AC 2009-42: ASCE POLICY 465: STATUS AND NEXT STEPS

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ASCE Policy 465 – Progress and Next Steps

Abstract

For several decades, educators and practitioners in the civil engineering community in the United States have been calling for reform of civil engineering education. In 1995, at the American Society of Civil Engineers (ASCE) Civil Engineering Education Conference (CEEC '95), some of the educational leaders of the profession believed that the time was right to begin the long road to reformation. Their call for action ultimately resulted in the passage of ASCE Policy Statement 465 Academic Prerequisites for Licensure and Professional Practice which states that in the future, education beyond the baccalaureate degree will be necessary for entry into the professional practice of civil engineering. Ultimately, the new Committee on the Academic Prerequisites for Professional Practice (CAP^3) was charged to develop, organize, and execute a detailed plan for the full realization of ASCE Policy Statement 465. The purpose of this paper is to discuss ASCE's current plan for implementing Policy Statement 465.

ASCE's Raise the Bar Initiative

October 2008 marked the Tenth Anniversary of the Board of Direction's approval of Policy Statement 465 Academic Prerequisites for Licensure and Professional Practice. Since then, ASCE has gradually increased its efforts to raise the educational requirements for entry into the future practice of civil engineering at the professional level. For more than a decade, ASCE has been presenting, talking, and listening to many stakeholders. As a result, ASCE has been progressively improving our proposed program to Raise the Bar in engineering education. This has resulted in refinements to Policy Statement 465 in 2001, 2004, and 2007.

The Committee on the Academic Prerequisites for Professional Practice (CAP^3) is charged to develop, organize, and execute a detailed plan for the full realization of ASCE Policy Statement 465. This effort is also referred to as the Raise the Bar initiative. The National Council of Examiners for Engineering & Surveying (NCEES) [1], the National Society of Professional Engineers (NSPE) [2], and the National Academy of Engineering (NAE) [3] have joined in this advocacy. In addition, there are many other individuals advocating change including Norman R. Augustine [4], James J. Duderstadt [5], and those leaders that attended the "5XME" Workshop [6].

The Raise the Bar effort ties directly into ASCE Strategic Plan via the Competency Strategy Sketch. The Competency Strategy Sketch is one of four key long-term strategic issues being pursued by ASCE. ASCE's "motive to act" on this strategic issue has been clearly documented. It states that the increasing breadth, complexity, and rate of change of professional practice puts greater stress on (a) the expectation that the BS degree can provide the foundation for the civil engineer to practice at the professional level, (b) the profession's ability to assure competence in engineering specialty areas, and (c) civil engineers' ability to acquire sufficient non-technical professional skills (such as communication, management, and leadership), thereby limiting opportunities to fill leadership roles. There are 13 actions associated with the strategy sketch

where the first nine are being championed by CAP^3 and the remaining four are being worked on by the Committee on Professional Practice (CPP). A summarized version of the plan can be found in Appendix A.

In addition, over the last year, numerous presentations on the effort have been given. Appendix B lists selected presentations. A summary of some of the major thrusts of the Raise the Bar initiatives during 2008 are summarized in the paragraphs that follow.

Second Edition of the Body of Knowledge (BOK)

The 2nd Edition of the Body of Knowledge (BOK2) was completed, published, and formally released during a ceremony at the National Academy of Engineering (NAE) on February 19, 2008. A free electronic copy of this BOK2 (and other information about ASCE's Vision 2025 and Raise the Bar initiative) is available at www.asce.org/raisethebar. BOK2 is also being sold through the ASCE Bookstore. As of the end of January 2009, over 8,500 copies of the BOK2 have been downloaded. Additionally, over 1,500 bound copies have been distributed to key stakeholders including engineering deans and civil engineering department heads. And approximately 300 bound copies have been sold through the ASCE Bookstore. The BOK2 has been and will continue to be discussed at most major gatherings of ASCE members in 2008.

Licensure

Given the challenge of defining the Model Rules to support the new Model Law, National Council of Examiners for Engineering & Surveying (NCEES) formed the Bachelor's +30 Task Force in late 2007. This Task Force was recently renamed the NCEES Engineering Education Task Force. The formal liaison to this committee from ASCE is Kenneth Fridley. Given the complexity of the assignment, the work of the Task Force was scheduled to take at least two years – until the summer of 2009. Up-to-date information about this Task Force (and other NCEES committees) can be found at www.ncees.org.

