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ENGINEERING **INC.**

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>> **The Changing
Role of
The CFO**

>> **Unusual
Engineering
Innovations**

>> **House,
Senate Pass
3 Percent
Repeal**

SENATOR SCOTT BROWN

**Leads the Charge Against
3 Percent Withholding**

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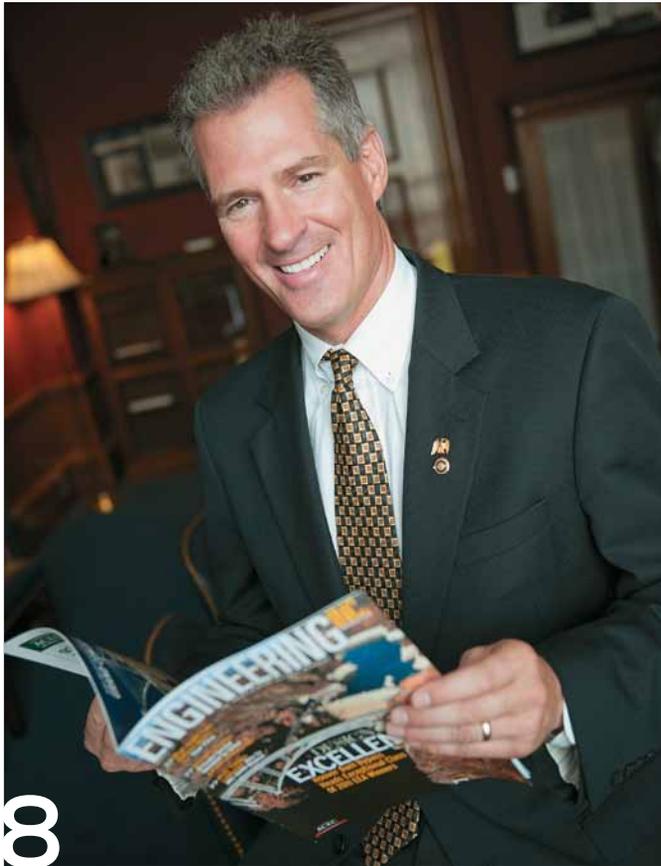
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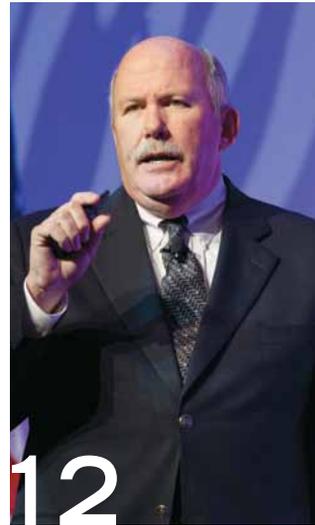
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Council Defends Level Playing Field In Rapidly Evolving Regulatory Arena

In a recent letter to the White House, ACEC and other key industry groups called for federal agencies to stop skirting the required notice-and-comment process when issuing new regulations.

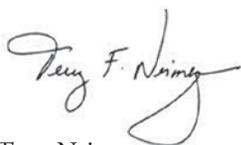
The letter was in response to the increased use of "interim rules" under which agencies implement new regulations without due comment. ACEC believes the comment process is critical to federal rulemaking, as it provides private industry the opportunity to amend and improve regulations prior to their implementation.

Over the past several years, there has been a vast expansion in the number and scope of proposed federal regulations and tax initiatives that impose burdensome costs on private businesses. The Council has been busy defeating such ill-conceived efforts as the proposed S-corp tax increase and the IRS 1099 mandate (which would have been applied to purchases of goods and services over \$600).

The Council is now targeting the SEC's proposed interpretation of the engineering exemption to the municipal advisor registration requirement in the Dodd-Frank Wall Street Reform and Consumer Protection Act. If interpreted the wrong way, many engineering firms would incur significant cost and legal burdens in registering with the SEC. Another proposed regulatory burden in our sights is the effort by some in Congress and the Administration to substantially lower the executive compensation cap for reimbursements on government projects.

ACEC supports regulatory reform toward more streamlined, efficient ways of implementing congressional intent, but will remain vigilant that such reform does not add arduous requirements for Member Firms, their clients and taxpayers.

This issue of *Engineering Inc.* features an interview with Massachusetts Sen. Scott Brown, who championed one of the Council's highest priority regulatory battles—repeal of the 3 percent withholding mandate. (See page 8.) Recent House and Senate passage of repeal by huge bipartisan margins was a big victory for ACEC.



