

Firms and individuals with national and international experience designing, managing and constructing large bridge projects are participating in the CRC expert review panel on bridge type. Firms and agencies represented on the panel are listed below. Brief bios are provided for the individuals on the panel.

The chair of the panel is Tom Warne.

### **Firms and Agencies Represented**

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- CH2M Hill – Joe Showers
- C-TRAN – Wesley King
- FHWA – Benjamin Beerman and John McAvoy
- FTA (PMOC) – John Buchheit
- HNTB – Theodore Zoli
- Independent Consultant – Steve Thoman (under contract to Bay Area Toll Authority)
- Leonhardt, Andra and Partners – Siegfried Hopf
- ODOT – Bruce Johnson
- Oregon State University – Scott Ashford
- Ralls Newman, LLC – Mary Lou Ralls
- Tom Warne and Associates, Inc. – Thomas Warne
- TriMet – Calvin Lee
- T.Y. Lin – David Goodyear
- URS – Steve Stroh
- WSDOT – Jugesh Kapur

### **Panel Member Bios**

#### **Chair, Thomas R. Warne, P.E., Tom Warne and Associates, Inc.**

Mr. Warne was appointed by the governors of Oregon and Washington to serve as the chair of the CRC Independent Review Panel during the summer of 2010. He has over 30 years of experience funding and delivering light rail and highway infrastructure projects. For the past nine years he has worked as a consultant assisting public agencies and private companies. Clients include the Federal Highway Administration, American Association of State Highway and Transportation Officials (AASHTO), metropolitan planning/regional transportation organizations and authorities, departments of transportation and contractors. Mr. Warne is known for his work on complex projects and programs. His projects include light rail systems, significant design-build efforts, major bridges, strategic planning, partnering facilitation, process improvement initiatives, and more. Mr. Warne was one of the early leaders in starting Context Sensitive Design in the late 1990s and this was one of his emphasis areas as President of AASHTO. For the past seven years, he has been the transportation advisor to Daybreak, a smart growth development in Salt Lake County. Other projects include the Woodrow Wilson Bridge, the 35 W Bridge Replacement in Minneapolis and University Light Rail in Utah. While serving as the Executive Director of the Utah Department of Transportation, he was responsible for delivering the \$1.325 billion I-15 Reconstruction project three months ahead of schedule and more than \$30 million under budget. He has an M.S. in Civil Engineering from Arizona State University and a B.S. in Civil Engineering from Brigham Young University.

**Scott A. Ashford, Oregon State University**

Dr. Ashford has over 25 years experience in the design and performance of bridge foundations. He served on the faculty in the Department of Structural Engineering at the University of California, San Diego, for 11 years and is currently Head of the School of Civil and Construction Engineering at Oregon State University. He is an internationally known expert in the design and construction of bridge foundations subjected to liquefaction and lateral spreading. His work in private industry prior to joining academia focused on bridge foundations, and he has served on several technical advisory and review panels. He earned his BS in Civil Engineering from Oregon State University, and his MS and PhD in Geotechnical Engineering at the University of California, Berkeley. He is currently the Chair of Oregon's Statewide Transportation Improvement Plan (STIP) Stakeholder Committee.

**Relevant Project Experience:**

- I-210/I-215 Technical Advisory Panel (California)
- San Francisco Oakland Bay Bridge (California)
- Cooper River Bridge (South Carolina)

**Benjamin Beerman, P.E., Federal Highway Administration**

Mr. Beerman is currently a Sr. Structural Engineer with the Federal Highway Administration. He brings over 14 years of experience in bridge design, repair, and rehabilitation of both highway and rail structures located throughout the mid-Atlantic region. He has been involved in numerous bridge design and rehab projects, including a networked tied arch (the largest in the world), three cable stay structures, and many steel trusses (fixed and moveable -- for both highway and rail). Mr. Beerman began his career at the Louisiana Department of Transportation while attending graduate school at Louisiana State University. He went on to join Modjeski and Masters in New Orleans then later transferred to help establish their Charleston, WV office. He later worked at the HDR rail group based out of Jacksonville, FL, and Ralph Whitehead and Associates (currently STV) in Richmond, VA.

