



American Society of Civil Engineers

Our web site: <http://sections.asce.org/columbia/index.html>

# Columbia Section

Since October 10, 1950

## Newsletter

January, 2005

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**Have you renewed  
your membership  
with ASCE?**



### Columbia Section January 19, 2005 Meeting

**Date:** Wednesday, January 19, 2005 at 11:30 am – 1:00 PM

**Place:** Shilo Inn, George Washington Way, Richland

**Meal:** Buffet (Chef's choice) \$15 per person.  
Please pay cash or check to treasurer at the meeting.

**Topic:** **Benton County Intertie Project Off I-82 to SR-397 in S. Kennewick**  
(see next page for I-82 to SR-397 Intertie map)

**Speakers:** Ross Dunfee, Benton County Engineer.

**About the Topic:** Mr Dunfee will talk about the history, the need, Phase 1 construction completion and the next phases to project completion.

Lunch will start at 11:30, and the presentations will start at Noon.

RSVP to: Darral Moore, (509) 783-2144, [dsm@jub.com](mailto:dsm@jub.com), by 1/18/05

### January 20, 2005 Joint Meeting ASCE Columbia Section Structural Technical Group and Structural Engineering Association of Washington (SEAW)

**Date:** Thursday, January 20, 2005 at 6:00 PM – 8:30 PM

**Place:** Shilo Inn, George Washington Way, Richland

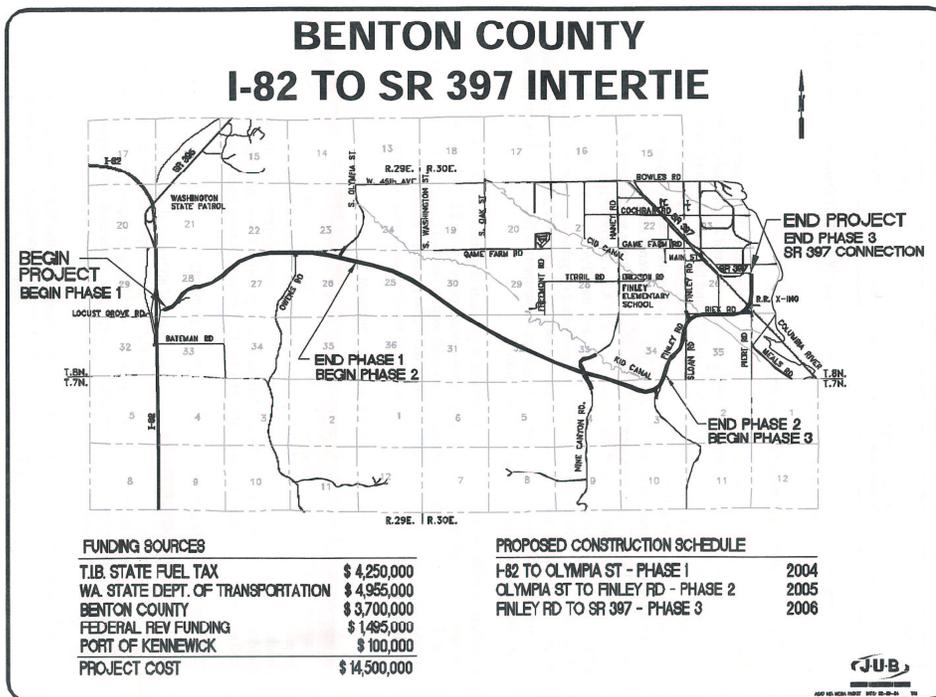
**Meal:** Dinner Buffet \$20 per person.  
*[IMPORTANT NOTE: Please pay by check made to "ASCE Columbia Section"]*

**Menu:** Chicken Parmesan, Vegetarian Lasagna, Rigatoni Alfredo Prima Vera, Fresh Seasonal Sautéed Vegetables, Focaccia Bread, Tossed Caesar Salad, Pepperoni Bow-Tie Pasta Salad, Greek Salad, Fresh Fruit Tray, Assorted Desserts (Chef's choice), Coffee, Decaf and Tea.

**Topic:** **Preliminary Design and Layout of Highway Structures**

**Speakers:** **Anthony Mizumori**, Washington State Department of Transportation

RSVP to: Indra Ghosh, (509) 371-9507, [ighosh2000@msn.com](mailto:ighosh2000@msn.com) by 1/19/05.



