This is your invitation to the 2009 Western Bridge Engineers’ Seminar

September 21–23, 2009
Sacramento Convention Center | Sacramento, CA

Innovative, Reliable and Practical Solutions for Today’s Bridge Engineer.

Seminar managed by:
Washington State University

Conference Management
2606 W Pioneer
Puyallup, WA 98371-4998
800-942-4978
www.conferences.wsu.edu
KEYNOTE SPEAKERS

DAN DORGAN
State Bridge Engineer, Minnesota DOT

Dan Dorgan has over 30 years experience in bridge design and managing statewide bridge programs. He began his career with the Minnesota DOT in 1975 and has held various positions as a bridge designer, administrator for bridge consultant contracts, and manager in the Metropolitan District of Mn/DOT. He has served on various AASHTO and TRB committees and is a member of the AASHTO Subcommittee on Bridges and Structures where he is a member or chair of several technical committees. As State Bridge Engineer, Dan Dorgan was at the forefront following the tragic collapse of the I35W Bridge in responding to media and the legislature, supporting the National Transportation Safety Board investigation, and directing Mn/DOT’s actions on a variety of bridge issues to restore and maintain agency operations.

LINDA FIGG
President/CEO and Director of Bridge Art, FIGG

FIGG is an International firm that exclusively specializes in bridges. FIGG bridges have received 312 awards for customers, recognizing economy, innovation and aesthetics including three Presidential Awards through the National Endowment for the Arts. Linda is a civil engineering graduate of Auburn University and received Auburn’s Engineering Achievement Award in 2006. Linda presently serves as the Vice Chair of the board of directors of the Construction Industry Round Table. She was named as one of Engineering News Record’s 22 Top Newsmakers in 1998, and Concrete Construction magazine named Linda as one of 13 most influential people in the concrete industry in 2007.

BRIAN MARONEY DR. ENGR., P.E.
California Department of Transportation

Brian Maroney is a bridge engineer with 25 years of experience and a licensed professional engineer in the State of California. He is currently working for the California Department of Transportation. He has recently been appointed Deputy Program Manager for the Toll Bridge Program from a position of Principal Bridge Engineering and Chief of Toll Bridge Design. Brian Maroney earned his Doctorate from the University of California, Davis under Dr. Karl Romstad conducting research on the seismic response of bridge structures to earthquakes and particularly the behavior of bridge abutments that included the first of their kind large scale bridge abutment tests to failure. Dr. Maroney serves on the faculty at UCD as an adjunct associate professor where he enjoys working on projects that are bridge related.

The Western Bridge Engineers’ Seminar is a biennial cooperative effort by the Federal Highway Administration and the Transportation Departments of Alaska, Arizona, 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 important to the design, construction, and maintenance of bridges. The theme of the 2009 technical program is “Innovative, Reliable and Practical Solutions for Today’s Bridge Engineer.” An exhibit area will feature booths displaying products and services of interest to seminar participants.

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Innovative, Reliable and Practical Solutions for Today’s Bridge Engineer.
Seminar Schedule

Sunday, September 20, 2009

3:00 – 6:00 pm
REGISTRATION (East Lobby)

6:00 – 8:00 pm
ICEBREAKER (Exhibit Area)

Monday, September 21, 2009

7:00 am
REGISTRATION (East Lobby)

7:30 am
CONTINENTAL BREAKFAST (Exhibit Area)

8:30 am – 10:00 am
GENERAL SESSION (Exhibit Hall E, Ground Floor)

• Welcome and Opening Remarks
  Kevin Thompson, P.E.,
  Seminar Chair and State Bridge Engineer

• Welcome to California
  Richard Land, Chief Engineer,
  California Department of Transportation

• Keynote Address

9:00 am
The New I-35W Bridge Over the Mississippi River:
A Modern Concrete Bridge for the Future
Dan Dorgan, State Bridge Engineer,
Minnesota Department of Transportation, Oakdale, MN
Linda Figg, President/CEO,
Figg Engineering Group, Tallahassee, FL

10:00 am – 10:30 am
COFFEE BREAK (Exhibit Area)

10:00 – 10:30 am
COFFEE BREAK (Exhibit Area)