**John A. Buchheit, P.E., DBIA, Federal Transit Administration**

Mr. Buchheit has over 24 years experience leading highway; bridge; and design-build projects. He is a certified professional with the Design Build Institute of America [DBIA] and is also a lead participant in the Project Delivery Subcommittee of the ARTBA Bridge Policy and Promotion Council. He has served as the Structures Manager for numerous complex projects including SR 836 Extension Design-Build for the Miami-Dade Expressway Authority [\$148 M] and the Lackawanna Valley Industrial Highway Reconstruction for the Pennsylvania Department of Transportation [\$610 M]. Mr. Buchheit has also performed consultation for Owners on development of procurement and bridging documents for alternative delivery contracts including the RailRunner Transit Project from Albuquerque to Santa Fe for the New Mexico Department of Highways. He has provided support to the FTA on the Columbia River Crossing Project working for the Project Management Oversight Consultant [PMOC] furnishing technical consultation and review of bridge documents and the Grantee's Project Management Plan. Mr. Buchheit is a Vice President with Gannett Fleming, Inc. and currently serves as a Regional Manager in the firm's southeast region. He is a senior member of Gannett Fleming's Design-Build Leadership Team and has also held the position of National Practice Manager for Bridge operations.

**David Goodyear, Chief Bridge Engineer, T.Y. Lin International**

During his thirty-five year career, Mr. Goodyear has developed engineering solutions to challenging issues involving concrete, steel, segmental, and cable-stayed bridge design. He is nationally recognized as a premier bridge engineer with the ability to deliver innovative, constructible design products. Mr. Goodyear has worked with public agencies and contractors across the nation, on small rural projects as well as large urban projects with a focus on concrete bridges, segmental and cable-stayed bridge design, foundation engineering, and waterfront structures.

His experience ranges from preparing analysis reports and feasibility studies to developing final PS&E documents and providing quality control, construction engineering, and value engineering services. His background working with multi-disciplined teams and public participation is extensive, and he is completely familiar with Local Agency and AASHTO standards, guidelines, and procedures. Mr. Goodyear served on the PTI Ad-Hoc Committee writing the Concrete Segmental Bridge Guide Spec, has supported AASHTO T-10 on behalf of ASBI, and is the current chairman of the PTI Committee on Cable Stayed Bridges.

**Relevant Project Experience:**

- Port Mann (British Columbia)
- Hoover Dam Bypass (Arizona – Nevada)
- Crooked River Gorge (Oregon)

**Siegfried Hopf, Chief Bridge Engineer, Leonhardt, Adra and Partners**

Mr. Hopf, based in Stuttgart, Germany, has a wide experience within bridge engineering from numerous bridge projects around the world, including some of the firm's largest cable-stayed, concrete and composite bridges. Most of these bridges are built abroad in USA, Norway, Korea, South America and Hong Kong. He spent 15 years in the USA for the concept design two major bridges. He was LAP's design manager for the Kap Shui Mun Bridge design, the Ting Kau tender design, the Stonecutter Island Bridge Design Competition in Hongkong, the Rhinebridges Ilverich and Wesel in Germany, the Stay Cable Portion of the Parana Bridge Rosario-Victoria in Argentina and 2nd Panama Canal Bridge. During his working career he was responsible for more than 20 conceptual/preliminary designs, many of them ended up to be successfully built, such as the Baytown Bridge in Houston, Texas, the Helgelands Bridge in Norway, the Kap Shui Mun Bridge in Hongkong, the Cable-stayed Bridge at Rosario-Victoria, Argentina, the Geo Geum Bridge in South Korea and the Sava River Bridge in Belgrade, Serbia.

**Relevant Project Experience:**

- Cable-Stayed Bridge Across the Orinoco River (Venezuela)
- Baytown Bridge (Houston, TX)
- Rhine River Highway Bridge Wesel (Germany)

**Bruce Johnson, P.E., Oregon Department of Transportation**

Mr. Johnson is the State Bridge Engineer in Oregon since September 2004. He supervises 51 people in bridge design, standards, operations, inspection, major bridge maintenance, load rating, bridge management, and preservation. Prior to that, he was the Division Bridge Engineer, for Federal Highway

Administration in Oregon from October 1988 to September 2004. He worked in various positions with FHWA in Oregon, Nevada, Kansas, Colorado, Indiana, and Iowa from 1975-1988.

Mr. Johnson is chair of AASHTO SCOBS, Technical Committee T-9 on Bridge Preservation, vice-chair of AASHTO SCOBS, Technical Committee T-20 on Tunnels, and a member of T-10, Concrete and T-3 Seismic. He is vice-chair of the TBR Committee on Bridge Management, AHD-35, and a member of TRB Committee on Bridge Aesthetics, AFF-10(2). Mr. Johnson is the vice-chair of the FHWA Expert Task Group for Bridge Preservation. He received many outstanding awards from FHWA, including an Engineering Excellence Award in 2001. He is a member of ASCE, fib, ACI, and the Underground Construction Association of the Society of Mining and Excavation.