### Summary of ASCE Columbia Section Presentation on December 1, 2004, Shilo Inn, Richland

Mr. Brad Anderson, District Manager, Badger Mountain Irrigation District (BMID), gave a presentation on the overview of the Badger Mountain Irrigation District. The BMID was formed in 1975. It is located on the north and south side of Badger Mountain. The water intake is located at the Yakima River delta, approximately 2½ miles from their service area. The system has a dynamic head of 560 feet. The entire system is pressurized with approximately 4,000 acres of serviceable area. The BMID was established to service suburban districts.

In the mid 1980's, the BMID had to shut down three-quarters of their service area due to the downturn of the economy (Hanford layoffs). However, the BMID did endure the hardship and is moving forwards with great resolve.

BMID purchased El Rancho Reata's potable water system in 1995. This water system consists of two wells with a reservoir. Over the past 10 years they have seen a large increase in service connections. Number of services has increased from 430 in 1995 to well over 600 in 2004.

The BMID has also recently upgraded their pumps and electrical system at the Yakima delta. These upgrades will push the BMID into the next generation.

With the recent growth in this area and potential future growth, the BMID has put itself in a great position to service and support the local Tri-City infrastructure. For more information with regards to BMID, please contact Brad Anderson at 783-1454.

### ASCE "Raise The Bar" Newsletter Vol. 1, No. 4

**By: Committee on Academic Prerequisites for Professional Practice (CAP^3)**

Welcome to the fourth edition of our newsletter. We continue to make major progress in ASCE's "Raise the Bar." Still, there is far more left to be done, than has been done to date to achieve successful implementation. This newsletter will highlight some of the recent work being done by the CAP^3.

The **CAP^3 Accreditation Committee** has been formulating draft *ABET civil engineering program criteria*. The goal of this endeavor is to incorporate the basic components of the Body of Knowledge (BOK) into undergraduate civil engineering criteria with the exception of *Outcome 12-technical specialization*. The Accreditation Committee has also been working on modifications to the ABET advanced level general criteria to provide assurance that graduates of a master's program in civil engineering have fulfilled the complete civil engineering body of knowledge. To this end, the committee has been working on the enablement of ABET accreditation for master's programs. This effort is not to mandate accreditation of master's program but rather to enable those that choose. The committee is also working on a DRAFT commentary to the revised criteria for civil engineering programs. A draft of the criteria and commentary will

be released for public comment at the *June 2005 American Society for Engineering Education* meeting. In general, *flexibility* is being sought to allow universities to efficiently obtain accreditation of both undergraduate and graduate programs of the same engineering discipline. Such flexibility does not exist within current interpretations of ABET policies.

The **CAP<sup>3</sup> Curricula Committee** consists of 18 Civil and Environmental Engineering Departments and several representatives from ASCE institutes. They have been reviewing the BOK and mapping their existing curricula against the BOK. They have concluded that obtaining the BOK in a bachelor's program is simply not feasible. The committee has also been looking at how to better define the levels of competence for each outcome as well as how to assess the attainment of the level of competence for the 15 outcomes.

The **CAP<sup>3</sup> Licensure Committee** has continued to provide input to CAP<sup>3</sup> and to each of its committees from a licensure perspective. The Licensure Committee has recently given a presentation to the Wisconsin Licensure Board. They are preparing to participate in the National Council of Examiners for Engineering and Surveying (NCEES) zone meetings in the spring of 2005. Our team is participating with the NCEES Licensure Qualification Oversight Group, which is charged with recommending modifications to the NCEES Model Law to require additional engineering education beyond the bachelor's degree as a prerequisite for licensure. The Model Law is a policy template promulgated to assist individual jurisdictions when they work with their legislatures to make changes to their engineering statutes. Potential changes to the Model Law are first considered by NCEES at the national level. At the 2004 Annual Meeting, NCEES voted to initiate the process of evaluating "raising the bar" in engineering education and incorporating additional engineering education requirements into the Model Law. Additional engineering education requirements will be discussed at the spring 2005 NCEES zone meetings, and may be voted upon at the 2005 NCEES Annual Meeting in Memphis.



