

This is  
your invitation  
to the 2003

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# Western Bridge Engineers' Seminar

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**Bridge Engineering  
in a Changing World**

October 5-8, 2003

John Ascuaga's Nugget  
Sparks/Reno, Nevada

The Western Bridge Engineers' Seminar is a biennial cooperative effort by the Federal Highway Administration Western Resource Center and the Transportation Departments of Alaska, California, Idaho, Nevada, Oregon, and Washington. Its purpose is the exchange of information between government agencies, consultants, contractors, educators, and suppliers on subjects of current importance to the design, construction, and maintenance of bridges. The theme of the 2003 technical program is "Bridge Engineering in a Changing World". An exhibit area will feature booths displaying products and services of interest to seminar participants.

## LOCATION

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Technical sessions, luncheons, and banquet will be held at:

**John Ascuaga's Nugget** in Sparks/Reno, Nevada

**Phone: (US or Canada)**

**Direct: 1-775-356-3300 or 1-800-648-1177**

Be sure to mention the Western Bridge Engineers' Seminar and *Reference G Bridge* when making reservations.

The Nugget is located on I-80, minutes from the Reno-Tahoe International Airport. **The Nugget offers free frequent shuttle service to and from the airport.** Bus and train stations are also within easy reach. **Rental cars** are available at the airport. Driving from the Airport – Take US 395 North, Turn right on I-80 and follow to Nugget Avenue Exit.

## SEMINAR REGISTRATION

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The \$240 registration fee is due September 15, 2003. Late registration after September 15 is \$275. Registration fee includes technical program, refreshments at breaks, 2 luncheons, and the Tuesday evening banquet. To register please return the form included with this brochure. Payments may be made by check or Credit Card (Visa or Mastercard). Registration desk hours will be:

|           |                                 |
|-----------|---------------------------------|
| Sunday    | October 5 – 4:00 pm to 8:00 pm  |
| Monday    | October 6 – 7:30 am to 5:00 pm  |
| Tuesday   | October 7 – 7:30 am to 5:00 pm  |
| Wednesday | October 8 – 7:30 am to 11:00 am |

Late registrations may be limited. A refund of the registration fee minus a \$30 service charge will be given for cancellation prior to September 15. A telephone call to the Conference Manager Jean Canfield at (360) 943-7732 will give you current registration information.

## GUEST PROGRAM

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Come join us at John Ascuaga's Nugget in Sparks/Reno, Nevada, where your friendly Nevada hostesses have planned a fun filled week to make your stay unforgettable! Enjoy a tour of historic Virginia City in the heart of the Comstock where gold was mined. Tour Carson City, the Nevada State Capitol, and home of the state's largest historic district. Enjoy lunch and a paddlewheel cruise of scenic Lake Tahoe. You will marvel at the clear sparkling water and beautiful mountain scenery. On Wednesday, your final day, a special breakfast and program has been arranged for your enjoyment.

## HOTEL RESERVATIONS

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Reservations are to be made directly with John Ascuaga's Nugget where a block of rooms is being held for seminar participants. Prices for Seminar participants are:

**\$92 Single/Double    \$102.00 Triple    \$112.00 Quad**

To receive these special rates you must mention **Western Bridge Engineers' Seminar** and **Reference G Bridge**. Make your room reservation by September 1. Upon request, information regarding additional hotels will be sent.

# Sunday / October 5, 2003

4:00 pm to 8:00 pm

REGISTRATION (Foyer near meeting rooms)

ICE BREAKER RECEPTION (*In exhibit hall*)

# Monday / October 6, 2003

7:30 am

REGISTRATION (Foyer near meeting rooms)

8:00 am

CONTINENTAL BREAKFAST (Exhibit Area)