Some of the key Raise the Bar leaders participated in the 2008 Annual Conference of the National Society of Professional Engineers (NSPE) in Portland, Oregon in July 2008. This was a key event for the Raise the Bar effort. With the passing of NSPE Professional Policy 168 (PP 168) on "Engineering Education Requirements" in early 2002, NSPE has been publicly supportive of education beyond the baccalaureate. However, this policy was subject to renewal by the new governing body of NSPE – called the House of Delegates. The conference included multiple discussions related to the renewal of PP 168 – and NSPE's overall support of education beyond the baccalaureate. Led by ASCE's Craig Musselman, key presentations were given to the general session of the conference – followed by a special presentation to the NSPE House of Delegates. It is anticipated that additional presentations will be given at the 2009 Annual Conference of NSPE July 16-19, 2009 in St. Louis, Missouri.

In August 2008, President-elect Wayne Klotz represented ASCE at the Annual Meeting of NCEES in Minneapolis. NCEES considered a motion by its Western Zone to suspend implementation of the new NCEES Model Law (passed in 2006 and reconfirmed in 2007). This motion, with a potential to halt the momentum of the Raise the Bar effort, was defused by a separate motion from

the NCEES Southern Zone that did not suspend implementation (Vote: 52-10-3). It was also extremely encouraging that NCEES also passed motions –

(1) exploring a national clearinghouse for the +30 component of the Model Law (Vote: 55-7-3),

(2) defining "acceptable coursework" and "approved course providers" for the +30 provisions of the Model Law (Vote: 34-26-5),

(3) incorporating the accredited master's degree into the Model Law (Vote: 54-6-5),

(4) changing the not-earlier-than date of the Model Law from 2015 to 2020 (Vote: 59-2-4), and

(5) explaining how to handle credits earned in excess of a university's requirements for a baccalaureate degree (Vote: 59-1-5).

Another key activity related to licensure was a combined effort of ASCE's State Government Affairs staff and CAP^3's members/staff to influence state legislation related to Raise the Bar. Of particular note has been the coordinated work with ASCE leadership in Nebraska and Louisiana.

- In Nebraska, a concentrated effort has been made to Raise the Bar. Workshops and meetings with local stakeholders/champions were held in Nebraska during July and August 2008; and local Town Hall meetings were conducted in October 2008.

- In Louisiana, interacting with stakeholders has been initiated. A Champions' Workshop and major presentation to the Louisiana Section was given in April; and multiple presentations and workshops to Louisiana stakeholders (including the faculty of every major university in the state) in September. A major presentation was given to the Joint Engineering Society Conference in Lafayette, Louisiana in January 2009

Accreditation

In a significant positive development, the ABET Board of Directors voted to remove the prohibition on dual level accreditation of engineering programs in their meeting on March 29, 2008 by a vote of 28-12 (with two abstentions). The ban had kept engineering programs in a given discipline at the same university from being accredited at both the baccalaureate and the master's level. A more detailed summary of the importance of this development can be found in www.asce.org/raisethebar.

What does the lifting of this prohibition mean to our long-term effort to implement the Body of Knowledge and ASCE Policy 465? It opens up multiple practical paths to the fulfillment and validation of the civil engineering higher educational standard. And, five to 15 years from now, it is hoped that more universities, by their own choice, will offer ABET-accredited practice-oriented master's degrees that better prepare the engineering practitioners and leaders of tomorrow.

BOK Educational Fulfillment

A new committee of CAP^3, the BOK Educational Fulfillment Committee (BOKEdFC), was formed in 2008 to focus on the curricula to satisfy the new BOK. The membership was finalized

in early December 2007 following a public call for nominations that was announced in the ASCE News, on the ASCE website, and on the Department Heads' Listserv. Ken Fridley (Chair) and Jeff Evans (Vice Chair) are leading this new committee. Under their leadership, the committee is:

1. Fostering the creation of a community of scholars, including academicians, practitioners, and others, interested in engineering educational reform.

2. Investigating and documenting how programs are incorporating the formal educational components of the first edition of the Body of Knowledge into their curriculum. Compiling best practices on how programs fulfill the formal education requirements of the BOK1.

3. Investigating and documenting how programs are incorporating and/or can incorporate the formal educational components of the second edition of the Body of Knowledge into their curriculum.