10:30 am – 12:00 pm
TECHNICAL SESSIONS

2A SEGMENTAL CONCRETE BRIDGES OF CALIFORNIA

• Design and Construction of the Folsom Lake Crossing in
  Folsom, California
  Jeffrey Thomure, M.S., P.E., CH2M Hill, Sacramento, CA

• The Precast Segmental Bridge Over the Otay River
  R. Jon Grafton, Pomeroy Corporation, Perris, CA

• Devil’s Slide/Confusion Hill—
  Segmental Construction in Rugged Terrain
  Kevin Harper, P.E., California DOT, Sacramento, CA

2B CONCRETE DURABILITY AND SUSTAINABILITY

• New Development in Design, Detailing and
  Constructability to Improve the Durability of Concrete
  Bridges
  Bijan Khaleghi, Ph.D., P.E., S.E,
  Washington State DOT, Olympia, WA

• What Does a Sustainable Bridge Look Like?
  Kelly Burnell, P.E., David Evans and Associates, Salem, OR

• Causes of Concrete Bridge Deck Cracking and Suggested
  Measures to Eliminate Them
  Mohammad Sheikhizadeh, P.E.,
  Washington State DOT, Olympia, WA

2C EARTH RETAINING SYSTEMS

• Micropile and Rock Anchor Walls
  Jaime Boris Irahola, M.S., P.E.; Andy McCook, P.E.,
  California DOT, Irvine, CA

• Cantilever Soldier Pile Wall Steel Design: AASHTO LRFD
  vs. AASHTO 17th Edition
  Jim Schettler, P.E., S.E., Jacobs Engineering, Bellevue, WA

• Tire Derived Aggregate Backfill for Retaining Walls
  Dana N. Humphrey, Ph.D., P.E., University of Maine, Orono, ME
  James L. Foster, Jr., P.E., Quincy Engineering, Inc.,
  Sacramento, CA
2D SEISMIC RETROFIT OF STEEL BRIDGES

• Green River Gorge Seismic Retrofit
  Zhengjie Zhou, Ph.D., P.Eng. *King County DOT, Seattle, WA*

• Seismic Retrofit of an Historic Steel Arch Bridge: Lessons Learned
  Barbara S. Moffat, P.E., *Jacobs Engineering, Bellevue WA*

• Foresthill Bridge Seismic Retrofit Project
  Mark Reno, P.E., John Quincy, P.E., *Quincy Engineering, Inc., Sacramento, CA*

3:00 – 3:30 pm
LUNCH

12:00 – 1:30 pm
LUNCH

• Lunch Time Speaker (To be Determined)

1:30 – 3:00 pm
TECHNICAL SESSIONS

3A RAPID BRIDGE REPLACEMENT

• Rapid Bridge Replacement, Elk Creek Tunnel Bridges
  Scott N. Nettleton, P.E., *T.Y. Lin International, Salem OR*

• Build and Slide Bridge Construction Technique
  Leonard M. Fiji Jr., MSCE, P.E., *California DOT, Eureka, CA*

• San Francisco-Oakland Bay Bridge: Yerba Buena Island Detour
  William Casey, P.E., *California DOT, Oakland, CA*

3B PRECAST POST-TENSIONED GIRDER APPLICATIONS

• Chandler Road Bridge, Prestressed Spliced Girders

• Precast Prestressed Spliced Girders: A Practical Solution for Bridge Construction in Difficult Terrain
  Jose Higareda, P.E., *California DOT, Sacramento, CA*; R. Jon Grafton, *Pomeroy Corporation, Perris, CA*

• Sodom Ditch Bridges—A Variable Depth Precast/ Pretensioned/Post-Tensioned Composite Box Beam Provides a Project Schedule Solution
  Keith Kaufmann, Ph.D., P.E., *Knife River—Western Oregon Division, Harrisburg, OR*

3C PROJECT PLANNING

• Management Information Systems in Structural Engineering
  Joseph E. Krajewski, P.E., *T.Y. Lin International, Beaverton, OR*

