

ACEC

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JULY/AUGUST 2008

ENGINEERINGiNC.

THE AWARD-WINNING BUSINESS MAGAZINE

www.acec.org

CONGRESSMAN KENDRICK MEEK

Leading the Charge to
Defeat 3 Percent Withholding

Member Firms
Penetrate **Global**
Marketplace

Liability Insurance
Rates Still Steady

2008 **Montreal** Fall
Conference Preview

2009 EEA Call for Entries; 2008 Fall Course Catalog



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ACEC

AMERICAN COUNCIL OF ENGINEERING COMPANIES

2006

CALL FOR ENTRIES
ENGINEERING EXCELLENCE AWARDS



ENGINEERING EXCELLENCE AWARDS

The American Council of Engineering Companies' (ACEC) annual Engineering Excellence Awards (EEA) competition recognizes engineering firms for projects that demonstrate a high degree of achievement, value and innovation.

For more than 40 years, engineering firms have entered their most innovative projects and studies in state and regional competitions conducted by state Member Organizations (MOs). Qualifying firms at the MO level are then eligible to participate in the ACEC national competition.

EEA entries are accepted into one of 11 project categories: studies, research, and consulting engineering services; building/technology systems; structural systems; surveying and mapping technology; environmental; water and wastewater; water resources; transportation; special projects; small projects and the newly added energy category.

A distinguished panel of 25-30 judges is convened to critique the projects. These professionals have backgrounds in engineering, architecture, state and federal government, media, academia and the military. The panel of judges spends three days evaluating projects for engineering excellence, then selects 24 top winners to receive 16 Honor Awards and eight Grand Awards. One Grand Conceptor Award will be selected from the eight Grand Award winners for the overall best engineering achievement.

Projects from all over the world are rated on the basis of: uniqueness and originality; future value to the engineering profession and perception by the public; social, economic, and sustainable development considerations; complexity; and successful fulfillment of client/owner's needs, including schedule and budget.

ACEC's 2009 Engineering Excellence Awards provide firms with national recognition and a platform to showcase their talent and expertise in a dramatic setting.

The annual EEA gala celebrates, with pride and elegance, the outstanding achievements of the engineering profession.

A special award—The Ramesh M. Khona Award for Communication of Engineering Excellence, recognizes the best display panel submitted as an entry in the EEA competition. The objective of the award is to promote communication of engineering excellence by creating displays that are both visually exciting and stimulating to read, as well as promoting the achievements of the engineering profession.

A panel of communications experts will determine the winner of this award. All EEA panels are eligible.





ACHIEVING NATIONAL RECOGNITION

During the Engineering Excellence Awards gala evening, all National Finalists are recognized and the top 24 winning projects are highlighted at the EEA Gala, a black-tie event – known as the “Academy Awards” of the engineering industry. This event will be held on Tuesday, April 28, 2009, at the Grand Hyatt Hotel in Washington, D.C.

The EEA gala will be held during ACEC's Annual Convention, which includes a legislative summit. More than 600 guests attended the 2008 EEA gala, including clients and members of Congress, along with international, federal, state and regional officials. ACEC's 2009 Engineering Excellence Awards competition offers the opportunity to showcase the year's best engineering achievements to an audience of clients, peers and decision-makers at all levels.

ELIGIBILITY

Any engineering or surveying firm is eligible to enter the awards program, whether or not the firm is a member of ACEC.

GENERAL CRITERIA

- 1** Both member and non-member firm entries must be submitted to the ACEC national competition through an ACEC state Member Organization (MO).
- 2** Each entry should be submitted to the MO in accordance with local rules for the entry. Contact the nearest ACEC MO office for details. Entries submitted to the ACEC national competition must be submitted in accordance with the rules and requirements in this brochure.
- 3** An MO may submit five entries from its own membership, plus one member entry for every five, above 10 entered on the MO level. A MO may submit any non-member entries judged by the MO to be legitimate candidates for entry in the national competition. Such non-member submittals will not be counted against the member submittal limitations outlined above.

4 Engineering or surveying projects that have won awards in state or national organizations' programs are encouraged to be entered.

5 Projects entered in the competition may have been executed anywhere in the world. Research and Studies (Category A) or Surveying and Mapping projects (Category D) must have been publicly disclosed by the client between Nov. 1, 2006 and Oct. 31, 2008. Construction of projects (Categories B through K – with the exception of D) must have been substantially completed and ready for use between Nov. 1, 2006 and Oct. 31, 2008.

6 Entries in the national competition may be placed in any one of the 11 categories. The entering firm must select the one category that is most appropriate. A project may be entered only once in any category. However, after a project entered in Category A has been constructed, it may be entered in a different category – B through K – in the year when eligible.

7 Each entry must consist of three components:

- I. Official entry notebook
- II. Envelope containing submission materials
- III. Photographic display panel (see “Preparing Your Entry for the 2009 Engineering Excellence Awards”).

Non-compliance with the rules may disqualify an entry. Please read the requirements thoroughly.

8 ACEC will not be responsible for any damage or loss to an entrant's official entry notebook, envelope, electronic media, supplementary report or photographic display panel.

9 The ACEC Engineering Excellence Awards committee reserves the right to determine the eligibility and category classification for all entries.

2009 CALL FOR ENTRIES

JUDGING

Entries will be judged on the basis of overall engineering excellence in each of the 11 categories; on the basis of the work performed by the entering firm only; and according to the rating guidelines listed. Winners and affiliated MOs will be notified.

AWARDS

The panel of judges will select 24 awards at their discretion – 8 Grand and 16 Honor Awards. A Grand Conceptor Award will be selected from the 8 Grand Award winners. The Grand Conceptor will be announced at the Gala as the top national winner selected by the judges, whose decisions on all awards are final. Awards will be presented to the clients/owners and entering firms submitting the winning entries. All National Finalists will be recognized along with the top 24 winning projects and the Grand Conceptor winner during the EEA Gala evening.

PUBLICITY

The public relations and marketing value of participation in the national EEA program is substantial. All national winners will be highlighted in ACEC's public relations program, which benefits all U.S. engineering firms. Working with participating firms and MOs, ACEC staff will contact local media to announce winners and their awards. Through national and MO efforts, display panels can be exhibited in city administrative buildings, universities, shopping centers and office buildings. These activities enhance direct business development benefits for both local and national award winners. Further benefits are gained through feature stories presented in firm brochures, newsletters and other publications.

RATING GUIDELINES FOR JUDGING

1. Original or innovative application of new or existing techniques..... 20%
2. Future value to the engineering profession and perception by the public..... 20%
3. Social, economic and sustainable design considerations..... 20%
4. Complexity 20%
5. Exceeding client/owner needs..... 20%
6. Total..... 100%

RATING GUIDELINE DEFINITIONS

1. **Original or Innovative Application of New or Existing Techniques:**
 - Does the entry demonstrate the use of a new science or a breakthrough in the general knowledge of engineering?
 - Does the entry represent a unique application of different technology, techniques, materials or equipment?
2. **Future Value to the Engineering Profession:**
 - Will the entry redefine current engineering thinking?
 - Does the entry advance a positive public image of engineering excellence?
3. **Social, Economic and Sustainable Design Considerations:**
 - Do the solutions identified produce secondary benefits of value to the community environment?
 - Does the entrant's approach provide society with social, economic, or sustainable development benefits?
 - Is the public's health, safety, or welfare significantly improved as a result of the entrant's, and/or affected environment's, contribution to the project?

CALL FOR ENTRIES – CATEGORIES

CATEGORY A:

Studies, Research and Consulting

Non-design services including, but not limited to:

- New products, materials and technologies
- Expert testimony
- Basic research and studies
- Computer/software technology
- Technical papers
- Public outreach/involvement

None of the projects entered in Category A can be involved with the preparation of construction documents.

CATEGORY B:

Building/Technology Systems

- Mechanical/electrical/plumbing
- Computer/technology
- Communications
- Acoustics
- Software systems
- Sustainability or carbon neutrality
- Efficiency certification standards, e.g. LEED

CATEGORY C:

Structural Systems

- Foundations
- Tunnels
- Buildings
- Seismic design
- Towers
- Bridges
- Sports facilities

CATEGORY D:

Surveying and Mapping Technology

- Geometrics, ALTA, land title and rights surveys
- Control, GPS, monitoring or construction surveying
- Survey mapping, GIS/LIS, photogrammetry

CATEGORY E:

Environmental

- Hazardous waste
- Solid waste
- Restoration/reclamation
- Air quality
- Noise
- Recycling
- Waste pond management
- Carbon sequestration and trading

CATEGORY F:

Water and Wastewater

- Water supply/distribution/treatment
- Wastewater collection/treatment and disposal
- Industrial waste
- Residuals management
- Reuse



4. Complexity:

- Did the entry successfully address very complex criteria or unique problems?
- Were extraordinary problems of site, location, hazardous conditions, project requirements or similar elements present?
- Did the entry require the use of out-of-the-ordinary technology or ingenuity for achievement of the project's goals?

5. Exceeding Client/Owner Needs:

- Did the engineer or entrant successfully engage the client/owner in the overall project development process?
- Is it an economical and cost-effective solution?
- How did the final cost relate to the original budget estimate?
- How closely does the entrant's solution meet the total goals of the client/owner?
- Did the entrant meet the client's time schedule?

PREPARING YOUR ENTRY

This section describes all required submission materials for entering the 2009 ACEC EEA competition. All materials must be submitted exactly as designated below. Digital files must be PC compatible and appropriate to the information being submitted (i.e., Microsoft Word for text, JPEGs for photos or other images, Adobe PDFs, etc.).

If the submission does not meet the requirements listed, it may be disqualified.

If any part of an entry does not meet requirements listed, that portion of the entry may not be presented for judging.

Extraneous material will be discarded.

No reference to other awards should be included in submitted materials.

In any given year, an entry may be submitted through only one MO. If a project was entered in more than one MO competition, **it is the responsibility of the affected MO** to decide which one will enter the project in the national competition.

DATES TO REMEMBER

Submitted materials **MUST BE RECEIVED** at ACEC by January 9, 2009. Materials received after that date will NOT be accepted. All materials submitted for judging in the national competition become the property of ACEC and may be used in ACEC publications. Panels may be used for displays or other promotional or educational purposes. **Submitted materials will NOT be returned.**

Company representative must be available by phone on January 14, 2009.

Judging: February 13 - 15, 2009 in Washington, D.C.

EEA Presentations and Gala Evening: Tuesday, April 28, 2009 in Washington, D.C.

SUBMISSION REQUIREMENTS

The following **three main components** must be submitted with the national EEA competition entry:

- I. Official entry notebook
- II. Envelope containing submission materials
- III. Photographic display panel

CATEGORY G: Water Resources

- Hydraulics, hydrology
- Irrigation
- Storm water management
- Erosion control
- Recreational facilities
- Flood control, dams

CATEGORY H: Transportation

- Highways
- Railroads
- Airports
- Marine/ports
- Public transit
- Intermodal facilities
- Inland water navigation

CATEGORY I: Special Projects

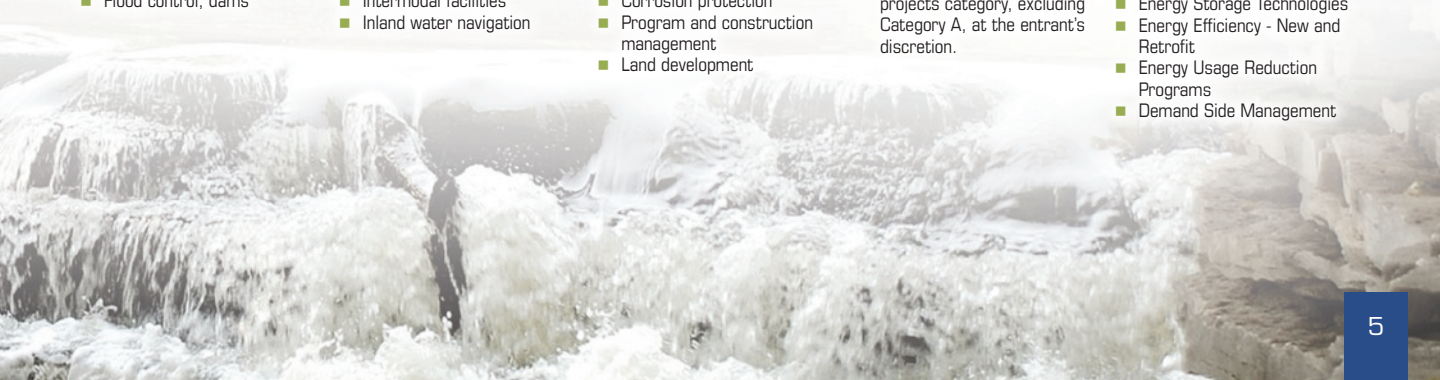
- Safety and security
- Industrial processes/materials handling
- Mining, metallurgy, mineralogy
- Corrosion protection
- Program and construction management
- Land development

CATEGORY J: Small Projects

- Total project construction budget does not exceed \$1 million
- Projects under \$1 million are not limited to small projects category, excluding Category A, at the entrant's discretion.

CATEGORY K: Energy

- Transmission and Distribution
- Power Generation
- Renewable Energy
- Cogeneration
- Energy Storage Technologies
- Energy Efficiency - New and Retrofit
- Energy Usage Reduction Programs
- Demand Side Management





I. OFFICIAL ENTRY NOTEBOOK

(black, 3-ring, 1/2" binder)

Notebook must include ONE COPY of the following:

(These copies are in addition to those that must be included in the envelope):

- Official entry form (with entry fee attached)
- Signed letter from the client/owner
- Executive summary
- Project description
- Six different photos or graphics (w/ captions and labeled: Photo 1, Photo 2, etc.)
- Photographic display panel (small version)
- CD-ROM
- Supplemental report – mandatory for Category A only (insert inside back cover or separately if too large)
- Entry fee: A check for \$975 for ACEC members and \$3,000 for non-ACEC members **must be attached to the official entry form** in notebook submitted to the ACEC competition. Refer to your MO for local competition fees.

II. ENVELOPE

CONTAINING SUBMISSION MATERIALS

The large envelope must have a label affixed to the outside, which indicates the firm name, the project name, and the category in which it shall be judged. The envelope must be large enough to contain originals and copies as indicated below:

1 Original and 10 copies of a completed official entry form. The engineer or surveyor and client/owner all must sign the original official entry form stating that the submitted project was substantially completed and ready for use between Nov. 1, 2006 and Oct. 31, 2008.

2 Original and 10 copies of a one-page signed client/owner letter, addressed to ACEC, describing the relationship the client/owner had with the entrant in the development of the project and how it exceeded the client/owner needs.

3 Original and 10 copies of an executive summary – one page; 8.5" x 11" with 1" side margins; double-spaced (minimum 12 pt. type) – describing the problem and solution. Project title and entry category must appear at the top of the page.

4 Original and 10 compiled copies of a project description, not to exceed five pages – 8.5" x 11", 1" side margins – addressing items a, b, c, and d as listed below. Project title, category and page number must appear at the top of each page. Entrants may use text (minimum 12 pt.), photos, graphs, etc.

- a) Role of entrant's firm in the project,
- b) Role of other consultants participating in project,
- c) Brief description of the entrant's contribution to the project addressing each of the following rating guidelines:
 - Original or innovative application of new or existing techniques
 - Future value to the engineering profession
 - Social, economic and sustainable design considerations
 - Complexity
 - Exceeding client/owner needs. Include total project budgeted cost, total project actual cost, entrant's portion of the budgeted cost, entrant's portion of the actual cost, scheduled and actual date of completion information from the **official entry form**.
- d) Describe **in at least 100 words**, and in layman's terms, why this project is worthy of special recognition. Explain all factors that comprise the project's uniqueness such as innovative engineering, challenges faced, and overall social impact. **Note: This description will provide the basis for all ACEC publicity on the project.**

5 Original and 10 compiled copies of the key participants on the project. Provide firm name, address, phone number, website and email address of each participant. Key participants should include contractors, subcontractors, other engineers, architects and other designers involved in the project.

6 Three copies each of six different photos or graphics (18 total) of high quality 8" x 10" printed from digital files. All photographs or graphics must have captions (describe what the photo or graph illustrates) on the back and labeled: Photo 1, Photo 2, etc. (include on CD-ROM: the required photos or graphics must be prepared as JPEGs, RGB, 300 dpi, sized to 7.5" x 10"; captions do not need to be included on the CD-ROM).

PHOTOGRAPHIC GUIDELINES:

- a) Photographs will be projected on a large screen during the EEA gala. Therefore, it is extremely important to submit high-quality, high-resolution images.
- b) Three of the photographs must be of the completed project and provide the highest level of visual impact for publicity.
- c) Three of the photographs should display the planning, start-up, and/or construction phases of the project.
- d) One enlarged, unmounted glossy photograph will be requested from each of the 24 national winners at a later time for ACEC's Engineering Excellence Awards display wall in Washington, D.C. The photograph will be selected from those submitted with the entry.



7 Forty-five copies of the photographic display panel (guidelines below) – sized to 8” x 8” color photographs or to 8.5 x 11” high-quality color laser prints (include on CD-ROM as Adobe PDF, 600 dpi, sized to 8” x 8”).

8 E-mail addresses of local newspapers, TV stations and radio stations in Excel format. If the MO or the entrant intends to handle all local and national publicity for the project, include a statement to this effect.

9 Eleven compiled copies of a press release (up to two pages, double-spaced) clearly and concisely describing the project and the entrant’s participation, reflecting on factors listed in point # 4. In addition, point out the value of the project to the community, identify the number of people served, cost savings, etc. No reference to other awards should be included in the submitted materials.

10 One copy of the CD-ROM must also be included in the envelope. CD-ROMs must be properly labeled to indicate the firm name, the project name, and the category. Be sure to test your CDs on different computers to ensure they are not machine dependent. The CD-ROMs must be read-only (CD-R) and should include the following items in order and titled as shown:

01 Six photos or graphics

02 Photographic display panel (*small version*)

03 PowerPoint file with a total of eight slides including a title slide with the name of the project followed by Photos 1 - 6 and the small version of the photographic display panel. This PowerPoint file will support the presentation of your project to the judges. No sound or animation is permitted. No preset timing or slide show sequencing should be embedded. A sample PowerPoint presentation is downloadable from the EEA website.

11 One copy of the **supplementary report** containing the findings portrayed with graphs, drawings, etc. (*mandatory for Category A Entries only*)

III. PHOTOGRAPHIC DISPLAY PANEL

Panel text and photos should demonstrate the challenges, solutions and innovative uniqueness of key project elements. The panel should be prepared with **high-quality photos and graphics with minimal text** (250 words maximum).

The photographic panel should meet the following requirements:

1 Panel shall be 30” x 30” square display material, which has a matte finish and laminated over the front and back as follows:

- a) front lamination is 5 mil;
- b) back lamination is 5 mil; and

c) panel is no more than 5-6 mil for a total of 15-16 mil in thickness.

Framed or mounted panels will NOT be accepted.

2 Four, 9-inch long strips of Velcro (the hook side only) must be placed on the back of panel, at the top and bottom near each corner of the panel.

3 Maximum of six photos and/or graphics shall be used on the panel. Each image shall be a minimum of 7” x 5” or 35 sq. in. A background photo is not considered a photograph.

4 Minimum 32 pt. type for text or descriptions and minimum 28 pt. type for captions and graphics.

5 ACEC logo (download from the ACEC website), title and location of the study or project, client/owner’s name and location, and entering firm’s name and location (*minimum 32 pt. type*) shall be indicated on the front of the panel.

6 Leave a 2”x 2” space in the upper right-hand corner of the panel that is free of text or images but carries the panel’s background scheme through this space. This blank space should not be left as a white square. This space will be used by the ACEC EEA Committee to code the entry so any words or graphics in this area will be hidden once the panel is coded.

7 The firm name, the firm address, the project name, and the category shall be indicated on the back of the panel.

Note: If facilities for production of the photographic display panel are not available in your area, contact Daisy Nappier at ACEC for sources.

Official Entry Form Comments: If your firm was responsible for the entire project, then the Entrant’s portion of the Total Project Construction Budget should equal the Total Project Construction Budget. If your firm was not responsible for the entire project, then the Entrant’s Portion of the Total Project Construction Budget should be the amount of the project construction budget your firm was responsible for. This information is about project costs, not firm fees.

SHIPPING

Panels must be shipped in mailing tubes.

Ship all materials to:

**American Council of Engineering Companies
Attn: Daisy Nappier
1015 15th Street, N.W., 8th Floor
Washington, D.C., 20005-2605**

All materials must be received no later than January 9, 2009.

CHECKLIST: Please review the checklist on the ACEC website to ensure you have included all of your materials before submitting your entry to ACEC.



OFFICIAL ENTRY FORM

Furnish all information requested below for each entry (both signatures are required). Firm, project, and client/owner's name should be typed or printed as they are to appear on the award. Please limit the project name to 45 characters. A fee of \$975 per entry for ACEC members (\$3,000 for non-ACEC members) must be attached to the copy of this form included in the Official Entry Notebook. An electronic version of this form can be found at: www.acec.org.

Make checks payable to: American Council of Engineering Companies.

ABOUT THE PROJECT

Project Name _____ (limit to 45 characters)

Judge this entry in the following category (*check one*):

- | | | |
|--|--|--|
| <input type="checkbox"/> A. Studies, Research, and Consulting Engineering Services | <input type="checkbox"/> D. Surveying/Mapping Technology | <input type="checkbox"/> H. Transportation |
| <input type="checkbox"/> B. Building/Technology Systems | <input type="checkbox"/> E. Environmental | <input type="checkbox"/> I. Special Projects |
| <input type="checkbox"/> C. Structural Systems | <input type="checkbox"/> F. Water and Wastewater | <input type="checkbox"/> J. Small Projects |
| | <input type="checkbox"/> G. Water Resources | <input type="checkbox"/> K. Energy |

Project Location: City _____ State _____

U.S. Congressional Representative's name in district where entering firm is located _____

U.S. Congressional Representative's name in district where project is located _____

What state is sponsoring this submission? _____

(Budgeted and/or actual costs may not apply to some studies in Category A)

Completion/Use Dates: Scheduled _____ Actual _____

Category A Costs: Budgeted \$ _____ Actual \$ _____

Construction Costs: Total Project Budget \$ _____ Total Project Actual \$ _____

Entrant's portion of Total Project Budget \$ _____ Entrant's portion of Total Project Actual \$ _____

☐ Check box if project was awarded through QBS process.

ABOUT THE FIRM(S) SUBMITTING THE PROJECT

Entering Firm(s) _____

Firm CEO _____

Firm Representative _____

Must be available by phone on Wednesday, January 14, 2009

Address (no P.O. Box) _____ City _____ State _____ Zip _____

Phone (____) _____ Cell (____) _____ Fax (____) _____

E-mail _____

I hereby authorize submission of this project into the American Council of Engineering Companies' 2008 Engineering Excellence Awards competition.

Senior Executive/Principal _____ Title _____

Signature _____ Date _____

Address (no P.O. Box) _____ City _____ State _____ Zip _____

Phone (____) _____ Fax (____) _____

E-mail _____

ABOUT THE CLIENT/OWNER(S) OF THE PROJECT

Client/Owner(s) _____

I currently believe the work of the engineer meets the intended uses and expectations for the project and hereby grant permission to enter this project in the ACEC 2009 Engineering Excellence Awards competition, and authorize publication of its outstanding features, unique aspects, or innovations. I confirm that the project was substantially completed and ready for use between Nov. 1, 2006 and Oct. 31, 2008.

Client/Owner Representative _____

Title _____ Signature _____ Date _____

Address (no P.O. Box) _____ City _____ State _____ Zip _____

Phone (____) _____ Fax (____) _____

E-mail _____

SEND THIS FORM ALONG WITH ALL OTHER MATERIALS TO:

AMERICAN COUNCIL OF ENGINEERING COMPANIES

Attn: Daisy Nappier ■ 1015 15th Street, N.W. ■ 8th Floor ■ Washington, D.C. 20005-2605

202-347-7474 ■ dnappier@acec.org



COVER AND TOC GARRY LANDSMAN

8

COVER STORY

CONGRESSMAN KENDRICK MEEK

Leading the charge to defeat 3 percent withholding.

