



EQUILIBRIUM

Newsletter of the Seattle Chapter
Structural Engineers Association of Washington

SEPTEMBER 2008

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Mini Seminar

Our September 23rd Mini-Seminar will cover Strengthening Techniques for Concrete Repair.

Pete Barlow of Contech Services will be our featured presenter.

September Dinner Meeting to Feature The Bravern

Join us for the first meeting of the 2008-2009 year. Our program will feature a presentation by DCI engineers Anish Talati and Jeff Brink on the Bravern project. The Bravern is a 3.5 million square foot mixed-use project containing office, residential, retail and parking. Located in Bellevue, Washington, The Bravern consists of four high-rise towers over a four and a half acre podium. The podium is comprised of four levels above grade with two separate auto courts, and seven levels below grade with parking for 3,100 automobiles. The two residential towers, each 33 stories in height, offer high-end condominiums priced up to \$5 million. The 300,000 square feet of retail on the project is tailored to meet the same exclusive market and is anchored by the first *Neiman Marcus* in the Pacific Northwest. The two office towers are 14 and 24 stories and contain 750,000 square feet of office space which is leased entirely by the *Microsoft Corporation*.

Presenters: Jeff Brink, P.E., S.E. is an Associate with DCI Engineers in Bellevue, Washington. Jeff has more than ten years of experience designing and managing office, residential, and commercial building projects in the Chicago and Seattle area markets. Brink's project expertise includes structures utilizing concrete, post-tensioning, tilt-up, steel, cold-formed steel, and wood construction. His experience allows him to identify and understand issues facing all of the consultants and provide

(Continued on page 2)



Graphic courtesy DCI Engineers

Meeting Information

DATE: Tuesday, September 23, 2008

PLACE: McCormick & Schmick's
AGC Building – South Lake Union
1200 Westlake Avenue N., Seattle

TIME: 5:15 - 6:00 FREE Mini Seminar
5:30 - 6:30 Social Hour
6:30 - 7:35 Dinner
7:45 - 9:00 Business, Program

COST: SEAW Members \$30.00
SEAW Non-Members \$35.00
Students (with ID) Free
Late Registration, add \$ 5.00

MENU: Your choice of the following:
Pan Seared Breast of Chicken with Chipotle Pepper Cream
OR
Three Cheese Ravioli with Basil Pesto Cream Sauce

Reservation Deadline: Thursday, September 18, 2008

REGISTER ONLINE @ seaw.org or by e-mail at seaw@seaw.org or call 206/682-6026.
Prepayment is appreciated!

FROM THE BOARD: Another September and Another Year

The month of September has always signified a time of change for me – the long summer days are over, everyone's back in school, and the commute gets worse; but it is the start of the football season and, best of all, it's the beginning of another year for our chapter that we should all look forward to.

Our vice president and program chair Peter Opsahl has some terrific presentations lined up for our meetings, including a strong possibility for a program featuring the Burj Dubai Tower. At the moment we plan to continue our mini-seminar/dinner meeting format at the McCormick & Schmicks on South Lake Union. Another lunch meeting will be considered after our first successful lunch meeting of last year. A briefing seminar by Dave Swanson, Tom Xia, and other individuals on their recent China earthquake reconnaissance trip with the UW is also anticipated.

The Young Member Forum continues to grow. Activities over the summer included a softball tournament and a monthly after-work social hour. In particular, YMF's outreach efforts with our local universities have greatly enhanced our visibility within the local academic community.

SEAW continues to be one of the strongest professional voices in

the code change process. Our Code Advisory, Building, Earthquake, Wind, and Existing Building Committees, among others, continue their efforts to develop the various codes into understandable, relevant, and useful documents. The countless volunteer hours contributed by our SEAW committee members are an essential counterbalance to full-time paid industry advocates and academics. Four examples of our committees' work are:

Wind Design: The 1997 UBC wind design section consisted of 5 pages and worked very effectively for the vast majority of projects. The 2006 IBC, along with ASCE 7-05, now contains 68 pages of text, figures, and tables. Many of the figures seem like tables. More significantly, many of the figures can be interpreted in different ways or are close to being unintelligible. To overcome this unnecessary complexity, IBC code change proposal S-84, based on the 1997 UBC approach, was developed by the SEA's of Washington, California, and Oregon, and submitted under the sponsorship of NCSEA. After some initial significant opposition, this simplification to the wind code is close to approval and becoming part of the 2009 IBC.