8:30 am to 10:00 am

OPENING SESSION

**Welcome and Opening Remarks**

**Introduction of Opening Session Speakers**

**Bill Crawford**, Seminar Chairman and Chief  
Bridge Engineer, Nevada Dept. Transportation

8:45 am

KEYNOTE ADDRESS

**Jeffrey Fontaine, P.E.**

Director, Nevada Department of Transportation

9:15 am

**What's Happening with Bridge Security?**

**Richard Land**, State Bridge Engineer, CALTRANS

Break 10:00 am to 10:30 am

10:30 am to 12:00 noon

GENERAL SESSION

**The Basis of the LRFD Specifications:**

**A Bridge Designer's View**

**Dennis Mertz, P.E.**, University of Delaware, Dept.  
Civil Engineering, Newark, DE

Luncheon 12:00 noon to 1:30 pm

1:30 pm to 3:00 pm

TECHNICAL SESSIONS

1A. INNOVATIVE CONSTRUCTION

**Bridge in a Day**

**Keith Gazaway**, Simon Wong Engr, San Diego, CA

**Minimizing Impacts to the Public Through Innovative  
Techniques**

**Steve Aisaka**, Parametrix, Kirkland, WA

**Larry Kyle**, HDR Engineers, Inc., Bellevue, WA

**Bubble Curtain Systems for use During Marine Pile  
Driving**

**Glen Fleming**, CALTRANS, Sacramento, CA

1B. REHABILITATION

**Load Upgrade of Concrete Box Girder with External  
Shear Hanger**

**Luke Su**, ABKJ Engineering, Seattle, WA

## **Improving Short Span Precast Concrete Bridge Performance by Making Simple Spans Continuous**

**Dale Serink**, UMA Engineering Ltd.

**Reg Quinton**, UMA Engineering, Ltd.

## **Skyway Guidway Beam Restorations – Jacksonville Transportation Authority**

**Robert Murray**, Parametrix

**Gary Clough**, Jacksonville Transportation Authority

### **1C. COMPUTER APPLICATIONS**

#### **Do-it-yourself Bridge Engineering Software**

**Richard Brice**, Washington DOT, Olympia, WA

**Richard Pickings**, President, Bridge Sight Software, Rescue, CA

#### **Congestion & Conflict Mitigation: the Practice, the Issues, and the Tools**

**Brian Maroney**, CALTRANS, Sacramento, CA

**Matthew Griggs**, Dokken Eng., Rancho Cordova, CA

#### **Pushover Analysis of Bridges**

**Majid Sarraf**, Imbsen & Assoc., Sacramento, CA

**Roy Imbsen**, Imbsen & Associates, Sacramento, CA

**Break 3:00 pm to 3:30 pm**

**3:30 pm to 5:00 pm**

### **TECHNICAL SESSIONS**

#### **2A. INNOVATIVE DESIGN**

##### **Galena Creek: Pilot Truss Design Alternative**

**Troy Martin**, Nevada DOT, Carson City, NV

##### **Lower Albina Bridge – Innovative Post-Tensioned Design Concept**

**Gary Conner**, CH2M Hill, Corvallis, OR

##### **11th Avenue Underpass, Design and Construction of a Steel Superstructure Supported on Slurry Walls**

**James Porter**, J-U-B Engineers, Boise, ID

**Clair Waite**, Terracon, Inc., Boise, ID

#### **2B. LESSONS LEARNED**

##### **Lessons Learned from Debonding of Highway Bridge Deck Concrete Overlays**

**Paul Carter**, CH2M Hill, Edmonton, Alberta, Canada

##### **Lessons Learned From the Field**

**Mohammad Sheikhezadeh**, WA DOT, Olympia, WA

##### **Repair of Post-Tensioned Concrete Box Girder Bridges**

**Richard Liptak**, Dokken Engineers

**Matthew Salveson**, Dokken Engineers

#### **2C. FOUNDATIONS**

##### **Innovative Approaches for the Design of Integral Abutment Bridges**

**David LeBlanc**, CH2M Hill, Detroit, MI

##### **Soil Structure Interaction Approaches for Long-Span Bridges Against Earthquake Loading New Design and Retrofitting**