8

DEPARTMENTS



MIKE KELLY/GETTY IMAGES

4

FROM ACEC TO YOU

Putting infrastructure on America's political agenda.

2

NEWS & NOTES

Engineers design homes that can withstand nature's destructive forces; Personal preferences might explain engineering industry gender gap; Member Firm historical photos needed for ACEC 100-year commemorative publication.

4

FEATURES

GOING GLOBAL

Firms find profitable prospects outside U.S. shores.

12

2008 PROFESSIONAL LIABILITY INSURANCE SURVEY

Liability insurance rates to remain steady.

19

BRIDGING THE GAP

Member Firms providing vital expertise for bridge infrastructure projects.

24

2008 CONVENTION WRAP UP

More than 1,200 enjoy "political fun-raising" at Annual Convention in Washington, D.C.

30

2008-2009 EXECUTIVE COMMITTEE

ExCom members reveal motivations for seeking Council leadership.

34

2008 FALL CONFERENCE PRIMER

The Council's Fall Conference in Montreal is right around the corner. Make your plans today!

36



12



36

MARKET WATCH

Safety concerns lead to bridge inspection opportunities.

5

LEGISLATIVE ACTION

Budget plan favors transportation, environment; House approves bill to extend energy tax; Senate rejects gas tax "holiday."

6

BUSINESS INSIGHTS

Effective program management; limiting liability in flood zones.

38

MEMBERS IN THE NEWS

Richard D. Fox to succeed Thomas D. Furman as chairman and CEO of CDM; Langan Engineering & Environmental Services wins Phoenix Award; Woolpert, Inc., acquires TEK Science.

39

ONE ON ONE

Gannett Fleming chairman and CEO William Stout discusses America's transportation infrastructure crisis.

44

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Putting Infrastructure on America's Political Agenda

As we enter the height of the election season, we must devote our efforts to making sure the candidates understand America's critical infrastructure needs—in transportation, water and energy—and the importance of a healthy and growing private sector.

Preventing devastating cuts to state transportation programs in 2009 and laying the groundwork for a new transportation program, as well as the elimination of the unfair 3 percent withholding mandate and other regulatory relief measures are high on our agenda.

Rep. Kendrick Meek (D-Fla.), the subject of our cover feature, is a champion in the fight to repeal the 3 percent withholding. He joins the Council in the belief that small businesses and companies pursuing government contracts—many of which operate on tight margins or irregular cash flows—would be adversely affected by this withholding tax. (See page 8.)



This issue of *Engineering Inc.* also reports on the growing—and profitable—international market for Member Firms, with some firms now generat-

ing more revenue from overseas projects than domestically.

Also included are results of the 2008 ACEC Professional Liability Insurance Survey, which show that insurance premiums are continuing a stable trend (see page 19), and the 2009 Engineering Excellence Awards Call for Entries, which begins the annual process of recognizing Member Firm achievements.

Additionally, you can meet the new ACEC Executive Committee as its members address their individual motivations for participating in the Council's leadership.

Finally, start making your plans for the ACEC Fall Conference—the industry's preeminent business event—to be held Oct. 19–22 in beautiful Montréal, Canada.

David A. Raymond

David A. Raymond
ACEC President & CEO

John F. Hennessy III

John F. Hennessy III
ACEC Chairman

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Engineers Seek to Help Homes Withstand Nature's Destructive Forces

Maybe the Big Bad Wolf should have tried to suck the house down.

That's the hypothesis, at least, of the Three Little Pigs project at the University of Western Ontario in London, Ontario. Engineers at the university's Department of Civil and Environmental Engineering believe pressure differences cause more structural damage than raw wind speed, and they have designed an innovative hurricane simulator to prove it.

By documenting how dangerous winds, such as those in a Category 5 hurricane, damage or destroy a house, researchers hope to recommend substantive changes to existing North American building codes.

Most hurricane simulators use scale models in wind tunnels. The most advanced work has been done at Florida International University's Wall of Wind project, which can blast 140-mile-per-hour winds and horizontal rain against the side of a one-story house.

Engineers for the Three Little Pigs project, being conducted at the multi-million-dollar Insurance Research Lab for Better Homes testing facility, have built a full-scale house with nearly 100 "pressure boxes" that can switch from blowing to sucking air as frequently as seven times per second. The switch produces pres-



sures on the house ranging from -15 to 5 kilopascals.

Researcher Michael Bartlett says such changes mimic the buffeting of hurricane winds of up to 155 miles per hour.

Study results will be used to save people's homes from the destructive forces of nature. Practices will include modifying building codes to advance safer houses; working with insurers and the government to create implementation strategies; developing cost-effective mitigation devices for retrofitting the existing housing stock; and developing quality-control strategies to minimize human error in construction.

Studies Show Personal Preference May Explain Engineering Industry Gender Gap

Two recent academic studies show that sexism or aptitude have little impact on why the engineering industry is so overwhelmingly male.

The studies conclude that the disparity might be due simply to the fact that many highly qualified women just don't want to be engineers.

Government and industry statistics show that approximately 11 percent of the nation's 2 million engineers are women.

But the *Study of Mathematically Precocious Youth* at Vanderbilt University, which has been tracking the lives and careers of 5,000 mathematically gifted men and women for more than 30 years, finds that simple preference is a key determinant for a woman's career path.

The study shows that while men and women score similarly on the SATs and achieve advanced credentials in equal numbers, mathematically precocious males are more likely to go into engineering or physical sciences, while equally qualified women tend to choose careers in medicine, biological sciences, humanities and social sciences.

Just as important, women participants in the study say they are not discouraged from pursuing certain career paths.

In another study at the University of Kansas, researchers interviewed nearly 600 men and women in the male-dominated information technology field and fields that are more gender-balanced. Researchers say personal preference is the largest determining factor in career choices, accounting for about two-thirds of the gender imbalance.

"On average," says Joshua Rosenbloom, who led the University of Kansas study, "men and women value different aspects of work and therefore make different career choices."

Member Firm Historical Photos Needed for ACEC 100-Year Anniversary Publication

ACEC is planning a commemorative publication to celebrate the Council's 100-year anniversary in 2009.

The publication will depict how ACEC Member Firms have been responsible for America's major engineering achievements over the past century—and how the Council protected and advanced the industry's business interests during the same time.

If your firm has any historical photos it feels would enhance the anniversary publication, please contact Alan D. Crockett, director of public relations and communications, at acrockett@acec.org or 202-682-4301.

All submitted materials will be returned to the firm once the project is completed.

Bridge Safety Concerns Could Lead to Inspection Opportunities

By Joe Salimando

A bridge collapsed in Minnesota last August, and 13 people died. Nearly a year later, the question has to be asked: Can *any* good come of this?

Perhaps. The resulting national attention on the need for adequate bridge inspection and repair as well as new and safer bridges and on how we pay for bridge and highway construction and upkeep *might* be a good thing. It's almost certain to create new business opportunities for engineering firms that specialize in bridge inspections and new bridge design.

What we need, ideally, is meaningful action as a result of this increased focus. For economic reasons and for safety's sake, our nation needs safe, properly maintained bridges.

Garnering Attention

A slew of media attention and congressional hearings immediately followed the August 2007 disaster. In late 2007, a report titled *Transportation for Tomorrow*, by the National Surface Transportation Policy and Revenue Study Commission, marked an important development.

The 260-page report cited a critical need for a major boost in transportation funding:

"The U.S. now has incredible economic potential and significant transportation needs. We need to invest at least \$225 billion annually from all sources for the next 50 years to upgrade our existing system to a state of good repair and create a more advanced surface transportation system to sustain and ensure



strong economic growth for our families. We are spending less than 40 percent of this amount today."

But is there any guarantee the American public—and, even more important, Congress—will take the report's recommendations to heart?

An in-depth MSNBC.com report in early 2008 provided additional fodder for reform. It pointed out that:

- Although a 1971 law mandates bridge inspections every 24 months, at least 17,203 of the nation's 592,000 vehicular bridges went more than two years between safety inspections. What's more, the report said, 1,411 of those bridges were on interstates.

A recent scan of newspapers lends even more impetus to the need for increased investment.

- In Pennsylvania, "bridge inspection reports rate 112 of Potter County's 251 bridges as structurally deficient, with 39 of those bridges scoring a 49 or lower on a sufficiency rating from 0 to 100."—*The Wellsboro (Pa.) Gazette*

- Randy Leonard of the Kansas Department of Transportation had this to say: "We might not be getting a Cadillac [bridge] inspection... We

are probably getting a Chevy inspection sometimes. There is room for improvement."

—*Topeka Capital-Journal*

Possible Solutions

Current bridge inspection techniques, including the decades-old National Bridge Inspection Standards (NBIS) for visual inspection of bridges, also have come under fire.

Peter J. Vanderzee of LifeSpan Technologies, a Georgia-based structural monitoring company, told *Go Bridges* magazine recently, "The NBIS visual condition assessment protocol is considered, by some knowledgeable persons, as an impediment to resolving our national bridge problem, especially for bridges classified as structurally deficient or those with known defects."

Rep. James Oberstar, the Minnesota Democrat who chairs the House Committee on Transportation and Infrastructure, is working hard to keep bridge safety and transportation funding top-of-mind, going as far as to request that the National Transportation Safety Board hold public hearings on the I-35W bridge collapse.

"Under the current budget process, even capital investments that would result in future cost savings to the federal government itself are difficult to fund," Oberstar said in a joint hearing with the House Budget Committee.

U.S. Transportation Secretary Mary Peters proposed the idea of "direct pricing of road use" to raise revenue in lieu of elevated federal gas taxes.

This pay-per-use concept parallels how most people pay for their use of utilities, and, according to Peters, "holds far more promise in addressing congestion and generating sustainable revenues for re-investment" compared with traditional gas taxes.

"Technology plays a role in direct pricing, via the use of new technologies that have eliminated the need for toll booths, and so the concept of road pricing is spreading rapidly around the world," explains Peters.

She also advocates the use of public/private partnerships to "advance the public interest by responding directly to the transportation challenges we currently face."

It all leads back to two important questions: Have we learned enough to turn our rhetoric into action, or will the call for more frequent bridge inspections and more infrastructure funding require yet another tragedy?

Joe Salimando writes frequently on the construction industry at www.eleblog.com. He can be reached at ecdcom@gmail.com.



BUDGET PLAN FAVORS TRANSPORTATION, ENVIRONMENT; HOUSE APPROVES BILL TO EXTEND ENERGY TAX; SENATE REJECTS GAS-TAX 'HOLIDAY'

House Approves ACEC-Supported Bill to Extend Energy Tax Provisions

The House passed legislation in May to extend expiring tax provisions that encourage development of renewable energy sources and energy efficiency, and extend the research and development tax credit through the end of 2008.

Prior to the bill's passage, ACEC President Dave Raymond emphasized in letters to House Speaker Nancy Pelosi (D-Calif.) and Minority Leader John Boehner (R-Ohio) that "consistent and predictable federal support for the implementation of renewable energy technologies is crucial to the development of alternative energy infrastructure in the private sector and throughout the economy."

The legislation, H.R. 6049, would continue the energy-efficient commercial buildings deduction to offset energy efficiency investments until 2013. It would extend for one year several expiring tax provisions, including the production tax credits for wind, geothermal, biomass and other renewable energy sources.

The measure also would extend a 30 percent business tax credit for solar energy and fuel cell investment through 2016, while increasing existing tax credits by an additional \$1.5 billion for advanced coal and coal gasification projects that demonstrate carbon capture and sequestration. The legislation also would extend expensing of environmental remediation costs associated with brownfields projects.

Similar legislation is pending in the Senate.

ACEC Backs Private Activity Bond Bill for Water Infrastructure

ACEC is backing new legislation introduced in the House by Rep. Bill Pascrell, Jr. (D-N.J.) that will make it easier for state and local governments to raise funds for critical water infrastructure projects.

The Sustainable Water Infrastructure Investment Act (H.R. 6194) would lift the state volume cap on private activity bonds

for water and wastewater projects, significantly expanding the availability of low-cost financing.

"This legislation represents a good, common-sense way to raise additional resources to meet our water needs," said Pascrell. "I look forward to working with ACEC and other stakeholders to get this measure enacted into law."

If passed, the bill will provide communities with an important new financing tool to address water infra-

structure financing challenges. Projections from Wall Street analysts and the Environmental Protection Agency estimate that the legislation could raise as much as \$6 billion each year for water projects. The cost to the federal government would be significantly less—only \$214 million over the next 10 years according to Treasury Department estimates.

Congress Strengthens QBS in SAFETEA-LU Technical Corrections Bill

Congress has approved and the president has signed into law a transportation technical corrections bill that includes ACEC-backed language to enhance the applicability of Qualifications-Based Selection (QBS) to federally funded transit projects.

The House and Senate passed the legislation (H.R. 1195) to make a number of minor and technical corrections to various highway, transit, safety and research programs under SAFETEA-LU, including modifications to several congressionally directed projects. ACEC supported the bill, which includes language that closes an opt-out loophole and requires the use of QBS on federal transit projects.

"We're pleased that Congress has finally moved this important legislation," said ACEC Transportation Committee Chairman David Oates of Oates Associates. "It will allow hundreds of highway improvement and expansion projects to move forward, and it makes clear that QBS applies to federal transit projects without exception."

Senate Rejects Gas-Tax 'Holiday'

Presidential politics entered the debate over the SAFETEA-LU technical corrections bill when an effort was made during the Senate debate to insert a provision to create a three-month



**David Oates, ACEC
Transportation Committee
Chairman**



Rep. Bill Pascrell, Jr. (D-N.J.)

ISSUES ON THE MOVE	WHAT'S NEXT
Funding bills for key federal programs	House, Senate votes in the summer, fall
Gas tax "holiday"	Further debate possible before August
Energy tax incentives	Final action expected in the fall

suspension, or “holiday,” from the federal gas tax.

ACEC and its industry allies voiced strong opposition to the proposal, which was offered by Sen. Jon Kyl (R-Ariz.) on behalf of Sen. John McCain (R-Ariz.), who initially advocated the suspension on the campaign trail.

Kyl withdrew the amendment in the face of opposition from his Senate colleagues and industry organizations. The proposal, however, may be an indication of additional efforts in the future to target the gas tax in response to rising gas prices.

Kyl's amendment sought to reimburse the Highway Trust Fund from the General Fund an estimated \$9 billion in lost revenue. In a letter to the Senate, ACEC President Dave Raymond said the suspension of the tax was exceedingly bad policy at a time when gas tax revenues are necessary to keep pace with critical transportation needs.

Raymond added that there is insufficient assurance of repayment and said the precedent would create worse problems down the line, including lower transportation investment.

“If adopted, it would seriously disrupt repairs, risk fatalities and do harm to the nation's economy,” said Raymond. “There also is no guarantee that reducing or eliminating the gas tax would result in savings passed on to the consumer.”

ACEC Condemns 3 Percent Withholding to Treasury; DoD Study Cites Enormous Mandate Cost

ACEC submitted comments in response to a Treasury Department request that strongly criticized the 3 percent withholding mandate approved by Congress and raised significant questions about how it will be implemented.

“The new requirement will hamper our work on behalf of the public,” said ACEC Chairman John Hennessy. “While the provision was designed to deter tax evasion, it will clearly penalize honest taxpayers such as the Member Firms of ACEC and create hardships for companies that contract with governmental agencies.”

The law is scheduled to take effect in 2011. The House approved legislation that would delay implementation until 2012. Senate approval of the measure, however, remains uncertain. ACEC and a large industry coalition are working with Congress to repeal the provision. (*See Cover Feature on page 8.*)

In related news, a Department of Defense (DoD) study concludes that implementing the 3 percent withholding mandate will cost DoD more than \$17 billion in the first five years.

DoD is particularly concerned that complying with this mandate will reduce the number of companies willing to contract with the government, leading to a loss of competition in bidding and diminished access to new technologies.



Sen. Jon Kyl (R-Ariz.)

BRENDAN SMALOWSKI/GETTY IMAGES

Budget Blueprint Boosts Funding for Key Transportation, Environmental Programs

A budget plan adopted by Congress in June would address a number of key industry priorities, including restoring the funding shortfall in the Highway Trust Fund in 2009 and boosting funding for key environmental cleanup programs.

The budget resolution adopted by the House and Senate sets total revenue and spending targets for the coming fiscal year and establishes the parameters for congressional consideration of tax and spending bills.

Of particular importance to the engineering industry is full funding provided for the highway, transit and safety programs at the levels authorized in the Safe Accountable Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) for 2009 (\$41.2 billion for highways and \$10.34 billion for transit programs). In recommending full funding of SAFETEA-LU's highway investment level, the resolution would accommodate subsequent legislation to correct a projected Highway Trust Fund revenue shortfall of \$3.7 billion in F.Y. 2009.

On environmental and energy issues, House and Senate budget leaders indicate that the plan would restore cuts proposed by the White House to EPA, U.S. Army Corps of Engineers and Department of Energy programs, including critical programs that fund water infrastructure and environmental cleanups. House and Senate appropriations committees will make specific allocations.

The budget resolution directs Congress to approve a one-year Alternative Minimum Tax (AMT) “patch” for 2008 to protect middle-income taxpayers from additional taxation. Of concern to ACEC and other business organizations, the budget resolution assumes over the long term that taxes will increase by \$1.2 trillion over five years, primarily by allowing most of the 2001 and 2003 tax changes to expire in 2011. This would lead to reinstatement of the so-called “death tax,” increased tax rates on capital gains and dividends and increased income tax rates in the middle and upper brackets, which would significantly increase taxes on S corporations and other pass-through entities.

Congress is now working on the next step in the process to pass individual appropriations bills, which provide the actual funding levels for specific government programs. With congressional elections and the race for the White House in full swing, it is unlikely that Congress will complete action on the spending bills before the end of the year.

FOR MORE NEWS

For weekly legislative news, visit ACEC's *Last Word* online at www.acec.org.

CONGRESSMAN Kendrick MEEK

Leads Charge Against the Onerous 3% Withholding

Rep. Kendrick Meek (D-Fla.) is the lead sponsor of the ACEC-backed House bill to repeal the 3 percent withholding provision, an unfair federal mandate poised to affect virtually every Member Firm.

The mandate stipulates that federal and state agencies, as well as some larger local governments, must withhold 3 percent from payments for contracted goods and services, including major design and construction projects. Defeat of the measure is one of the Council's top legislative priorities.

The Florida lawmaker, who also is a member of the House Ways and Means Committee, has garnered substantial bipartisan support for his bill. In an exclusive interview with ACEC, Meek discusses the motivation behind the repeal effort, the importance of ACEC's support and his prediction for the bill's future.

ACEC PRESIDENT DAVE RAYMOND:

We want to thank you for your leadership in the important effort to repeal the onerous 3 percent withholding mandate that is scheduled to go into effect in 2011. How did you become involved in the repeal effort?

REP. KENDRICK MEEK: It started when a Miami-Dade County commissioner, my friend Sally Heyman, came

to my office to talk to me about it and pointed out how a lot of small businesses would be hurt by this. We started to do the research and, after meeting with ACEC and some of your members, it became very evident to me that while this was something that was probably initiated to help the IRS capture tax dollars that weren't being paid, it actually did more damage to the small business community. It also created an unfunded mandate for

local and state governments and even the federal government. In fact, it's going to cost the Department of Defense billions of dollars just to be able to track and pull these dollars in and channel them to the IRS. I am sure there are other ways that it can be done. It was something that wasn't even considered by the committee before it went into legislation.

ACEC CHAIRMAN JOHN HENNESSY:

The issue has generated much concern, not just from engineering firms, but other industries and small businesses as well, and even local governments. Have you found the impact to be so widespread, and what do your constituents in Florida think about it?

MEEK: They think it's great that we have taken on this challenge. It would have a big impact on small businesses in Florida, and small businesses throughout the nation, along with engineers and other services that contract with government. Those kinds of businesses can often have such a small profit margin that they really need those dollars to help pay the next month's payroll. To have that taken away at the beginning of a contract with a government entity can negatively impact the health of a small business and overall business in general. Those business owners are generally law-abiding taxpaying citizens. It's only a very small percentage who aren't doing what they are supposed to do regarding taxes.



Rep. Kendrick Meek (far right) meets with ACEC Chairman John Hennessy (left) and ACEC President Dave Raymond (center) in his Capitol Hill office to discuss the 3 percent withholding.

RAYMOND: What do you foresee is the future of this legislation in the House and the Senate?

MEEK: I see tremendous support across the board and across party lines. Every member of Congress can identify with the need to change the 3 percent rule. Even the IRS would almost concur because we're having them report back to us on language we would like to add that will take this process a little further. Once that report comes back, I believe that we will find a way to fill the projected revenue gap and do away with the 3 percent altogether. But it takes time, and it takes one step at a time.

HENNESSY: To that point, you have some 250 co-sponsors for the bill. You certainly seem to have the House covered. Is there anything ACEC and the engineering industry can do to help garner support in the Senate?

MEEK: We continue to build the momentum in the House because we have so many co-sponsors. And we're always looking for more, so keep doing what you've been doing these many months in mak-

ing sure your members inform their legislators about the bill. In my opinion, this will not be totally resolved in the 110th Congress—a future Congress will retire this effort. However, we have made great headway with this legislation because, for certain, this Congress is very aware of the 3 percent mandate. We've seen a great deal of support from representatives from government, small and large business, and people just concerned with good government.

RAYMOND: Are there alternatives to the 3 percent withholding from the standpoint of the revenue they sought to achieve through this unwarranted method?

MEEK: We've asked the IRS to report back to us on the impact it will have on small business and just how many problems it will create within the federal government. But we're also going to be looking at all taxes and tax breaks in the next Congress. Through those measures, we hope to be able to fill the revenue gap. Right now, the staff of the Ways and Means Committee and the Senate Finance Committee staff also are trying to figure

out how they can close that gap. Everything we do, we have to also figure out how we're going to pay for it. That has not been achieved yet for this issue, but it will be.

HENNESSY: Looking at the bigger tax picture, Ways and Means Committee Chairman Charles Rangel (D-N.Y.) has indicated his desire to move a major tax reform bill in the future. What can you tell us about the general direction of this effort?

MEEK: I think there is going to be a great discussion on Capitol Hill—one that everyone concerned about taxes, and interested in tax incentives and tax breaks, should pay close attention to. It's going to become very real because everything is going to be on the table for the 111th Congress. With the new administration, there will probably be a presidential commission to look at the entire tax picture and make recommendations on what Congress should do. As a result, every profession should come together and think about what is important to them as it relates to the tax structure. But

Where did the Provision Come From?

While it's uncertain whether the principal purpose of the 3 percent withholding mandate was for tax enforcement or simply to raise revenues to offset other tax changes, the new law has sparked intense opposition from a wide range of business organizations and governmental entities and has led to calls for repeal in Congress.

What added fuel to the fire was the manner in which the new law was put into place. When the House and Senate took up their respective versions of what later became the Tax Increase Prevention and Reconciliation Act of 2005, neither body had debated or voted on the 3 percent provision. It was only when the final version of the bill emerged from closed conference negotiations that ACEC and others realized it had been inserted into the bill. By the time the measure came to the House and Senate for a final vote, it was too late to strike the 3 percent provision from the bill.

The focus of industry concern is Section 511 of the act, which requires federal, state and many local governments to withhold 3 percent from almost all payments and contracts, starting in 2011. From the perspective of engineering firms, the new requirement will apply to virtually every contract with a federal agency, state departments of transportation or other state agencies, and larger municipal governments that purchase at least \$100 million in goods and services each year. The mandate is not limited to the engineering industry—virtually every industry and profession that provides goods or services to the public sector will be affected.

Senate Finance Committee leaders—led by then-Chairman Charles Grassley (R-Iowa) and senior Democrat Max Baucus (D-Mont.)—had expressed concerns that government contractors were failing to satisfy their tax obligations. They

pointed to a 2005 report by the Joint Committee on Taxation that suggested withholding may be one way to close the gap between what federal contractors owe in federal taxes and what they pay. An earlier Government Accountability Office report on the Department of Defense (DoD) had found that about 27,000 federal contractors owed \$3 billion in unpaid tax liabilities.