ACI 318 Appendix D: I personally, along with other members of our Board, have heard many members express genuine frustration with Appendix D of ACI 318, especially with its conservative approach to post-installed anchors. Several SEA committees and individuals are addressing the flaws in this appendix. I understand that to fix Appendix D, the ACI process will take several years. It appears to me that there may be other more expeditious avenues to provide a temporary fix for Appendix D until the ACI code change process can work its course. This board will make it a priority to do whatever it can to facilitate a temporary resolution to this problem.

Existing Buildings: With the

recent publication of ASCE 31 and ASCE 41, along with the International Existing Building Code and Chapter 34 of the IBC, confusion exists on which of these publications and standards should apply to a project. To help us navigate through these code and guideline provisions, our Education Committee, along with our Existing Building Committee, has scheduled a fall seminar for Practical Approaches for the Rehabilitation of Existing Buildings (see details in this newsletter).

Building Department Submittals: Different submittal requirements by various jurisdictions, varying plan check review philosophies, and inconsistent code interpretations have always been frustrating to the consulting engineer. On the other hand, the varying quality of permit submittals has been just as big of a frustration for the building official. The WABO/SEAW Liaison Committee has generated three guidelines on structural plan check philosophy, wet stamping, and the use of the Rapid Solution Methodology for Wind Analysis. A fourth white paper, Structural Guidelines for Permit Submittal, will soon be issued. This committee is an invaluable link between structural engineers and building officials, and is the foundation for consensus regarding code interpretations and guideline requirements for plan submittals and reviews.



Our Code Advisory, Building, Earthquake, Wind, and Existing Building Committees, along with the SEAW/WABO Liaison Committee, continue their efforts in improving and keeping code documents as relevant as possible. Please communicate to the committee chairs and members your appreciation for all their efforts. They definitely make things easier for our profession. Better yet, volunteer and serve on a committee.

And lastly, remember that when *next* September - 2009 - rolls around, it will be the start of yet another year. Be sure to leave a place on your calendar that month for the SEA Northwest Conference in Tacoma to be hosted by the SEAW Southwest Chapter.

-Scott Douglas
Seattle Chapter President
sdouglas@dc-engineers.com

The SEAW Seattle Chapter *Equilibrium* is printed monthly from September through May and is available online at www.seaw.org. Circulation by mail: approximately 550 copies. Articles, letters, and announcements are accepted by e-mail to seaw@seaw.org.

Advertising rates (prepaid, please): Help Wanted/Job wanted, \$50 ; Display ads: Quarter page, \$90; Half Page, \$120; Full Page \$150; inserts, pre-printed 8 1/2 X 11 inch flat, \$150. 10% discount for ads running two or more months. Deadline is the fourth Friday of the month. Contact SEAW for an Advertising Order Form.

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Cover Story, Continued

(Continued from page 1)

proactive structural solutions. Brink earned his Bachelor's degree from Michigan State University and Master's from the Illinois Institute of Technology.

Anish Talati, P.E., S.E. is an Associate with DCI Engineers in Bellevue. Anish has a Master of Science degree from the University of Memphis, Tennessee. He has more than twelve years of structural design and

management experience. His project expertise includes structures utilizing concrete, post-tensioning, and steel construction. Talati has worked on high-rise and mid-rise buildings including educational, residential, retail, parking and multi-use structures, fire stations and a sports stadium. His experience, problem solving, and management skills allows him to be proactive contributor towards the success of the project.