4. Disseminating their findings through appropriate forums including the preparation of written reports suitable for publication to the BOK (regardless of version).

It is anticipated that they will complete their current work by the end of 2009. The following universities are participating on the committee:

Members	Corresponding Members	Corresponding Members
University of Alabama	California State U -- Sacramento	Michigan Technological University
University of Arkansas	The Citadel	Mississippi State University
Bucknell University	University of Central Florida	North Dakota State University
Iowa State University	Drexel University	University of Oklahoma
University of Louisiana	University of Florida	Purdue University
Montana State University	George Mason University	Seattle University
North Carolina State University	University of Houston	The University of Texas - Tyler
Northern Arizona University	University of Kentucky	United States Air Force Academy
Rose-Hulman Institute of Technology	Lawrence Technological University	United States Military Academy
Texas A&M University	Manhattan College	University of Virginia
University of Southern California	The University of Melbourne	Virginia Military Institute
University of Wisconsin - Madison	Merrimack College	University of Wisconsin-Platteville
	Michigan State University	

Pre-licensure Experience

CAP^3 has organized another new constituent committee, the Body of Knowledge Experiential Fulfillment Committee (BOKExFC). Based upon the final report of the CAP^3 Experience Committee from July 2007 (see www.asce.org/raisethebar), this committee will work to create pre-licensure experience guidelines that are supportive of the expectations of Second Edition of the Body of Knowledge (BOK2), and that could evolve into regulatory mechanisms in engineering licensure.

The specific charge for the committee includes the following:

1. Review the final report of the ASCE Experience Committee (July 2007). Recast the ASCE BOK experiential guidelines into a form applicable and acceptable to engineers of all disciplines, while ensuring full compliance with the intent of the BOK outcomes for civil engineers. If necessary, propose additional outcomes/guidelines that are essential for other disciplines that naturally accommodate/align with the career paths of civil engineers

2. Develop a matrix for attaining the elements of the generic experiential outcomes in an engineer intern's pre-licensure career. If necessary and appropriate, identify those elements that may be unrealistic or unreasonable to attain in pre-licensure career activities.

3. Develop a stand-alone set of experience guidelines to be followed by a civil engineer intern during his or her pre-licensure career. These guidelines should include not only the substantive elements of the experiential outcomes, but also provisions for reporting, mentorship, self assessment, and self-validation of the experience elements.

4. Prepare a draft report by July 2010 to allow for completion of the final report by September 2010 with a presentation to the ASCE Board of Direction in October 2010.

These experiential guidelines should complement and supplement the outcomes fulfilled through the formal educational process through "B + M/30" (baccalaureate plus the master's or approximately 30 credits of coordinated graduate or upper level undergraduate engineering credits).

Paraprofessionals in the Engineering Design Team

ASCE's Raise the Bar initiative has lead to the opportunity to think more broadly about the nature of the engineering team -- and that it includes more than just licensed professionals. They also include paraprofessionals – individuals who have significant engineering educational qualifications and who perform important technical and non-technical roles.

Some key leaders of the Board of Direction, CAP^3, and the Committee on Professional Practice (CPP) are concerned that individuals serving in these roles are not well understood, defined or credentialed – and need to be incorporated into the profession in a more organized, recognized and productive manner. To address this situation, ASCE formed a Board-level task committee to explore paraprofessionals in civil engineering and set the stage for follow up activities related to this issue. The Paraprofessional Exploratory Task Committee (PETC) was formed in April 2008 and completed its report in September 2008 -- and presented to the ASCE Board of Directors at its November 2008 meeting. The report, which can be found at www.asce.org/raisethebar, includes a review of paraprofessionals in several other learned professions; summarized the types, roles and credentials of paraprofessionals in civil engineering; and identified issues for further study which would improve their incorporation into the civil engineering profession. The report also presents a model for distinguishing engineers, engineering technologists and engineering technicians – a model that is suitable for adaptation by other engineering disciplines.

A Board-level committee, named the Paraprofessional Task Committee (PTC), is being formed and is charged to develop a recommendation for ASCE recognition and support of paraprofessionals within the Civil Engineering profession. This recommendation will include member input concerning the importance and feasibility of this effort. At a minimum, the recommendation will also include alternatives for the identification of roles and responsibilities, credentialing, promotion of work opportunities and value to the profession, and generic career paths to include education, training, and work experience. While the PETC and PTC are not constituent committees of CAP^3, the successful completion of their charges is extremely important to the Society's Raise the Bar initiative.

