela de Ingenieria de Caminos de Montana, Argentina

Marcelo Gaston Bustos, Escuela de Ingenieria de Caminos de Montana, Argentina

Oscar Victor Cordo, Escuela de Ingenieria de Caminos de Montana, Argentina

Pablo Girardi Mancini, Escuela de Ingenieria de Caminos de Montana, Argentina

Oscar Mario Fernandez, Escuela de Ingenieria de Caminos de Montana, Argentina

Miguel Oscar Pereyra, Escuela de Ingenieria de Caminos de Montana, Argentina

**Regional Network Analysis of Log Truck Transportation on Public Roads in New Zealand by Using Geographic Information Systems** (9LVR-0036)

Les R. Dowdle, University of Canterbury, New Zealand

Robert A. Douglas, University of Canterbury, New Zealand

**Evaluating Economically Justified Road Works Expenditures on Unpaved Roads in Developing Countries** (9LVR-0185)

Rodrigo Archondo, World Bank

**MONDAY, JUNE 25, 2007, NOON–1:30 P.M.**

**CONFERENCE LUNCH**

Anthony R. Giancola, National Association of County Engineers, presiding

**Yoder Award Presentation**

*Guest Speaker:*

Andrew Griffith, Texas Department of Transportation

(continued on page 23)



**PREREGISTRATION FORM**  
**9th International Conference on Low-Volume Roads**  
Austin, Texas, June 24–27, 2007

The preregistration fee of \$425.00 per person includes entry to all sessions and breaks, Sunday reception, Monday lunch and Texas History Museum tour and dinner, Tuesday lunch and field trip, Wednesday banquet, and a copy of the two-volume conference proceedings. **The deadline for preregistration is May 1, 2007.** Forms received after the deadline will be handled as on-site registrations (\$475.00). Preregistrations received without payment will be returned. Companion tickets are available, if registered and paid in advance, as outlined in the registration information at the bottom of this form.

**REFUND AND CANCELLATION POLICIES**

The University of Texas at Austin reserves the right to cancel or make changes in the conference arrangements. A refund of the fee, less a \$50.00 administrative fee, will be made if written cancellation is received before May 31, 2007. If the conference is cancelled, the entire fee will be refunded.

**REGISTRATION PAYMENT INFORMATION**

Payment can be made by check or money order payable to *The University of Texas at Austin*. If paying by credit card via the Internet, please note that the University of Texas at Austin accepts only Visa, MasterCard, or Discover.

Your registration should be received by **May 1, 2007**.

**Registration by mail:**

Detach the completed registration form and mail it with check or money order to

Jan Slack  
The University of Texas at Austin  
Department of Civil, Architectural, & Environmental Engineering  
ECJ Bldg., Room 6.10 (C1761)  
Austin, TX 78712-0278  
USA

**Registration by web:**

<http://www.caeec.utexas.edu/9LVR/index.htm>

Office hours are from 8 a.m. to 4 p.m. U.S. Central Time, Monday through Friday. For information or to register, contact Jan Slack ([jan@mail.utexas.edu](mailto:jan@mail.utexas.edu)), registration coordinator.

Phone: 512-471-4771  
Fax: 512-475-7314 (24 hours)

## PARTICIPANT INFORMATION

*Please type or print. Complete a separate form for each registrant (include your spouse or companions here).*

Name: \_\_\_\_\_  
Last First Middle Initial

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Spouse or Companion Name(s): \_\_\_\_\_

If you have a dietary need or disability that requires special accommodation, please advise: \_\_\_\_\_

\_\_\_\_\_

### Conference Registration Fees: (select one)

Preregistration Fee (on or before May 1, 2007) \$425 \$ \_\_\_\_\_  
On-Site Registration Fee (after May 1, 2007) \$475 \$ \_\_\_\_\_

### Tuesday, June 26 Field Trips: (select one)

Canyon Dam Spillway \_\_\_\_\_  
Chip Seal Demonstration \_\_\_\_\_  
Bamberger Ranch \_\_\_\_\_

### Sunday, June 24 Pre-Conference Workshops:

World Bank's Road Economic Decision Model (RED)  
(W1) 8:30 a.m.–noon (Spanish) \_\_\_\_\_  
(W4) 1:30 p.m.–5:00 p.m. (English) \_\_\_\_\_