**Ignatius Lam**, Earth Mechanics, Fountain Valley, CA

**Construction of the Sound Transit Beacon Hill Tunnel West Portal Under I-5 Viaduct in Seattle, WA**

**David Korpi**, Jacobs Civil, Inc., Bellevue, WA

**Mike Lehnen**, Hatch Mott MacDonald, Bellevue, WA

**Trevor Taylor**, Jacobs Civil, Inc., Bellevue, WA

## **Tuesday / October 7, 2003**

**7:30 am Registration**

**8:00 am COFFEE/TEA & ROLLS (Exhibit Areas)**

**8:30 am to 10:00 am**

**TECHNICAL SESSIONS**

### **3A. SEISMIC DESIGN**

**Application of the new LRFD Guidelines for the Seismic Design of Highway Bridges**

**Derrell Manceaux**, FHWA, Lakewood, CO

**Columns vs. Foundations –**

**Interpreting Seismic Design Software**

**John Eddy**, ARUP, San Francisco, CA

**Seismic Analysis and Design of Bridge Structure Founded on Soft Soils**

**Paul C. Chung**, CALTRANS, Sacramento, CA

### **3B. INNOVATIVE MATERIALS**

**Self Compacting Concrete**

**Myint Lwin**, FHWA, San Francisco, CA

**High Performance Steel for Highway Bridges**

**Vassant Mistry**, FHWA, Washington, DC

**Utilization of High Performance Grouts for Post-Tensioned Bridges**

**Timothy Gillespie**, Sika Corp, Lyndhurst, NJ

### **3C. INSPECTION**

**Current Diving Regulations by OSHA,USCG, USACE, and ANSI Training Standards are Discussed**

**Brian Abbot**, Krech Ojard & Assoc., East Lansing, MI

**John Bogue**, Wilber Smith Assoc., Chalfont, PA

**High Risk Post-Tensioned Bridges Need to be Checked For Tendon Corrosion**

**Dr. Donald Pearson-Kirk**, PBQ&D, Taunton, G.B.

**Michael Traffalis**, PBQ&D, Portland, OR

**Matt Miller**, PBQ&D, Portland, OR

**Fatigue Crack Identification and Repair of Nevada Bridges, Using In-House Personnel**

**David Severns**, Nevada DOT, Carson City, NV

**Richard Faber**, Nevada DOT, Carson City, NV

**Break 10:00 am to 10:30 am**

**10:30 am to 12:00 noon**

**TECHNICAL SESSIONS**

#### 4A. STEEL BRIDGES

##### **Steel Orthotropic Box Girder Fabrication, New Carquinez Suspension Bridge**

**Michael Marquez**, CALTRANS, Sacramento, CA

**Dr. Eugene Thimmhardy**, CALTRANS, Sacramento

**Dr. Raymond Wolfe**, CALTRANS, Sacramento, CA

##### **Back to the Basics: Efficient Design of Steel Bridges**

**Kenneth Wright**, HDR Engineering, Pittsburgh, PA

##### **Seismic Retrofitting and Testing of Steel Deck Truss Bridges**

**Dr. Majid Sarraf**, Imbsen & Assoc., Sacramento, CA

**Dr. Michael Bruneau**, MCEER, SUNY, Buffalo, NY

#### 4B. PEDESTRIAN BRIDGES

##### **Adidas Skybridge**

**Dusty Andrews**, Morse Bros., Harrisburg, OR

##### **Responding to Community Expectations:**

##### **Three Pedestrian Bridges for the 21st Century**

**Rick Phillips**, PARSONS, Mesa, AZ

**Donald Davis**, PARSONS, Tempe, AZ

##### **Design, Construction, and Aesthetics for an Urban Bicycle Pedestrian Tunnel**

**Paul Kinderman**, Washington DOT, Olympia, WA

#### 4C. LOCAL AGENCY BRIDGES

##### **The Other Side of Bridge Design**

**Susan Johnson**, Berger/ABAM, Federal Way, WA

##### **Low Volume Road Bridges –**

##### **Designs for Remote Locations**

**David Harvey, Martin Jobke, Julien Henley**,

Associated Engineering, Burnaby, BC, Canada