At the last minute, Sens. Grassley and Baucus inserted the 3 percent mandate into the bill during conference negotiations with the House.

ACEC and other opponents of the mandate argue that had the 3 percent provision been debated openly or been given the benefit of congressional hearings, many of the problems coming to light now would have been properly vetted. The total profit margin on some engineering contracts equates to 3 percent or less. In these cases, withholding 3 percent would put a serious strain on firm cash flow and financial viability.

The 3 percent mandate represents an even greater potential problem for smaller firms, especially if prime contractors are allowed to pass the costs associated with the withholding requirement along to their subcontractors.

State and local governments are also voicing opposition to the law. These critics argue that the provision amounts to an unfunded mandate that will exceed the federally set cost threshold; that costs of compliance outstrip expected revenues; that contractors will increase the cost of their proposals to compensate for the withholding; and that state and local governments will be at a disadvantage in contracting because fewer firms will compete on public-sector projects as a result of the withholding provision.

Some federal agencies have also expressed concern. The DoD reported in April 2008 that complying with Section 511 would cost more than \$17 billion in the first five years, far in excess of the estimated revenues generated by the withholding requirement.

you couldn't ask for a better leader or conductor of this effort than Chairman Charlie Rangel, and I am excited to be a part of that effort.

RAYMOND: A lot of our members are concerned about the dilapidated state of America's infrastructure. Do you have any thoughts on what should be done?

MEEK: I'm working on rail infrastructure legislation now. Also on the front burner is how the gas tax hasn't brought in the kind of dollars that they thought it would have and how that is becoming an issue with the highway bill. Infrastructure is so very important to our nation's quality of life and economic health. That's one of the reasons why there's

“That's one of the reasons why there's a drumbeat now for starting to invest more on the domestic front. Americans are seeing what's happening and how our infrastructure is crumbling.”

a drumbeat now for starting to invest more on the domestic front. That drumbeat is getting louder and louder because Americans are seeing what's happening and how our infrastructure is crumbling. We're also not putting people to work like before, and our economy is based now more on lending than generating dollars. That is also why you hear more and more about “green jobs,” which will put more people to work, including engineers and other professions. Everyone will have a chance to take part in the greening of America—and engineers will be right smack in the middle of all that. Engineers will make sure we become a greener society with light rail in the cities, and make sure that energy efficiency actually happens. And I am pretty sure there are going to be incentives for communities to start moving in that direction, and that will create a lot of interest and opportunity, not only in the professional ranks, but also for those in school right now trying to make an exciting career decision. More and more will want to be engineers to take part in this great time—a renaissance time—and a very exciting future for this country. ■

HONOR ROLL

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GOING Glob

By Samuel Greengard



Firms finding profitable prospects outside

In an increasingly global world, Keith J. Hawsworth knows the distance between two riverbanks often is greater than the space between two nations. Over the past decade, technology has shattered barriers to international business and helped companies build bridges to projects that would have been unimaginable only a few short years ago.

"Today, the opportunities in the global arena are enormous," says Hawsworth, CEO of New York-based PB, formerly known as Parsons Brinckerhoff. "A major company cannot afford to be on the sidelines."

These days, PB, with more than 70 offices and 10,000 employees throughout the world, is building plenty of bridges—as well as tunnels, airports, power facilities, roadways and subway systems. PB's portfolio of global projects includes the Chao Phraya River Bridge in Bangkok, the Sydney (Australia) Transit System, the Delhi airport, the East London Underground extension and the

new Taiwan High Speed Rail project. In fact, half the firm's business now is derived from international projects.

PB is not alone. Many U.S. engineering firms now see the prospects of international business as a golden opportunity. Such deals, executives say, can cushion downturns in the domestic economy; boost revenues; tap into valuable human skills, knowledge and brainpower; and support a more efficient working environment, including the ability to follow the sun and conduct business 24 hours a day, seven days a week.

"The forces contributing to globalization are accelerating. There is growing pressure on firms to compete internationally," says Jeff Oltmann, principal consultant at Synergy Professional Services, a Portland, Ore.-based consulting firm.

But success is no guarantee. A global presence requires well-conceived business processes; first-rate information technology (IT) tools; knowledgeable employees who understand how to work



al

U.S. shores

on multinational teams; and a thorough understanding of laws, regulations, labor practices and cultural issues.

"It's not uncommon for companies to significantly underestimate the amount of resources and coordination required to make a global initiative work," explains Oltmann. "Business processes are radically different when you have staff located 12 time zones and 10,000 miles away."

A New Deal

The rise of global capitalism, along with more stable political regimes, has changed the global business scene. Although India, China and the United Arab Emirates are the most obvious examples of this new world order, plenty of other countries have developed an appetite for new infrastructure as their economies have flourished and a middle class has emerged. In many instances, however, engineering companies in these countries lack the expertise and experience to handle large-scale projects, opening the door for American and European firms to take advantage.

As the doors to these and other untapped nations swing open, firms are expanding their reach, adding offices, cultivating local expertise and installing sophisticated IT systems meant to tap into new opportunities—and, in many cases, higher profits.

"There's a huge and growing demand for services around the world," says Jonathan Goldstick, vice president and development director of maritime services, North America, at U.K.-based Halcrow, which has 70 offices and 8,000 employees scattered across 50 countries. Halcrow's revenues now top \$750 million a year, with approximately 25 percent

The opportunities in the global arena are enormous. A major company cannot afford to be on the sidelines.

KEITH J. HAWKSWORTH
PB



of its business stemming from projects in the Middle East, compared with just 10 percent from the United States.

The scope of the firm's business is enormous. It is involved in the design and development of container terminals, liquefied natural gas facilities, dams and hydropower facilities, highways, tunnels, bridges, airports and other infrastructure projects. In the past 10 years, Halcrow has evolved

from a primarily British consultancy anchored in government projects to one that accommodates the public and private sectors the world over.

One such project is the Jebel Ali Port expansion in Dubai. In an effort to accommodate marine traffic by the year 2030, engineers designed and did the reclamation of a harbor with 2,800 hectares of marine terminals and 40 kilometers of quaywall—features that will enable massive Super-Post-Panamax container vessels to berth. Halcrow, under contract with DP World (formerly Dubai Ports Authority), is charged with juggling a variety of engineering tasks related to the project, including the acquisition of existing data, field data collection programs, the establishment and calibration of models for existing conditions, an analysis of dredging and reclamation impacts, preparation of cost estimates and additional environmental impact issues.

American firms have a competitive edge in this large-scale program management, says Richard Fox, president of CDM, a 4,000-person firm with 18 offices overseas. "The U.S. has had a long history of large program jobs," he says. "Only recently have developing countries combined both the need and the money to undertake large-scale programs, and they're turning to U.S. expertise to manage them."

But it's not just U.S. firms that benefit. British Halcrow has worked hard to develop the international presence required to land such megaprojects. Worldwide offices—often staffed with top local talent—allow the firm to serve as a "local service provider," says Michael Della Rocca, president and regional managing director for the firm's North American operations. To do that, he says, the firm often joins with local partners and forges strategic relationships—including joint ventures and public/private partnerships—with other global services companies.

Emerging as an "A" player on the international engineering stage requires more than a desire to land lucrative contracts and provide a sophisticated array of services. With brainpower and talent scattered across several continents, "it's important to leverage smart people wherever they are located," says Oltmann. "Today, a global company must be truly multinational—in terms of its workforce and its overall business approach."

New Borders and Boundaries

Engineering firms that thrive globally develop specialties that propel them to the forefront of the industry. Halcrow, which performs projects in a range of engineering disciplines, currently derives 6 percent of its business from maritime projects; PB focuses on transportation; CDM's core competency is in the water sector; and Stanley Consultants—a Muscatine, Iowa-based firm that has worked in 98 countries—has established a presence creating military air bases, particularly in the Middle East.

"We have historically used the international market to counterbalance the domestic market," says Gregs Thomopoulos, CEO of Stanley Consultants. "While the United States works its way through the current economic downturn, the international market is very robust." Over the past fiscal year, Stanley's revenues from its international operations climbed 70 percent while its overall revenues grew by just 15 percent. "With the high revenue from oil, many countries in the Middle East have ambitious infrastructure and other development projects. And the weak U.S. dollar has made U.S. firms very competitive compared with the European firms that have traditionally dominated overseas markets."

The Louis Berger Group has taken full advantage of the vibrancy of the global market. International operations accounted for 78 per-



CDM has provided a range of engineering services for the design and upkeep of Singapore's innovative Marina Bridge dating back to the early 1980s.

PUB SINGAPORE



Halcrow currently is working on the massive Jebel Ali Port expansion project in Dubai.



SAM YEH/AP/GETTY IMAGES

Only recently have developing countries combined both the need and the money to undertake large-scale programs.

RICHARD FOX
CDM



Each country and project requires a distinct understanding of the rules, regulations, policies and procedures that facilitate business and make people comfortable. The scope of projects on U.S. soil often is markedly different from those in other countries, says Fredric Berger of the Louis Berger Group. Domestic initiatives trend toward maintenance and rehabilitation, while projects abroad often focus on new large-scale developments. U.S. projects also frequently require a narrower range of skills and deeper technical specialization, where global initiatives demand multidisciplinary talent, particularly bilingualism and workers with multiple areas of expertise.

To build that global expertise, CDM relies on both acquisitions and organic growth. CDM acquired the 350-person German geo-technical firm Jessberger + Partner in 1997. This union created CDM Jessberger and enabled CDM to gain immediate entry into the European and geo-technical markets. Recently CDM completed two smaller acquisitions in Poland to establish a local presence in Eastern Europe.

In markets where CDM has chosen to build its presence organically, Fox says that repatriating engineers who completed their education and started their careers in the United States is the best

cent of the firm's 2007 revenues of \$874 million. Berger's current project portfolio stretches across more than two dozen nations, including Iraq, Afghanistan, Sudan, the Philippines, Nigeria, the Democratic Republic of Congo, Rwanda and Kosovo. The firm has tackled diverse projects, ranging from the retrofitting of foundries to protect the Taj Mahal against air pollution, to design review and construction supervision for a 12.4-mile, \$2.5 billion subway line in Bangkok.

7 Ways to Excel In the Global Arena

- 1. Develop a long-term strategy.** Firms that thrive in the global marketplace map out what expertise and resources they need to conduct business in other parts of the world.
- 2. Cultivate a relationship with the end customer.** It's vital to open offices in countries and recruit local talent. These individuals often have an innate understanding of what customers look for and how work gets done.
- 3. Put a centralized project management system in place.** Managing work abroad is inherently complex. How effectively an organization monitors and manages a portfolio of projects will determine whether it flourishes or crashes.
- 4. Invest in communication-based information technology.** Today's global teams require a solid communication infrastructure. E-mail is only a starting point. Key systems include shared websites and portals, collaboration software, document- and knowledge-sharing repositories, videoconferencing, databases and wikis.
- 5. Ensure that employees display the proper language skills and cultural understanding.** Language barriers and communication breakdowns derail projects and undermine business strategies. Invest in the training needed to field global teams.
- 6. Build a presence beyond an office.** Become a valued member of the community. Participate in professional associations, government-sanctioned events and educational and charitable causes.
- 7. Form strategic partnerships that make sense.** Building a global infrastructure is expensive and time-consuming. Consider forming partnerships and strategic alliances to tap into existing expertise and capabilities.

model. Not only do these staffers know the company, they have an intimate knowledge of the culture and a network of contacts in the engineering field in their native land. "Both our Hong Kong and Vietnam offices are led by such individuals," he says.

While U.S. firms often look to staff overseas offices with local



PB served as project management consultant for the \$15 billion Taiwan High Speed Rail project.



Louis Berger Group retrofitting foundries at the Taj Mahal to protect India's famous landmark from air pollution.



The Middle East Air Base Maintenance Facility is one of several projects Stanley Consultants has conducted for U.S. and foreign governments.

There's a huge and growing demand for services around the world.

JONATHAN GOLDSTICK
HALCROW



talent, they tend to rely on American engineers to provide the leadership.

"The ideal candidates for international work should be senior engineers who have project management experience, are able to get along with people of all cultures and religions, and are respectful of the local norms and customs," says Thomopoulos. "They should also have the highest ethics and integrity because international work offers a lot of opportunities for unethical behavior."

In the end, success is more than the sum of engineering degrees and technical prowess.

"People have to be adept at dealing with other people and sensitive to other cultures. They have to be less dogmatic and more conciliatory," Berger explains. "Preconceived notions and a single-minded approach won't get the job done. Oftentimes, there isn't a single right technology or approach. It's necessary to adapt things to the environment and have a feel for the agency or staff that operates and maintain the system after the expatriate team leaves."

As a result, Louis Berger Group seeks out individuals with previous international exposure; workers must be comfortable dealing with uncertainty and change. Ideal candidates often display open-mindedness and a passion for travel. Many have previous international university experience, grew up as children of military officers or expats who served or worked overseas, or decided to join the Peace Corps or another international aid organization. "This demonstrates that they have already mastered a bicultural, bilingual environment," says Berger. "They are already one step ahead of the game."

Engineering the Future

If the human component is the heart and soul of a global business success, IT and project management is its central nervous system. "You have to be really good at project management. Things that you could do previously in an ad hoc way are no longer possible in an international environment," explains Oltmann, the international consultant. "Many companies, the first time they embark on any kind of international project, significantly underestimate the amount of coordination that is required. Consequently, things can become extremely chaotic."

It's essential to deploy enterprisewide IT systems, including software, that can support the business processes organizations have in place. These systems not only enable the technical and practical aspects of design, engineering and project management, but also facilitate collaboration and advanced workflows. Technology, taken together with knowledge of underlying business processes, requires vision and leadership. "Someone has to be in a position to pull everything together—including all the input from the various offices or sites—and make it work," says Oltmann.

PB's Hawksworth is familiar with the need for top-flight technology. He has witnessed firsthand the industry's evolution from paper to pixel. "You can now stand in the middle of the Arabian Desert, switch on your BlackBerry and receive e-mail messages," he says. "Technology has not only made global business

possible, it has changed the fundamental nature of business." Today, PB relies on sophisticated enterprise software to track and manage project status and costs, currency fluctuations, designs and more. "Every project throughout the company is on one system, so it's possible to know what's going on with projects individually and have a composite view," says Hawksworth.

The firm conducts ongoing cost analyses to determine which projects are most profitable—and least risky. Number crunching, for example, has enabled PB to shift from highway design in favor of airports, subways and other specialized infrastructure projects. It also has helped PB better understand labor conditions, including talent shortages, wage inflation and specific circumstances surrounding fixed-rate or lump-sum reimbursements.

The firm's recent accomplishments only reinforce its position as a global engineering giant. The company served as the project management consultant for the Taiwan High Speed Rail project—a \$15 billion privately funded venture that commenced operation in January 2007. It managed the construction of the initial phase of the Delhi Mass Transit System, a 38.5-mile project that includes 53 stations and 7.5 miles of tunneling. And it was recently awarded a contract to provide architectural and engineering services for the \$1.8 billion, 3.1-mile Marina Coastal Expressway in Singapore, scheduled for completion in 2013.

It's imperative to stay abreast of the nuances of international business, regardless of a company's success. Obtaining business licenses, navigating government bureaucracies and coping with ever-shifting rules and regulations are all part of the global business environment. "There are countries where, strategically, it doesn't make sense to work on government contracts or certain types of specialized projects," says Hawksworth.

One thing is certain: The market for global engineering services is thriving. At present, parts of Asia, the Middle East and South America are hot spots for new design and engineering projects.

It's a new world order, and one that should appear on the radar of every engineering firm.

"It's unwise to move into the international arena simply for the money or to take advantage of a particular opportunity," says Oltmann. "A company must develop a long-term strategy and understand how each and every project fits into an overall plan. That's the basis for long-term success in the international marketplace." ■

Samuel Greengard is a business writer living in West Linn, Ore.



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2008 Professional Liability Insurance SURVEY

By Maureen Conley

Premium rates steady or falling—but for how long?

For the third straight year, ACEC's Professional Liability Insurance (PLI) Survey of Member Firms indicates that premiums are declining, while claims are holding steady. And many experts predict those trends will continue through 2008.

Soft Market

The 2008 survey of 533 Member Firms (for F.Y. 2007) reveals that more insurance carriers are finding traction in the PLI market, a trend that is driving competition and helping keep rates low.

In F.Y. 2004, six insurance carriers controlled 80 percent of the PLI market, with shares ranging from 4 percent to 34 percent. But in F.Y. 2007, the six top firms controlled 73 percent of the market, with shares ranging from 6 percent to 20 percent, according to the survey.

PLI providers such as CNA/Schinnerer and XL Design Professional saw their respective market shares decline or remain mostly even through 2007—CNA/Schinnerer's market share slipped from 34 percent in 2004 to 20 percent in 2007, while XL's went from 21 percent to 19 percent. At the same time, relatively smaller players have sliced into the market with increased success.

Beazley, for example, cracked the top six in just two years, capturing 8 percent of engineering firms in 2007.

So what forces are driving this softer PLI market?

Lee Genecki, chief underwriting officer for Travelers, says insurance companies have become a darling of investors, while several years without any major catastrophes have opened the door for an influx of inexpensive capital.

Michael Welbel, a board member at A/E ProNet and president of M.G. Welbel & Associates, Inc., expects demand to diminish as the larger construction industry softens alongside the economy.

Both men say rates might decline even further before they rise again, noting that insurance companies typically react to market forces after they take hold.

Paula Dixon, senior vice president at Holmes Murphy & Associates and incoming president of the Professional Liability Agents Network, says that while "preferred risks" can expect a modest 5 percent drop, only "engineers that are exercising good risk management and staying away from residential work such as condos" are seeing significant decreases.

"Premiums and deductibles are generally flat with prior years," adds Robert Rogers, assistant vice president, architects

and engineers, for Boston-based Lexington Insurance Company. "We remain committed to individual account underwriting. Accounts with good loss experience can lead to decreases and those with severe claims can experience increases. We always strive to create long-term relationships with our insureds and to moderate any necessary premium or deductible changes."

Despite recent market changes, carriers caution design professionals not to sacrifice continuity with the same insurer or quality risk management and claims

It's likely the majority of [firms] were lured by the promise of lower premiums.

CHUCK KOPPLIN

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC.



I've seen a slight uptick in claims, but nothing extraordinary.

ALBERT RABASCA

XL DESIGN PROFESSIONAL



services for the sake of a lower premium.

Chuck Kopplin, principal at Graef, Anhalt, Schloemer & Associates and former chair of ACEC's Risk Management Committee, says firms have yet to heed that advice. "Of the 13 percent of firms that switched carriers last year, it's likely the majority were lured by the promise of lower premiums," says Kopplin.

Still, Katherine Enos, senior vice president at CNA/Schinnerer, says the current PLI market is "pretty stable." Enos says construction firms are making smart growth decisions and carriers "have really begun to price this industry" appropriately.

Pressure Mounting on Underwriters

But the pressure is mounting on underwriters. Genecki says inflation drives insurers' operating costs up 4 percent to 6 percent year after year. "At some point, the rate we're getting on our book of business has to take that into account," he says.

The good news is that some of those losses can be recouped from the investment income on today's premiums, which would not be paid out as claims for two to three years. But a weak stock market and low interest rates mean underwriters no longer have the same cushion to fall back on.

Welbel says underwriting losses might already be creeping in, and a softening economy, which tends to drive up claims, could further impact profitability. Travelers' actuaries say rates are very near the bottom, while Genecki says competition

still could drive rates lower. Carriers, however, likely will not know for four to five years whether the underwriting decisions they make today will result in profits.

Deductibles, Claims

Though most deductibles held steady through 2007, about 15 percent of responding firms increased deductibles. That compares with 14 percent that reported increases for the same time frame in 2006. But that trend cannot continue indefinitely, cautions Kopplin, who points out that it is not always economical to shoulder higher deductibles for the benefits of lower premiums.

Welbel says the persistent soft market has driven deductibles lower than the 1 percent to 2 percent of revenues that underwriters typically are comfortable with.

Dixon says low deductibles can adversely affect a firm's loss history by shifting too much of the burden of paying claims to the carrier. "It's wiser to share the risk, rather than be tempted by lower deductibles, because any strike against you stays within your loss history for five years," she says.

Claims, meanwhile, are steady to slightly up, with 59 percent of respondents reporting no claims in F.Y. 2007, and just 2 percent reporting instances of 10 claims or more.

Albert Rabasca, director of industry relations for XL Design Professional, says "I've seen a slight uptick in claims, but nothing extraordinary."

A slow economy makes all players in major design and construction projects "less tolerant of things like delays and increases" and more likely to sue to recoup losses, notes Welbel.

Figure 1

Number of personal liability claims made against Member Firms in F.Y. 2007

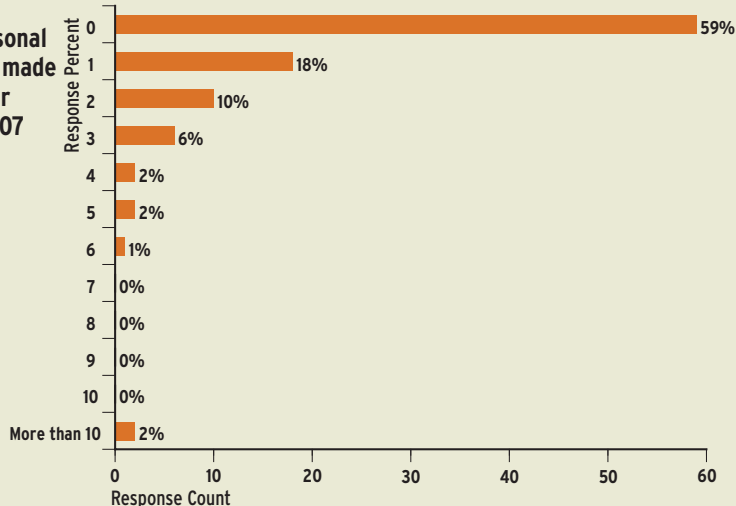
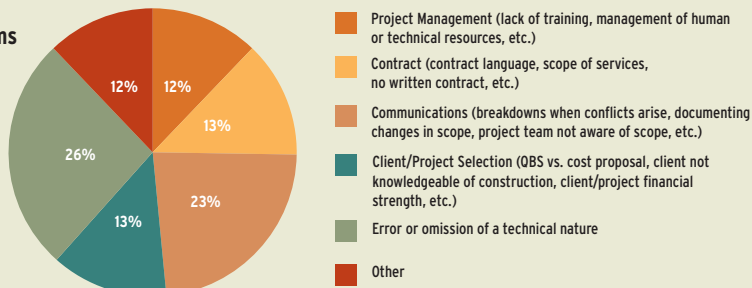


Figure 2

Cause of Claims



Source: 2008 Professional Liability Insurance Survey.



When You Need Professional Liability Protection, It's Always Good to Have a PLAN.

Why ACEC members choose the Professional Liability Agents Network for their insurance needs:

- Access to exclusive professional liability and property/casualty coverage for A/E/E firms.
- Innovative risk management programs that earn continuing education credits.
- Valuable contract review and dispute resolution services.
- More than 20 years of experience helping design and environmental firms avoid losses and preserve client relations.

The personal service of one. The combined resources of many. That's PLAN.

Professional Liability Agents Network



PLAN

Professional Liability Agents Network

I'm already seeing spikes in smaller nuisance claims.

GARY PRATHER
TRAVELERS



"I'm already seeing spikes in smaller nuisance claims," says Travelers Risk Management Director Gary Prather, "many of which would typically have been settled a few years ago."

More firms say they paid a claim they believed to be frivolous, up from 19 percent in 2004 to 28 percent last year, according to the survey. Kopplin says this trend might reflect the belief that it is sometimes cheaper to settle than to prove your case in court.

Areas to Watch

One potential problem area that the market has had its eye on recently is mold. Fortunately, Travelers's Genecki says, "mold never materialized into the next asbestos," despite concerns from some industry watchers that it would. Prather says that's because the industry spotted the problems and quickly took action.