Best Management Practices for Design and Maintenance  
of Low-Volume Roads

(W2) 8:30 a.m.–noon (English) \_\_\_\_\_  
(W5) 1:30 p.m.–5:00 p.m. (Spanish) \_\_\_\_\_

Best Practices for Safety Improvements on  
Low-Volume Roads

(W3) 8:30 a.m.–noon \_\_\_\_\_  
Disaster Responses for Low-Volume Roads  
(W6) 1:30 p.m.–5:00 p.m. \_\_\_\_\_

Design and Construction of Surface Treatments

(W7) 9 a.m.–5:00 p.m. no. ( ) @ \$70 = \$ \_\_\_\_\_

### Thursday, June 28 Optional Field Trip to Texas Transportation Institute

no. ( ) @ \$55 = \$ \_\_\_\_\_

### Spouse or Guest Registration Fees:

Sunday Reception no. ( ) @ \$20 = \$ \_\_\_\_\_

Continental Breakfast Monday, Tuesday and Wednesday no. ( ) @ \$54 = \$ \_\_\_\_\_

Monday Spouse or Guest Excursion to San Antonio no. ( ) @ \$35 = \$ \_\_\_\_\_

Monday Lunch no. ( ) @ \$40 = \$ \_\_\_\_\_

Monday Museum tour/dinner no. ( ) @ \$65 = \$ \_\_\_\_\_

Tuesday Field Trip (includes lunch) (select one):

Canyon Dam Spillway no. ( ) @ \$55 = \$ \_\_\_\_\_

Chip Seal Demonstration no. ( ) @ \$55 = \$ \_\_\_\_\_

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**MARRIOTT AUSTIN AT THE CAPITOL ACCOMMODATION FORM**  
**9th International Conference on Low-Volume Roads**  
Austin, Texas, June 24-27, 2007

*Please complete both sides of this form and mail or fax to:*

Group Room Coordinator  
Austin Marriott at the Capitol  
701 East 11th Street  
Austin, TX 78701 USA

Telephone: 1-512-478-1111 or toll-free 1-800-648-4462  
Fax: 512-479-6458  
Internet: [www.marriott.com/ausdt](http://www.marriott.com/ausdt)

Credit card information must accompany reservation. **Reservation Code: LVRLVRA for single or double room; LVRLVRB for triple or quad room**

**Reservations must be received by Saturday, June 2, 2007.** After this date, rooms and group rates are subject to availability. To reserve your room, return this completed form and payment (via valid major credit card) to the hotel's Group Room Coordinator. Check-in: 3:00 p.m. Check-out: noon.

Name: \_\_\_\_\_  
Last First Middle Initial

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

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**Marriott Austin at the Capitol Accommodation Form** *(continued)*  
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Airport transportation to hotel: 10 miles to the hotel, Airport SuperShuttle (approximately \$13.00 U.S./person) or taxicab (approximately \$20.00 U.S.).

**MONDAY, JUNE 25, 2007, 1:30 P.M.–3:15 P.M.**

**TECHNICAL SESSION 4:  
SOIL STABILIZATION 2**

Anand J. Puppala, University of Texas, Arlington,  
presiding

**Laboratory and Field Evaluation of Fluid-Bed  
Combustion Fly-Ash as Granular Road Stabilizer**

(9LVR-0088)

Guillermo Thenoux, Pontificia Universidad Catolica  
de Chile

**Laboratory and Field Evaluation of Base  
Stabilization Using Cement Kiln Dust**

(9LVR-0021)

Zhiming Si, Texas Department of Transportation  
Caroline Herrera, Texas Department of  
Transportation

**Chloride Stabilization of Unpaved Road  
Aggregate Surfacing** (9LVR-0087)

Stephen Monlux, U.S. Department of Agriculture  
Forest Service

**Stabilization Mechanisms of Nontraditional  
Additives** (9LVR-0173)

Jeb S. Tingle, U.S. Army Engineer Research and  
Development Center

**MONDAY, JUNE 25, 2007, 1:30 P.M.–3:15 P.M.**

**TECHNICAL SESSION 5:  
MAINTENANCE 1**

I. Paul Sunwoo, U.S. Bureau of Indian Affairs,  
presiding

**Applicability of Existing Gravel Road  
Deterioration Models Questioned** (9LVR-0220)

Gerrie van Zyl, PD Naidoo and Associates  
Mervyn Henderson, Provincial Government  
Western Cape  
Robbie Uys, PD Naidoo and Associates