##### **The Clark Fork River Bridge: A Successful Collaboration**

**Larry Evans**, Forsgren Associates, Boise, ID

**Lunch 12:00 noon to 1:30 pm**

**1:30 pm to 3:00 pm**

#### **TECHNICAL SESSIONS**

#### 5A. PROJECT CASE STUDIES

##### **Innovative Concepts in the Design and Construction of Box Girder Bridges in Sunset Interchange**

**Yuhe Yang**, PBQ&D, Seattle, WA

**Stanley Ryter**, PBQ&D, Seattle, WA

**Derek Kuzak**, PBQ&D, Seattle, WA

##### **From Type Selection to Final Design, I-580 Freeway Extension Project**

**Matt Negrete**, CH2M Hill, Sacramento, CA

##### **Highlights of Designing and Constructing the Structures in Seattle Urban Area – The Construction of SR-90 and SR-519 Intermodal Phase 1 Project**

**Long Tran**, Washington DOT, Olympia, WA

## 5B. PC/PS BRIDGES

### **Precast Substructure Elements – Case Study – Cooks Chasm Bridge**

**Dr. Keith Kaufman**, Morse Bros., Harrisburg, OR

### **A Comparison Study on the Performance of a Propped Spliced-Girder vs. Propped Non-spliced Girder Bridge**

**Dr. Khashayer Nikzad, Dr. Theo Trochalakis, Kunle Ogunrinde**, all with MACTEC Engineering & Consulting, Bellevue, WA

### **Design, Detailing, and Construction of WSDOT Post-Tensioned Spliced-Girder Concrete Bridges**

**Richard Brice**, Washington DOT, Olympia, WA  
**Bijan Khaieghi**, Washington DOT, Olympia, WA

## 5C. RESEARCH

### **New Loss Equations for Design of Post Tensioned Spliced Girder Bridges**

**Dr. Toorak Zokaie**, Leap Software, Gold River, CA  
**Amgad Girgis, Rob Pearce, Maher K. Tadros**, all from U of Nebraska, Omaha, NE

### **Shake Table Testing of Flared Column Details**

**David Sanders**, U of Nevada, Reno, NV

### **Low Cycle Fatigue of Bridge Columns in California**

**Fadel Alamenddine**, CALTRANS, Sacramento, CA

**Break 3:00 pm to 3:30 pm**

3:30 pm to 5:00 pm

## TECHNICAL SESSIONS

## 6A. CABLE SUPPORTED BRIDGES

### **Innovative Curved Cable-Stayed Bridge to Provide Pedestrian/Bicycle Connections**

**Alan Phipps**, Figg Engineers, Denver, CO

### **Design and Testing of Innovative Cradle System for Cable Stays, Maumee River Bridge, Toledo, OH**

**Denney Pate**, Figg Engineers, Tallahassee, FL

### **Design and Construction of Suspension Bridge Across the McKenzie River, Eugene, Oregon**

**Jiri Strasky**, Consultant, Greenbrae, CA

## 6B. RAPID CONSTRUCTION

### **South 38th Street Bridge – Challenges of Urban Bridge Design and Construction**

**Joseph Merth**, Washington DOT, Olympia, WA

### **Hillcrest Overcrossing at Minnesota Drive Anchorage, AK**

**Stephan Lee**, Alaska DOT, Juneau, AK

### **Fast Track Design and Construction of Three I-5 Bridges in Eugene, OR**

**Sam Grossberg**, Oregon DOT, Salem, OR

## 6C. HISTORIC PRESERVATION

### **Willamette River (St. Johns) Bridge Rehabilitation**

**Gary Rayer**, OBEC Consulting, Eugene, OR

### **The Trail of the Coeur D'Alene Rails to Trails Bridges**

**Stephen Nicholls, Jerome Nicholls, Susan Kovich**,  
all from Nichols Engineering, Spokane, WA

### **Eklutna River Bridge Rehabilitation**

**Brian Leshko**, HDR Engr. Pittsburgh, PA

6:00 pm – 9:00 pm

## COCKTAILS & BANQUET

6:00 pm to 7:00 pm

## NO HOST COCKTAIL HOUR

7:00 pm to 9:00 pm

## BANQUET & PROGRAM

*(Casual Business Attire)*

# Wednesday / October 8, 2003

7:30 am REGISTRATION

8:00 am CONTINENTAL BREAKFAST (Exhibit Area)