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ACEC Chairman



David A. Raymond
ACEC President & CEO

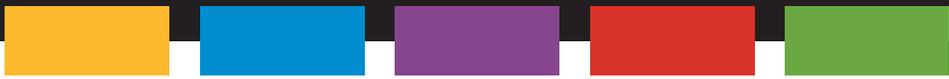




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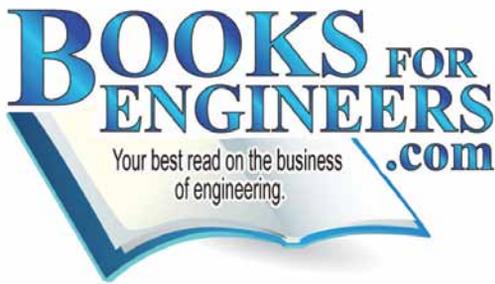
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New College Curriculum Seeks To Enhance Social Skills Among Engineering Students

Officials at the University of Minnesota (UM) say science and engineering students often enter the workforce devoid of important interpersonal social skills and communications training.

To address this deficiency, UM College of Science and Engineering established "The Gemini Project," a new program to promote networking, teamwork and better understanding of generational differences and workplace relationships among students.

Gemini Project Chairwoman Tess Surprenant said science and engineering students typically are very analytical thinkers dedicated to their studies.

"At the same time, those students may not have spent as much time in general as others learning to handle various social situations that we all know can also affect professional success," she explained. "We believe the program helps the student transition from academics to the business, networking and teambuilding needs and realities of the workplace."

ACEC Urges Kansas to Stay Clear Of Professional Services Tax



ACEC President Dave Raymond participated in the Kansas Governor's Services Sector Economic Summit in August at Black & Veatch headquarters in Overland Park, Kan. Raymond urged Kansas officials not to impose a professional services tax, saying such a measure would "damage the state's competitiveness with surrounding states." From left: ACEC/Kansas Executive Director Scott Heidner, Raymond, Kansas Secretary of Labor Karin Brownlee, Gov. Brownback, Black & Veatch Associate Vice President Clint Robinson and Black & Veatch Vice President for Government Affairs Paul Weida.

ACEC/New York Survey Confirms Growing Trend, Unfavorable Impression of Acquisitions

While more than half of New York state engineering firms say it is likely that their firm will acquire another firm within the next five years, less than one in five view such consolidation favorably, a new ACEC/New York survey said.

The survey of 93 New York state consulting engineering firms conducted this summer

showed that more than one-third (36 percent) of respondents work at a firm that has acquired another firm over the past five years, and more than one-half (51 percent) say it is "likely" or "very likely" that their firm will acquire another firm in the next five years.

Despite this trend, the survey showed that only 17 percent of respondents view

acquisitions favorably; more than half say such deals force small and mid-size firms out of the market; one-third say such acquisitions increase cost competition; and 73 percent say the subsequent cost competition has had a significant impact on their business.

In rating industry conditions overall, more New York state engineers describe their business as fair (50.5

percent), than last year (44 percent). Only 7.5 percent of respondents gave their business a rating of "not good."

Most engineers (61 percent) also were at least "somewhat optimistic" about the business outlook for 2012, an increase from a similar study conducted in 2009, which indicated a positive outlook among 46 percent of those surveyed.

U.S., Global Water Needs Are Clear, Financing Remains Cloudy

In the United States and globally, deteriorating or non-existent water infrastructure presents a wide range of costly challenges. While meeting these challenges presents opportunities for engineers, adequate funding remains a formidable obstacle.

According to a July 2011 American City & County report, the country's aging infrastructure is in crisis. "Without renewal or replacement, the number of water pipes in the United States that are classified as poor, very poor, or life-elapsd will increase from 15 percent in 2000 to 44 percent by 2020," the report said.

Globally, population increases and outdated water management practices are expected to exacerbate already perilous situations. According to the World Bank, 80 countries now have water shortages that threaten health and economies, while 40 percent of the world's population—more than 2 billion people—have no access to clean water or sanitation.

Dan McCarthy, president and CEO of global water consultant Black & Veatch, singled out environmental change as another potential obstacle: "Through climate change, many communities where water was once abundant can experience imbalances in supply and demand. Communities with limited resources continue to experience high growth and, as a result, water supply issues intensify."



DESIGN PICS/LIM PHOTO

Such issues have spurred significant international investment. Consider these examples:

- With "water resource management" dubbed priority No. 1, the Chinese government has vowed to complete construction of a "flood prevention and anti-drought system" by 2020. Projected price tag: \$600 billion.
- Latin America and Caribbean leaders have acknowledged the need to invest more than \$249 billion over 20 years "to close the region's water infrastructure gap," according to the World Bank.
- Brazil plans to invest \$42 billion by 2015 in its municipal wastewater and water treatment facilities to adequately provide water supplies to its major cities and to treat their waste.

Domestically, the Water Infrastructure Network (WIN) estimates that \$300 billion to \$500 billion is needed over

the next 20 years for water infrastructure replacement and development.