**Development of an Economic and Practical  
Alternative to Traditional Bituminous Surface  
Treatments** (9LVR-0216)

Michael Pinard, InfraAfrica Consultants

**Life-Cycle Cost Comparison of Strip Sealing  
and the Ultra-High-Pressure Watercutting  
Technique for Restoring Skid Resistance on  
Low-Volume Roads** (9LVR-0114)

Douglas D. Gransberg, University of Oklahoma  
Bryan Dale Pidwerbesky, Fulton Hogan Ltd.,  
New Zealand

**Development of Scheduling Algorithms for Routine Maintenance of Unsealed Roads in the Western Cape Province, South Africa**

(9LVR-0103)

Adriaan Francois Burger, PD Naidoo and Associates  
Mervyn Henderson, Provincial Government  
Western Cape

Gert Cornelis van Rooyen, University of Stellenbosch

**MONDAY, JUNE 25, 2007, 1:30 P.M.–3:15 P.M.**

**TECHNICAL SESSION 6:**

**ASSET MANAGEMENT**

Cesar A. V. Queiroz, World Bank, presiding

**Prioritization of Low-Volume Pavement Sections for Maintenance Based on Rapid Visual Condition Evaluation Using Fuzzy Logic**

(9LVR-0100)

Amrithalingam Veeraragavan, Indian Institute of  
Technology Madras

**Life-Cycle Economic Framework for Evaluating Alternative Road Construction Methods on Low-Volume Roads** (9LVR-0091)

Ron R. Gerbrandt, Saskatchewan Highways and  
Transportation, Canada

Curtis Berthelot, University of Saskatchewan, Canada

**Asset Valuation of Low-Volume Road Networks: Application to Chilean Infrastructure**

(9LVR-0090)

Hernan de Solminihac, Pontificia Universidad  
Catolica de Chile

Priscila Hidalgo, APSA, Chile

Alondra Chamorro, Pontificia Universidad Catolica  
de Chile

**Asset Management Strategy for Unsealed Low-Volume Roads in New Zealand** (9LVR-0042)

Bryan Dale Pidwerbesky, Fulton Hogan Ltd.,  
New Zealand

Simon Hunt, Fulton Hogan Ltd., New Zealand

Robert A. Douglas, University of Canterbury,  
New Zealand

**MONDAY, JUNE 25, 2007, 3:15 P.M.–3:45 P.M.**

**Break**



**MONDAY, JUNE 25, 2007, 3:45 P.M.–5:30 P.M.**

**TECHNICAL SESSION 7:  
PAVEMENT EVALUATION**

Mustaque Hossain, Kansas State University,  
presiding

**Applying Methodologies to Evaluation of  
Unpaved Roads Surface Condition in the  
Municipal District of Aquiraz, Ceará, in the  
Northeast of Brazil (9LVR-0232)**

Ernesto Ferreira Nobre, NUPELTD-UFC, Brazil

**Pavement Performance Evaluation of Three  
Canadian Low-Volume Test Roads (9LVR-0077)**

Susan L. Tighe, University of Waterloo, Canada  
Lynne Cowe Falls, University of Calgary, Canada  
Guy Dore, Laval University, Canada

**Three Low-Cost Techniques for Determining  
When to Place and Remove Seasonal Load  
Restrictions on Low-Volume Roads (9LVR-0046)**

Maureen A. Kestler, USDA Forest Service  
Richard L. Berg, Frost Associates  
Bryan C. Steinert, Haley & Aldrich, Inc.  
Gordon Hanek, USDA Forest Service  
Mark Truebe, Willamette National Forest  
Dana N. Humphrey, University of Maine

**Modeling the Response of Paved Low-Volume  
Roads Under Various Traffic and Seasonal  
Conditions (9LVR-0152)**

Nabil Suleiman, University of North Dakota  
Amiy Varma, North Dakota State University

**MONDAY, JUNE 25, 2007, 3:45 P.M.–5:30 P.M.**

**TECHNICAL SESSION 8:  
MAINTENANCE 2**

Mark J. Nahra, Delaware County, presiding

**The Rebirth of Chip Sealing in Minnesota  
(9LVR-0135)**

Thomas John Wood, Minnesota Department of  
Transportation  
Roger C. Olson, Minnesota Department of  
Transportation