Frequently Asked Questions

To communicate with a broad stakeholder group, CAP^3 has prepared a set of Frequently Asked Questions along with draft responses. They are in a very user-friendly format and can be found at www.asce.org/raisethebar. This can serve as an excellent primer for those interested in more information and different perspectives on the Raise the Bar initiative.

Plus 30 Task Force

The Plus 30 Task Committee (P30TC) will explore what the +30 credits should be and practical alternatives for how civil engineers can attain +30 credits that will be required for licensure as a professional engineer in the future – and that are beyond the requirements of an accredited baccalaureate engineering degree. The Plus 30 Task Committee (P30TC) will be focused on alternatives such as corporate universities, public agency professional development programs, professional intensive short courses, and non-engineering degree programs. The formal charge of the committee includes:

- Define +30 credits for civil engineers in terms of technical and professional practice focus areas.
- Identify acceptable courses for +30 credits for civil engineers -- and recommend guidelines and mechanisms to identify future courses.
- Recommend guidelines and mechanisms to identify approved course providers for these acceptable courses for civil engineers.
- Recommend guidelines and mechanisms to identify means to acquire the +30 from non-academic providers.
- Prepare a report documenting its findings and recommendations.

The Plus 30 Task Committee (P30TC) will deliver its final report at the fall 2009 meeting of the ASCE Board of Direction.

Summary of ASCE's Raise the Bar Initiative

This initiative is about the future of engineering, not the past. As one ASCE member has said, "Shall we walk backwards into the future admiring the past, or shall we turn around and face the challenges the future brings?" Progress has been made in the decade since ASCE Policy 465 was first approved by the BOD, and this effort will continue to span multiple decades.

References

1. Carter, J. "Council Votes to Increase Amount of Education Required for Engineering Licensure." National Council of Examiners for Engineering and Surveying. Sept. 2006. News Release.

2. National Society of Professional Engineers. Professional Policy No. 168 - Engineering Education Requirements. (http://www.nspe.org)

3. National Academy of Engineering. 2005. *Educating the Engineer of 2020: Adapting Engineering Education to the New Century*. National Academies of Sciences, Washington, DC. (http://www.nae.edu)

4. Augustine, N. R. "Re-engineering Engineering: 21st-Century Needs Can't Be Met With Just a Four-Year Degree." ASEE Prism. Feb. 2009.

5. Duderstadt, J.J. *Engineering for a Changing World: A Roadmap to the Future of Engineering Practice, Research, and Education*. The Millennium Project, The University of Michigan. 2008. (http://milproj.dc.umich.edu/)

6. National Science Foundation. 2007. *The "5XME" Workshop: Transforming Mechanical Engineering Education and Research in the USA*. National Science Foundation, Arlington, VA. May 10-11, 2007. (http://www-personal.umich.edu/~ulsoy/pdf/5XME_Report.pdf)

Appendix A: Competency Strategy Sketch (1/14/09)

Strategic Issue *(the motive to act)*
The increasing breadth, complexity, and rate of change of professional practice puts greater stress on:

a) The expectation that the BS degree can provide the foundation for the civil engineer to practice at the professional level.
b) The profession's ability to assure competence in engineering specialty areas.
c) Civil engineers' ability to acquire sufficient non-technical professional skills (such as communication, management, and leadership), thereby limiting opportunities to fill leadership roles

Desired Outcomes *(conditions that will exist when the issue is favorably resolved)*

1. An ongoing assessment of the profession's dynamic Body of Knowledge (BOK) has been established.
2. A demonstrated attainment of this BOK is required to earn professional engineer status.
3. There exist multiple, defined paths to fulfill the BOK requirements.
4. The need for, and integrity of, this requirement, as well as client recognition of its value, has been widely accepted by the profession.
5. Civil engineers are of higher quality, increasing the value they add to society and to clients and giving them flexibility and agility over their careers.
6. Widely recognized and accepted post-licensure specialty certifications and/or licenses for all appropriate civil engineering specialty areas have been established.

Guiding Principles *(parameters placed on the strategy managers)*
Work continuously at engaging stakeholders, particularly ASCE members.