Insurers also continue to watch for claims arising out of Building Information Modeling, integrated project delivery, green building design and other emerging technologies and standards. Carriers say it is still early, but warn not to over-promise in these areas.

Dixon helps clients "negotiate insurable provisions" in complex contracts. She says the questions generated by design/build become more complicated with the introduction of multiparty master contracts and integrated project delivery.

Carriers look for a blurring of lines of responsibility and the possibility that designers could be held liable for elements beyond their control, such as job-site safety.

Examining contracts for insurability enables design firms to "make business decisions" about whether to participate and how much risk to manage, says Dixon. A bad contract—or none at all—"will affect the firm's practice two to three years down the road" in terms of insurance pricing and claims results, she says.

Dixon also cautions designers to be on the lookout for indemnity clauses, especially in a gloomy economy. Some contracts even go as far as to state that engineers will indemnify, defend and hold harmless owners for any claims arising out of the engineers' services.

Another area of concern is prevailing party clauses, where the prevailing party can recover its legal expenses from the opposing party in a lawsuit. Most policies, however, make no provision for paying the legal costs of the party suing the designer. Result: A firm could find itself paying out-of-pocket, even if the claim goes to trial and the engineer is not found negligent.

Experts preach vigilance in selecting clients and owners, the two of which are responsible for 80 percent of claims.

XL's Rabasca was particularly struck by the 61 percent of respondents who said they rarely or never turn down work because of concern about potential risk.

Calling client selection "a major non-technical risk driver for design professionals," he points out the 533 respondents who reported spending 48,000 personnel hours defending claims. On average, that's about 90 hours per firm, higher than last year's average of 72 hours. "That cost is not reflected in the premiums," explains Rabasca. "It's a direct out-of-pocket cost to the firm."

Outlook

Though growth rates have slowed, Rogers says, Lexington is seeing revenue forecasts from design firms that are "flat to slightly up." In fact, he says, "we have seen very few insureds forecasting lower revenue than prior years."

Enos expects a downturn in the construction industry over the next year, but warns that insurance carriers price

forward, not backward. That dichotomy might mean that some firms projecting a decline in business likely won't see a commensurate decline in premiums. While the construction industry should expect a slowdown, she says, it usually is among the first sectors to rebound when the economic climate improves.

Past soft markets have begun to harden as a result of increased claims activity, says Kopplin, noting that it takes claims a long time to work through the system. That means that, especially for new players, "it could take years for their losses to really show up." Still, short of a major shakeup in providers or huge, unanticipated losses, he says, "the soft market is continuing" for the foreseeable future.

XL's Rabasca says some carriers might struggle to pay claims, especially if prices drop too low. But, "when the smoke clears and the hard market returns, which it will, the carriers that are responsibly underwriting will remain standing."

The complete results of the 2008 ACEC Professional Liability Insurance Survey of Member Firms (for F.Y. 2007) can be purchased through the ACEC Bookstore at www.acec.org. ■

Maureen Conley is a business writer living in Kensington, Md.

Mold never materialized into the next asbestos.

LEE GENECKI
TRAVELERS





FALL 2008 COURSE CATALOG Institute For Business Management



- Leadership & Ethics
- Project Management & Project Delivery
- Business Management & Quality
- Human Resources
- Finance & Economics
- Contracts & Risk Management
- Marketing & Business Development
- Communications & Information Technology

Business Practice Education Delivered Nationally, Regionally, and at Your Desktop

The ACEC Institute for Business Management provides comprehensive and accessible business management education for engineering company principals and their staffs.

Comprehensive Curriculum Choices

More than 100 programs covering critical core content are available this year. These courses are taught by industry practitioners and owners noted for their engineering business expertise.

The Institute curriculum covers eight basic tracks:

- Leadership & Ethics
- Project Management & Project Delivery
- Business Management & Quality
- Human Resources
- Finance & Economics
- Contracts & Risk Management
- Marketing & Business Development
- Communications & Information Technology

Online Course Catalog and Registration

All of the Institute's educational offerings are contained in a fully searchable format on ACEC's website. For a complete list of upcoming national and regional educational opportunities, visit ACEC's online education events calendar:

www.acec.org/calendar/index.cfm

Search for programs by topic, by date or by location. Plan and register for educational training in an easy, systematic manner.

Books and Publications

An active publications program is an important component of the Institute's educational offerings. Popular topics for books and other resources include:

- Project delivery systems
- Building Information Modeling (BIM)
- Sustainability
- Contract documents through Contracts & Risk Management Central
- Surveys on business trends, salaries and benefits
- Practice guidelines

Visit www.acec.org/publications for a continually updated list of publications.

Learning...When and Where You Want It

Institute courses are offered in several ways that directly satisfy member preferences:

- Traditional face-to-face programs scheduled throughout the U.S.—including nationally sponsored courses and those delivered by ACEC's state Member Organizations
- Educational sessions at ACEC national conventions and conferences
- Archived self-paced courses over the Internet
- Real-time and interactive online seminars

Online Seminars

ACEC's online seminars allow you to participate anywhere the Internet is available. Leading professionals present focused topics in 1½-hour sessions, and participants log on to a website to view a live presentation. Calling in to a toll-free number adds the audio portion of the presentation. Participants can ask questions via the web. Sessions provide 1.5 professional development hours (PDHs).

Significant savings are realized by having multiple participants for a single-location registration fee.

Educational Management Initiative Helps Engineers with Continuing Education Options and Recordkeeping

ACEC's Institute for Business Management and The National Council of Examiners for Engineering and Surveying (NCEES) have jointly undertaken the creation and construction of an engineering educational management system—a freestanding online database resource for A/E/C professionals in search of continuing education opportunities. The web location is www.rcep.net, and the site—hosted by NCEES and ACEC—is branded as:

rcep.net

Continuing Education for Engineering Professionals

The *rcep.net* program is an expanding registry of continuing education providers that have demonstrated adherence to high-quality, effective practices in professional education for engineers and surveyors. The *rcep.net* site is continuously accepting providers and education events and courses for inclusion.

Of primary importance to users is the searchable Master Calendar of Courses, which facilitates a fast and precisely targeted call-up of all courses matching a user's search criteria. The site also offers a lifetime record keeping service, which will track a subscriber's courses and credits for reference by employers and state licensing boards. This one-stop shopping site will be the first and best resource available for A/E/C professionals seeking information on availability of online and on-site engineering education courses and programs.



TABLE OF CONTENTS

■ Leadership & Ethics	I-4
■ Project Management & Project Delivery	I-6
■ Business Management & Quality	I-8
■ Human Resources	I-10
■ Finance & Economics	I-11
■ Contracts & Risk Management	I-12
■ Marketing & Business Development	I-14
■ Communications & Information Technology	I-15
■ 2008 Fall Conference: Sustainability in the Built Environment	I-16
■ Online Seminars	I-20
■ Business Advisory Services and Contracts & Risk Management Central	I-22
■ State Organization Fall 2008 Programs	I-23
■ Registration Form	Back Cover

■ Leadership and Ethics

COURSES

Senior Executives Institute (SEI)

Class 15

September 2009–March 2011

Washington, DC

The ACEC Senior Executives Institute (SEI) is an advanced management, leadership and public policy training program for current and emerging A/E leaders. SEI provides a compelling and challenging curriculum through unparalleled learning opportunities so that A/E executives prosper in the 21st century. SEI is highly interactive, energetic, exploratory and challenging.

Each SEI class attends five five-day sessions over two years covering:

- Your Vision and the World
- Personal Mastery
- Strategy and Systems Thinking
- Organizational Leadership Issues
- Putting It All Together

Registration Fee:

Member—\$25,250; Non-member—\$28,500

Registration for 2009 Class 15 and information are available at <http://www.acec.org/education/sei.cfm>.

SEI class size is limited.

PDHs: Each of the five SEI sessions provides approximately 28 professional development hours.

Registration:

For more information, contact Dee McKenna, deputy director of ACEC's Institute for Business Management, at dmckenna@acec.org, at 202-682-4328, or visit <http://www.acec.org/education/sei.cfm>.

ONLINE SEMINARS

See pages I-20–22 for pricing and other details.

Rapid Leadership Development in Engineering and Design Firms

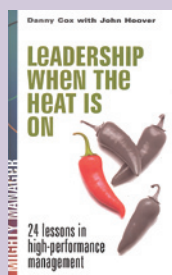
Scott W. Braley, Braley Consulting & Training

October 28, 2008

How do leaders begin and maintain the momentum to design, implement and sustain high-level performance? This seminar looks at *rapid* leadership development and deployment—what works and what doesn't as we seek to identify, define, develop, keep, challenge and support up-and-coming professionals and new leaders. Braley will focus on key issues to equip participants to address leadership development quickly, effectively and utilizing many of your own in-house resources.

Leadership When the Heat Is On 24 Lessons in High-Performance Management

Danny Cox with John Hoover
2007, McGraw-Hill
\$12.95

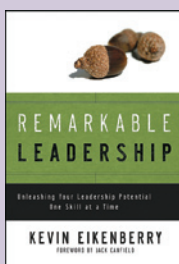


This quick-hitting, hands-on rulebook is chock-full of hard-won advice and action steps for keeping your cool

under pressure and inspiring incredible performance from your team.

Remarkable Leadership Unleashing Your Leadership Potential One Skill at a Time

Kevin Eikenberry
2007, Jossey-Bass
\$27.95



Remarkable Leadership is a practical handbook for anyone who wants to hone the skills they need to become

an outstanding leader. The book explores real-world concerns such as focus, limited time, incremental improvement, and how we learn.

Your Inner CEO

Allan Cox
2007, Career Press
\$24.99

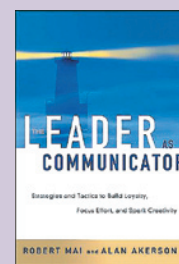


Your Inner CEO translates a new philosophy of leadership into a practical, applied program that can help anyone

become a world-class leader. You'll learn to uncover your hidden goals, face your fears, summon your strengths, and propel yourself toward the future you want.

The Leader as Communicator Strategies and Tactics to Build Loyalty, Focus Effort and Spark Creativity

Robert Mai and Alan Akerson
2003, Amacom
\$24.95



The author examines roles as diverse as trust-builder and critic, renewal champion and navigator, learning advocate and

provocateur. This insightful book demonstrates how to become a stronger, more confident leader—one who can use communication to build alignment, enthusiasm and productivity.

Organizing a Legacy Firm

Ray Kogan and Cara Bobchek, Kogan & Company

November 5, 2008

Design your firm for continuing success. Your organizational structure determines how you win work, the expertise you bring to clients, your efficiency and profitability, employees' growth, and your firm's contribution to your community. Organizational structure can facilitate—or impede—your ability to achieve your vision. This session will explore different organizational structures, organizing for value, organizing your message and identity in the marketplace, and when and how to change your firm's organizational structure.



Time Mastery

How Temporal Intelligence Will Make You a Stronger, More Effective Leader

John K. Clemens and Scott Dalrymple

2005, Amacom

\$21.95



Time Mastery includes dozens of examples of leaders whose temporal intelligence has helped them achieve business breakthroughs at organizations. With intriguing examples from sports, science, history and the performing arts, as well

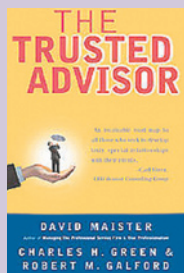
as business, the book offers a fascinating, in-depth look at a surprising new leadership skill.

The Trusted Advisor

David H. Maister, Charles H. Green
and Robert M. Galford

2001, Free Press

\$15.00



One key to professional success is the ability to earn the trust and confidence of clients. To demonstrate the paramount importance of trust, the authors use anecdotes, experiences and examples—successes and mistakes, their own

and others'—to great effect. The result is an immensely readable book for both the inexperienced advisor and the most seasoned expert.

**For a complete list of books
or to place an order, visit
www.acec.org/publications.**

Project Management and Project Delivery

COURSES

Green Infrastructure and Sustainable Communities Certificate Course Presented with Colorado State University July 14-17, 2008 Denver, CO

This four-day intensive certificate program is always an early sell-out. Developed with Colorado State University to meet a growing demand for new knowledge in a changing industry, this unique course highlights sustainable development in a business context, sustainable design tools and techniques for specific engineering markets (urban water management, transportation, buildings), and related innovation. Drawn from among the country's leading practitioners working in sustainable development, faculty will look at assembling high-performance project teams, the status of sustainable technologies, and the future of sustainable engineering. The program is structured for working design professionals, contractors and builders.

Registration Fee:

Advance (through June 13):

Member—\$1,545; Non-member—\$1,745

Regular (after June 13):

Member—\$1,745; Non-member—\$1,945

PDHs: 32 (In addition to a Certificate of Completion)

LEED for Design & Construction Professionals Presented by Colorado State University November 12-14, 2008 Denver, CO

An intensive program that delivers an in-depth review of the technical requirements of a specific LEED rating system, this new course equips attendees with the tools and information needed to incorporate green building practices into a project.

Instruction will include case studies on successful strategies for earning LEED credits and achieving project certification. Technical reviews provide attendees with an understanding of how LEED is being used nationally to define various levels of green project design and are recommended for those preparing for the LEED Professional Accreditation exam.

Registration Fee:

Advance (through October 10):

Member—\$1,495; Non-member—\$1,595

Regular (after October 10):

Member—\$1,595; Non-member—\$1,795

PDHs: 21

Sustainable Project Management for Facilities and Infrastructure Systems December 2-5, 2008 Falls Church, VA

Developed with Virginia Tech, this new course covers the practical side of sustainable development technologies and services through an overview of techniques, methods, tools, and resources to encompass the full life cycle of facility and infrastructure systems. Curriculum includes theoretical and practical experience on cutting-edge global projects, plus a visit to Washington, DC, green facility and infrastructure sites.

Registration Fee

Advance (through October 29):

Member—\$1,985; Non-member—\$2,035

Regular (after October 29):

Member—\$2,035; Non-member—\$2,235

PDHs: 32

The Project Delivery Series:

The Project Delivery Series provides the A/E/C marketplace with balanced and comprehensive information about major project delivery systems. Individual titles cover traditional and alternative systems, including sequential approaches such as Design/Contract-Build and integrated approaches such as Design-Build-Operate.

The Project Delivery Systems Series includes must-read information for owners considering project delivery options, as well as for project delivery professionals advising owners about alternative delivery approaches. All of the contributors and authors of the Series agree that choosing the right delivery system for a project, given owner needs and project parameters, is a vital first step in any development process.

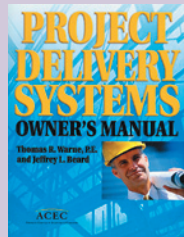
Project Delivery Systems Owner's Manual

Tom Warne and Jeffrey L. Beard

2005, ACEC

Member—\$99.00

Non-member—\$139.00



ACEC presents an in-depth manual designed to help owners select the appropriate project delivery system for every project. Reviewed by

ACEC's Management Practices Committee, this invaluable publication includes chapter-length discussions on each of the major sequential delivery processes.

Construction Management at Risk

Elliott Gappinger

2008, ACEC

Member—\$49.00

Non-member—\$69.00



Construction Management at Risk explains how to use CMAR, with particular emphasis on the roles of the architect/engineer and the project owner. Examples of

real projects illustrate potential pitfalls for architects and engineers, and how they can use the CMAR process to better serve the needs of their clients.

**Building Information Modeling (BIM):
The Promise and The Reality for A/E/C Firms**
December 4–5, 2008

New Orleans, LA

ACEC presents the voices and experiences of industry innovators who are collaboratively transforming the BIM multi-dimensional project planning concept into A/E/C marketplace reality. Presented to capacity enrollment since its 2007 debut, the 1½-day course is a must for firm leaders and project managers considering expansion into BIM. Curriculum topics include an examination of BIM as a concept, demonstration of how it is being put into practice by the collaborative professional teams involved, real-life transition plans and related IT budgeting case studies by engineering firms, an exploration of BIM technology, discussion of legal issues and risks associated with the concept, and a look at how firms can best prepare for a BIM future.

Registration Fee:

Advance (through November 5):

Member—\$895; Non-member—\$1,020

Regular (after November 5):

Member—\$1,020; Non-member—\$1,145

PDHs: 11

ONLINE SEMINARS

See pages I-20–22 for pricing and other details.

**Negotiating Better Engineering Contracts:
A Win-Win Situation**

Gary Bates, Roenker Bates Group

August 19, 2008

Participants will acquire insights to recognize different techniques others use to negotiate; learn which skills are required to be an effective negotiator; understand the importance of proper planning for negotiation; practice the methods for conducting an effective negotiation session; and realize the proper sequence for reaching a win-win engineering contract.



Design-Build Project Delivery

2001, ACEC

Member—\$49.00

Non-member—\$69.00



This book examines the basic differences in Design-Build in the private and public sectors, variations of this delivery method, guidance on how to manage risk and attain rewards, method pros and cons, legisla-

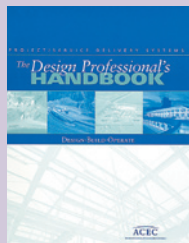
tion and how the process itself works. Discover new marketing techniques in the Design-Build environment, how to manage risk and how to attain rewards.

Design-Build-Operate

2005, ACEC

Member—\$89.00

Non-member—\$109.00



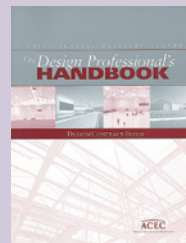
Learn and examine key differences between the Design-Build process and the Design-Build-Operate delivery system, as well as the long- and short-term opportunities, obligations, responsibilities and liabilities that exist.

Design/Contract-Build

2005, ACEC

Member—\$89.00

Non-member—\$109.00



retaining full control over the process.

Design/Contract-Build is a sequential methodology that preserves the A/E's traditional role, but also includes engagement of a qualified construction contractor early in the process. The system enables owners to gain the advantages of integrated delivery while

■ Business Management and Quality

COURSES

Business of Design Consulting (BDC) for the Engineering Firm of the 21st Century

A Best Practices Educational Event

September 24-27, 2008

San Antonio, TX

The Business of Design Consulting (BDC) is presented for design professionals seeking to sharpen their business practice knowledge to compete more successfully. Attendees will hone management skills with new insights from leading practitioners who specialize in the A/E/C environment.

The intensive four-day program offers engineering firm professionals a logical sequence of focused learning in eight essential management areas and delivered through application exercises, extensive discussion and interactive workshops.

BDC offers expertise from some of the industry's leading authorities on:

- Leadership
- Human Resources
- Finance
- Business Management & Ownership Transition
- Contracts and Risk Management
- Information Technology
- Marketing

Faculty: Paul Doherty, Satellier, LLC; Peggy Pound, The Pound Group; Colvin Matheson, Matheson Financial Advisors, Inc.; Tom Porterfield, Victor O. Schinnerer & Company, Inc.; David Stone, Stone and Company.

Registration Fee:

Advance (through September 5):

Member—\$1,545; Non-member—\$1,745

Regular (after September 5):

Member—\$1,745; Non-member—\$1,945

PDHs: 28

Commended Master's Program

Earn a Master of A/E/C Business Management from Northwestern University

ACEC and Northwestern University, Evanston, IL, have joined forces to offer the nation's premier design and construction master's program, created specifically for business-minded A/E/C professionals. Northwestern's 12-course, three semester A/E/C business management curriculum leads to a Master of Science degree from the McCormick School of Engineering and Applied Science. The Master's program is for individuals with several years of experience who already hold a professional degree (scientific or technical) in engineering, architecture, construction or a closely related field of study.

For more information about the Commended Master's Program, contact Jeffrey Beard, vice president, ACEC, and director of the Institute for Business Management at 202-347-7474 or by e-mail at jbeard@acec.org.

2007–2008 Design & Construction Industry Trends Survey

2007, ACEC

Member—\$299.00

Non-member—\$399.00



Business practice trends for A/E companies are detailed in ACEC's comprehensive 2007–2008 *Design & Construction Industry Trends Survey*. Company finance and operating ratios, costs of health care and retirement, retention and training data, and much more are contained in this in-depth study. All of the vital statistics are shown in the aggregate and categorized according to region, market focus and firm size.

Ownership Transition

Options and Strategies, Third Edition

Lowell Getz and Paul Lurie

2002, ACEC

Member—\$69.00

Non-member—\$89.00



An invaluable resource for design professionals considering the possibility of transferring ownership. The book also serves as a step-by-step guide with plenty of helpful forms and contracts to ensure an efficient and profitable transfer.



Shortage of Engineers: There Is No Quick Engineering "Fix"

John D. Jolls, John D. Jolls and Company

September 23, 2008

Dealing with the shortage of engineers requires a new way of thinking about recruitment, retention, and professional image building, plus new philosophies about financial capital and people allocation. A few firms have not been troubled by the shortage, and this seminar explores the business practices that deliver that result.

ONLINE SEMINARS

See pages I-20–22 for pricing and other details.

Strategic Planning for Your Company's Next *Bus Drivers*

Greg Churchman, Churchman Consulting

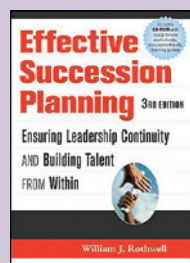
September 17, 2008

Who in your organization will be *driving the bus* in the future? Planning for your future firm "bus drivers"—your supervisors, managers, and leaders—is critically important. Participants will learn how to identify, develop and retain potential leaders, link aspects of succession planning with performance and career management, encourage and coach current staff leaders and engage them in succession planning and development.

Effective Succession Planning, 3rd Edition

Ensuring Leadership Continuity and Building Talent from Within

William J. Rothwell
2005, Amacom
\$65.00



A new diagnostic tool to assess succession needs is a valuable feature of this book. With its illuminating case studies and CD-ROM with worksheets, assessment tools, and training guides, it's a complete resource of everything your organization needs to create, sustain, and evaluate a strong succession planning program.

Strategic Planning for Design Firms

Raymond Kogan, AIA and Cara Bobchek
2007, Kaplan Publishing
\$49.95

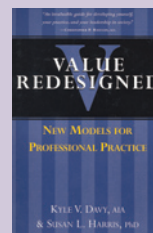


Strategic Planning for Design Firms will help leaders and owners of design firms understand the concepts of strategic planning and how to apply these concepts to complete a strategic planning process in their own firms.

Value Redesigned

New Models for Professional Practice

Kyle V. Davy, AIA and Susan L. Harris, PhD
2005, Greenway
\$39.50



Innovative models for professional practice are beginning to flourish, providing firms avenues of escape from the cycle of commoditization and low prestige within the architecture and engineering community. These new models of practice offer value propositions combining new ways of creating value with innovative pricing strategies.

Human Resources

COURSES

Human Resources Forum

October 27–28, 2008

Kansas City, MO

The HR Forum is a 1½-day meeting structured for peer networking in an interactive roundtable format for human resources professionals seeking professional growth. Facilitators develop a basic agenda and each participant's input will formulate the ensuing discussions on emerging trends and problem-solving in the workplace. An HR professional Listserv is available to participants, facilitating education, idea sharing and informal communication year-round.

Registration Fee:

Member—\$350; Non-member—\$450

PDHs: 8

ONLINE SEMINARS

See pages I-20–22 for pricing and other details.

Leverage Your A/E Human Resources for Competitive Advantage

John Geddie, Martin-Simonds Associates, Inc.

September 2, 2008

The current tight labor market demands that A/E firms develop and retain a competitive hiring advantage. This session examines ways to leverage human capital within the firm to improve productivity, win the talent war by employing best practices in human resources, and improve the motivation and loyalty of technical professionals.



Future Leaders Focus: A Study of the Needs and Priorities of Young Design Professionals

Barbara H. Irwin, HR Advisors Group, LLC and Cara Bobchek, Management Consultant

October 14, 2008

What attracts young engineers to a company? What keeps them loyal? How do they view their careers in comparison to older generations? This seminar presents the combined voices of young engineers through an original 2007 survey in over 50 firms nationwide. Results provide insight into the minds of younger staff, as well as ideas, direction, and guidance to firms focusing on retention and development of the workforce of today and tomorrow.