Meeting Recap

SEAW Summer Casual Meeting: Committee Showcase and Engineers Without Borders

By Karen Damianick

The summer casual meeting at the Corinthian Yacht Club on Shilshole was a well-attended and interesting event. The night started out with a committee showcase. The committee summaries have been published in the Summer Statewide Equilibrium newsletter, which can be found online at www.seaw.org under "Resources". One thing nearly all the committees had in common was that they are looking for volunteers! There are multiple volunteer opportunities, whether you're interested in attending committee meetings and being an active member, or just reading the email correspondence and reviewing documents to keep abreast of committee activities as a corresponding member. If you're interested, please contact the committee chair for more information.

Engineers Without Borders

After the committee showcase, the main presentation by the University of Washington Chapter of Engineers Without Borders (EWB) began. Susan Boltan, faculty advisor for the student chamber of EWB, gave a very interesting talk about the chapter's Bolivian project, as well as a primer on how EWB works in general. EWB was started in Colorado in 2000 and works with disadvantaged communities around the world, including in the United States. A goal of EWB is to have a chapter work in a particular region for a couple years, to gain trust and make a lasting difference there.

EWB tries to help disadvantaged communities by using engineering to improve their overall health. They do this by improving infrastructure, housing, and indoor pollution. EWB likes to pick fairly small goals as a first project in order to gain the trust of the com-

munity. The UW EWB is currently doing significant work in a small village in Bolivia. They are addressing indoor air quality in huts, where the women typically cook over open fires with no chimneys. They have designed and constructed new stoves with chimneys, replacing thatch roofs with tin to prevent fire. Air quality has been improved, and thatch, which is a habitat for insects that cause debilitating disease has been removed.

The stove and roof project has been so successful that neighboring communities have requested that EWB come to their village to help them implement a similar project. EWB has hired people from the first village to teach the other villages how to install the roofs the second year of the project. This project is on-going, and a new bridge and other basic improvements are also in the village's future.

These communities have been

"helped" by organizations in the past. However, without proper follow-through and education, many of those projects have gone to waste. One example was a 25-meter diameter water holding tank for irrigation that a previous organization had built. However, no method of getting the water to the farmers' fields was ever installed. The tank sat unused until EWB came and designed a gravity irrigation system and taught villagers how to use it.

In addition to the student chapter of EWB, there is a Puget Sound Professional Chapter, which meets monthly. EWB is always looking for people to volunteer their time, expertise, or money! Please see the following links for more information.

EWB UW Student Chapter: www.students.washington.edu/ewbuw/

EWB Puget Sound Professional Chapter: www.ewb-pugetsound.org/

Mark Your Calendar

SEPTEMBER, 2008

| | | |
|---------|------|---|
| Tuesday | 23rd | Seattle Chapter Board meeting Seattle Chapter Dinner |
| Friday | 26th | SEAW State Board meeting |
| Friday | 26th | October Newsletter deadline |

OCTOBER, 2008

| | | |
|-----------|-------|---|
| Thurs-Sat | 23-25 | NCSEA Annual Conference - Cleveland |
| Friday | 24th | November Newsletter deadline |
| Tuesday | 28th | Seattle Chapter Board meeting Seattle Chapter Dinner |

NOVEMBER, 2008

| | | |
|---------|------|---|
| Friday | 7th | Existing Buildings Seminar |
| Tuesday | 25th | Seattle Chapter Board meeting YMF-Sponsored Dinner meeting |
| Friday | 28th | December Newsletter Deadline |

Watch the SEAW website for Calendar updates!

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YMF Corner

The Younger Member Forum was created in 2007 to provide networking and social opportunities to SEAW members 35 and under, as well as new non-member engineers and students. All SEAW members are welcome to participate in YMF functions.