Other engineering disciplines will be critical to long-term success in requiring additional engineering education and changes to the *NCEES Model Law*. Changes to the NCEES Model Law would pertain to all disciplines across the board. ASCE is working closely with the Boards of IEEE-USA and NSPE to seek multi-society approval of a PowerPoint presentation intended to apply to all disciplines, for use throughout the engineering profession. NSPE President Dr. Bobby Price, PE has charged the NSPE Licensure and Qualifications for Practice Committee with formulating a national program to generate state-by-state support for additional engineering education requirements. The details of such a program are anticipated to come before the Board of NSPE in 2005.

The **CAP<sup>3</sup> BOK Fulfillment and Validation (F&V) Committee** began its work in the fall of 2004. The report, *Civil Engineering Body of Knowledge for the 21<sup>st</sup> Century*, identifies several paths to attainment of the BOK. The BOK could be fulfilled by obtaining a Bachelor's degree plus either a Master's degree or approximately 30 acceptable credits & experience ("B + M/30 & E"). The "E" in "B + M/30 & E" refers to progressive, structured engineering experience which, when combined with the educational requirements, *results in attainment of the requisite Body of Knowledge*. "B + M/30" represents two different, but related methods to satisfy the educational requirements for entry into the professional practice of civil engineering. Both are equally satisfactory in fulfilling the BOK requirements.

Some of those seeking to fulfill the BOK will follow the traditional path of matriculation at institutions of higher learning. Some may choose to attain the BOK through a combination of campus-based education and courses offered by non-traditional providers. A critical challenge in including non-traditional approaches to completing fulfillment of the BOK is to ensure that the education provided by these organizations meets the standards of quality and rigor found in and expected of colleges and universities and that the additional courses taken fulfill the educational component of the BOK. To this end, the BOK F&V Committee was charged with: recommending means to validate the fulfillment of the BOK attained through distance education, corporate universities, public agency courses, and professional society offerings; determining how to describe, measure, and assess the quality of this type of education; preparing typical guidance to be used by young civil engineers for designing programs that will fulfill the BOK and for documenting the results; and coordinating its alternatives and recommendations with the Licensure, Accreditation, and Curricula Committees.

Regarding the B+30 path, there are a many organizations offering post-graduate professional education. Universities offer non-degree and certificate programs that include a large number of courses that would be relevant to attainment of the BOK. Some of these courses are offered by departments in which ABET accredited programs exist. Other courses are offered by department with no association with ABET or no association with engineering. As the requirements for continuing professional development (CPD) have been mandated for re-licensing of engineers and the profession in general has moved toward support of life-long learning, many for-profit and non-profit organizations, government agencies and engineering firms are offering both CPD and more formal graduate equivalent courses. Both those in the universities and those outside programs offer courses and, in some cases, programs or degrees through distance learning methods. The committee is investigating several approaches that could be used to deal with the need, in the B+30 program, to ensure that organizations offering courses are of a quality that parallels the quality of universities and to ensure that the approximately 30 courses taken, as a group, fulfill the educational component of the BOK. Education's long history in accreditation clearly indicates that accrediting bodies do not accredit courses; rather, they accredit the organizations and programs that provide the courses and expect that these organizations will offer courses that meet the standards of higher education.

The committees of CAP<sup>3</sup> continue to prepare reports for the ASCE BOD as well as public dissemination. Questions or suggestion, please contact Jeffrey S. Russell at [russell@enr.wisc.edu](mailto:russell@enr.wisc.edu), Stuart G. Walesh at [stuwalesh@comcast.net](mailto:stuwalesh@comcast.net), or Thomas A Lenox at [tlenox@asce.org](mailto:tlenox@asce.org).

## Structural Engineers Association of WA Announcements

Yakima  
January 27, 2005



Richland  
January 28, 2005

### How to stay out of the engineers' office! 2003 IRC Prescriptive method; You really can do it yourself.

South Central Chapter of SEAW joins with APA (The Engineered Wood Association) to bring you this exclusive, no non-sense, presentation.

**Who should attend?** Residential Architects, House Plan Designers, Builders, Building Officials, Plan Reviewers, and other interested persons.

If you thought you could do house plans yourself... you were right! With the new IRC prescriptive method anyone can design a house and meet the code. All you have to do is know the rules and follow them. Here's your opportunity to get a look at what it takes to meet the lateral load resisting system requirements for single family dwellings.