• The SR 520 Bridges—Catastrophic Failure Plan

• Columbia River Crossing Type Study and Preliminary Engineering

3D STEEL BRIDGE TOPICS

• Mores Creek Canyon Steel Truss Bridge Repair/Retrofit
  Ted Bush, P.E., S.E., Mike Johnson, P.E. *HDR Engineering, Inc., Boise, ID*

• Orthotropic Steel Deck Bridge Landmarks of Our Infrastructure in California
  Alfred R. Mangus, P.E., *California DOT, Sacramento, CA*

• New Bridge Painting Specifications Incorporating Lessons Learned

3:00 – 3:30 pm
COFFEE BREAK

3:30 – 5:00 pm
TECHNICAL SESSIONS

4A CASE STUDIES FROM WASHINGTON STATE

• The Design and Construction of Medium Span HPS Hybrid Box Girder Bridges Over I-5 Mainline Traffic
  Loung (Lou) H. Tran, P.E., *Washington State DOT, Olympia, WA*

• Bridge and Structures Best Practices and Lessons Learned for a Successful Design/Build Project: I-405 South Bellevue Case Study
Seminar Schedule

Tuesday September 22, 2009

7:00 am
REGISTRATION (East Lobby)

7:30 am
CONTINENTAL BREAKFAST (Exhibit Area)

8:30 – 10:00 am
TECHNICAL SESSIONS

5A IMPLEMENTATION OF ACCELERATED BRIDGE CONSTRUCTION BY STATE DOTS

- Practice of Accelerated Bridge Construction in California
  Paul Chung, P.E., Michael Beauchamp, P.E.,
  California DOT, Diamond Bar, CA

- Implementing Accelerated Bridge Construction in Oregon
  Benjamin Tang, P.E., Bruce Johnson, P.E.,
  Oregon DOT, Salem, OR

- WSDOT’s Plan for Accelerated Bridge Construction
  Jugesh Kapur, P.E., S.E., Bijan Khaleghi, Ph.D., P.E., S.E.,
  Washington State DOT, Olympia, WA

4B MATERIALS TECHNOLOGY

- Reducing the CO2 Of Concrete Mixtures for Bridges
  Tony Kojundic, FACI, Director,
  Silica Fume Association, Pittsburg, PA

- Proven Chemical Engineering Solutions for the Effective Year-Round Rehabilitation of Bridge Decks
  Tom Carter, Stirling Lloyd Products, Inc., Newington, CT

- Rapid Repair of Low Volume Bridges: Mechanically Fastenend FRP Strips
  Michael G. Oliva, Ph.D., University of Wisconsin

4C UNFORESEEN CONSTRUCTION CHALLENGES

- Gold Mines and CIDH Piles
  Heidi Kuntz, P.E., California DOT, Rancho Murietta, CA;
  William Bertucci, California DOT, Sacramento, CA

- Oregon’s Realignment of US20 Slides Back into Construction
  Jordan Pelphrey, Knife River—Western Oregon Division, Harrisburg, OR

- Emergency Deck Replacement of the Pit River Bridge Over Lake Shasta
  Sonny Fereira, P.E., California DOT, Red Bluff, CA;
  Andy O’Sullivan, California DOT, Mount Shasta, CA;
  Dave Riccitiello, P.E., William Reames, P.E.,
  Golden State Bridge, Inc., Martinez, CA

4D LRFD SEISMIC DESIGN CONSIDERATIONS

- Laterally Loaded Pile Analysis for the LFRD Design of Bridge Foundations
  Mohammad Islam, Ph.D., P.E., G.E., California DOT

- Design Strategies for Bridges in Low to Moderate Seismic Zones
  Greg Griffin, P.E., S.E., CH2M Hill, Boise, ID

- More Discussion on the AASHTO Guide Specifications for LRFD Seismic Bridge Design
  Elmer Marx, P.E., MSCE, Alaska DOT, Juneau, AK
5C CONTEXT SENSITIVE SOLUTIONS FOR PEDESTRIAN BRIDGES

- The Lake Hodges Stress Ribbon Bridge
  Anthony Sanchez, Ph.D., P.E., Joe Tognoli, P.E.,
  T.Y. Lin International, San Diego, CA