8:30 am to 10:00 am

## 7. GENERAL SESSION

### **Practical Steel Tub Girder Design**

**Domenic Coletti**, HDR Engineering, Dallas, TX

**John Holt**, Texas DOT, Austin, TX

**John Vogel**, Texas DOT, Houston, TX

### **The New Tacoma Narrows Suspension Bridge**

**Tom Spoth**, Parsons Corp., New York, NY

**Semyon Treyger**, HNTB, Bellevue, WA

**Tim Moore**, Washington DOT, Olympia, WA

### **New Carquinez Bridge Deck Erection Methods**

**Greg Orsolini, Dyab Khazem, Cassandra Batchelor**,  
all w/Parsons, San Francisco, CA

**Joe Reyes**, CALTRANS, Sacramento, CA

Break 10:00 am to 10:30 am

10:30 am to 11:30 am

## 8. GENERAL SESSION

### **Type Study and Preliminary Engineering for the Colorado River Bridge at Hoover Dam**

**Bonnie Klamerus**, FHWA, Denver, CO

**David Goodyear**, T.Y. Lin Internat'l, Olympia, WA

**Rob Turton**, HDR Engineering, Phoenix, AZ

## CLOSING REMARKS

**Bill Crawford**, Bridge Engineer, Nevada

Department of Transportation, Bridge Division,  
Carson City, Seminar Chairman

## INVITATION TO 2005 SEMINAR

Bridge Engineer Chairman 2005

**Tour Information and Instructions** *(see next page)*

1:00 pm – 4:00 pm  
OPTIONAL TECHNICAL TOUR

**Tour the University of Nevada, Reno,  
Bridge Engineering Laboratory**

Tour buses will leave the Hotel at 1:00 pm and return to the Hotel by 4:00 pm. The Bridge Engineering Laboratory is located on the campus of the University of Nevada, Reno, about 5 miles from the Hotel. This is a **NO COST** tour with only reservations required in advance. Space is limited to 50 on a first come first serve basis. Refreshments will be served during the tour.

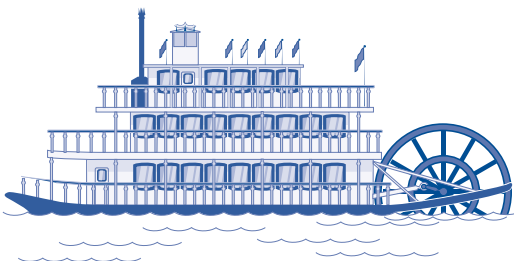
The University of Nevada, Reno Bridge Engineering Laboratory specializes in earthquake engineering for bridges. Both static and dynamic tests can be performed in this state of the art laboratory. Its facilities include a strong floor, fixed reaction wall, two 25 ton overhead cranes, hydraulic actuators, a computer controlled data acquisition system and three 14.5' by 14' shake tables. The shake tables have a capacity of 100,000 pounds each making them the largest in the United States for combined capacity. In addition, the shake tables can deliver a +/-1.0g acceleration, a velocity of 40 in/sec, and a displacement of 12 inches in two horizontal directions. The tables may be operated in combination or individually.

**LAKE TAHOE – *what you never knew and forgot to ask!***

Lake Tahoe is the largest alpine lake on the North American Continent. It is 22 miles long and 12 miles wide, with a surface area of 193 square miles.

1. Water in Lake Tahoe is 99.7 percent pure, about the same as distilled water. We were told it is so clear that a white dinner plate can be seen 70 feet below the surface.
2. Lake Tahoe contains 39.75 trillion gallons of water – enough to cover the entire state of California to a depth of 14.5 inches.
3. Daily evaporation is 1.4 million tons, or enough water to supply the needs of 3.5 million people on a daily basis.

**Conference Attire** – Wear casual clothing and comfortable walking shoes for daytime. Bring something dressier for the banquet. Don't forget to bring a light jacket since evenings are cool.