**Best Practices for Pavement Edge Maintenance:  
The Farm-to-Market Road System in Texas  
(9LVR-0044)**

William D. Lawson, Texas Tech University  
Shabbir Hossain, Virginia Transportation Research  
Council

**Low-Volume Unpaved State Highways in Arizona: Innovative Approaches (9LVR-0016)**

Richard L. Powers, Arizona Department of Transportation

**Privatization of Low-Volume Road Maintenance Management, Malaysian Experience (9LVR-0196)**

Tahir bin Ahmad, Selia Selenggara Sdn Bhd  
Mustaque Hossain, Kansas State University

**MONDAY, JUNE 25, 2007, 3:45 P.M.–5:30 P.M.**

**TECHNICAL SESSION 9:  
ENVIRONMENT**

Michael T. Long, Oregon Department of Transportation, presiding

**Rapid Survey of Road Conditions to Determine Environmental Effects and Maintenance Needs (9LVR-0128)**

Keith Mills, Oregon Department of Forestry  
Liz Dent, Oregon Department of Forestry  
Jennie Cornell, Washington State Department of Natural Resources

**Reduced-Impact Logging (RIL) Road Issues in Tropical Forests (9LVR-0068)**

Gordon Rex Keller, USDA Forest Service  
Jonathan Berry, USDA Forest Service

**Watershed Sediment Reduction (9LVR-0139)**

Eugene Charles Calvert, Collier County Transportation  
Stephen H. Ford, Mendocino County Department of Transportation  
Howard N. Dashiell, Mendocino County Department of Transportation

**Evaluation of the Effect of Edge Lines on Narrow Highways with Low Traffic Volume in Louisiana (9LVR-0182)**

Xiaoduan Sun, University of Louisiana  
Jae Hyun Park, Korea Institute of Construction Technology

**MONDAY, JUNE 25, 2007, 7:00 P.M.–10:00 P.M.**

**DINNER AT TEXAS STATE HISTORY MUSEUM**

**TUESDAY, JUNE 26, 2007, 7:00 A.M.–2:30 P.M.**

**FIELD TRIP** (lunch provided on field trip)

**TUESDAY, JUNE 26, 2007, 3:00 P.M.–3:30 P.M.**

**Break**

**TUESDAY, JUNE 26, 2007, 3:30 P.M.–5:30 P.M.**

**MEET-THE-AUTHOR POSTER SESSION**

G. P. Jayaprakash, Transportation Research Board,  
presiding

**Strategic Planning for Optimization of Road  
Building Materials in the Overberg District  
Municipality (9LVR-0219)**

Gerrie van Zyl, PD Naidoo and Associates  
Gerhard Fourie, PD Naidoo and Associates  
Mervyn Henderson, Provincial Government  
Western Cape

**Rapid Soils Analysis Kit for Low-Volume Roads  
and Contingency Airfields (9LVR-0066)**

Ernest S. Berney, U.S. Army Engineer Research and  
Development Center  
Ronald E. Wahl, U.S. Army Engineer Research and  
Development Center

**Stabilization of Surficial Slides Using Recycled  
Plastic Reinforcement (9LVR-0117)**

J. Erik Loehr, University of Missouri, Columbia  
Thomas W. Fennessey, Missouri Department of  
Transportation  
John J. Bowders, University of Missouri, Columbia

**MnROAD Low-Volume Road Performance  
Related to Traffic Loadings (9LVR-0140)**

Benjamin James Worel, Minnesota Department of  
Transportation  
Tim Clyne, Minnesota Department of Transportation

**New Products Evaluation Program for  
Lower-Volume Local Roads (9LVR-0019)**

Robert Gray, Pennsylvania Department of  
Transportation  
Jeffery G. Roback, Pennsylvania Department of  
Transportation

**MnROAD Low-Volume Road Lessons Learned  
(9LVR-0137)**

Benjamin James Worel, Minnesota Department of  
Transportation  
David M. Johnson, Minnesota Department of  
Transportation  
Lev Khvanovich, University of Minnesota–Twin Cities

**Use of Tank-Bottom Sludge to Construct and Upgrade Graded Roads (9LVR-0037)**

Ramzi A. Taha, Sultan Qaboos University

**Aggregate Surfacing Design and Management for Low-Volume Roads in Temperate, Mountainous Areas (9LVR-0136)**

Keith Mills, Oregon Department of Forestry

Mavin Pyles, Oregon State University

Rick Thoreson, Oregon Department of Forestry

**Alaska's Dense-Graded High-Float Emulsion Surface Treatments: A New Mix Design**

(9LVR-0150)