- Bridge Under the Wings: Artistic Vision to Structural Decisions
  Oscar A. Oliden, P.E., Jacobs Engineering, Phoenix, AZ;
  Michael Negrete, P.M., City of Phoenix, Phoenix, AZ

- Cosumnes River Pedestrian Bridge—A 410 Foot, Three Span Wood Truss Bridge
  James L. Foster, Jr., P.E., Quincy Engineering, Sacramento, CA;
  Paul C. Gilham, P.E., S.E. Western Wood Structures, Inc.,
  Tualatin, OR

5D CASE STUDIES OUTSIDE OF THE WESTERN STATES

- A Case Study in the Use of Advanced Technology in the Decision Making Process for Major Bridge Repairs: Lake Hamilton, Arkansas, Bridge Foundation Rehabilitation
  David R. Reser, P.E., Infrastructure Engineers, Inc., Saint Cloud, FL

- Alteration of BNSF Railroad Company Bridge Over the Upper Mississippi River, Burlington, Iowa
  Dr. Kamal Elnahal, P.E., U.S. Coast Guard, Bridge Administration Office, Washington, DC

- Black Bridge Over the Blackfoot River—Truss Span Lengthening
  Brad Miller, P.E., Dustin Hirose, P.E.,
  HDR Engineering, Inc. Missoula, MT

6A LRFD GENERAL DESIGN CONSIDERATIONS

- Live Load Distributions on One and Two-Cell Box Girder Bridges
  Paul Chung, P.E., California DOT, Diamond Bar, CA;
  Anthony Logus, P.E., California DOT, Sacramento, CA

- LRFD Fatigue Design of Steel Bridges in California
  Lian Duan, Ph.D., P.E., California DOT, Sacramento, CA

- Design of Horizontally Curved Concrete Box Girder Highway Bridges
  Richard V. Nutt, S.E., Nutt, Redfield & Valentine, Orangevale, CA

6B PRECAST GIRDER DESIGN TOPICS

- Composite Behavior of Precast Bridge Deck Panel Systems
  Sean R. Sullivan, Ph.D., HNTB Corporation, Bellevue, WA

- Getting to LRFD Together—Observations Made During the Joint TxDOT / WSDOT Development of PGSuper
  Richard Pickings, P.E., MSCE, President, BridgeSight Software, South Lake Tahoe, CA;
  Richard Brice, P.E., MSCE, Washington State DOT, Olympia, WA

- Lateral Stability of Long Span Girders from a Producer’s Perspective
  Steven Walker, P.E., Knife River—Western Oregon Division, Harrisburg, OR

6C FOUNDATIONS

- Sunken Caisson Foundations for South Park Bascule Bridge
  Yang Jiang, Ph.D., P.E., S.E., HNTB Corporation, Bellevue, WA

- Unknown Foundation Testing and Emergency Repairs for the Lake Cushman Bridge
  Kathryn L. Van Hecke, USDA Forest Service, WA;
  Daniel G. Stromberg, Collins Engineers, Inc., WA

- “Solutions for Emergency Bridge Repair” (Milltown Dam Removal)
  John Hinman, P.E., S.E., Gloria Beattie, P.E., CH2M Hill
Seminar Schedule

6D A SLEW OF CASE STUDIES FROM SEATTLE

- SR 519 Design/Build Project – Atlantic Street Ramp Design
  Richard Patterson, P.E., S.E., Michael Bianucci, P.E., AECOM Technology, Seattle, CA;
  Huanzi Wang, Ph.D., P.E., AECOM Technology, Oakland, CA

- Innovative Process Informs Function on the SR 520 Bridge Replacement Project
  Greg Nutson, P.E., S.E., HDR Engineering, Seattle, WA

- SR 519 Intermodal Access Project: Design-Build in an Urban Environment
  Mark Johnson, MSCE, P.E., CH2M Hill, Bellevue, WA

12:00 – 1:30 pm
LUNCH

• Lunch Time Speaker (To be Determined)

1:30 – 3:00 pm
TECHNICAL SESSIONS

7A ACCELERATED BRIDGE CONSTRUCTION PROJECTS

- Successful Project Applications of Accelerated Bridge Construction in California
  Michael Beauchamp, P.E., Paul Chung, P.E., California DOT, Diamond Bar, CA