Following our first election in May, the newly-elected YMF leadership met with the outgoing leaders in June to transition our positions and share information. The outgoing Chair, Cale Ash, will stay on for another year as Past Chair to serve a continuity role for the new leadership. The new leadership positions are held by: Chair: Melissa White of Swenson Say Faget; Vice Chair: Jessica Jenness of DCI

Engineers; Outreach Representative: Shawn Roberge of Coffman Engineers; and Social Representative: Robyn Lee of DCI Engineers. The focus of our meeting, beyond transition, was to further our goals of increasing membership and outreach, to improve communication between the YMF and both SEAW membership and the broader structural engineering community, and to provide open opportunities for

YMF members to meet and network with fellow young structural engineers. Over the coming months, the YMF Corner will be interviewing each of the new YMF Leaders.

We held a summer social hour in Bellevue in July, and one in Seattle in August. We were pleased by the turnout for both, and look forward to seeing the increased interest in our monthly social hours and other activities in the coming year. As in the past, the November SEAW meeting will be sponsored by and focus on the younger members and students in SEAW.



We look forward to a great year full of exciting opportunities and new friends.

Melissa White, YMF Chair
mwhite@swensonsayfaget.com

Member News

Zeno Martin joins Wiss, Janney, Elstner Associates

SEATTLE, WA (August 14, 2008) - Wiss, Janney, Elstner Associates, Inc. (WJE), an interdisciplinary firm of structural engineers, architects, and materials scientists, is proud to announce the recent addition of Zeno Martin to their Seattle office. Mr. Martin has 10 years of valuable engineering experience with wood structures to add to WJE's accomplished group of recognized industry leaders.

Mr. Martin's expertise includes the evaluation of engineered wood products, creating design guidelines and provisions, evaluation of structural code compliance, structural upgrades, and investigation of existing structures. Additionally, he has been active in building code development and educational activities for groups such as the International Code Council.

Moreover, Mr. Martin has gained considerable expertise through extensive lab testing of structural wood products, fasteners and connections, FRP-wood composites, and large scale assemblies including walls, floors, and roofs.

Prior to joining WJE, Mr. Martin worked for a major trade association in the engineered wood industry, where he also provided professional consulting services.

WJE resources combine state-of-the-art laboratory and testing facilities, nationwide offices, and knowledge-sharing systems to deliver better results for thousands of clients, from individuals to large corporations and government agencies. Uniquely qualified to respond to the technical and aesthetic needs of architecturally significant and historic structures, WJE has successfully completed investigative, testing, design, and repair services for virtually every type of construction material, structural system, and architectural component. For more information, please visit www.wje.com.



Shannon & Wilson Expands to Southern California

Shannon & Wilson, a Seattle-based geotechnical and environmental consulting firm, has acquired Van Beveren & Butelo, a Los Angeles geotechnical engineering firm. The acquisition expands Shannon & Wilson's geographic reach into southern and northern California.

Van Beveren & Butelo specializes in geotechnical engineering for private and public development projects. With the additional expertise of Shannon & Wilson, new markets will include the transportation and waterfront sectors.

Shannon & Wilson added a Sacramento office in 2007. The addition of the Los Angeles office represents the company's commitment to better serve its California clients in the public and private sectors.

With 10 offices and 270 employees in Washington, Alaska, Oregon, California, Colorado, Missouri, and Florida, the company supports geotechnical and environmental projects in a variety of markets nationwide.

Visit their website at www.shannonwilson.com

EQUILIBRIUM to go PAPERLESS IN MAY 2009

Beginning in May, 2009 the Seattle Chapter *Equilibrium* will be produced in electronic form only. Each month, members will receive the already familiar email announcing the presence of the latest issue on the SEAW website, along with a link to the document. This will not only save resources, but will be considerably less expensive for the chapter, enabling us to keep member dues low.

If you are currently receiving the *Equilibrium* by mail, and are ready to go all-electronic now, please notify the SEAW office at seaw@seaw.org.

Seminars

SEAW Fall Seminar

Practical Approaches to the Rehabilitation of Existing Buildings

Friday, November 7, 2008
Moss Bay Event Center on Lake Union

Spokane: Thursday, Nov 13
Tri-Cities: Friday, Nov 14

Are you finding that all the new and updated codes and standards for existing building are making your practice easier or more confusing? Having a hard time determining appropriate approaches and criteria for seismic rehabilitation?