Steve Saboundjian, Alaska Department of Transportation and Public Facilities

Robert L. McHattie, GZR Engineering

**TUESDAY, JUNE 26, 2007, 3:30 P.M.–5:30 P.M.**

**HOT TOPICS SESSION 1**

Cheri F. Marti, University of Minnesota, presiding

Engage in informal small-group discussions on timely low-volume road “hot topics” facilitated by key experts. Each roundtable discussion will offer valuable information on best practices and lessons learned as well as provide helpful resource material. Ask questions, share experiences, learn from others, and gain practical information to apply to your low-volume road needs. Participants will have the opportunity to rotate among their selection of table topics to gather information, receive expert assistance, and expand their resource network for a wide range of timely topics. Table topics for Session 1 will focus on new materials and on preservation and management techniques.

**TUESDAY, JUNE 26, 2007, 7:30 P.M.–9:00 P.M.**

**TRB LOW-VOLUME ROADS COMMITTEE (AFB30) MEETING**

Anthony R. Giancola, National Association of County Engineers, presiding

WEDNESDAY, JUNE 27, 2007, 8:00 A.M.–9:45 A.M.

**TECHNICAL SESSION 10:  
PAVEMENT GENERAL**

Alex T. Visser, University of Pretoria, South Africa,  
presiding

**Guidelines for Selecting Surfacing Alternatives  
for Unsealed Roads (9LVR-0144)**

Theuns F.P. Henning, MWH Global

**Variability and Control of Gravel Road Visual  
Assessments (9LVR-0217)**

Gerrie van Zyl, PD Naidoo and Associates  
Andre van der Gryp, Western Cape Provincial  
Administration

**Mine Haul-Road Condition Triggered  
Maintenance Using Reconstructed Vehicle  
Response to Haul-Road Defects (9LVR-0033)**

Daniel Hugo, University of Pretoria, South Africa  
Stephan Heyns, University of Pretoria, South Africa  
Roger Thompson, University of Pretoria, South Africa  
Alex T. Visser, University of Pretoria, South Africa

**Mechanistic-Empirical Approach for Prediction  
of Remaining Life of Low-Volume Roads Using  
Falling-Weight Deflectometer Deflections  
(9LVR-0035)**

Sabine Werkmeister, University of Canterbury,  
New Zealand  
Bruce Steven, University of California, Davis  
David Alabaster, Transit New Zealand

WEDNESDAY, JUNE 27, 2007, 8:00 A.M.–9:45 A.M.

**TECHNICAL SESSION 11:  
CONSTRUCTION**

E. Dean Carlson, Carlson Associates, presiding

**Exploring Alternative Strategies for the  
Rehabilitation of Low-Volume Roads in Nevada  
(9LVR-0051)**

Gayle Maurer, Nevada Department of Transportation  
Sohila Bemanian, Nevada Department of  
Transportation  
Patricia L. Polish, Nevada Department of  
Transportation

**Investigation of a Flexible Slurry–Microsurfacing System for Overlay Preparation: Construction and Seasonal Monitoring at MnROAD**

(9LVR-0057)

Eddie N. Johnson, Minnesota Department of Transportation

Thomas John Wood, Minnesota Department of Transportation

Roger C. Olson, Minnesota Department of Transportation

**Forensic Case Studies on Low-Volume Roads in Texas** (9LVR-0034)

Zhiming Si, Texas Department of Transportation

Caroline Herrera, Texas Department of Transportation

**Environmental and Traffic Deterioration Using a Mechanistic-Empirical Pavement Design Model: A Canadian Example** (9LVR-0078)

Susan L. Tighe, University of Waterloo, Canada

Ken Huen, University of Waterloo, Canada

Ralph Haas, University of Waterloo, Canada

**WEDNESDAY, JUNE 27, 2007, 8:00 A.M.–9:45 A.M.**

**TECHNICAL SESSION 12:**

**MATERIALS 1**

James Kozik, U.S. Department of Agriculture Forest Service, presiding

**Use of Naturally Occurring Pozzolans for Road Construction in Tanzania** (9LVR-0195)

Mbakisya A. Onyango, Kansas State University

Innocent Macha, COWIconsult

Christian Busch, COWI A/S, Denmark

**Comparative Analysis of Commonly Used Aggregate Materials and Placement Methods for a Wearing Course on Low-Volume Roads in Pennsylvania** (9LVR-0120)