- The Public Says Close it and Build it Quickly— Why we Build too Many Projects Under Staged Construction
  Matthew N. Griggs, P.E., Dokken Engineering, Folsom, CA; Ron Birch, P.E., MCM Construction, Sacramento, CA

- Performance Specification Contracting for the Mile Bridge
  Ray Mabey, P.E., Oregon DOT, Salem, OR; Brian Bierwagen, P.E., PMP, Paramatrix, Portland, OR; Bob Murray, P.E. S.E., Paramatrix, Sumner, WA

7B INNOVATIVE PRECAST DESIGN SOLUTIONS

- The Hood Canal Bridge Project
  Mark A. Gaines, P.E., Geoff D. Swett, P.E, S.E., Washington DOT, Seattle WA;
  Michelle L. Tragesser, P.E., KPFF Consulting Engineers, Seattle, WA

- Oregon’s Colombia River Gorge Bridges Receive Façade Treatments
  Keith Kaufman, Ph.D., P.E., Knife River—Western Oregon Division, Harrisburg, OR

- The Significant Advantages of Precast Bridge Rail
  Jim Morrison, National Association of Precast Concrete, Pacific Precast, Inc., Vancouver, WA

7C COLD WEATHER CHALLENGES IN BRIDGE CONSTRUCTION

- Design and Construction of Creekside Town Center Bridges
  Peter A. Giessel, P.E., Reid Middleton, Inc., Anchorage, AK

- Replacement of Alaska Railroad Bridge 432.1 in Goldstream Valley
  Nathan Dickerson, John Sherk, HDR Engineering, Inc., Anchorage, AK

- Context Sensitive Design of the Fort Edmonton Footbridge Over the North Saskatchewan River
  Alex Harrison, CH2M Hill, Sacramento, CA; Joseph Showers, P.E. P.Eng., CH2M Hill, Denver, CO

7D BRIDGE BEARINGS AND EXPANSION DEVICES

- The Selection and Design of High Load Multi-Rotational Bearings for the Hoover Dam Bypass Bridge
  Ronald J. Watson, R. J. Watson, Amherst, NY

- Homer Hadley Bridge Modular Expansion Joint Replacements
  Ralph J. Dornsife, P.E., S.E., Richard B. Stoddard, P.E., S.E., Washington State DOT, Olympia, WA

- A Synergy for Increased Seismic Protection of Bridges
  Roy A. Imbsen, D.Engr., P.E., Anoop Mokha, Ph.D., S.E., Earthquake Protection Systems, Mare Island, CA

3:00 – 3:30 pm
COFFEE BREAK (Exhibit Area)
8D CASE STUDIES FROM OREGON

- **Millport Slough Bridge—A Coastal Bridge Design Incorporating Ground Improvement**
  Matthew Stucker, P.E., *Oregon DOT, Salem, OR*

- **Depot Street Bridge Over Oregon’s Wild and Scenic Rogue River**
  Ken Stoneman, P.E., PLS, Guido Portier, P.E., *David Evans and Associates, Inc., Salem, OR*

- **Sauvie Island Bridge Replacement**
  Ian B. Cannon, P.E., *Multnomah County, OR*

6:00 – 7:00 pm
**NO HOST COCKTAIL HOUR** (Location TBA)

7:00 – 9:00 pm
**BANQUET** (Business Casual, Location TBA)

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**Wednesday, September 23, 2009**

7:30 am
**CONTINENTAL BREAKFAST** (Exhibit Area)

8:30 – 10:00 am
**TECHNICAL SESSIONS**

9A CASE STUDIES FROM CALIFORNIA

- **A Self Anchored Suspension Bridge Over Harbor Drive in San Diego**
  Daniel Fitzwilliam, P.E., Joe Tognoli P.E., *T.Y. Lin International, San Diego, CA*

- **San Francisco-Oakland Bay Bridge – Connection of the Oakland Touchdown Structure and Skyway at Hinge E**
  Vinh Trinh, WKE Inc., Santa Ana, CA; Xiaoyun Wu, Ph.D., P.E., *IDC Consulting Engineers, Inc., Anaheim, CA*