Actions *(required to achieve these outcomes)*

	Action ***Note:*** *In Strategy Mgr column, bold committee is the lead.*	**Strategy Manager(s)**	**Outcomes Addressed**	**Target Completion Date**	**Action Status (in brief)**
1.	Develop a Body of Knowledge (BOK) for civil engineering; seek member discussion on its accuracy and value; and institutionalize a process to continuously access, evaluate, and update.	**CAP3**, CCOM	1, 5	Feb04 (#1) Feb08 (#2) Feb?? (#3)	**Done.** This has been a major project of CAP^3; second edition was released in Feb08; third edition no-earlier-than Feb2012.
2.	Translate the BOK into meaningful accreditation criteria that are approved by ABET. Institutionalize a process to continuously access, evaluate, and update these criteria.	**CAP3**, EdAC	3, 2, 5	Dec07 (#1) ????? (#2)	**Done for the First Edition of the BOK.** Revised Civil Engineering Program Criteria and Master's Level General Criteria were approved by ABET (on second/final reading) in Nov07 — for implementation in AY 2008-2009. Planning for subsequent changes to accreditation criteria related to the Second Edition of the BOK has not been developed (too soon!).

	Action ***Note:*** *In Strategy Mgr column, bold committee is the lead.*	**Strategy Manager(s)**	**Outcomes Addressed**	**Target Completion Date**	**Action Status (in brief)**
3.	Influence the universities to modify their undergraduate/ graduate civil engineering programs to fulfill the formal education component of the BOK.	**CAP3**, EdAC	3, 4, 5	Oct 2010	New educational committee (BOKEdFC) was organized. Tri-weekly telephone conferences conducted since early 2008. First face-to-face meeting was held on April 19-20, 2008 in Reston. Second face-to-face meeting was held on August 16-17, 2008 in Minneapolis. Interim report to be prepared by Jun09.
4.	Develop experience guidelines for the CE Engineer Intern (EI) that support an individual's fulfillment of the BOK.	**CAP3**	3, 5	Oct 2010	"Problem identification" committee completed its work by Oct07. Solicitation for new/fresh members made in the Sep08 edition of *ASCE News* and other newsletters. Experiential Workshop conducted in Jan09 with 22 participants. New experiential committee (BOKExFC) to be totally organized by Feb09.
5.	Influence NCEES to amend the Model Law requiring additional education beyond the BS degree in the future.	**CAP3**	2, 5	Sep 2006 *(Counteract ongoing attempts to rescind)*	A new NCEES model law was passed in the summer of 2006—and reconfirmed in the summer of 2007 and 2008. Challenges to the Model Law will probably continue over the next several years. Must be continually alert to face opponents who act to rescind the new Model Law.
6.	Influence NCEES to amend the Model Rules to establish a credible means to validate an individual's fulfillment of the BOK via a) baccalaureate degree, (b) masters degree or validated "+30" programs, and c) pre-licensure experience.	**CAP3**	2, 3, 5	Sep 2009	NCEES organized a "B plus 30" committee in the fall of 2007 to address this action. Name changed to NCEES Engineering Education Task Force in Aug08. CAP^3 has four of its key licensure members participating on this committee—two as voting members (appointed by NCEES) and two as "consultants" (named by NSPE & ASCE). This committee presented preliminary results in the summer 2008; should present final results by the summer of 2009. Challenges to the Model Rules will probably continue over the next several years. Must be continually alert to face opponents who act to rescind the new Model Rules.
7.	Influence key stakeholders, major employers of civil engineers, and lead client groups to understand & commit to the changes necessary to implement the Raise the Bar initiative.	**CAP3, CCOM**	4, 5	2015	Continuous need to communicate, communicate, communicate, . . .

	Action ***Note:*** *In Strategy Mgr column, bold committee is the lead.*	Strategy Manager(s)	Outcomes Addressed	Target Completion Date	Action Status (in brief)
8.	Influence ABET to remove the prohibition on dual-level accreditation of engineering programs.	**CAP3,** EdAC	3	Nov 2009	**Done.** Despite significant resistance, succeeded in getting a positive vote of the ABET BOD for removal of the prohibition on dual-level accreditation of engineering programs in Mar08. The change will go into effect with the 2009-2010 accreditation cycle.
9.	Advocate changes to the licensing laws in each of the 56 jurisdictions to reflect the NCEES model law and raise the bar for the licensure of engineers.	**CAP3, CGA**	3, 5	2035	Working to pass legislation in Nebraska to change the licensure law. Conducted a "NE Champions Workshop" in NE in Jul08, together with several visits to key state and industry leaders. Conducted two "town hall" meetings in NE in Oct08. Completed a four-day visit to LA in Sep08, with participation in the LA Section Conference and visits to every major civil engineering university program in LA.
10.	Develop model leadership, management, and communication skill-set matrices for practicing civil engineers.	**CPP**	5	Nov 2009	CPP's Committee on Career Development has been tasked with this item and is beginning work in January 2009.