Steve Michael Bloser, Pennsylvania State University

**Characterization of Some Tropical Soils for Road Pavements** (9LVR-0032)

André Molenaar, Delft University of Technology, Netherlands

**Selection and Use of Locally Available Pavement Materials for Low-Volume Roads in Western Australia** (9LVR-0048)

Stephen Emery, Kubu Australia Pty Ltd  
Geoff Cocks, Coffey Geosciences Pty Ltd  
Ross Keeley, Main Roads Western Australia

**WEDNESDAY, JUNE 27, 2007, 9:45 A.M.–10:15 A.M.  
Break**

**WEDNESDAY, JUNE 27, 2007, 10:15 A.M.–NOON  
TECHNICAL SESSION 13: DUST**

Maureen A. Kestler, USDA Forest Service,  
presiding

**Improvement of Functional Designation of Low-Volume Roads by Dust Abatement in Lithuania** (9LVR-0124)

Daiva Zilioniene, Vilnius Gediminas Technical University, Lithuania  
Donatas Cygas, Vilnius Gediminas Technical University, Lithuania  
Antanas Aloyzas Juzenas, Vilnius Gediminas Technical University, Lithuania  
Algirdas Jurgaitis, Vilnius University, Lithuania

**Development of a Methodology for Vehicles Dust Emission Measurement on Unpaved Roads** (9LVR-0063)

Guillermo Thenoux, Pontificia Universidad Catolica de Chile

**Evaluation of Products and Application Procedures for Mitigating Dust in Temperate Climates** (9LVR-0027)

John F. Rushing, U.S. Army Engineer Research and Development Center  
Jeb S. Tingle, U.S. Army Engineer Research and Development Center

**Stabilization and Dust Control at the Buenos Aires National Wildlife Refuge** (9LVR-0147)

Roger W. Surdahl, Federal Highway Administration  
J. Heather Woll, FHWA Federal Lands, CFLHD  
H. Rick Marquez, FHWA Federal Lands, CFLHD

WEDNESDAY, JUNE 27, 2007, 10:15 A.M.—NOON

**TECHNICAL SESSION 14:  
PAVEMENT MANAGEMENT**

Lynne H. Irwin, Cornell University, presiding

**Establishing Deterioration Models for Local  
Roads in Australia** (9LVR-0012)

George John Giummarra, ARRB Transport  
Research Ltd.

**Managing Low-Volume Roads with Wisconsin  
Information System for Local Roads** (9LVR-0209)

Mary Reckner Ebeling, University of Wisconsin,  
Madison

Jason Bittner, University of Wisconsin, Madison

**Network Level Performance Measures  
for Low-Volume Highways in Alberta, Canada**

(9LVR-0121)

Roy Jurgens, Alberta Infrastructure and  
Transportation, Canada

**The ROADDEX II Project: Focusing on  
Low-Volume Roads in the European  
Northern Periphery** (9LVR-0022)

Timo Saarenketo, Roadscanners OY

Ronald Munro, Munroconsult Ltd

Richard Evans, The Highland Council

WEDNESDAY, JUNE 27, 2007, 10:15 A.M.—NOON

**TECHNICAL SESSION 15: STRUCTURES**

Gordon Rex Keller, USDA Forest Service, presiding

**Geomorphic, Aquatic, and Engineering  
Design Considerations for Low-Water Crossings**

(9LVR-0098)

Gordon Rex Keller, USDA Forest Service

Kim Clarkin, USDA Forest Service

**Precast Modified Beam-in-Slab Bridge System: An  
Alternative Replacement for Low-Volume Roads**

(9LVR-0223)

Travis F. Konda, HNTB Corporation

F. Wayne Klaiber, Iowa State University

Terry J. Wipf, Iowa State University

Thomas P. Schoellen, Blackhawk County Engineers  
Office

**Choosing the Best Site for a Bridge** (9LVR-0226)

James Scott Groenier, USDA Forest Service

Robert Gubernick, USDA Forest Service



**Just Build a Simplified Bid Process for Bridge Replacements** (9LVR-0109)

Amy Toohey, Ohio Department of Transportation  
Randy Comisford, Ohio Department of Transportation  
Curtis Zigan, Ohio Department of Transportation