The SEAW Fall Seminar will cover the rehabilitation of existing buildings, focusing on both the process and technical aspects. Topics include:

- A summary and comparison of the provisions of IBC Chapter 34 and the IEBC.

- Suggested approaches to dealing with unique aspects of the evaluation and rehabilitation processes from the initial meeting with the building owner through permitting.
- Suggested technical provisions to use with various common building types.
- Example problems featuring unreinforced masonry and concrete buildings and illustrating various aspects of the rehabilitation process and technical provisions (including the IEBC, ASCE 31, and ASCE 41).
- A preview of upcoming changes for the Chapter 34 of the 2009 IBC and the 2009 IEBC.

Please see the brochure included in this newsletter, or check the SEAW website at www.seaw.org for further details.

Steel Construction and Welding Inspection Seminars Scheduled for Fall 2008

The Steel Structures Technology Center has announced their schedule for three one-day, seven-hour seminars on the inspection of steel construction and structural welding, and a two-hour evening seminar on structural steel plan reading. All four seminars are conducted in cooperation with the International Code Council (ICC).

The "**Structural Steel and Bolting Inspection**" seminar includes International Building Code (IBC) special inspection requirements, steel materials, steel fabrication and erection, and high-strength bolting.

The "**Structural Welding Inspection**" seminar includes IBC special inspection requirements, and welding inspection under American Welding Society (AWS) Structural Welding Codes D1.1 - Steel, D1.3 - Sheet Steel, and D1.4 - Reinforcing Steel.

The "**Inspection of Seismic Steel Frames**" includes American Institute of Steel Construction (AISC), IBC, and AWS requirements for connection details, welding, bolting, inspection and non-destructive testing for steel buildings designed to the AISC Seismic Provisions.

"**Plan Reading for Steel Construction**" includes structural steel design and shop drawings.

Locally the seminars are scheduled for September 25 & 26, 2008, in Tukwila.

The seminars parallel the ICC special inspector certification programs for "Structural Steel and Bolting" and for "Structural Welding". All seminars are approved for continuing education credit for ICC certifications. In addition,

the courses meet the criteria of AWS QC1:2007 regarding continuing education credit for AWS welding inspector certification renewal.

Individuals will be able to register for each seminar separately, or register for two or more seminars as a discounted package. Group discounts are offered for those firms or agencies sending three or more attendees.

For more information and for specific locations and times, visit the Steel Structures Technology Center website at www.steelstructures.com.

The seminars will be instructed by Robert Shaw, a consulting engineer with 35 years experience in steel construction and a specialist in steel construction inspection and quality standards. He is intimately involved in steel construction standards, serving as a member of the AWS D1 Structural Welding Committee and Subcommittee D1L on Seismic Welding, the AISC Committee on Specifications and Task Committee 9 on Seismic Design, and the Research Council on Structural Connections (RCSC) Specifications Committee. He also chairs the International Institute of Welding Commission XV on Design, Analysis and Fabrication of Welded Structures. As President of the SSTC, he has conducted numerous seminars on structural steel design and inspection since 1990. He is also author of the Structural Bolting Handbook, the Structural Welding Quality Handbook, the Shop Inspection Handbook for Structural Steel Buildings, and the Structural Steel Inspection Workbook.



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Opportunities

Structural Engineers

DCI Engineers is a leading-edge, team oriented structural and civil engineering firm with five offices along the West Coast. Being licensed in all 50 states, as well as Canada and Mexico, ensures you will be involved in exciting, high-profile and challenging projects.

DCI was recently honored with the Pinnacle Award by Structural Engineer Magazine for placing in both Best Firms to Work For and Hot Firms 2007.

If you are an engineer or CAD designer with a desire to advance your career, please visit our website www.dci-engineers.com for a list of open positions or send your resume to resumes@dci-engineers.com.