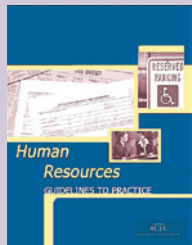
2004 Human Resources Guidelines CD

Kathleen A. Forrand, Editor

2004, ACEC

Member—\$89.00

Non-member—\$119.00



This jam-packed CD contains HR forms for virtually every need—hiring, promotions, performance appraisals, benefits, raises, commendations, exits and more. Included are sections on e-mail and Internet policies, and violence in the workplace.

Workforce Wake-Up Call

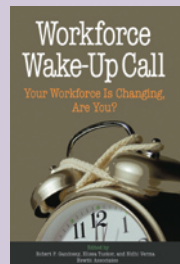
Your Workforce Is Changing, Are You?

Edited by Robert P. Gandossy,

Elissa Tucker and Nidhi Verma

2006, Wiley

\$34.95



Covering all the major implications of workforce change, the book features an all-star list of contributors and a wealth of expert opinion that current managers won't find anywhere else.

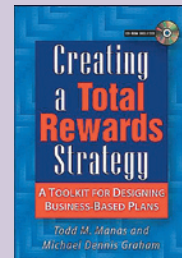
Creating a Total Rewards Strategy

A Toolkit for Designing Business-Based Plans, 2nd edition with CD

Todd M. Manas and Michael Dennis Graham

2002, Amacom

\$69.95



Salary, bonuses, benefits and “perks” may be the most visible elements of a rewards program, but other components are just as valuable to employees. This book and CD lay out details on how nonfinancial rewards can be quanti-

fied and combined with monetary measures in ways that meet business objectives.

Finance and Economics

COURSES

Finance Forum

September 15–16, 2008

Chicago, IL

ACEC's Finance Forum is a 1½-day meeting of industry finance professionals with the goal of gaining new insights and information to be more successful for their firms. The Forum gives attendees the opportunity to network with peers and exchange valuable information and experiences. Content typically includes perennial issues such as executive compensation, sales and growth, mergers and acquisitions, and government contracts and systems in the current environment. A professional Listserv is available for participants so that education, idea sharing and communication can continue year-round.

Registration Fee:

Member—\$350; Non-member—\$450

PDHs: 8

understanding, reading and interpreting economic indicators such as the Producer Price Index, the National Association of Purchasing Management Index and the Productivity Report can help firms better align future projects with the projected state of the economy.

Where Does the Money Go? What Happens Between the Top Line and the Bottom Line?

Robert vanArsdall, XL Design Professional

November 4, 2008

Too often, engineering firms look at the revenue line on their balance sheets, then the total profit, and wonder *where all the money went*. The gap between money made and money kept can be a large one. The seminar also will describe important tools for identifying how and where money disappears inside the firm, on projects and in pricing. The presenter will focus on price differentiation by client, the elements of activity-based costing and its implications on overhead, and identifying where potential profit is being lost and how to stop it.

ONLINE SEMINARS

See pages I-20–22 for pricing and other details.

How Economic Indicators Predict Business Sector Performance and Potential

Craig Schwartzhoff, Prudential Retirement

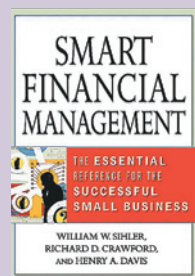
October 30, 2008

Participants will learn to identify the leading economic indicators which may have the greatest impact on their firm's markets and how they can use these indicators as measures to gauge the upcoming business climate. The seminar demonstrates how

Smart Financial Management

William Sibler, Richard Crawford and Henry Davis

2004, Amacom
\$29.95

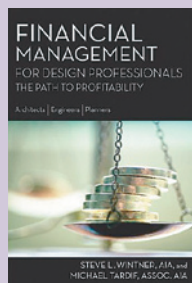


Long on practical guidance, while refreshingly short on math, *Smart Financial Management* helps owners and managers of small businesses solve everyday financial dilemmas and avoid potential problems.

Financial Management for Design Professionals

Stephen L. Wintner and Michael Tardiff

2006, Kaplan
\$49.95



You don't need to be a financial wizard to ensure the future success of your design firm. For design professionals looking to advance their careers, the book is an indispensable reference and training guide.

2004 Financial Management Guidelines CD

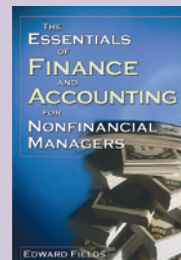
2004, ACEC
Member—\$69.00
Non-member—\$89.00



Achieve financial goals and re-familiarize yourself with key lessons in financial management. Topics include using financial information to improve performance, planning, trend analysis, assembling a budget income statement, invoicing and collections, developing a Net Revenue Forecast and using IT effectively.

The Essentials of Finance and Accounting for Nonfinancial Managers

Edward Fields
2002, Amacom
\$19.95



This indispensable book demystifies accounting and finance and demonstrates how financial decisions are manifestations of company goals. Crystal-clear examples show how managers can connect corporate financial information directly to their own strategies and actions.

Contracts and Risk Management

COURSES

Legal Counsel Forum

October 21–22, 2008

Montreal, Canada

Held in conjunction with ACEC's 2008 Fall Conference: *Sustainability in the Built Environment*, the Legal Counsel Professional Forum is a 1½-day meeting, structured as an interactive roundtable for networking among legal counsel employed or retained by ACEC member firms. The goal is to provide a setting for the exchange of information by participants to enhance their ability to serve their firms and clients. The Forum encourages input to enrich and promote conversations on emerging issues and problem solving in the workplace. A professional Listserv is available for participants so that education, idea sharing and communication can continue year-round.

Registration Fee:

Member—\$350; Non-member—\$450

ONLINE SEMINARS

See pages I-20–22 for pricing and other details.

Contracts, Coverage and Jury Interpretation: A Peek Behind the Insurance Curtain

Albert J. Rabasca, XL Design Professional

September 3, 2008

Improved awareness of the claim process can influence decisions and behaviors during design and construction that can afford the design professional added protection in the event of a claim. Rabasca goes behind the insurance curtain to explore pitfalls in contract language from the perspective of A/E professional liability coverage, examining allegations from actual lawsuits in comparison to insurance contract coverage. The importance of clear and concise language will also be examined, understanding that the ultimate interpreter would not be a jury of your peers.



Watch for new courses...

Our calendar of online seminars is continually adding new hot-topic events. See what's new at

www.acec.org/calendar/index.cfm

Project Manager's Spotlight on Risk Management

Kim Heldman

2005, Jossey-Bass

\$16.95



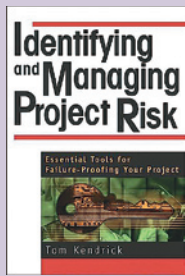
This book is a quick and practical guide to applying the disciplines of proven risk management practices without the rigor of complex processes.

Identifying and Managing Project Risk

Tom Kendrick

2003, Amacom

\$32.95



Readers are taken step-by-step through every phase of a project, showing how to consider the possible risks involved at every step in the process. Relevant figures and diagrams support the text and illustrate key scenarios.

Risk Management for Design Professionals

William G. Ramroth, Jr.

2007, Kaplan

\$39.95



William G. Ramroth explains the principles of risk management and how any design firm can apply them to every project. By reducing the process to simple steps and comparing professional risk to familiar themes like games of chance, Ramroth demonstrates how to avoid risk at every stage of the design process.

Limiting Liability and Managing Risks Through Contract Provisions: Ceilings, Floors and Trap Doors

Neal J. Sweeney, Kilpatrick Stockton LLP

November 19, 2008

Engineers regularly risk claims that are out of proportion to their modest design fees and even to their entire net worth. Realistic risk management requires project owners to confront these economic realities and reflect them responsibly in the allocation of design risk and limitations on the engineer's liability. Sweeney explores the concepts of standard of care and professional negligence in protecting the engineer from liability, marketing efforts and contract language that raise the standard by which performance may be judged, and performance guarantees that increase liability.

Popular ACEC Online Seminars Now Available On Demand

The ACEC Bookstore offers two seminars—originally presented live online in 2008—as On-Demand Webinars... web-based and accessible anytime.

Liability of Design Professions for Construction in Flood Hazard Locations and Failed Dams and Levees are 1.5 hour courses presented by Dr. Jon Kusler, Esq., Association of State Wetlands Managers, and Edward A. Thomas, Esq., Michael Baker Corporation. For details and to purchase, visit the ACEC Bookstore at www.acec.org/publications.

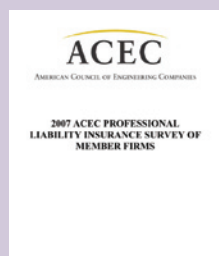


2008 ACEC Professional Liability Insurance Survey

2008, ACEC (Download)

Member—\$29.00

Non-member—\$39.00



Insurance availability, rates, types of coverage, pre-claim assistance, claim processing, and related issues all have direct bearing on the financial strength of a firm. ACEC's Risk Management Committee conducts an annual survey of member firms' liability insurance coverage and experience to provide this overview of the current industry insurance landscape.

EJCDC Contract Documents



ACEC offers a broad array of contract documents, including environmental and funding agency contracts. These are available individually or in specially priced sets.

Go to www.contractscentral.net or www.acec.org/publications, to purchase downloadable documents.

Marketing and Business Development

COURSES

Market Forecast Series

Generally held Thursdays

1:30-3:00 pm ET

ACEC's Market Forecast Series presents up-to-date contracting opportunities and procurement approaches from federal agency programs and private clients. Key representatives discuss budget outlooks, agency or industry organization, and procurement. Find out how to do business and win projects with federal agencies and various private-sector owner representatives. Agencies and industries represented may include U.S. Army Corps of Engineers, Naval Facilities Engineering Command, General Services Administration, U.S. Air Force, Health care, Education, and Land development.

Registration Fee:

Member—\$199; Non-member—\$249

PDHs: 1 per session

Visit www.acec.org/calendar/ for details.

Professional Sales and Marketing Forum

October 19, 2008

Montreal, Canada

Held in conjunction with ACEC's 2008 Fall Conference: *Sustainability in the Built Environment*, Montreal, Canada, the Professional Sales and Marketing Forum is a day-long meeting designed to help sales and marketing professionals network with peers and gain valuable insights that can be implemented in their firms. A professional Listserv is available for participants so that education, idea sharing and communication can continue year-round.

Registration Fee:

Member—\$325; Non-member—\$395

PDHs: 8

ONLINE SEMINARS

See pages I-20–22 for pricing and other details.

Calculating Carbon Footprints: Potential Business for Engineering Firms

Mark van Soestbergen, International Carbon Bank & Exchange

September 10, 2008

Carbon footprinting is defined as a measure of the impact of human activities on the environment in terms of the greenhouse gases produced and measured in units of carbon dioxide. "A project's carbon footprint will be an increasingly important evaluation criteria," says van Soestbergen, a nationally known expert on climate change. Participants will learn how to establish their firms' carbon footprints, and to extend that practice as a client service.

Increase Your Win Rate with Powerful, Persuasive Proposals

Clare Ross, The Clare Ross Organization

November 11, 2008

What are the essentials of a good proposal? What are the key content points a decision maker wants to see? How should content be organized? What about differentiation from the competition? How can proposals be written faster? This seminar offers answers and ideas for writing powerful, persuasive proposals that win business.

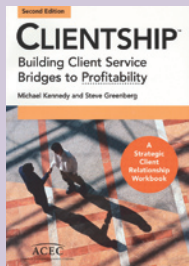
Clientship™, Second Edition

Michael Kennedy and Steve Greenberg

2005, ACEC

Member—\$49.00

Non-member—\$69.00



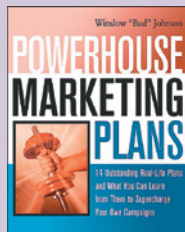
This updated edition illustrates again that good client service is part of a firm's competitive advantage. This book will become a staple as a sales and customer service training tool used by successful firms and agencies, just as the original.

Powerhouse Marketing Plans

Winslow "Bud" Johnson

2004, Amacom

\$29.95



Here are the tools to create successful marketing campaigns using proven strategies of well-known companies that have done it right. Maximize market research such as phone surveys, ethnographic studies, focus groups, online surveys, trade research and more.

A/E/C Marketing Fundamentals

Michael T. Kubal, Kevin T. Miller & Ronald D. Worth

2004, BNi

\$59.00



The idea of a market-driven firm culture is beginning to find a place in the A/E/C industries. This book introduces marketers to the new realities of that environment, as well as providing resources and ideas for adapting to changing industry standards.

Communications and Information Technology

COURSES

Information Technology Forum

October 6-7, 2008

Chicago, IL

The Information Technology Forum is a 1½-day meeting, structured for networking with peers in an interactive roundtable format to help IT managers better serve their firms. An IT Listserv is available to participants, facilitating education, idea sharing, and informal communication year-round. A Forum agenda provides the framework for discussion, which encourages participants' input to enrich the ensuing conversations on emerging trends, problem solving in the workplace and more.

Registration Fee:

Member—\$350; Non-member—\$450

PDHs: 8

Show Me the Money: Maximizing the Benefits of Information Technology

Ty Kicklighter, Walter Schoel Engineering Company, Inc.

October 22, 2008

Leveraged correctly, information technology can positively affect the financial performance of firms in unique ways. Using financial statements and examples of common IT projects, this seminar explores the consequences of IT spending on firm health from the perspectives of company leaders and IT professionals.

ONLINE SEMINARS

See pages I-20-22 for pricing and other details.

E-Signatures, E-Seals, E-Mail, Electronic Drawing Exchange: Legal and Practical Tips to Protect Your Designs and Data

Michelle F. Kantor, McDonald Hopkins

August 12, 2008

The real world of electronic information transfer presents real legal and learning challenges—on liability risks with electronic drawings transfer; enforceability of e-seals, e-signatures and e-mails; and the kinds of agreements needed to protect all project participants. This seminar addresses these critical issues and provides tips on protecting your designs along with other safeguards in doing business electronically.

BIM Handbook

A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors

Chuck Eastman, Paul Teicholz, Rafael Sacks,

Kathleen Liston

2008, Wiley

\$85.00



The *BIM Handbook* guides readers to successful implementations, helping them avoid needless frustration and costs in taking full advantage of this paradigm-shifting approach, which helps build better buildings that consume fewer materials and require less time, labor, and capital resources.

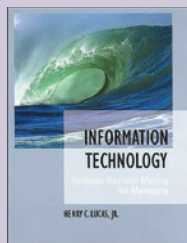
Information Technology

Strategic Decision-Making for Managers

Henry C. Lucas, Jr.

2004, Wiley

\$87.95



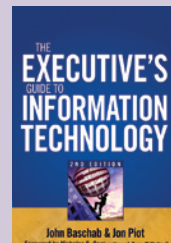
From new business models to new types of business, information technology has become a key driver of business and essential to corporate strategy. Lucas focuses on the key knowledge and skills needed to take an active role in managing IT to maximize the benefits of the investment.

The Executive's Guide to Information Technology, 2nd Edition with CD

John Baschab and Jon Piot

2007, Wiley

\$80.00



A guide to running a cost-effective, efficient and delivery-focused corporate information technology unit, this book offers specific policies, approaches and tools for each critical IT management function. Spreadsheets, documents and checklists can be accessed on the CD that is included.

ACEC's 2008 Fall Conference: *Sustainability in the Built*



Plan now to join us for ACEC's 2008 Fall Conference: *Sustainability in the Built Environment*, in Montreal, Canada, October 19–22, 2008.

The Conference program features a series of educational sessions grouped by theme tracks and an expanded trade show, in addition to a full complement of tours, events and opportunities to enjoy Montreal's neighborly hospitality and unique European ambience.

The Conference will focus on business and knowledge management, including emerging markets, creative leadership and unique solutions developed by practitioners and facility/infrastructure owners, in the following educational areas:

- Business Management
- Structural & Risk Management
- Transportation Markets & Issues
- Water, Wastewater & Environmental Markets
- Buildings, Industrial & Energy Markets
- Finance & Economics
- Technology Forecasting & Trends

You now must have a valid Passport to re-enter the United States from Canada, and renewing or applying for a Passport is a lengthy process. So start your planning now, and join us north of the border in October.

Visit www.acec.org for the most up-to-date listing of sessions and events. Plan now to join us!

better managers and business developers.

Developing Future Leaders: Best Practices and Lessons Learned for Growing 20–35 Year-Olds

Geordie Aitken

Aitken Leadership Group

Leaders in many engineering firms are challenged by the apparent difference in values and goals within the 20–35 year-old demographic, and struggle to employ strategies that will maximize their young talent. This session addresses the causes, symptoms and possible antidotes to the apparent “generation gap” and the challenge of developing leadership in the younger generations.

Case studies will illustrate how to slow the “brain drain” and create a professional environment in which young leaders can thrive. Cases cited will demonstrate the impact on the organization of effectively engaging young professionals in work-sharing between offices, teamwork, and utilization.

The Introvert's Communication Arsenal **Geoff Webb**

Graceworks, Inc.

Engineers who can communicate confidently are always in demand... but the majority of engineers consider themselves introverts. This session examines the definition of “introversion” and factors that define one's level of introversion/extroversion; introduces practical tips and techniques for “extroverting” without burning out or selling out; and looks at ways engineers can draw on their introverted strengths to engage colleagues and clients, enhance leadership skills, produce more col-

SESSIONS HIGHLIGHT TODAY'S BIG TOPICS

Business Management

Listen Your Way to the Shortlist

Joan Freitag

Hanson Professional Services, Inc.

Statistically, people working in the A/E/C profession spend at least 55 percent of their time listening every day. Listening to colleagues, subordinates and superiors can help determine business success, and there is a direct correlation between listening competence and upward mobility in organizations. Listening to clients can help professionals build their businesses. And listening skills can be taught.

Workshop attendees will discover what they know and how much they have to learn, and practice techniques to boost their listening effectiveness as a tool for becoming

Environment, October 19–22, Montreal, Canada

laborative solutions, and build stronger client relationships.

Attendees will gain the confidence and freedom to have a greater impact on the telephone, in conversations, at meetings, and in presentations.

Built to Last: Sustainability and Succession

Robert vanArsdall

XL Design Professional

Sustainability isn't just about energy conservation and resource renewal... it can also describe the construction of a firm that will last 100 years and longer.

What can we learn from the succession and management practices of 100-year-old firms? How have they managed to transition ownership and management successfully over such a time span? How have they remained profitable? Frequently they have implemented management practices that ensure succession as an orderly process that can be replicated rather than as a unique event in time. This session will explore the advice and examples gained from a sample survey of century-old U.S. firms.

What Is the Right Value for Your Firm?

David S. Cohen

Matheson Financial Advisors, Inc.

Did you know there may be different types of value depending on the purpose for which the engineering firm is being valued? Case studies will explore the types of value for design firms and differences for internal and external transactions.

Topics include reasons that a firm needs a formal valuation, different ways to

value a design firm, financial indicators that drive value, internal transition or external transaction value, how to get your firm ready to sell, stock formulas and creating positive shareholder behavior. These insights will assist owners and principals readying their firms to sell and providing information for dissemination—in a way that can positively impact firm performance and build shareholder value.

Structural & Risk Management

Killer Contract Clauses: Tips to Identify and Negotiate Deal Breakers

Michelle F. Kantor

McDonald Hopkins

Unless properly negotiated, most owner-generated design agreements expose firms to unacceptable and uninsurable risks. This session identifies 10 top *killer contract clauses* that design professionals should understand and address when negotiating contracts. Discussion will include indemnification, standard of care, warranties, copyright, and site observation, among other key clauses. In addition to practical approaches to everyday issues, attendees will gain valuable insights for protecting their companies when transmitting data and drawings over the Internet, and will take home checklists to use for future negotiations.

Integrated Project Delivery and Building Information Modeling: Structural Steel Delivery Redefined

Scott Ricks, TRC Worldwide Engineering; Sean Smith, Gresham, Smith & Partners; and Whitney McClure, MJ Harris, Inc. Engineering companies are increasingly faced with short-

ened schedules and higher levels of expectations from owners. This session presents an alternate delivery method that results in not only meeting, but exceeding these expectations.

In the delivery of structural steel buildings, engineering drawings—frequently incomplete—are bid by general contractors who may not fully understand the steel procurement process, and fabricators who often deflate the cost in order to get a contract signed. The result is RFIs, change orders, and schedule delays. This proposed delivery method is a prime working example of Integrated Project Delivery, made extremely efficient and reliable by using Building Information Modeling (BIM).

Risk Management Report Card: Would Your Firm Earn 'A,' 'F,' or 'Incomplete'?

Erin Austin and Jack Beemer, David Evans and Associates, Inc.; Stan Austin, Miller Nash LLP; Lois Roberts, Lois Roberts Consulting Engineers; Robert Fogle, HNTB Companies; and Chuck Kopplin, Graef, Anhalt, Schloemer and Associates, Inc.

A successful risk management program involves more than insurance procurement and saying "no." A panel of risk managers, in-house and outside attorneys from successful small, medium and large firms will describe their comprehensive programs including some of the operational details.

Attendees will determine gaps and exposures that need to be addressed in their own programs, and learn how risk issues can be efficiently resolved by implementing some of the panel's best

practices. This session will present ideas for risk management programs that support company objectives and avoid becoming the "sales prevention program."

Risk Taking Under the 2007 ABA, Consensus and EJCDC Documents

Roger L. Sabo

Schottenstein Zox & Dunn

New 2007 construction documents present new opportunity and new risk. The engineer preparing the contract forms has the opportunity to craft a document from the Standard form and insert or change the contract or the conditions, and create new opportunity for additional tasks. But what about the possibility of introducing new problems? Has the new document now crossed the line such that in certain states it would fall under the economic loss rule exceptions? Has it spawned liability from one of many government entities, such as the EPA or OSHA?

This session identifies specific topics to watch for and their treatment in the variety of new contract forms.

Transportation Markets & Issues

Solving Congestion with a Marquee Bridge Project—Completion of A25 in Montreal, Canada

Régine Beauboeuf, Parsons Corp.; Marc Flamand, Québec Ministry of Transportation; George Zakem, Macquarie North America; and Jacques Lacombe, Kiewit Corporation

This case study will focus on how the decision was made to use the Public/Private Partnership (PPP) process, selection, execution, tolling as a means

ACEC's 2008 Fall Conference: *Sustainability in the Built*

Council of American Structural Engineers (CASE) Risk Management Convocation Sessions

The Independent Expert Cost Estimator in Dispute Resolution

Joseph Wallwork, Strategy LLC

Ethics Reform and New Risks to the Business of Engineering

Anne Ellis, Earth Tech, Inc.

Green Ache(rs): Risk Issues Related to Green Design and Green Building Certification

Eric Singer, Ice Miller, LLC

A Toolbox You Can Actually Use for Risk Management

Douglas Ashcraft, Walter P. Moore & Associates, Inc., and Corey Matsuoka and Mike Matsumoto, SSFM International, Inc.

Understanding and Managing Structural Engineering Claims

Gregg E. Bundschuh and Dave Collings, Ames & Gough

Council of Professional Surveyors Sessions

Records Management in Professional Service—Constructive Destruction, the Silent Handhold on Information Flow

Gregory A. Helmer, RBF Consulting

of finance, public involvement, risk sharing, environmental management, and continuous public outreach for the duration of the partnership. Attendees will hear how an unconventional delivery method and technology came together to solve a significant congestion problem, from owner, developer, and contractor perspectives.

This presentation also will focus on the technical aspects of the project, how these forces came together to deliver this critical link in the regional infrastructure, and how the consulting industry can help an owner in bringing new technology and delivery methods to market.

Managing Environmental Permitting Risks in a PPP Environment—Completion of A25 in Montreal, Canada

Marc Flamand, Québec Ministry of Transportation; Régine Beauboeuf, Parsons Corp.; and Jean-François Poulin, Kiewit Construction

Public/Private Partnership (PPP) financing can benefit the general public, as this case study on how the decision was made to share the challenges and risks of obtaining environmental permits under an accelerated PPP delivery method demonstrates. Participants focused on risk sharing and risk management of critical environmental issues, the criteria used to determine which conditions could be met by the public partner, those to be transferred to the private partner, and those that could be effectively shared. Attendees will gain understanding of how the private partner developed an environmental work plan and a risk management plan designed to

avoid the legal and financial pitfalls of a late delivery.