- **Tower Bridge Pedestrian / Bicycle Improvements Project—Sacramento, California**
  Benjamin L. Consollacion, P.E., Ali Seyedmadani, Ph.D., P.E., *Parsons Brinkerhoff, Sacramento, CA*
**Seminar Schedule**

**9B MANAGING THE CONDITION OF OUR EXISTING BRIDGES**

- **Element Level Bridge Inspection—Improving the AASHTO Commonly Recognized Structural Elements**
  Barton Newton, P.E., *State Bridge Maintenance Engineer, California DOT, Sacramento, CA*

- **Bridge Instrumentation for the US 101 Spencer Creek Bridge in Oregon**
  Taranat Potisuk, Ph.D., P.E., *H. W. Lochner, Inc., Salem, OR*

- **Advances in Laser Scanning and Sonar Imaging of Bridges**
  Terence M. Browne, P.E., *Collins Engineers, Inc., Auburn, CA*

**9C CURRENT DESIGN ISSUES**

- **The Problems With Skew**
  Domenic Coletti, P.E., *HDR Engineering, Inc., Raleigh, NC*; Walter Gatti, *Tensor Engineering, Indian Harbour Beach, FL*

- **Simplified AASHTO LRFD Design of Combination Barrier-Deck Overhang in Concrete Bridges**
  Kamal Mirtalaei, Ph.D., P.E., S.E., *Arizona DOT, Phoenix, AZ*

- **Bridge Construction Loads and Evaluation**
  Michael J. Garlich, P.E., S.E., *Collins Engineers, Inc., Chicago, IL*

10:00 am – 10:30 am
**COFFEE BREAK** (Exhibit Area)

10:30 am – 12:00 noon
**GENERAL SESSION**

10:30 am
**THE SAN FRANCISCO-OAKLAND BAY BRIDGE REPLACEMENT PROJECT: WHERE WE ARE TODAY**

Brian Maroney, Dr.Engr., P.E., California Department of Transportation, Oakland, CA

11:30 am
**INVITATION TO 2011 SEMINAR**
**CLOSING REMARKS**
**ADJOURN**
CONFERENCE ATTIRE

Wear casual clothing and comfortable walking shoes for daytime. Bring business casual clothing for the banquet. Don’t forget to bring a light jacket since evenings can be cool.

LOCATION

Technical sessions, continental breakfasts, luncheons and breaks will be held at the Sacramento Convention Center, 1400 J Street, Sacramento, CA. The banquet will be held across the street at the main conference hotel—the Sheraton Grand Hotel, 1230 J Street—13th and J Street, Sacramento, CA.

FOR RESERVATIONS:

Sheraton Grand Sacramento
1230 J Street (13th & J)
Sacramento CA 95814
916-447-1700 | www.sheraton.com/sacramento

When making your room reservations, make sure to mention that you are with the Western Bridge Engineer’s seminar to receive the reduced conference rate of $135 plus tax.

SEMINAR REGISTRATION

The $345 registration fee is due September 4, 2009. Late registration after September 4 is $390. Registration fee includes technical program, (3) continental breakfasts, (2) luncheons, refreshments at breaks, and the Tuesday evening banquet. To register online go to: www.capps.wsu.edu/westernbridge

To register by mail, please send the completed form to Washington State University, Conference Management, 2606 W Pioneer, Puyallup WA 98371-4998. Late registrations may be limited. A refund of the registration fee minus a $50 service charge will be given for cancellation prior to September 10. Call Conference Manager, Janet York at 253-445-4629 for current registration information.

GUEST PROGRAM

Come join us for the “Sacramento Discover Gold!” guest program. On Monday morning we will meet at the Sheraton Grand for a Welcome Breakfast followed by a Spirit of Sacramento Delta Cruise and a tour of the California Railroad Museum. On Tuesday, we will travel to the Hangtown Gold Bug Mine in Placerville, returning in time for the evening banquet. Price for the guest program includes all tours and transportation plus breakfast on Monday, lunch on Monday and Tuesday, and the Tuesday evening banquet.