Engineers

Seattle Structural

Seattle Structural PS Inc is a downtown Seattle firm looking for engineering candidates at all experience levels. Share in our vision of client-based service and hard working enthusiasm on diverse and challenging projects in the US and overseas. Join our collaborative staff of 10 in one of Seattle's most vibrant office towers, specializing in public, commercial, retail, industrial and specialty projects. We offer excellent benefits and stimulating work in a casual environment. Visit our website at www.seattlestructural.com

Send resumes to: Pete Pawlak, PE
1420 Fifth Avenue, Suite 425,
Seattle, WA 98101

206-343-3000 phone; 206-343-3013 fax; P.Pawlak@SeattleStructural.com

Engineers

INCA Engineers, Inc., a Tetra Tech company, is seeking talented structural engineers for the following positions in our Bellevue, Washington office:

Senior Bridge Engineers

We are looking for a self-motivated senior bridge engineer with at least 8 years of experience in the analysis and design of concrete and steel bridges and related structures. Experience with local Washington transportation and transit agencies, port authorities, and cities is desirable. A PE license and MS degree in structural engineering are required. A current SE license or ability to obtain one within 12 months is preferred.

With INCA, you will be working

on unique and challenging projects that include:

risk and reliability based assessment of bridges instead of common load factor rating

design of a track bridge over an expansion joint on a floating bridge – first in the world

analysis and design of aerial structures for rail-structure interaction to account for thermal effects, and vehicle-structure interaction to account for dynamic effects

Staff and Senior Structural Engineers

We are looking for talented senior and staff structural engineers, with at least 4 years of experience in the analysis and design of concrete and steel structures, to assist with our ongoing projects, including hurricane/flood protection in New Orleans, a concrete pier design in Tacoma, navigation locks on the Mississippi River, and bridge/retaining wall designs for Sound Transit. Experience with marine structures is desirable, and a PE and MS in structural engineering are preferred.

You will work with one of the premier engineering firms on regional and national projects, and establish a strong career path. So, join our creative and exceptional team! Tetra Tech is a large, publically held company that provides state-of-the-art tools and emphasizes innovation and design excellence.

INCA is committed to providing a competitive and performance-based compensation and an excellent benefits package, including:

- 100% Paid Employee Medical Insurance
- 100% Paid Dental Insurance Life Insurance
- Long-term Disability Insurance
- 401K Plan
- Profit Sharing Pension Plan Vacation, Holiday, and Sick Leave
- Flexible Cafeteria Spending Plan
- Daycare Cafeteria Plan
- Flexible Hours
- Education Reimbursement Opportunities
- Stock Purchase Opportunities

Please send resume via our web site or to INCA Human Resources 400 - 112th Avenue NE, Suite 400, Bellevue, WA, 98004. Go to www.incainc.com for more information on this and other opportunities. EOE.

Structural Engineer

Arup is a leading international design firm with over 9,000 members worldwide in 86 offices. We are involved in the design of some of the most prestigious projects locally and worldwide. Our North America practice, established more than 20 years ago, now includes over 800 employees in 10 offices. We recruit only the best and brightest people and provide an opportunity for growth commensurate with your investment of skill, energy and desire to contribute and succeed.

Our Seattle office is seeking a Structural Buildings Engineer, interested in a challenging position and wanting to Shape a better world in cutting edge design and work on some of the most prestigious buildings projects in the Pacific Northwest. Arup was "Voted Best AEC Firms to Work For" by Building Design + Construction Magazine. At Arup, you will be working in a team of talented engineers developing designs and delivering projects in the US and around the world. We design a wide range of project types

including Healthcare and Laboratories, Commercial buildings (high rise and medium rise), Museums and Galleries, Stadiums and Education buildings. We have excellent benefits and we work in a collegiate, multi-disciplinary environment where engineers mix and work in teams such that you will experience sustainability in its broadest sense as well as working with talented acousticians, fire engineers, facade specialist, energy modelers, lighting specialists and many others.