Water, Wastewater & Environmental Markets

Turning Wastewater into Wanted Water: A Case Study

Chandra Weiss and Paul Bryant, Pivotal Management Consulting; Drapeau Josee, Kiewit Parsons and a Panel of Owner/Operators

Clean water is our most valuable resource and a limited one. Learn from a panel of the engineers, operators and owners about the creative use of wastewater. This unique project combined a wastewater treatment facility and an ethanol plant that otherwise could not have been built in the area. In goes filthy wastewater, out comes ethanol...what will engineers think of next?

Buildings, Industrial & Energy Markets

Is This an Engineering Firm's Office?

Kevin Honomichi, BHC RHODES

Differentiating yourself from your competitors and attracting and retaining staff are two of the most daunting challenges faced by engineering firms. This session looks at the office space itself, and how it can most creatively make a statement about firm culture, provide a productive work environment and reinforce a firm's brand.

This case study of urban and suburban workplaces will look at office spaces that make the impression that "this doesn't look like an engineer's office." Ideas will be introduced to help mid-size and small firms "break the mold" of tradition to create places that employees and customers want to be.



Environment, October 19–22, Montreal, Canada

Big Box Owner Panel Discussion

Paul Bryant and Chandra Weiss, Pivotal Management Consulting, LLC, and a Panel of Big Box Retail Owners and Constructors
Big box retailers have been moving towards standardized project formats that limit the creativity of engineers and other designers in bringing in ideas that drive down life cycle costs. Hear one big box retailer's view of sustainable engineering and construction, and his contractor's description of project situations that allow—or limit—the ability to make design alterations to maximize “project stakeholder value.”

The session will explore one company's attempt to integrate more sustainable designs while simultaneously managing initial investment and life cycle costs as well as overall perceptions of sustainability, life cycle costing, and competing project needs.

Finance & Economics

Teaming and Joint Ventures in the Public/Private Partnership (PPP) Market—A Case Study

Keith Sabol, Parsons Corporation and Jacques Lacombe, Kiewit-Parsons

In 2002, an alliance of firms was formed to pursue work in an emerging transportation market; seven years later they are delivering A25, the first Public/Private Partnership tendered by the Ministry of Transportation Quebec. This case study will focus on strategic alliances, the value and challenges of design/construction joint ventures, leveraging strengths to succeed in emerging markets and mitigating risk. Attendees will gain an inside look at how contractual

teaming relationships can successfully propose and deliver large infrastructure projects, understand and meet owners' needs and concerns, and expand geographic markets.

Retirement Program Trends in the Engineering Industry

Brian Neligan, PLANSPONSOR, and Nancy Barrette, ACEC Retirement Trust

Hiring and retaining quality staff in the engineering industry has become much more challenging, and a firm's retirement program is always a benefit of interest to prospective employees. How much is the company match? Do you offer a Roth 401k? Do you know how your retirement program compares to your competitors' plans? This session will provide an overview of retirement plan design and trends within the engineering industry, with data breakdown for small, medium and large engineering companies.

Strategies to lower program expenses and reduce fiduciary risk will be presented along with ideas for staying competitive with retirement benefits and succeeding in a tight job market.

Public/Private Partnerships (PPP)—A Canadian Example for the U.S. Engineering Profession

George Zakem and Fred Bettez, Macquarie North America, Ltd.

Public/Private Partnerships (PPP) bring private sector capital to the delivery of public services, and are attracting increasing interest from governments in Canada. The PPP procurement process requires greater effort than more traditional forms such as design-build, and this session looks at how the engineering profes-

sion is positioning to take advantage of this growth market. Attendees will gain an understanding of the diverse and important roles within a PPP process and how to select roles that best fit their firms, as well as the approach to teaming for a PPP procurement—what to look for and what to avoid, and negotiating with greater knowledge of risks.

Technology Forecasting & Trends

Lessons Learned in Implementing BIM and IPD in a 900-Person Multidisciplinary Firm

Sean B. Smith, Gresham, Smith and Partners

This session describes the overall implementation strategy employed in the ongoing training and application of Building Information Modeling (BIM) and Integrated Project Delivery (IPD) in a large organization with multiple locations, markets and services.

At the heart of this technical issue is *change*, and the willingness and reluctance of people to implement the new procedures, tools and processes necessary for growth. Attendees will look at the correlation between the principles of the Core Team of an IPD team and the steering group for a firm's overall implementation, and hear firsthand the specific challenges, problems, and successes of one firm's experience with this process.

Sustaining the World's Infrastructure

Terry D. Bennett, Autodesk
Sustainable design not only minimizes the environmental footprint of infrastructure



development, it also allows firms to design better for less money than their competitors. The ability of A/E/C firms to predict, create, and deliver designs that are not only sustainable, but address the pressures of aging infrastructure, industrialization and urbanization, will transform industry professionals into leaders in shaping public and environmental policy.

This session outlines and discusses how 3D data capture, sustainable design, integrated practice and construction automation can impact the way firms develop the world's infrastructure systems for future generations.

Fall 2008 Online Seminars

What Is an Online Seminar?

ACEC's online seminars are a cost-effective and convenient way to participate in informative and popular learning events from anywhere the Internet is available. Professionals from leading firms present topics in a tightly packed 1½-hour session in a format that facilitates important learning right at your computer.

At the session start time, participants log on to a website for the live presentation delivered in real-time. Calling a toll-free number provides the audio portion of the presentation and participants can ask questions via the Web.

With one registration fee payable per connection, a roomful of people can participate at no additional cost. ACEC's fall 2008 online seminar lineup features some of the most popular traditional topics, as well as some new ones.

Online seminars generally are held from 1:30 to 3 p.m. Eastern time. Unless otherwise noted, seminar fees are: Member—\$199; Non-member—\$249; and each course offers 1.5 PDHs.

Fall online seminars will include the sessions listed below. Sessions are frequently added or amended to reflect hot topics or cutting-edge ideas as industry issues arise, and the schedule is continually being expanded. Visit www.acec.org/education for the up-to-date list of upcoming topics and dates.

Leadership and Ethics

Rapid Leadership Development in Engineering and Design Firms

Scott W. Braley, Braley Consulting & Training
October 28, 2008

How do leaders begin and maintain the momentum to design, implement and sustain high-level performance? This seminar looks at *rapid* leadership development and deployment—what works and what doesn't as we seek to identify, define, develop, keep, challenge and support up-and-coming professionals and new leaders. Braley will focus on key issues to equip participants to address leadership development quickly, effectively and utilizing many of your own in-house resources.

Organizing a Legacy Firm

Ray Kogan and Cara Bobchek, Kogan & Company
November 5, 2008

Design your firm for continuing success. Your organizational structure determines how you win work, the expertise you bring to clients, your efficiency and profitability, employees' growth, and your firm's contribution to your community. Organizational structure can facilitate—or impede—your ability to achieve your vision. This session will explore different organizational structures, organizing for value, organizing your message and identity in the marketplace, and when and how to change your firm's organizational structure.

Project Management and Project Delivery

Negotiating Better Engineering Contracts: A Win-Win Situation

Gary Bates, Roenker Bates Group
August 19, 2008

Participants will acquire insights to recognize different techniques others use to negotiate; learn which skills are required to be an effective negotiator; understand the importance of proper planning for negotiation; practice the methods for conducting an effective negotiation session; and realize the proper sequence for reaching a win-win engineering contract.

Business Management and Quality

Strategic Planning for Your Company's Next Bus Drivers

Greg Churchman, Churchman Consulting
September 17, 2008

Who in your organization will be *driving the bus* in the future? Planning for your future firm "bus drivers"—your supervisors, managers, and leaders—is critically important. Participants will learn how to identify, develop and retain potential leaders, link aspects of succession planning with performance and career management, encourage and coach current staff leaders and engage them in succession planning and development.

Shortage of Engineers: There Is No Quick Engineering "Fix"

John D. Jolls, John D. Jolls and Company
September 23, 2008

Dealing with the shortage of engineers requires a new way of thinking about recruitment,

retention, and professional image building, plus new philosophies about financial capital and people allocation. A few firms have not been troubled by the shortage, and this seminar explores the business practices that deliver that result.

Human Resources

Leverage Your A/E Human Resources for Competitive Advantage

John Geddie, Martin-Simonds Associates, Inc.

September 2, 2008

The current tight labor market demands that A/E firms develop and retain a competitive hiring advantage. This session examines ways to leverage human capital within the firm to improve productivity, win the talent war by employing best practices in human resources, and improve the motivation and loyalty of technical professionals.

Future Leaders Focus: A Study of the Needs and Priorities of Young Design Professionals

Barbara H. Irwin, HR Advisors Group, LLC and Cara Bobchek, Management Consultant
October 14, 2008

What attracts young engineers to a company? What keeps them loyal? How do they view their careers in comparison to older generations? This seminar presents the combined voices of young engineers through an original 2007 survey in over 50 firms nationwide. Results provide insight into the minds of younger staff, as well as ideas, direction, and guidance to firms focusing on retention and development of the workforce of today and tomorrow.

Finance and Economics

How Economic Indicators Predict Business Sector Performance and Potential

Craig Schwartzhoff, Prudential Retirement
October 30, 2008

Participants will learn to identify the leading economic indicators which may have the greatest impact on their firm's markets and how they can use these indicators as measures to gauge the upcoming business climate. The seminar demonstrates how understanding, reading and interpreting economic indicators such as the Producer Price Index, the National Association of Purchasing Management Index and the Productivity Report can help firms better align future projects with the projected state of the economy.

Where Does the Money Go? What Happens Between the Top Line and the Bottom Line?

Robert vanArsdall, XL Design Professional
November 4, 2008

Too often, engineering firms look at the revenue line on their balance sheets, then the total profit, and wonder *where all the money went*. The gap between money made and money kept can be a large one. The seminar also will describe important tools for identifying how and where money disappears inside the firm, on projects and in pricing. The presenter will focus on price differentiation by client, the elements of activity-based costing and its implications on overhead, and identifying where potential profit is being lost and how to stop it.

Contracts and Risk Management

Contracts, Coverage and Jury Interpretation: A Peek Behind the Insurance Curtain

Albert J. Rabasca, XL Design Professional
September 3, 2008

Improved awareness of the claim process can influence decisions and behaviors during design and construction that can afford the design professional added protection in the event of a claim. Rabasca goes behind the insurance curtain to explore pitfalls in contract language from the perspective of A/E professional liability coverage, examining allegations from actual lawsuits in comparison to insurance contract coverage. The importance of clear and concise language will also be examined, understanding that the ultimate interpreter would not be a jury of your peers.

Limiting Liability and Managing Risks Through Contract Provisions: Ceilings, Floors and Trap Doors

Neal J. Sweeney, Kilpatrick Stockton LLP
November 19, 2008

Engineers regularly risk claims that are out of proportion to their modest design fees and even to their entire net worth. Realistic risk management requires project owners to confront these economic realities and reflect them responsibly in the allocation of design risk and limitations on the engineer's liability. Sweeney explores the concepts of standard of care and professional negligence in protecting the engineer from liability marketing efforts and contract language that raise the stan-

dard by which performance may be judged, and performance guarantees that increase liability.

Marketing and Business Development

Calculating Carbon Footprints: Potential Business for Engineering Firms

Mark van Soestbergen, International Carbon Bank & Exchange
September 10, 2008

Carbon footprinting is defined as a measure of the impact of human activities on the environment in terms of the greenhouse gases produced and measured in units of carbon dioxide. "A project's carbon footprint will be an increasingly important evaluation criteria," says van Soestbergen, a nationally known expert on climate change. Participants will learn how to establish their firms' carbon footprints, and to extend that practice as a client service.

Increase Your Win Rate with Powerful, Persuasive Proposals

Clare Ross, The Clare Ross Organization
November 11, 2008

What are the essentials of a good proposal? What are the key content points a decision maker wants to see? How should content be organized? What about differentiation from the competition? How can proposals be written faster? This seminar offers answers and ideas for writing powerful, persuasive proposals that win business.



Other Education and Business Management Resources

Communications and Information Technology

E-Signatures, E-Seals, E-Mail, Electronic Drawing Exchange: Legal and Practical Tips to Protect Your Designs and Data
Michelle F. Kantor
McDonald Hopkins
August 12, 2008

The real world of electronic information transfer presents real legal and learning challenges—on liability risks with electronic drawings transfer; enforceability of e-seals, e-signatures and e-mails; and the kinds of agreements needed to protect all project participants. This seminar addresses these critical issues and provides tips on protecting your designs along with other safeguards in doing business electronically.

Show Me the Money: Maximizing the Benefits of Information Technology
Ty Kicklighter, Walter Schoel
Engineering Company, Inc.
October 22, 2008

Leveraged correctly, information technology can positively affect the financial performance of firms in unique ways. Using financial statements and examples of common IT projects, this seminar explores the consequences of IT spending on firm health from the perspectives of company leaders and IT professionals.

Business Advisory Services Program (formerly Organizational Peer Review)

ACEC's Business Advisory Services (BAS) provide design firms a review of business management practices and procedures through the eyes of objective, experienced practitioners. It is management consulting at a fraction of the typical cost, firm-wide or in a targeted area.

Business Advisory Services offers a highly cost-effective assessment of one or more of a firm's most critical functional areas:

- General Management
- Human Resources, Training and Professional Development
- Project Management
- Quality Management
- Computer Systems Management/Information Technology
- Financial Management
- Business Development

Conducted by a team or an individual with specific expertise in your selected area(s), BAS is a confidential process. Because the program is positive and constructive, BAS offers an opportunity for firms to continue to improve their delivery of services to clients and to motivate their employees in the work they do and in their personal career development.

For more information about ACEC Business Advisory Services, contact Sarah Kaska at skaska@acec.org, or 202-347-7474, ext. 320.

New Contracts & Risk Management Central Website Offers One-Stop Contracts Shopping



Contracts & Risk Management Central brings together a complete inventory of contract forms and supporting documents that are in use nationwide by over 500,000 professionals delivering facilities and civil infrastructure for public and private owners. Included are:

- **Engineers Joint Contract Documents Committee (EJCDC) Engineering and Construction Contracts**
 - **Council of Professional Surveyors (COPS) Land Surveying Contracts**
 - **Council of American Structural Engineers (CASE) Structural Contracts**
 - **International Federation of Consulting Engineers (FIDIC) International Contracts**
 - **Construction Management Association of America (CMAA) Construction Management Contracts**
 - **American Institute of Architects (AIA) Contracts**
- ... and a wide selection of risk management products.

Contracts & Risk Management Central is a dedicated website, accessible through the ACEC Bookstore at www.acec.org/publications or direct at www.contractscentral.net.

State Organization Fall 2008 Programs

ACEC/California

Climate Change: Science, Law & Policy

September 24 (Sacramento)
and
September 26 (Long Beach)

For details and to register, visit
www.celsoc.org.

ACEC/Colorado

Annual Ethics Seminar

Mid-November

For details and to register,
e-mail jennifer@acec-co.org or
call 303-832-2200.

ACEC/Florida

FICE Design Conference hosted by FDOT

July 27–30

Florida Laws & Rules for Professional Engineers— Plus Ethics

August 6

FES/FICE 92nd Annual Summer Conference & Exposition

August 7–9

Fall Civil PE Review Course

August 22–24 and September
19–21 (Six-day Prep Course)

FES/FICE Project Management Certificate Program

August 26–28 and September
23–25 (Six-day Prep Course)

Stormwater Permitting

September 3–4

Programs take place at loca-
tions throughout the state.
For details and to register, visit
www.fleng.org/conftrain.cfm.

ACEC/Illinois

ACEC-IL/IDOT Bridge Seminar

September 23–24

ACEC-IL/IDOT Bridge Seminar

September 30–October 1

Programs take place at loca-
tions throughout the state.
For details and to register, visit
www.acec-il.org.

ACEC/Kentucky

InRoads 1

July 21–23

Microstation Related Training

August 19–20

Leadership-Delegation and Time Management Training

September 17–18

InRoads Survey

September 23–24

InRoads Upgrade

September 25–26

US Army Corps of Engineers: A-E Selection & Contracting/ A-E Contract Negotiation, Awards, and Contract Administration

October 9–10

Microstation Related Training

October 21–24

Microstation

November 18–21

Microstation

December 9–12

Events will take place at the
Kentucky Engineering Cen-
ter, Frankfort, KY. For details
and to register, go to www.kyengcenter.org, under Profes-
sional Development, or call
800-455-5573.

ACEC/Michigan

NHI Three-day Bridge Inspection Refresher Course (FHWA-NHI 130053)

October 14–16

PSMJ Project Managers Boot Camp

November 6–7

Programs take place at loca-
tions throughout the state.
For details and to register, visit
www.acecmi.org.

ACEC/North Carolina

ACEC/NC and PENC Joint Environmental Conference

August 19
Raleigh, NC

For details and to register, call
919-781-7934.

ACEC/Oregon

ACEC/Washington & ACEC/ Oregon Joint Fall Conference

September 25–27
Tucson, AZ

For details and to register,
visit www.acec-wa.org or www.acecOregon.org, or call Loy
Young, ACEC/Washington,
425-453-6655.

ACEC/Tennessee

Leadership Development Program

This program consists of a
series of four two-day sessions
covering a wide variety of
critical management topics.
Sessions will be presented on
August 22–23, September
12–13, October 10–11 and
November 14–15 at the TN
Engineering Center, Nashville.

For information, call 615-242-
2486 or visit www.acedtn.org
or www.tnspe.org.

ACEC/Virginia

Virginia Engineers Conference

September 17–18
Williamsburg, VA

For details and to register, visit
www.virginiaengineersconference.org.

ACEC/Wisconsin

Engineering Future Leaders (Six-session program)

September 2008–April 2009
(July 8 Deadline for
Applications)

Program information and
application are available at
www.acecwi.org.

Managing Scope Creep: Not Getting Nicked and Dimed to Death

September 23

Electronic Discovery

September 23

17th Annual DSF Consultants Conference

November 6

Programs take place at loca-
tions throughout the state.
For details and to register, visit
www.acecwi.org.

To be listed in the ACEC
Institute for Business
Management Spring 2009
Course Catalog, please
contact bhemphill@acec.org.

REQUEST FOR INFORMATION

☐ **Send** or ☐ **E-mail more information on:**

- ☐ Senior Executives Institute (SEI)
- ☐ ACEC's 2008 Fall Conference: *Sustainability in the Built Environment*, October 19-22, 2008, Montreal, Canada
- ☐ Business Advisory Services (formerly Organizational Peer Review)
- ☐ Commended Masters Program
- ☐ Regular e-mail information on ACEC's new and upcoming resources, including online and on-site learning events, conferences and conventions, books and more.

FAX request for information to: 202-789-7220

REGISTRATION FORM

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Refunds, credits, substitutions and cancellations. For cancellations received by ACEC at least 30 days before the program date, ACEC will issue a full refund of registration fees, less a \$100 administration fee. For cancellations received by ACEC between 29 and 15 days before the program date, ACEC will issue credits toward future ACEC education seminars. Credits are valid for six months toward any ACEC seminar. For cancellations received by ACEC 15 days or less before a program date, ACEC will issue no refunds or credits. In addition, ACEC will issue no refunds or credits for "no-shows." Substitute attendee registrations may be made at any time.

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**IS IT PART OF THE
PLAN FOR YOUR OWN
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BRIDGING THE GAP



Engineering firms
providing vital
expertise for bridge
infrastructure
projects

By Darlene Bremer

A Walkway Across The Missouri

PROJECT:
Missouri River
Pedestrian Bridge,
Council Bluffs, Iowa,
and Omaha, Neb.

FIRM:
HNTB Corporation,
Kansas City, Mo.

Over the past 15 years, Omaha, Neb., has undertaken a \$2 billion infrastructure redevelopment of its downtown and riverfront. The project is intended to transform the once heavily industrial area into an urban center. The final piece of this transformation is the \$24 million cable-stayed pedestrian bridge that crosses the Missouri River and links Omaha with Council Bluffs, Iowa, a town in the throes of its own redevelopment.

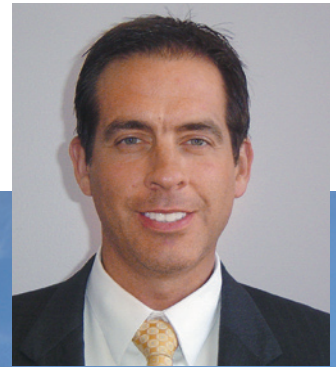
The engineer of record for the pedestrian bridge, Kansas City, Mo.-based engineering firm HNTB Corp., began the design and environmental study and permitting processes in the summer of 2006. The company is responsible for the design of the entire bridge and for providing construction oversight. General contractor APAC-Kansas, Inc., of Overland Park, began construction in October 2006, and the concrete bridge is scheduled for completion in November 2008. The final product will be approximately 2,500 feet long with a 506-foot main span and two 253-foot back

spans and will feature single-tower pylons rising more than 200 feet above the river. The dynamic, curvilinear design begins with a sweeping curve leading to the cable-supported river spans that alternate from side to side between the main tower pylons in a graceful S-curve. "The city's goal is to create a pedestrian bridge that promotes recreational river access, encourages economic development, emphasizes historic and cultural resources, improves wildlife habitat, improves water quality and endorses responsible flood plan management," explains Christian J. Brown, HNTB's associate vice president. With 150 miles of trails on both sides of the river, planners say, the bridge will be a safe and exciting way for bicyclists and pedestrians to cross the river.

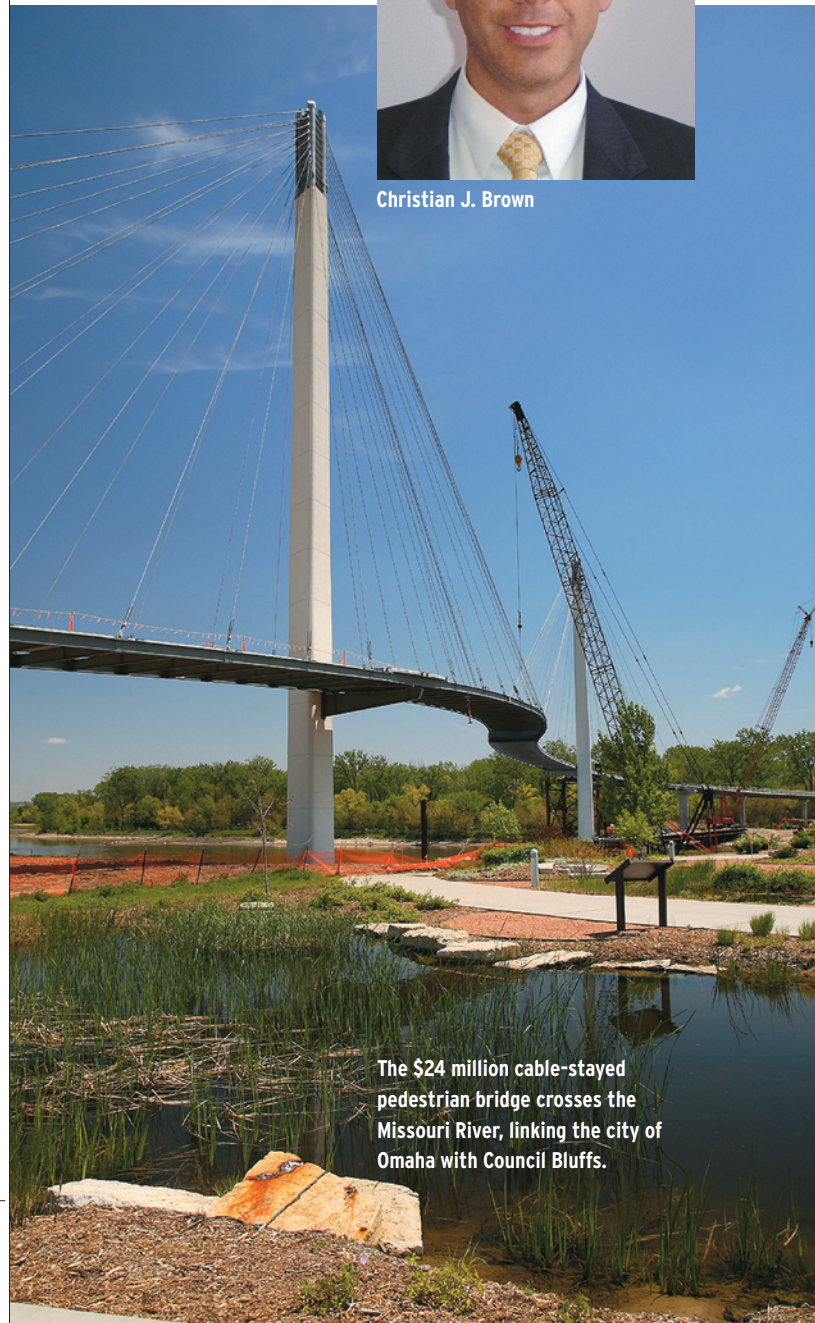
HNTB's biggest challenge is to provide a signature bridge solution that stays within the team's \$24 million design and engineering budget. "The budget restrictions required that we develop a design that maximizes construction and focuses on optimizing the most important design and safety elements," says Brown. Innovative strategies employed by the company to minimize design complexity include developing a cable-stayed structure using two planes of cables to enhance the curvilinear design, developing cost-effective solutions for simplifying the steel fabrication process with minimal variations while ensuring

symmetry, avoiding the use of temporary falsework and supports for foundation and pylon construction and superstructure erection and designing a structural system with proven past performance in resisting wind- and pedestrian-induced vibrations. "We envision the bridge becoming a destination

simply because of the interest created by the gently curving pathway and ever-changing vistas," says Brown.