#### **Jugesh Kapur, P.E., Washington State Department of Transportation**

Mr. Kapur is the State Bridge and Structures Engineer for Washington state where he provides direction, guidance, and management to the structural engineering program with the assistance of 140 individuals in the WSDOT's Bridge and Structures Office. Prior to this position he was the State Bridge Design Engineer, Design Unit Manager and also worked in the private sector for 8 years. He is a University of Washington graduate and a registered professional engineer in civil and structural engineering in Washington and Oregon.

#### **Wesley King, High Capacity Transit Project Manager, Clark County Transit Authority (C-TRAN)**

Mr. King has extensive planning and project management experience for transit and highway projects. While with the Michigan Department of Transportation he was actively involved in the rehabilitation efforts for the M-1/M-102 tri-level grade separated interchange rehabilitation, M-85 viaduct rehabilitation analysis, and the Detroit River International Crossing (DRIC) Study. All three projects included extensive public outreach utilizing context sensitive solutions. The DRIC is a multi-billion dollar project and is analyzing public/private partnerships as well as tolling options for development. The DRIC also underwent a bridge type analysis of cable stayed vs a suspension structure. Mr. King was also assistant project manager on the Detroit Transit Options for Growth Study and was contracted to the City of Detroit's Department of Transportation through URS Corp. before joining C-TRAN.

#### **Calvin Lee, P.E, TriMet**

Mr. Lee is TriMet's bridge and structures engineer and is a registered professional engineer with over 20 years of experience. His experience includes the development, design, construction, and inspection of bridges for both highway and transit uses as well as the asset management of a public agency owned and maintained bridge inventory system. He is currently responsible for structural design and construction oversight on large scale transit capital projects. Prior to joining TriMet, Mr. Lee was the City Bridge Engineer and a Division Manager for the City of Portland's Office of Transportation.

#### **John McAvoy, Major Project Manager, FHWA Oregon Division**

John McAvoy currently serves the FHWA in the Oregon Division as the Major Project Manager for the Columbia River Crossing project. He is responsible for delivering a multi-modal, multi-billion dollar, comprehensive, long-term transportation solution that addresses congestion, safety and mobility

problems on I-5 between Portland, OR and Vancouver, WA. Prior to joining the Oregon staff, Mr. McAvoy served in the Rhode Island Division as the Major Project Manager overseeing the planning, permitting, design, and construction of 15 separate construction contracts making up the \$600 million relocation of Interstate 195 in Providence. Mr. McAvoy joined the FHWA in 2001 as the Design Engineer in the Connecticut Division. He began his professional career as a consultant with Close, Jensen & Miller in Wethersfield, CT. before joining the staff at Purcell Associates in Glastonbury, CT in 1994. Mr. McAvoy received a bachelor's degree from the University of Connecticut in 1987 and is licensed by the State of Connecticut as a Professional Engineer. He was selected for the FHWA's highest honor in 2003 as a recipient of the Administrator's Award for Superior Achievement and was a 2008 recipient of the Secretary's Partnering for Excellence Award.

**Mary Lou Ralls, P.E., Ralls Newman, LLC**

Ms. Ralls has more than 25 years experience, including bridge design, structural engineering, project management, and accelerated bridge construction. She was the project manager for development of the FHWA Framework for Prefabricated Bridge Elements and Systems (PBES) Decision-making and PBES Cost Study and is currently a course instructor for the National Highway Institute. Her research and expertise is nationally recognized and she has served on multiple independent review panels and advisory groups for projects in Maryland, Massachusetts, Rhode Island, and others. Ms. Ralls has received numerous awards including the *Administrator's Public Service Award* from FHWA, the *AASHTO President's Award in Research Category*, and the *Design Award for Best Bridge with Spans Greater than 135 feet*, presented by the Precast/Prestressed Concrete Institute. Prior to her current position of Engineering Consultant with Ralls Newman, LLC, she directed the Bridge Division of the Texas Department of Transportation. Ms. Ralls has an M.S. in Engineering, Structures, and a B.S. in Civil Engineering with Highest Honors from the University of Texas at Austin. Ms. Ralls served on the CRC Independent Review Panel in 2010.