## Companion/Guest Program

Your Nevada Hostess has planned many exciting and fun events to highlight your stay in the Biggest Little City in the World! In addition to the non-stop Nevada style fun, you will have the opportunity to explore historic Virginia City in the heart of the Comstock, cruise Lake Tahoe, and visit picturesque Carson City, Nevada state capitol.

### **VIRGINIA CITY AND CARSON CITY TOUR**

**Monday's** activities will include a "Get Acquainted" brunch in a beautiful suite, where you will meet friends old and new, while enjoying a special Reno view.

Activities will include a short (35 minute) ride to Virginia City—America's largest historical landmark, where you can stroll along the boardwalks to shops, museums, old time western saloons, and gaming under the balconies of historical "C" street, all restored to the "way it was" Lots to do here!

Now it is on to Carson City and Red's Old 395 Grill for lunch reservations and a tour around this historical city. You can visit the Nevada State Museum with interesting exhibits, an underground mine, the Mint and silver display, and shopping on Curry Street behind the museum—or you can skip all this and go on a planned one hour walking tour.

### **M.S. DIXIE LAKE TAHOE CRUISE & LUNCHEON**

**Tuesday's** fun will begin with a scenic drive through the mountains to beautiful Lake Tahoe where you will board the paddlewheeler M.S.Dixie for a leisurely cruise and luncheon. Bring your camera along to capture the spectacular scenery!

Next, is a trip to Truckee via Incline Village, State Line and Kings Beach. View millionaires' mansions along the lake in Incline, see the historic Cal-Neva Club at Stateline, and drive by Squaw Valley (Olympics Venue in 1960). Truckee is a fun place to shop for souvenirs to take back home. You will be back at the hotel in time to dress for the evening banquet.

### **GENTEEL DISROBE (a *edu-taining* event!)**

**Wednesday's** schedule begins with a delicious breakfast followed by an entertaining and unusual program.

Lady Loftis will appear before the audience as a wealthy Victorian woman with all the accoutrements that would benefit her station in life. She has on, or about her person, 17 – 18 pieces of clothing and accessories. Each piece is removed, displayed and explained as Carolyn genteelly disrobes down to her chemise and drawers. It has been said of this event "women love it and men are amused".

This is "check-out" day so we will break early.

# Registration Form

Name \_\_\_\_\_

Title \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State / Province \_\_\_\_\_

Zip / Postal Code \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Spouse or Guest Name (for badge) \_\_\_\_\_

## Circle Sessions you plan to Attend:

1A 2A 3A 4A 5A 6A 7 8

1B 2B 3B 4B 5B 6B

1C 2C 3C 4C 5C 6C

**Seminar Registration Fee** ..... **\$240** \_\_\_\_\_

*(Registration fee includes Monday & Tuesday luncheons and Tuesday banquet)*

**Late Registration Fee** ..... *(After 9/15)* **\$275** \_\_\_\_\_

**One Day Registration Fee** ..... **\$130** \_\_\_\_\_

*(includes luncheon)*

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**Spouse / Guest Program Fee** ..... **\$115** \_\_\_\_\_

*(Registration fee covers entire guest program including Monday & Wednesday breakfast, Tuesday lunch & Tuesday banquet)*

**Spouse Late Registration Fee** ..... *(After 9/15)* **\$130** \_\_\_\_\_

**Total All Items: \$** \_\_\_\_\_

## Wednesday Afternoon Technical Tour

*University of Nevada Engineering Lab (no charge).*

Number of People \_\_\_\_\_

*Make checks (in U.S. funds) payable to:*

**WESTERN BRIDGE ENGINEERS' SEMINAR**

*Mail Registration form to:*

**Western Bridge Engineers' Seminar**

Jean Canfield, Conference Manager

PO Box 135

Olympia, WA 98507-0135

*To Register by Visa or Mastercard:*

Visa  MC  Expiration Date \_\_\_\_\_

Card Number \_\_\_\_\_

Signature \_\_\_\_\_

**WESTERN BRIDGE  
ENGINEERS' SEMINAR**

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Jean Canfield, Conference Manager  
Post Office Box 135  
Olympia, WA 98507-0135