We are seeking someone with superior design and analysis skills, to plan and design structural systems for buildings, including libraries, museums, high rises, universities and other commercial architecture; who are able to coordinate structural plans with other multi-disciplinary engineers, as well as calculate loads and perform structural analysis and design for steel, concrete, timber, and masonry building structures based on building codes and specifications; able to perform responsible professional structural engineering design and review of drawings and specifications for compliance with

(Continued on page 8)

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seattle

Opportunities

(Continued from page 6)

building code requirements, city ordinances, and State and Federal statutes; as well as apply your knowledge of current seismic design and evaluation methodology.

- Bachelors/Masters Degree in Civil/Structural Engineering with a sound knowledge of structural engineering fundamentals

- 5 years design experience with buildings, including libraries, museums, high rises and other commercial architecture.

- Proficient using Robot, ETABS and/or SAP seismic analysis software.

- PE/SE license desired.

Apply care of Julie Jeffery, Senior Recruiter, at Julie.jeffery@arup.com

Structural Engineers Wanted!

Put yourself in the driver's seat – join KPFF's Special Projects Division in downtown Seattle.

Structural Engineers within KPFF's Special Projects Division enjoy the freedom of being the prime consultant on the majority of our projects. We use a holistic approach to project management that requires you as the Structural Engineer to not just provide structural engineering services, but to SOLVE your client's PROBLEM. This approach puts you in the role of project manager and allows you to see the big picture on every project. This is a rewarding and enjoyable place to be, giving you direct access to the client and owner.

Our management style is:

- Progressive
- Open Minded
- Self Directed
- Based on mutual respect and honesty
- Built on Free and Open communication

KPFF's Special Projects Division is a 40+ person group that provides project management, planning, civil & structural engineering, machinery design and construction management on a wide range of project types through all stages of development. Our project types include:

- Ports
- Industrial Developments
- Shipyards
- Cruise Terminals

- Small Boat Harbors
- Marinas
- Commercial Developments
- Transportation Projects

Please submit your resume to emp@kpffspd.com

Structural Engineer III

Bridge and Structural Design

King County Department of Transportation

Road Services Division/ Engineering Services Section

Salary: **\$32.56 - \$41.28** Hourly

This is a challenging senior level structural engineering position designing complex road and bridge structures. The position is open to all qualified applicants.

JOB DUTIES:

-Perform complex structural designs and prepare plan details, estimates, and specifications for bridges, walls, and other roadway related structures.

-Perform complex structural analyses and studies and prepare written reports or technical memos to conclude the findings and recommendations.

-Function as a technical expert to supervise and provide direction and consultation to design consultants and in-house staff.

-Act as a Project Manager on task or project assignments from inception to construction.

-Perform bridge live load rating analysis and issue over-load truck permits.

-Review and approve construction shop drawings, shoring plans, and design calculations.

-Other duties as assigned.

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Bachelor's degree in civil engineering (BSCE) and minimum **two (2)** years of progressively responsible experience in structural designs.

EIT Certification.

Experience in developing bridge designs and preparation of structural design plans, specifications and cost estimates and bridge live load ratings.

Demonstrated skill in project management techniques and principles that include budget,

scope and schedule development, monitoring, and implementation.

Ability to work independently and supervise staff in performing complex structure designs and analyses.

Ability to communicate, work and collaborate with others and receive direction from supervisors and managers.

Ability to determine and prioritize work assignments.

Ability to prepare written reports or technical memos based on the findings from project conceptual studies, structure analyses and condition inspections, etc.

Ability to plan, initiate, develop and implement project plans; perform and commit to job duties according to agreed project milestone schedules and budgets.

Ability to have predictable and reliable attendance.

HIGHLY DESIRABLE: Professional Engineering License.

For more information about the job and detailed application instructions, go to our website at <http://agency.governmentjobs.com/kingcounty/default.cfm>.

Transit Design and Construction Manager



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- Dong Wang**, Associate
- Wesley Isbell**, Associate
- Jo Yuan**, Associate
- Jerry Lee**, Associate
- Aaron Sterns**, Associate
- Vu-Hoang Nguyen**, Associate