Christian J. Brown



The \$24 million cable-stayed pedestrian bridge crosses the Missouri River, linking the city of Omaha with Council Bluffs.

The Minnesota Department of Transportation awarded a \$234 million contract to rebuild the I-35W St. Anthony Falls Bridge.

Rebuilding In the Face of Tragedy



Linda Figg

PROJECT:
I-35W St. Anthony
Falls Bridge,
Minneapolis

FIRM:
FIGG Engineering
Group, Tallahassee,
Fla.

Two months after the terrifying I-35W bridge collapse in Minneapolis on Aug. 1, 2007, the Minnesota Department of Transportation (Mn/DOT) awarded a \$234 million design-build contract to the joint venture of Longmont, Colo.-based Flatiron Construction Corporation and Manson Construction Co., Inc., of Seattle, for the bridge's

replacement. Tallahassee, Fla.-based FIGG Engineering Group is the engineer of record responsible for bridge design, providing quality assurance on-site during construction and managing the overall engineering team, including the general civil engineer and roadway design firm, the geotechnical analysis company, the landscape architects and the aesthetic lighting company.

"The project's goal is to design a bridge for the future that is constructed for safety, sustainability and aesthetics," says Linda Figg, the firm's president and CEO. Her firm is charged with designing and overseeing construction of a bridge 1,223 feet long and 189 feet wide with a 100-year projected lifespan, capable of carrying 10 lanes of traffic and supporting future light-rail transportation. In addition, the bridge must maximize openness and green space and provide new opportunities for recreation and reflection. Similar projects usually require four to five years to complete. FIGG has no such luxury. Mn/DOT has determined that the temporary loss of



this vital interstate connector over the Mississippi River will have a negative economic impact resulting in business losses of \$400,000 to \$1 million a day. With those figures in mind, officials have set a target project completion deadline of Dec. 24, 2008. "It took an intense team effort to accomplish the design quickly with multiple levels of quality control that ensure long-term safety and sustainability," says Figg of the project, which is now under construction.

The site has many unique challenges that required special design considerations, including alignment geom-

etry to ensure that the vertical and horizontal profiles of the bridge align with and enhance the existing approach roadways, foundation configurations and construction techniques. Other design issues include a site under the bridge where dredged river soil is deposited, two large storm water outfalls, a historic wall that must be preserved and a railroad track. "All of these challenges are being met with a special emphasis on multiple levels of structural redundancy, low maintenance and a design that provides a high-tech, high-performance concrete bridge," explains Figg.

PROJECT:
The Mathews Bridge Grating Replacement, Jacksonville, Fla.

FIRM:
JEA Construction Engineering Services, Inc. (JEAcēs), Gainesville, Fla.

Stretched across Florida's St. John's River, the Mathews Bridge is the main link for more than 68,000 motorists a day traveling between Arlington and Jacksonville. Built in 1953, the 1,600-foot truss bridge with a length of nearly 7,000 feet had its original steel grating replaced in 1999. It wasn't long, though, before motorists started to complain.

The new steel grating was less popular with the public than more traditional, solid riding surfaces. In an effort to improve conditions, state transportation officials decided to make a change.

"The Florida Department of Transportation (FDOT)

awarded PCL Civil Constructors the \$13 million contract to replace the bridge's 810-foot open steel grating deck with a composite steel deck that incorporates a lightweight concrete riding surface that would

please the public and maintain the safety and integrity of the existing bridge," explains Thomas W. Woods, project administrator for Gainesville, Fla.-based JEAcēs.

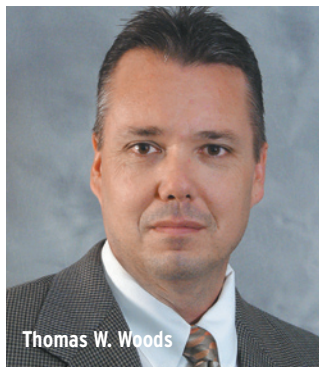
JEAcēs was chosen to

oversee the construction and ensure that the project's plans and specifications were strictly followed. JEAcēs was also responsible for resolving construction issues before they became problems, administering the contract and coordinating construction activities.

Construction on the new surface began in January 2007 with the installation of the work platform underneath the existing truss. Upon completion of the platform, traffic was restricted to one way westbound and was detoured eastbound over nearby bridges so construction could begin. "This way, rush-hour traffic into downtown could remain unimpeded," explains Woods.

FDOT set a 90-day timeframe for the detour and subsequent completion of the surface replacement, based on the analysis performed by Hardesty & Hanover, LLP, the engineer of record. To adhere to the short schedule for removing the existing steel grating, installing the new stringers and installing the lightweight reinforced concrete riding surface, PCL, JEAcēs and FDOT worked in concert in continuous shifts, 24 hours a day, seven days a week. "In addition, JEAcēs helped negotiate the \$500,000 bonus offered by FDOT to the contractor as an incentive to finish the project in 90 days," says Woods.

JEAcēs and the project team presented the traveling public with four lanes of new lightweight concrete bridge deck on July 14, 2007, exactly 90 days after traffic was detoured to begin construction. The team received the Florida First Coast Chapter of the American Concrete Institute's Significant Structures Award for its unique use of concrete on the project.

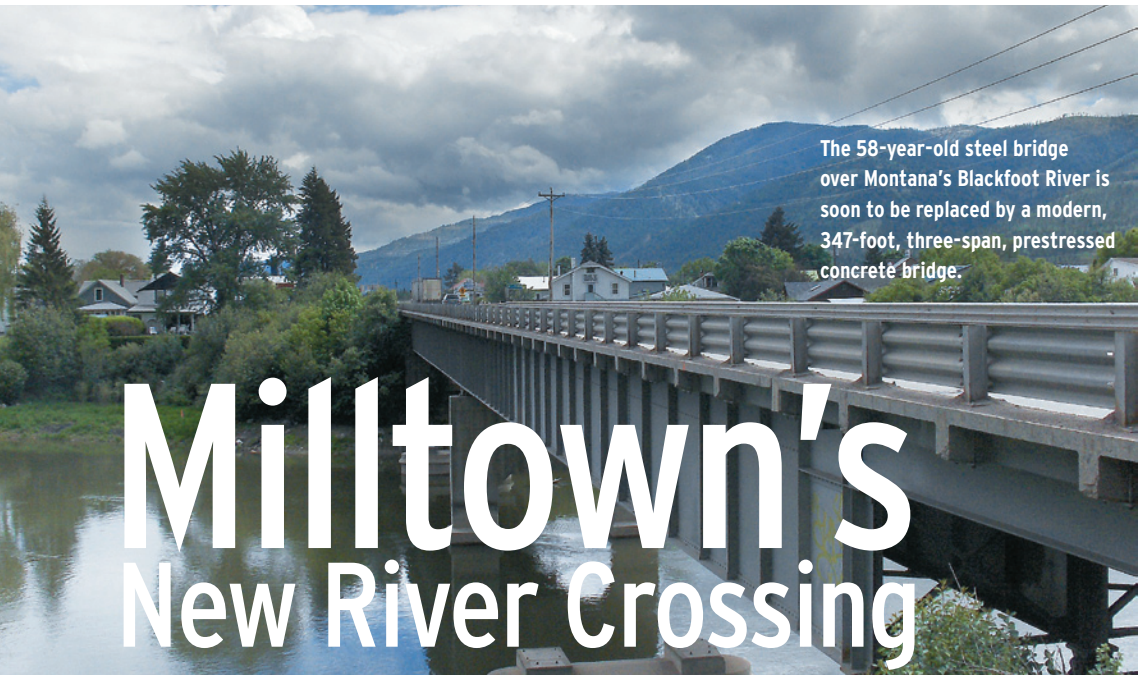


Thomas W. Woods



The Mathews Bridge is the main link for more than 68,000 motorists a day traveling between Arlington and Jacksonville, Fla.

A Smoother Ride in Jacksonville



The 58-year-old steel bridge over Montana's Blackfoot River is soon to be replaced by a modern, 347-foot, three-span, prestressed concrete bridge.

Milltown's New River Crossing

PROJECT:
Montana Highway
200 Bridge
Replacement,
Milltown, Mont.

FIRM:
Morrison-Maierle,
Inc., Helena, Mont.

When state officials in Montana decided to forge ahead with plans to demolish the historic Milltown Dam, part of the U.S. Environmental Protection Agency's (EPA's) Milltown Reservoir Sediments Superfund site cleanup, they knew the project would also require the demolition of the Montana Highway 200 Bridge.

The 58-year-old bridge over the Blackfoot River was the main connector for motorists between the cities of Missoula and Great Falls. But with the dam coming down half a mile

upstream, the bridge would no longer be safe for travel; they had to build a new bridge to account for the water flow that would result from the demolition of the dam.

In search of a design-build firm with extensive understanding and capabilities, the EPA, Montana Department of Transportation (MDT) and Missoula-based general contractor Frontier West, LLC, turned to Helena-based Morrison-Maierle, Inc. (MMI). The project had several goals the design-build team needed to fulfill. The EPA's demolition of the hydroelectric dam would restore the stream to its original state and rebuild the natural habitat in this environmentally conscious community. Building the new 347-foot, three-span, prestressed concrete bridge to replace the existing steel bridge would provide a modern structure for the community and ensure travelers' safety.

MMI prepared the technical proposal and design for the temporary detour bridge, the new bridge and the approach roadway. MMI also is responsible for construction phasing and traffic control plans, the river hydraulic analysis for the new bridge, geotechnical engineering, construction materials quality assurance and helping MDT coordinate with the EPA and the Montana Department of Environmental Quality.

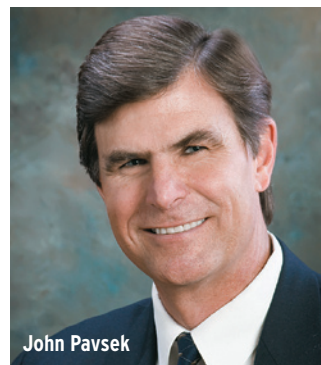
The \$7.2 million project kicked off in August 2007 and is scheduled for completion by December 2008. "The aggressive time requirement is driven by the removal of the dam, as determined by the EPA, and the onset of a Montana winter," explains Scott Murphy, vice president. MMI meets at least twice weekly with its design-build partners to discuss concerns and issues related to these challenges. "Design-build delivery provides MMI with



Scott Murphy



Charlie Brisko



John Pavsek

more effective control over the schedule to ensure on-time completion," says Charlie Brisko, project bridge engineer.

In designing the new bridge, MMI had to account for substantial changes in the river hydraulics resulting from the demolition of the dam, including reduced water levels, increased current flow, pier scouring and ice jam forces. "To overcome these challenges, we used comprehensive hydraulic and scour modeling processes to determine the effect of the reservoir drawdown on the design of the bridge," explains John Pavsek, MMI's senior transportation engineer and project manager. ■



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New ACEC Chairman John Hennessy (left) is introduced by ACEC President Dave Raymond (below) at the Convention's kick-off dinner.

MORE THAN 1,200 ENJOY Political Fun-Raising AT ANNUAL CONVENTION

The comedic impersonators of Hillary Clinton, Barack Obama and John McCain on stage at the kick-off dinner set a witty tone for the politically charged ACEC Annual Convention in Washington, D.C.

More than 1,200 members and guests attended this year's event, highlighted by visits to Capitol Hill, thought-provoking education sessions, the 42nd Annual Engineering Excellence Awards Gala and appearances from noted political analysts.

"The variety of political discussions and programs were a great learning experience," noted John Spina of C&S Engineers in Syracuse, N.Y. "My favorite part of the Convention was definitely the luncheon debate between Tucker Carlson and Paul Begala. It was fun listening to those guys."

"The political pundits were outstanding. Getting speakers such as these for the Convention is great for the attendees," said Monty Miller of Sayre Associates in Sioux Falls, S.D. "I thought the sessions also were very good...they're always pertinent to your business and you get a lot out of them."

"The CEO Roundtables were fabulous, and the Congressional Briefing was great," added Linda Beacham of The Schemmer Associates, Inc., in Omaha, Neb.

Convention Highlights:

- John Hennessy succeeded Mac MacMurray as ACEC's 2008–2009 chairman; five new members joined the 2008–2009 Executive Committee: Tim Psomas (chairman-elect), Terry Neimeyer, Craig M. Avery, James Duncan and Ted Williams. Candy Toler, ACEC/Tennessee executive director, will serve as the NAECE representative.
- The Board of Directors discussed "drilling down deeper" into ACEC's membership base to share Council programs and services with a broader range of Council members.
- Jack Schenendorf of the National Surface Transportation Policy Commission addressed the Board and outlined challenges in securing infrastructure funding amid election-year politics.
- ACEC/PAC raised more than \$110,000 matching the all-time Annual Convention Record.
- ACEC's "citizen lobbyists" conducted nearly 200 congressional office visits.
- More than 500 attended suspense-filled EEA Gala.



FOX News' Chris Wallace offered unique insights on the presidential race.



Enjoying a little Convention humor are, from left: Sergio "Satch" Pecori, CEO of Hanson Professional Services; David E. Kennedy, ACEC/Illinois executive director; Larry Bory, HDR; and Joan Freitag, Hanson Professional Services.

Wallace Criticizes TV News; Great Debaters Leave 'Em Laughing

FOX News host Chris Wallace gave attendees the "inside scoop" on the presidential election, including how the time limitations of television news can sometimes shortchange the public.

To emphasize, Wallace impersonated legendary TV newsman David Brinkley: "Today Moses came down from the mountain with 10 commandments...here are the two most important."

The lunchtime "Great Debate" between MSNBC's Tucker Carlson and former Clinton adviser Paul Begala offered a successful mix of political insight and Beltway humor.

Carlson, a staunch conservative, said that the press in Washington "is in love" with Sen. Barack Obama (D-Ill.), jesting

that Obama's historic bid for the White House has created "the Journalist Full Employment Act." He also poked fun at the Democrats, particularly the party's powerful superdelegates, who he said remind him of the House of Lords—"you know, pheasant hunters who look like Ichabod Crane—like a council of elders."

Begala, retaliated by taking a shot at former Republican candidate Mitt Romney, when he quipped "it cost him about \$35 million for just one delegate."

Carlson begrudgingly agreed with Begala that a Democratic victory this year seems likely, considering President Bush's historically low approval rating, which Begala joked would be even lower were it not for the support of his "blood relations and frat brothers."



Greg Cohen of the American Highway Users Alliance and Shirley Ybarra of the Reason Foundation conduct a Town Hall discussion on whether government or private firms should own the nation's infrastructure.

MSNBC's Tucker Carlson and Democratic campaign adviser Paul Begala debated the election from opposite viewpoints.



Emmy Award-winner Ross Shafer kept Engineering Excellence Awards Gala attendees entertained with his hilarious wit.





Rep. Joseph Knollenberg (R-Mich.), left, meets with ACEC members in his Capitol Hill office. Pictured from left to right: Legislative Assistant Eric Brown; Daniel Fredendall of Orchard, Hiltz & McCliment; Walter Alix of Hubbell, Roth & Clark; and Jay Shah of Somat Engineering.



Floyd Damron (left), vice president of CH2M HILL, and Mike Rabe, principal of CRW Engineering Group, meet with Sen. Lisa Murkowski (R-Alaska), who recently signed on as a co-sponsor of legislation to repeal the 3 percent withholding mandate.



Senate Republican leader Mitch McConnell (R-Ky.) greets Karen Wood of HMB Professional Engineers, Inc., and Craig Avery (center) of Stantec, Lexington, Ky., during a visit to McConnell's office.



Rep. Daniel Lipinski (D-Ill.), left, discusses infrastructure funding with ACEC members (left to right) Daniel Ceechi, United Technologies Corp., and James Messmore and John Coombe, both of Hanson Professional Services. Lipinski is a member of the House Transportation and Infrastructure Committee.

Members Conduct Nearly 200 Congressional Office Visits; Boost Support to Repeal 3 Percent Mandate

ACEC's "citizen lobbyists" conducted nearly 200 visits to congressional offices to support important ACEC legislative initiatives and secured additional supporters for the repeal of the onerous 3 percent withholding mandate, along with funding for transportation and water infrastructure.

"I love this type of direct impact—that's what makes it fun," said ACEC/Oregon President Mel Sears of Parametrix, Inc., whose visit to an Oregon House member helped secure a new co-sponsor for the 3 percent repeal legislation. The bill, H.R. 1023, is now approaching 250 co-sponsors.

The Convention's advocacy program kicked off with an address from Reps. Peter DeFazio (D-Ore.) and Earl Blumenauer (D-Ore.), who advised ACEC members on transportation and water infrastructure issues prior to their Capitol Hill visits.

On the other side of the Rotunda, Sens. Lindsey Graham (R-S.C.) and David Vitter (R-La.) offered perspectives on key issues and the presidential race for members of ACEC's Capitol Club, Chairman's Club and Millennium Club during a Senate luncheon.

ACEC/PAC Convention Support Strong; Costello Underscores Infrastructure Priorities at Fundraiser

ACEC/PAC raised more than \$110,000 through Convention fundraising events, matching the all-time Annual Convention record.

Newly appointed ACEC/PAC national co-chairs, Tom Ahneman of Ahneman Kirby, LLC, in Connecticut and Jerry Stump of Wilbur Smith Associates in Tennessee, were impressed by the strong show of support.

"This is phenomenal," said Ahneman. "The contributions raised through the Convention fundraising events indicate that ACEC members truly understand the importance of our political program."

"I have no doubt that 2008 will be



Magnusson Klemencic Associates Chairman & CEO John Magnusson (right) receives congratulations on winning the Grand Conceptor Award from ACEC President Dave Raymond at the EEA Gala. Also pictured are Drew Gangnes, Magnusson's director of civil engineering, and his wife, Denise.

another record-setting year for ACEC/PAC," added Stump, whose state already has hit its 2008 PAC fundraising goal.

ACEC/PAC also hosted a successful fundraising event for Rep. Jerry Costello (D-Ill.). Costello chairs the House Aviation Subcommittee and has been a key ally for the industry on numerous infrastructure initiatives.

The Illinois lawmaker praised the work of ACEC and its members in educating Congress on the need to provide adequate funding for water and transportation infrastructure.

Members Embrace Suspense-Added EEA Gala

The more than 500 attendees at this year's Engineering Excellence Awards Gala witnessed a new twist in the popular program.

Unlike previous ceremonies, the winner of the 2008 Grand Conceptor Award for best engineering achievement of the year had been kept secret since the judging in February.

When Master of Ceremonies Ross Shafer announced the winner, a chorus of cheers and thunderous applause reflected the audience's—and the winner's—surprise.

In a virtual dead-heat finale, Magnusson Klemencic Associates' Olympic Sculpture Park in downtown Seattle beat out Walter P Moore's University of Phoenix Stadium, site of this year's NFL Super Bowl.

"This EEA Gala was the best ever," said Bart Patton, chief operating officer at Kleinfelder. "The element of suspense for the Grand Conceptor Award created more focus on the winners and was much more dramatic."

Special Thanks

ACEC thanks the following companies for their sponsorship of ACEC/PAC activities at the Convention:

PLATINUM

Degenkolb Engineers
Stantec

GOLD

ACEC/New York

SILVER

C&S Companies
Pennoni Associates, Inc.

ACEC thanks the following companies for their generous sponsorship and support of the 2008 Engineering Excellence Awards Gala:

GOLD

HNTB
Walter P Moore
XL Insurance

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CDM
CH2M HILL
HDR, Inc.
Victor O. Schinnerer & Company, Inc.



More than 500 members and guests gather for the Engineering Excellence Awards Gala.

'The Chance to Give Back' Highlights 2008-2009 ExCom Answers to:

“What was your motivation to become a leader in ACEC?”



Chairman
John F. Hennessy III

“My motivation for becoming a leader at ACEC comes from my grandfather and father, as well as a mentor. My grandfather taught me that with privilege comes responsibility to give back to your community and industry. One of my mentors, Arnold Windman, was president of ACEC in the '80s. These forces showed me that one of the best ways to give back to one's community and industry is by active participation in ACEC.”



President & CEO
David A. Raymond

“My interest in ACEC was sparked some 10 years ago by Henry Michel, then chairman of Parsons Brinckerhoff. Henry said ACEC would be an opportunity to combine business acumen with the personal satisfaction of serving the industry. He also said it may be fun. And he was right on all scores.”



Chairman-Elect
Timothy Psomas

“My motivation for being a leader within ACEC is to improve the business climate for engineering companies. I find it especially satisfying working with like-minded leaders in our industry. I see this need and the opportunity for leadership at the local, state and national levels within ACEC.”



Senior Vice Chairman
Gregs G. Thomopoulos

“Giving back to the industry some of my time and knowledge is something I always wanted to do after over 40 years in private practice. Becoming a volunteer leader of ACEC—the voice of the engineering industry—was the best way to accomplish this goal. I find great satisfaction in working with the dedicated staff of ACEC, who do an excellent job representing and promoting the interests of our Member Firms.”



Treasurer
Terry F. Neimeyer

"My motivation came from the friends I made as a result of my activity the past 10 years at ACEC/ Maryland and the last five years at the national organization. ACEC is *the* organization where one can meet fellow practitioners and ask their help in solving business problems. My participation in the Design Professionals Coalition as a member and as chairman convinced me of the need for advocacy at the federal level, and ACEC provides that for all firms in our business."



Vice Chairman
Craig M. Avery

"I want to associate with the leaders of the industry so that I can grow personally and professionally. The leadership in each state and nationally are among the most talented leaders in the industry. I want to contribute something significant to the association that I believe best represents the consulting engineering community, especially in the legislative process."



Vice Chairman
James R. Duncan

"As a businessman and electrical engineer, my goal is to share with firms similar to mine the incredible value of belonging to ACEC. The Council possesses the expertise and assets at the state and national level to effectively advocate on behalf of the engineering industry, and this reinforces and communicates to our nation the value of the engineering profession. ACEC is defining future priorities and empowering engineers."



Vice Chairman
David D. Kennedy

"For many years, I have attended ACEC meetings and had the privilege of participating in a number of ACEC committees. These experiences provided learning opportunities that helped me lead our firm. In the process, I have met and worked with a number of great people. Based on these experiences, it seemed that by serving on ExCom I could offer my perspectives, support our profession and continue learning how to improve our business."