**WEDNESDAY, JUNE 27, 2007, NOON–1:30 P.M.**

**Lunch on Your Own**

**WEDNESDAY, JUNE 27, 2007, 1:30 P.M.–3:15 P.M.**

**TECHNICAL SESSION 16:**

**MATERIALS 2**

Jorgé A. Prozzi, University of Texas, Austin,  
presiding

**Kimberlite Tailings: A Road Construction Material** (9LVR-0052)

Sudhir Mathur, Central Road Research Institute  
(CRRI), India

**Failure Mechanism and Design Criterion for Low-Volume Roads Subgrade Widening**

(9LVR-0156)

Jianming Ling, Tongji University, China  
Jinsong Qian, Tongji University, China

**The Development of Performance-Based Tests for Nontraditional Road Additives** (9LVR-0214)

David J. Jones, University of California, Davis

**WEDNESDAY, JUNE 27, 2007, 1:30 P.M.–3:15 P.M.**

**TECHNICAL SESSION 17: GEOSYNTHETIC**

Jeb S. Tingle, U.S. Army Engineer Research and  
Development Center, presiding

**Discussion of Empirical Design Methods for Geosynthetic Reinforced Low-Volume Roads**

(9LVR-0174)

Jeb S. Tingle, U.S. Army Engineer Research and  
Development Center

**Analysis of Geotextile Response to Common Index Property Tests** (9LVR-0138)

Sarah Jersey, U.S. Army Engineer Research and  
Development Center

Jeb S. Tingle, U.S. Army Engineer Research and  
Development Center

**Geotextile Separators for Dust Suppression on Unbound (Gravel) Roads (9LVR-0030)**

John J. Bowders, University of Missouri, Columbia  
Elisabeth Anne Freeman, University of Missouri-Columbia

**Mechanistic-Empirical Design Model Predictions for Base-Reinforced Pavements (9LVR-0106)**

Steve Will Perkins, Montana State University

**WEDNESDAY, JUNE 27, 2007, 1:30 P.M.–3:15 P.M.**

**TECHNICAL SESSION 18:**

**TECH TRANSFER**

Achille Alonzi, Federal Highway Administration, presiding

**Guidelines for Engineering Analysis of Motorized Mixed Use on Low-Volume Roads in the National Forests of the United States**

(9LVR-0054)

Andrew Edward Gilliland, USDA Forest Service

**Designing Low-Volume Road Pavements in Northern Europe Against Permanent Deformation (9LVR-0221)**

Andrew R. Dawson, University of Nottingham, United Kingdom

**Sustainable Innovative Surfacing Treatments for Low-Volume Roads (9LVR-0041)**

Bryan Dale Pidwerbesky, Fulton Hogan Ltd., New Zealand

Jeff Waters, Fulton Hogan Ltd.

**Planning Roads for Darfur, Sudan (9LVR-0017)**

Mathew J. Betz, retired

**WEDNESDAY, JUNE 27, 2007, 3:15 P.M.–3:45 P.M.**

**Break**

**WEDNESDAY, JUNE 27, 2007, 3:45 P.M.–5:30 P.M.**

**HOT TOPICS SESSION 2**

Ann Johnson, University of Minnesota, presiding

Engage in informal small-group discussions on timely low-volume road “hot topics” facilitated by key experts. Each roundtable discussion will offer valuable information on best practices and lessons learned as well as provide helpful resource material. Ask questions, share experiences, learn from others, and gain practical information to apply to your low-volume road needs. Participants will have the opportunity to rotate among their selection of table topics to gather information, receive expert assistance, and expand their resource network for a range of timely topics. Table topics for Session 2 will focus on planning, design, and safety.

**WEDNESDAY, JUNE 27, 2007, 6:00 P.M.–7:00 P.M.**

**SOCIAL HOUR**

**Companion fee: \$25.00**

**WEDNESDAY, JUNE 27, 2007, 7:00 P.M.–9:00 P.M.**

**CONFERENCE BANQUET**

**Companion fee: \$70.00**

**THURSDAY, JUNE 28, 2007, 9:30 A.M.–5:30 P.M.**

**OPTIONAL FIELD TRIP TO TEXAS  
TRANSPORTATION INSTITUTE**



**Transportation Research Board  
500 Fifth Street, NW  
Washington, DC 20001**