	Action ***Note:*** *In Strategy Mgr column, bold committee is the lead.*	Strategy Manager(s)	Outcomes Addressed	Target Completion Date	Action Status (in brief)
11.	Provide enhanced leadership and non-technical professional skills training to civil engineers through a variety of venues and formats through: a) Leader Education and Development (LEAD), b) Leadership and Management Certificate Program.	**CPP**, CGU, CYM, Cont Ed	5	a) Ongoing b) 2012	a) Leader Education and Development (LEAD): 8 month program that creates dramatic growth in leadership confidence and skills; Target audience – engineering managers and rising leaders. FY08 program – full; FY09 program will begin November 08. Exploring new locations and new marketing strategies. b) Leadership and Management Certificate Program 5-year plan: target audience is young engineers. "Course in a box" will be available to sections/ branches for delivery locally. • Yr 1 – FY08: Pilot Session – Supercharge your Career • Yr 2 – FY09: Release Career Development Module V.1; Develop Pilot Modules – Project Management + Personal Leadership • Yr 3 – FY10: Release Project Management + Personal Leadership Module V.1; Develop Pilot Modules– Team Development + Ethics • Yr 4 – FY11: Release Team Development + Ethics Module V.1; Develop Pilot Modules – Conflict Mgmt + Change Mgmt; • Yr 5 – FY12: National recognized certificate program; "Successful" Common Usage
12.	a) Prepare an ASCE Policy Statement on advanced credentialing; b) Provide a reference for post-PE licensure specialty credentialing for use by the CE profession; and c) Identify gaps and sources in post-PE licensure specialty credentialing needed by the CE profession.	**CPP,** CEC	5, 6	a. May 2008 b. Apr 2009 c. Nov 2009	CPP has appointed a task committee to address action items 12b and 12c. Item 12a was completed in May 2008
13.	Revise and update Manual 45, "How to Work Effectively With Consulting Engineer" one of the Society's most popular manuals.	**CPP**	1	Dec 2009	Cmte has rewritten most of the document and is awaiting input from member and corporate questionnaires to complete data based appendices

Appendix B: Sampling of RAISE THE BAR Presentations in 2008

- ASCE Multi-Region Leadership Conferences @3 (January/February 2008).
- BOK2 Press Conference at National Academy of Engineering (February 2008).
- ACEC Design Professionals Coalition (February 2008)).
- International Mechanical Engineering Education Conference (April 2008).
- ASEE Midwestern Section Conference (April 2008).
- Founder Society Executive Directors (April 2008).
- Louisiana Raise the Bar Champions (April 2008).
- NSPE Western Zone Meeting (April 2008).
- USACE National Technical Competency Workshop (May 2008).
- Lawrence Technological University- Professional Advisory Council (May 2008).
- NCEES Central & Western Zones Joint Meeting (May 2008).
- National Civil Engineering Department Heads' Meeting (May 2008).
- Oregon Joint Engineering Conference co-sponsored by NSPE/ACEC/ASCE/Others (May 2008).
- US Universities Council on Geotechnical Education & Research Workshop (May 2008).
- ASEE Annual Conference and Exposition (June 2008).
- United States Army Corps of Engineers Leadership (June 2008).
- NSPE Annual Conference (July 2008).
- Nebraska Raise the Bar Champions (July 2008).
- Southeast Conference Colleges of Engineering (July 2008).
- NCEES Annual Meeting (August 2008).
- ASME Body of Knowledge Committee (September 2008).
- International Federation of Consulting Engineers (September 2008).
- Louisiana Academic Workshops (September 2008).
- Naval Facilities Engineering Command Leaders (September 2008).
- Nebraska Town Hall Meetings @2 (October 2008).
- ASCE Officers' Orientation (October 2008).
- ASCE Headquarters Orientation (October 2008).
- ABET Annual Meeting (October 2008).
- NSPE Northeastern Zone Meeting (October 2008).
- International Engineering & Construction Conference (October 2008).
- ACEC National Fall Conference (October 2008).