Vice Chairman
Raymond F. Messer

"My firm has received many benefits from its membership in ACEC. Through my involvement in ACEC leadership, I wanted to return something to the profession and the organization that looks after our many business interests. After all, it is our business interests that allow us to continue serving society as engineers, doing what we love doing. I want to help the leadership of ACEC—volunteers as well as staff—get that message across to our Member Firms."



Vice Chairman
Ted C. Williams

"As a young project manager attending Consulting Congress Day many years ago, I witnessed ACEC's positive impact on the welfare of the consulting engineering business. This led to my understanding that a successful career would involve excelling not only in the technical aspects, but also the business aspects of engineering, which ACEC knows best. I feel it is now my obligation to help carry on this tradition of protecting and promoting the consulting engineering business."



NAECE President
Candy Toler

"My motivation to serve was based on the old adage: 'You get out of something just what you put into it.' Early on, I understood the value of meeting with colleagues to share their best practices and learn from their opportunities. Their willingness to share their experience has helped me significantly, and I in turn have served as a mentor to several of our newer state execs. The natural next step was to move into the leadership of NAECE and, hence, onto ExCom."

ACEC Fall Conference
October 19-22, 2008

Sustainability
in the **BUILT**
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Experience the “joie de vivre” of Montréal, ACEC’s first-rate speakers and educational programs, and spectacular networking events.

Legendary Explorer Robert Ballard to Reveal Undersea Secrets

Robert Ballard, world famous explorer, discoverer and historian who uncovered the wreck of the Titanic in 1985, will share his amazing stories and scientific insights.

In a visually gripping presentation, Ballard will explain his passion for the last great uncharted territory on Earth—the ocean—and his vision for how new technology will continue to advance the frontiers of exploration.

Ballard followed up his discovery of the Titanic—more than 13,000 feet below the surface of the North Atlantic—with discoveries of the wrecks of the Bismarck, the lost fleet of Guadalcanal, the USS Yorktown (sunk in World War II’s Battle of Midway) and President John F. Kennedy’s PT-109. He also discovered new life forms at the bottom of the ocean, where none thought life could exist.



Noted Analyst Morton Kondracke to Provide Election Preview

FOX News commentator Morton Kondracke, one of the nation’s most renowned political columnists, will provide his unique “inside-the-beltway” election insights.

Kondracke has covered the ins-and-outs of Washington politics for 37 years, as the former Washington bureau chief for *Newsweek*, and executive editor and senior editor of *The New Republic*.

He currently is a commentator on the FOX News’ Special Report with Brit Hume and is a weekly co-host of *The Beltway Boys*. He is also executive editor of *Roll Call*, and writes a twice-weekly political column syndicated to more than 400 newspapers nationwide.





PHILIPPE REMAULT/GETTY IMAGES

Educational Sessions

ACEC's program features stimulating educational sessions, including:

- Sustaining the World's Infrastructure
- Turning Wastewater into Wanted Water: A Case Study
- Managing Environmental Permitting Risks in a PPP Environment—Completion of A25 in Montréal, Quebec
- Risk Issues Related to Green Design and Green Building Certification
- "Big Box" Owner Panel Discussion
- Lessons Learned from the PBS&J Embezzlement Incident

2008 CASE Convocation

The Council of American Structural Engineers (CASE) will offer a Convocation as part of the 2008 Fall Conference.

Highlights include:

- The Independent Expert Cost Estimator in Dispute Resolution
- Ethics Reform and New Risks to the Business of Engineering
- Risk Issues Related to Green Design and Green Building Certification

Special Activities and Spouse Programs

- Best of Montréal City Tour
- Ethnic Neighborhoods and Wine Tasting Tour
- The French Canadian Experience and the Sugar Shack
- Cirque Performance
- Post-Fall Conference Tour to Québec City

PAC Activities

- Sweepstakes Drawing Grand Prize: \$10,000 CASH!
Cost: \$200 per ticket
- ACEC/PAC Golf Tournament



Important Passport Information

ATTENTION:

Individuals traveling to Canada will need a valid passport!

Passports cost around \$100 and take approximately six weeks to process from time of receipt. For more information on passport services, including how to obtain a passport and a full set of rules and regulations, visit travel.state.gov/passport. New customs requirements are in effect. For more information, visit the websites of Citizenship and Immigration Canada and the U.S. Department of State.



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Important note about registration and hotel reservations: All attendees must be registered and paid in full for the Conference in order to book a room at the Conference hotel. A special housing code is required. Detailed hotel information is available at www.acec.org.

Discover Montréal

An international destination of choice, Montréal is easily

accessed by land, water and air. Downtown is a mere 20 minutes from the airport. Visitors will find this compact island city great for walking, and can easily—and safely—explore its vibrant neighborhoods on foot, at any time of the day or night. Montréal is vastly multicultural, boasting more than 80 ethnic communities, and enjoys an outstanding reputation worldwide for gourmet dining.



Montréal's renowned duality of Old World charm infused with North American energy lies at its very heart. It is the plurality of cultures that really makes this metropolis tick.

For more information or to register online, go to:

www.acec.org





EFFECTIVE PROGRAM MANAGEMENT; LIMITING LIABILITY IN FLOOD ZONES

Effective Program Management

Most engineers cringe at the first hint of a project delay. But says Stephen Mulva, associate director for benchmarking and metrics at the University of Texas Construction Industry Institute, planned delays can sometimes lead to increased revenues and smarter, more efficient allocation of resources across a firm's portfolio of projects.

Mulva, who presented an ACEC seminar in June titled *Advanced Project and Program Management*, says that unlike project managers, who typically are concerned with the technical deliverables of a single operation, program managers are expected "to maximize the benefits emanating from an entire portfolio of projects."

What it comes down to is the concept of return on capital employed, says Mulva. Firms formerly relied on return on investment to gauge the relative success of a project. Now firms tend to evaluate their business as a whole. "Each project has to be managed in concert with the larger portfolio," says Mulva.

Years ago, such calculations were difficult to make. But with the advent of more robust modeling and simulation software, firms actually can predict what will happen if they delay a project in favor of reallocating limited resources to other jobs; the results are encouraging. "The really interesting finding is that you actually can delay projects and save money and make more revenue," says Mulva, who has worked on projects where similar tactics have helped firms boost revenues by as much as 40 percent, sometimes billions of dollars.

BIM: Promise vs. Reality

While Building Information Modeling (BIM) is being touted as "the next big thing" in mechanical engineering. Kirk Pesta, of Harley Ellis Devereaux, cautions that firms won't win with just any out-of-the-box solution.

It has to be "the right fit," says Pesta, who along with executives at two leading software manufacturers, sketched out the promises and realities of BIM during a day-long seminar sponsored by ACEC and the Council of American Mechanical and Electrical Engineers (CAMEE) in June. Given the ever-expanding variety of products in the marketplace, how can firms confidently choose a product that will meet their needs? Pesta offers this advice:

- Confine your search to software providers who specialize in engineering, who know the business, not just graphics.
- The software should be customizable to your firm's and your customer's needs. Make sure you have access to expert technicians whose job it is to help modify the software.
- Senior engineers should be involved in the process from the

start. They should be included in product evaluation, selection and training.

- Once you choose a system, make sure your employees receive basic and advanced training. Make the most of your investment by ensuring the technology is used appropriately and to its full advantage.
- Assign a core team to pilot the software and test its capabilities before launching a full-scale integration.

Limiting Liability in Flood Hazard Locations

Across the nation, a rise in flood-related losses has opened the door for lawsuits against design and engineering firms, prompting concerned executives to ask: How do we limit our liability?

"The amount of care that the architect or engineer needs to display is dependent, in part, on the degree of risk," says Jon Kusler, associate director of the Association of State Wetlands Managers. Kusler joined Ed Thomas, Esq., of ACEC Member Firm Michael Baker Jr., Inc., in leading a recent ACEC-sponsored web seminar on the topic.

So what can firms do to limit their liability?

The advent of flood maps and other predictors make it imperative that firms engage in due diligence when entering into any project in a flood-risk area. Engineers should carefully study local and state regulations. If there is a flood, they must be able to demonstrate to a judge and jury that they acted reasonably in planning, designing and building a structure.

Because the standard of care continuously is moving, Kusler and Thomas recommend design professionals do the following:

- Carry insurance consistent with the type of risk they are dealing with;
- Follow a "No Adverse Impact Approach" and avoid increasing flood hazards on anybody, or anything;
- Be able to prove to a jury that the project was designed to a reasonable, and defensible standard of care; and
- Be prepared to be sued.

The bottom line: "careful, careful, careful," says Kusler. For more on this topic, visit: www.floods.org. ■

The ACEC Institute for Business Management provides comprehensive and accessible business management education for engineering company principals and their staffs. Visit <http://www.acec.org/calendar/eventList.cfm> for a complete listing of ACEC programs.

On The Move



Thomas D. Furman Jr.

CDM Chairman and CEO **Thomas D. Furman Jr.** has announced his retirement, effective at the end of 2008. **CDM** President **Richard D. Fox** will assume chairman and CEO responsibilities on Jan. 1, 2009. Furman was named CEO in 1998 and chairman of the board in 1999. Fox has served as president of CDM since 2001.



Richard D. Fox

Ann E. Massey has been appointed president and CEO of **MACTEC, Inc.**, and president of **MACTEC Development Corporation (MDC)**. MDC is MACTEC's construction entity focusing on decontamination, demolition, remediation, radiological engineering and risk management services. Since 2002, Massey has been the firm's north division manager, where she was responsible for more than 750 employees and more than \$100 million in annual revenue.



Ann E. Massey

Alvaro J. Piedrahita has been named president and CEO of **T.Y. Lin International (TYLI)**. Currently, he is a Miami-based senior vice president for TYLI, director of its global services division and a member of the TYLI board of directors. Piedrahita succeeds former president and CEO **John G. Haussmann**, who resigned to pursue new opportunities in the transportation industry.



Alvaro J. Piedrahita

Rob Phillips has joined traffic and transportation engineering firm **Sam Schwartz Engineering** as executive vice president and COO. Most recently,



Rob Phillips

Phillips was a consultant with PSMJ's mergers and acquisitions division.

Black & Veatch named **Kerry Erington** senior vice president in the company's energy business, where he will manage the firm's gas, oil and chemicals business line. Previously, Erington was the director of project controls for Black & Veatch's energy business.



Kerry Erington

Brenda K. Martinez was named a vice president with **Gannett Fleming West**, a New Mexico-based engineering corporation specializing in planning, design and construction management. Martinez is responsible for business development, project management and environmental planning.



Brenda K. Martinez

Robert Keller has been named vice president in the Langhorne, Pa., office of **TranSystems**, where he will serve as a senior environmental manager. Keller will manage the environmental clearance processes for major transportation projects.

Chuck Cayton has joined **HNTB Corporation** as vice president and office leader for the firm's Hampton Roads, Va., office. Cayton will direct a variety of transportation projects with HNTB's municipal, state and federal clients. Previously, Cayton served as vice president of The Business Advisory Group and as senior vice president and operations manager of the southeast region for Parsons Brinckerhoff.

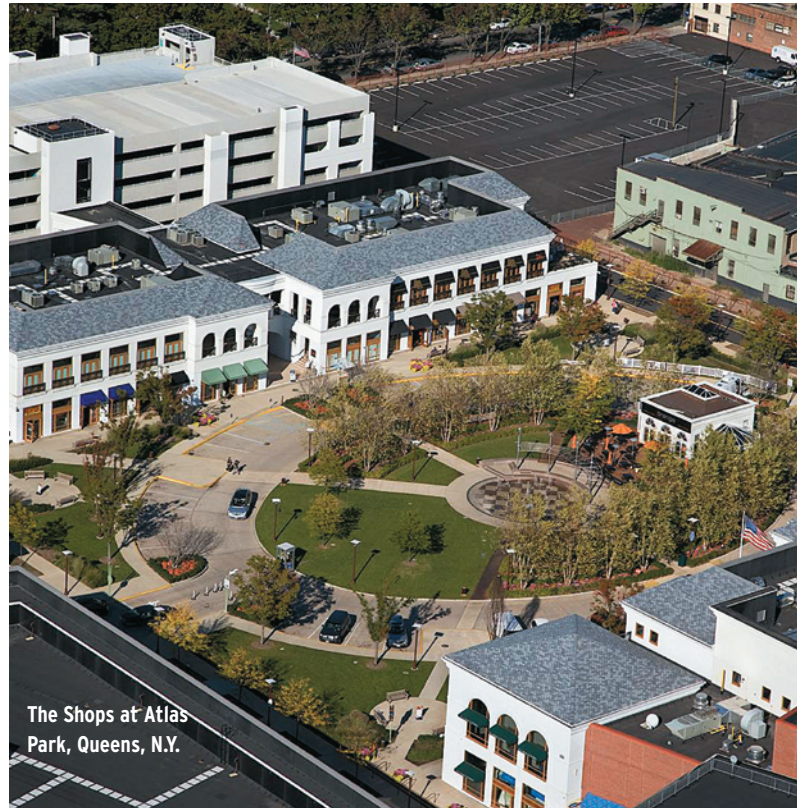
Awards

Langan Engineering & Environmental Services, a provider of integrated land development engineering and environmental consulting services, was awarded the U.S. Environmental Protection Agency's "Phoenix Award" for its work on The Shops at Atlas Park in Queens, N.Y., a 20-acre lifestyle center catering to boutique retail space, restaurants and entertainment.

The firm assisted project developer Atlas Park, LLC, in overcoming a host of engineering challenges and regulatory issues. Langan served as the project's brownfield consultant, civil engineer and geotechnical engineer.

"We are proud to win the prestigious Phoenix Award and gratified to have helped Atlas Park LLC transform an underutilized industrial property into a visually appealing retail destination that is sure to spur future development, strengthen the local economy and improve the quality of life in the community," said David T. Gockel, president and CEO of Langan.

Established in 1997, the Phoenix Awards honor excellence in brownfield redevelopment by individuals and groups working to solve the critical environmental problem of transforming abandoned industrial areas into productive new uses.



The Shops at Atlas Park, Queens, N.Y.

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Mergers & Acquisitions

Woolpert, Inc., announced the acquisition of **TEK Science**, a storm-water specialty firm in Orlando, Fla. TEK Science joins Woolpert with extensive experience in storm-water retrofit design, National Pollutant Discharge Elimination System (NPDES) compliance, storm-water drainage design, storm-water modeling and utility design. Woolpert also recently acquired **Rockett & Associates** of Winter Park, Fla., a firm that specializes in water distribution and sewer collection.

"The acquisition of TEK Science will provide Woolpert with an added level of expertise in water management," said Mike Flannery, Woolpert's president and CEO. Jeff Earhart, TEK Science owner, said, "We are looking forward to collaborating with the professionals at Woolpert to help expand the firm's water management services."

Long Beach, Calif.-based **Moffatt & Nichol** announced the consolidation of its San Diego-based operations with **Blaylock Engineering Group**, a marine structural engineering firm. This combined operation, known as **Moffatt & Nichol Blaylock**, will enhance Moffatt & Nichol's capabilities in marine engineering, as well as facility inspection and rehabilitation, while offering Blaylock a presence in the global marine engineering arena.

A core strength of Blaylock is the design and repair of marine structures and developing repair schemes to extend the useful service life of facilities. The expanded services position both firms to better serve port, military and transportation clients. The combined entity will continue to support existing clients while expanding its inspection and rehabilitation practice.

Golder Associates, a geotechnical engineering and environmental services firm, has acquired **Wireless Systems, Inc.**, a Denver-based business specializing in wireless instrumentation and controls. Wireless provides engineering design and consulting services to integrate electrical gear, automation and instrumentation, primarily for the water and wastewater markets.

"This...provides new markets and opportunities in engineering and consulting for a variety of industries, including mining, manufacturing, waste management, water resources, transportation, and oil and gas," said Kelly Garrod, president of Wireless Systems and now senior consultant at Golder. With the Wireless integration, Golder can now offer firms additional capability in civil and environmental engineering, information management and construction support.

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SDA enhances the professional development and personal growth of its members and, as a result, the development and growth of their respective firms. SDA accomplishes this through a host of networking opportunities, both in person and online, and by providing educational resources in the areas of Finance, Human Resources, Information Technology, Marketing, Office Administration, and Project Management.

To learn more about the benefits of SDA and to obtain information on becoming a member, visit us online at: www.sdadmin.org



MEMBERS IN THE NEWS

Welcome New Member Firms

ACEC/Arizona

Pacific Advanced Civil Engineering, Inc., Phoenix
Pearson Engineering Associates, Inc., Phoenix

ACEC/Arkansas

Lockeby & Associates, Inc., Little Rock

ACEC/California

Akel Engineering Group, Inc., Fresno
AMSC, Inc., Pleasanton
APD Consultants, Inc., Irvine
Applied Civil Engineering Incorporated, Napa
Bennett Trenchless Engineers, Inc., Folsom
CA Wehsener Engineering, Inc., San Diego
Cage Technical Services, Mammoth Lakes
Clear Path, Auburn
Drake Haglan & Associates, Sacramento
F3 & Associates, Inc., Petaluma
Hanagan Land Surveying, Inc., Santa Cruz
Johnson-Frank & Associates, Inc., Anaheim
Krueper Engineering & Associates, Inc., San Bernardino
Paul A. Peck & Associates, Riverside
TEC 2, LLC, San Luis Obispo
VCA Engineers, Inc., Los Angeles
WMH Corporation, San Jose

ACEC/Florida

Building Engineering-Consultants, Inc., Destin
C.A.P. Engineering, Inc., Doral
Cherokee Consulting, Inc., Miami
EcoShore International, Inc., Boca Raton
GBF Engineering, Inc., Fort Lauderdale
Gries Engineering, Inc., Leesburg
HighSpans Engineering, Inc., Fort Myers
Landmark Engineering, Inc., Jacksonville
Mechling Engineering & Consulting, Inc., Jacksonville
Shearer Consulting, Inc., Longwood
SWRF, Tampa

ACEC/Georgia

Hemisphere Engineering U.S., Inc., Atlanta

ACEC/Idaho

Sorenson Engineering, Inc., Idaho Falls

ACEC/Maine

Gartley & Dorsky Engineering & Surveying, Inc., Camden

ACEC/Maryland

Glock Smidt Engineering, Inc., Forest Hill
NMP Engineering Consultants, Inc., Hunt Valley

ACEC/Massachusetts

McCluskey Consulting & Management, LLC, Hull

ACEC/Michigan

Surveying Solutions, Inc., Standish

ACEC/Missouri

Civil Design, Inc., St. Louis

ACEC/Nebraska

R.W. Engineering & Surveying, Inc. dba Sides & Associates, Omaha

ACEC/New York

Empire Geo-Services, Inc., Hamburg
Jacob Feinberg Katz & Michaeli Consulting Group (JFK&M), New York
Narov Associates, New York

ACEC/Oklahoma

Carol S. Paulsgrove, PLLC, Newcastle
O.J.C. Company, Tulsa

ACEC/Utah

Benchmark Engineering and Land Surveying, LLC, Sandy
Calder Richards Consulting Engineers, Salt Lake City
Environmental Performance Group, Inc., Salt Lake City
Epic Engineering, Heber City
Summit Engineering Group, Inc., Heber City
Synergy Consultants, Inc., Draper

ACEC/Wisconsin

Jewell Associates Engineers, Inc., Spring Green

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For more information, contact Jackie Pysarchuk @ 202-682-4318 or jpysarchuk@acec.org

Calendar of Events

2008

AUGUST

- 12** E-Signatures, E-Seals, E-Mail, Electronic Drawing Exchange: Legal and Practical Tips to Protect Your Designs and Data (online seminar)
- 19** Negotiating Better Engineering Contracts: A Win-Win Situation (online seminar)
- 20** Proven Strategies for Enhancing Performance (online seminar)
- 26** Additional Services Fee Recovery Training (online seminar)

SEPTEMBER

- 2** Leverage Your A/E Human Resources for Competitive Advantage (online seminar)
- 3** Contracts, Coverage and Jury Interpretation: A Peek Behind the Insurance Curtain (online seminar)
- 10** Calculating Carbon Footprints: Potential Business for Engineering Firms (online seminar)
- 15-16** Finance Forum, Chicago
- 16** Creating a High Performance Workplace (online seminar)

- 17** Strategic Planning for Your Company's Next *Bus Drivers* (online seminar)
- 18** Getting Deals Done in Today's Market (online seminar)
- 23** Shortage of Engineers: There is No Quick Engineering "Fix" (online seminar)
- 24** Effective Project Planning to Improve Profits (online seminar)
- 24-27** Business of Design Consulting (BDC) for the Engineering Firm of the 21st Century, San Antonio
- 30** Developing and Implementing Winning Strategies for Engineers, Architects and Construction Companies (online seminar)

OCTOBER

- 6-7** Information Technology Forum, Chicago
- 14** Future Leaders Focus: A Study of the Needs and Priorities of Young Design Professionals (online seminar)
- 19-22** ACEC Fall Conference, Montréal

Additional information on ACEC's events is available at www.acec.org.

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William Stout is chairman and CEO of Gannett Fleming.

Views on America's Transportation Infrastructure Crisis, Sustainability, and Challenges in the Water Sector

Q. As an industry leader in transportation systems, what message would you send to political candidates this year about the state of America's infrastructure?

A. My message is that we need real leadership at all levels of government to deal with what is becoming a transportation infrastructure crisis. By real leadership, I mean the willingness to inform the public that there is no free lunch. Bridges are collapsing, commute times are increasing and we are being far too timid in attacking these problems because we do not have the political will to do what is necessary.

For too long, those in control of public infrastructure funding have been unwilling to tell the public that safety and improved mobility require substantial expenditures that should be funded by those that use the system.

Q. In what ways has the sustainability trend affected your operations?

A. Sustainability has affected the way we work and the work we do. We are recycling more and more of the materials that we previously consumed. Further, we are making increased use of recycled paper and other products and have installed a green roof at our corporate headquarters. We have a standing committee on sustainability that makes recommendations to management and educates our employees on sustainability practices in their lives at work and at home.

We also look for opportunities to improve the sustainability of everything we design. Many of our professionals have obtained Leadership in Energy and Environmental Design (LEED) accreditation. Although this applies mostly to green commercial buildings, we recently received the first LEED certification for a water treatment plant. We bring sustainable elements to as many projects as possible, not just the ones where it is expected.

Q. What is your view of the engineer shortage? Is it as severe as some say? What is the fix?

A. I believe we are on the brink of an engineer shortage. Currently, we are able to hire the entry-level engineers we

need. However, we are having a difficult time hiring experienced professionals. It is our sense that civil engineering enrollments are down and that hiring entry-level civil engineers will become a problem in the near future, particularly if politicians take our earlier advice and infrastructure spending ramps up.

The fix is multifaceted. First, we must start recruiting engineers when they are in middle school. We need to get our engineers into the classroom to explain the engineering profession to America's youth. Second, we must improve our relationships with universities not only to develop bonds with professors and their students, but also to provide input on the curriculum being taught. Third, we must actively recruit college students for internships and for full-time employment upon graduation. Fourth, and perhaps most importantly, we must increase the stature of the profession in the minds of the public so that they encourage their children to pursue engineering.

Q. As a top-10 firm in dams and reservoirs, what do you see as America's principal challenge in the water sector?

A. The principal challenge in the water sector is the replacement or repair of aging

infrastructure, especially dams and levees. The health and safety of the public demand an improvement in the condition of these aging structures. Meaningful liability protections must be put in place for our industry to assist in addressing this need.

We must also replace or repair the mains that are used to transport water to customers. Billions of gallons are wasted each year through leaking pipes. This wastes not only precious water resources, but the energy resources required to treat and pump the water as well.

Q. Has your participation in ACEC been personally and professionally rewarding?

A. Yes, it has been my pleasure to participate in ACEC/Pennsylvania's Business Practices Committee, ACEC's Institute for Business Management (IBM), the Design Professionals Coalition (DPC) and the Senior Executives Institute (SEI). The Pennsylvania committee and IBM deal with education—a special interest of mine—and enable me to inform each committee on the plans and activities of the other. Meeting and exchanging ideas and practices at both DPC and SEI have been invaluable. I have learned a great deal and formed many lasting friendships. ■



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