**Joe Showers, Business Group Technical Manager/Bridge Design and Construction, CH2M Hill**

Mr. Showers is the Chief Bridge Engineer for CH2M Hill, and is based in the Denver corporate office. He holds a Masters Degree in Civil Engineering and a Masters Degree in Architecture from Virginia Tech and has 35 years of experience in the design of bridges and structures, including long span bridges over navigable waterways and areas with challenging foundation conditions. He is the current chairman of TRB AFF10(2) committee on Bridge Aesthetics, and past member of the Concrete Bridge Committee. His work experience includes the planning, design and construction of segmental and cable stayed bridges, including the Folsom Bridge over the American River near Sacramento, the Golden Ears Bridge over the Fraser River near Vancouver, and the James River Bridge near Richmond. He is currently assisting the Minnesota DOT as owner's representative on the Hastings Bridge over the Mississippi River, a design build project that includes a 545 foot span composite steel and concrete, post-tensioned tied arch bridge.

**Relevant Project Experience:**

- Northumberland Strait Crossing (Prince Edward Island – New Brunswick)
- Golden Ears Bridge (British Columbia)
- Cooper River Bridge (South Carolina)

**Steve Stroh, Deputy Director of Surface Transportation, Major Bridges, URS Corporation**

Mr. Stroh is the URS National Deputy Director for Surface Transportation, focusing on major bridge projects. He also serves as the manager of URS' Center of Excellence for Bridge Design in the Tampa, Florida office. He has been responsible for the development of a number of long-span and complex bridges throughout the United States and internationally, including development of the first extradosed prestressed bridge in the U.S., the Pearl Harbor Memorial Bridge in New Haven, CT. Mr. Stroh joined URS in 1983 and has 35 years of industry experience. He is a nationally recognized expert in bridge design and serves on several national committees and boards. He earned a Masters Degree in Civil Engineering from the University of South Florida. He is also a long-standing member of the faculty of the University of South Florida, teaching undergraduate and graduate courses. He is registered as a professional engineer or structural engineer in 20 states.

**Relevant Project Experience:**

- Pearl Harbor Memorial Bridge (Connecticut)
- kclCON (Paseo) Bridge (Missouri)
- Ironton Russell Bridge (Ohio)

**Steve Thoman, Principal Bridge Engineer, Independent Consulting Engineer**

Mr. Thoman provides project manager services for transportation projects and is a registered structural/civil engineer with over 33 years of experience. He specializes in the programming, planning, design and construction of bridges for highway and transit systems. Mr. Thoman has led design teams as project manager or bridge project manager for individual projects with bridge construction costs totaling more than \$4B. These design projects have included complex freeway interchanges, toll ways, long-span bridge crossings, and seismic retrofit of viaducts and long span structures. Mr. Thoman is currently under contract to the Bay Area Toll Authority.

**Relevant Project Experience:**

- Benicia-Martinez Bridge (California)
- Antioch Bridge (California)
- Carquinez Toll Bridges (California)

**Theodore P. Zoli, III, P.E., HNTB**

As Technical Director of HNTB's bridge practice nationwide, Mr. Zoli has led the design of many award-winning bridges throughout the US and abroad, including the Blennerhassett Island Bridge over the Ohio River (winner of the Gustav Lindenthal Medal), the Leonard B. Zakim bridge in Boston, MA and the Bob Kerrey Pedestrian Bridge in Omaha, NE. Mr. Zoli's work has been informed by his research into bridge safety and reliability with a focus on the design of structural systems against member loss and structural behavior under unforeseen extreme events. He leads HNTB's infrastructure security practice and has developed innovative protective measures for some of our nation's largest and most important bridges. Mr. Zoli has received national recognition for his work in bridges including a Special Achievement Award by the AISC for the Bob Kerrey Pedestrian Bridge. On New Year's Eve in 2009, he was featured on NBC Nightly News with Brian Williams in a news segment entitled *What Works*.

In September 2009, Mr. Zoli was made a MacArthur Fellow by the John D. and Catherine T. MacArthur

Foundation. This prestigious award was granted for major technological advances to protect transportation infrastructure and for his innovative designs. With the generous grant that is associated with the Fellowship, Mr. Zoli is currently working on two initiatives: a lightweight hyperbolic paraboloid modular roof based upon an adaptation of boat hull construction technology and catenary pedestrian bridges fabricated using synthetic (polyester) rope for use in remote mountainous regions.