**Featured Presenter: Mike Drorbaugh**, Senior Engineered Wood Specialist in the Field Services Division at APA, will present on 2003 IRC prescriptive method for single family dwellings including APA developed portal frame detailing. Mike is a frequent and popular speaker and trainer in the Western U.S. and Canada.



**Seminar will be presented on two consecutive days:**

**Yakima, WA  
January 27, 2005**

**Time: 1pm to 5pm**

Venue: Probation Services Classroom  
207 South 3<sup>rd</sup> Street

(Please use the west entrance facing the police station)

Soft drinks, coffee and cookies will be provided.

To register call John Tate at:  
(509) 453-5501

Cover Charge: \$30

Make checks payable to SEAW.

Registration at the door only by available space. Maximum seating 55 persons.

**Richland, WA**

**January 28, 2005**

**Time: 1pm to 5pm**

Venue: Conference Room 1-C-1  
1200 Jadwin Ave

(Please enter through the main entry off of Jadwin at street level.)

Soft drinks and cookies provided.

To register call Amy or Kristy at:  
(509) 735-1589

Cover Charge: \$30

Make checks payable to SEAW.

VISA and Master Card accepted.

Registration at the door only by available space. Maximum seating 35 persons.

***Seats will not be reserved without payment.***

ENGINEERING FOR A BETTER TOMORROW

### Structural Engineers Association of WA Announcements Meeting Schedule

**January 20, 2005:** Joint meeting with ASCE Columbia Section, 6:00 PM, Shilo Inn, Richland, WA. Topic Preliminary Design and Layout of Highway Structures.

**February 20, 2005:** Snow Loads of ASCE 7 and IBC 2003. Speaker: John Tate.

**March 17, 2005:** Design Loads for Water Tanks. Speaker: Jon Dietrich.

For more Info: visit [www.seaw.org](http://www.seaw.org).

### ASCE Continuing Education Courses

- **Design of Metal Buildings: Avoid Pitfalls in Specifying and Procuring**, January 27 – 28, 2005, Scottsdale, AZ, \$955 for Members, \$1,155 for non-Members. 1.4 CEUs. For more info: Call 1-800-548-2723, or visit [www.asce.org/conted/seminars](http://www.asce.org/conted/seminars).
- **Seismic Design & Performance of Building Structures**, January 27 – 28, 2005, Sacramento, CA, \$975 for Members, \$1,175 for non-Members. 1.6 CEUs. For more info: Call 1-800-548-2723, or visit [www.asce.org/conted/seminars](http://www.asce.org/conted/seminars).
- **Earthquake Induced Ground Motions**, January 20 – 21, 2005, San Diego, CA, \$945 for Members, \$1,145 for non-Members. 1.6 CEUs. For more info: Call 1-800-548-2723, or visit [www.asce.org/conted/seminars](http://www.asce.org/conted/seminars).
- **Probabilistic Designs**, January 19 – 21, 2005, Scottsdale, AZ, \$1,055 for Members, \$1,255 for non-Members. 2.1 CEUs. For more info: Call 1-800-548-2723, or visit [www.asce.org/conted/seminars](http://www.asce.org/conted/seminars).

### ASCE Distance Learning Courses

- **Structural Renovation of Buildings on CD**, Price \$695 for Members, \$795 for non-Members. For more info: Call 1-800-548-2723, or visit [www.asce.org/conted/distancelearning](http://www.asce.org/conted/distancelearning).
- **Snow Load Provisions in ASCE 7-02 on CD**, Price \$75 for Members, \$125 for non-Members. 0.1 CEUs. For more info: Call 1-800-548-2723, or visit [www.asce.org/conted/distancelearning](http://www.asce.org/conted/distancelearning).
- **Earthquake Protective Design Video**, Price \$135 for Members, \$165 for non-Members. 0.15 CEUs. For more info: Call 1-800-548-2723, or visit [www.asce.org/conted/distancelearning](http://www.asce.org/conted/distancelearning).
- **Wind Loads Online Course**, Price \$399 for Members, \$499 for non-Members. 0.8 CEUs. For more info: Call 1-800-548-2723, or visit [www.asce.org/conted/distancelearning](http://www.asce.org/conted/distancelearning).