Worldwide Water: Supply and Demand

Water Resources	
Europe	6%
North America	15%
Asia Pacific	18%
South Asia	4%
East Asia	7%
Africa	9%
Middle East	11%
South America	30%
Water Use	
Europe	10%
North America	16%
Asia Pacific	11%
South Asia	24%
East Asia	17%
Africa	5%
Middle East	11%
South America	5%

Source: *The Atlas of the Real World: Mapping the Way We Live*, Thames & Hudson, 2008

- The EPA last year updated a 2004 Clean Watershed Needs Survey, which considered only wastewater pollution control needs. The updated number (as of January 2008), which includes projected investments in wastewater treatment plants, pipe repairs, and new pipe systems, was \$298 billion.
- The U.S. Army Corps of Engineers said that the United States needs \$100 billion to update the nation's levee systems and \$125 billion more "to replace the current navigation lock system."

The need for improved water infrastructure would seem at odds with Washington's desire to cut government spending. Federal contributions to water and wastewater initiatives have dropped off nearly 75 percent since 1980.

Joe Salimando writes on construction at www.electricalcontractor.com. Reach him at ecdotcom@gmail.com.

Transportation Bill Advances In Senate, House



GARY LANSMAN

House Transportation and Infrastructure Committee Chairman John Mica (R-Fla.)

The Environment and Public Works Committee unanimously approved a two-year transportation bill Nov. 9 that maintains current funding levels plus inflation, a total of \$85.3 billion for highway programs.

Entitled “Moving Ahead for Progress in the 21st Century” (MAP-21), the bipartisan bill consolidates the number of federal programs from 90 to less than 30, refocuses funding on key national priorities, tasks the Department of Transportation with developing new performance-based standards for states and includes several ACEC-backed project delivery changes, including accelerated environmental reviews and project exclusions.

MAP-21 also expands the Transportation Infrastructure Finance & Innovation Program, from \$122 million to \$1 billion per year, to significantly increase federal credit assistance to leverage financing for major projects. Senate Majority Leader Harry Reid (D-Nev.) has indicated his desire to bring MAP-21 to the floor for a vote prior to the end of the year.

In related news, Speaker of the House John Boehner (R-Ohio) announced plans to take up a multiyear transportation bill before the end of the year. Dubbed an “energy and infrastructure jobs bill,” the House proposal would tie additional revenue from expanded oil and gas production to transportation infrastructure investment in an effort to at least maintain current funding levels.

A six-year bill funded at current levels plus inflation would total \$320 billion and would require \$12 billion to \$15 billion annually in additional tax receipts. House Transportation and Infrastructure Committee Chairman John Mica (R-Fla.) has already outlined the policy highlights of his bill, including program consolidation and aggressive project delivery reforms.

Transportation Programs Extended Into 2012

Following extensive advocacy and grassroots outreach from ACEC and industry stakeholders, the House and Senate approved legislation (H.R. 2887) to extend federal aviation programs through Jan. 31, 2012, and surface transportation programs through March 31, 2012.

In a major victory for the industry, the bill maintains funding at current levels; it also provides for collection of user fees for the Aviation Trust Fund and Highway Trust Fund through those dates.

With a program shutdown averted, attention has turned back to multiyear reauthorization bills. Key lawmakers hoped to negotiate a final deal on the long-stalled Federal Aviation Administration bill (H.R. 685/S. 223), including funding for airport improvement projects and upgrades to the nation's air traffic control system, which has been blocked over proposed changes to union organizing rules at airlines.



BLUE LINE PICTURES/GETTY IMAGES

ACEC Advances Commissioning as an Engineering Service

The U.S. Army Corps of Engineers recently adopted ACEC's position that commissioning services be performed by engineering firms and selected through Qualifications-Based Selection (QBS) in a recent Corps ID/IQ solicitation.

ACEC has long advocated that commissioning is an engineering service that should be performed under the supervision of a licensed professional engineer and selected based on qualifications. As building systems, the breadth of technologies involved and their impact on performance expand, a broader understanding of technical principles and integrative

capabilities of professional engineers is required.

Commissioning considerations start at the beginning of a project to ensure that owners understand and properly verify performance before project acceptance, and include not only climate control considerations, but safety, security, sustainability, communications, and other equipment and systems that must be verified individually and collectively during operation.

ACEC continues to advance this position with federal agencies and other associations, including working with the American Society of Heating, Refrigerating and Air Conditioning Engineers to develop a Position Document on Commissioning.

ACEC 'Instrumental' in Achieving House 3 Percent Repeal, Says Rep. Herger

The House of Representatives has passed by a wide and bipartisan margin of 405-16 legislation to repeal the onerous 3 percent withholding mandate. The Senate has also cleared repeal legislation, which President Obama has pledged to sign.

ACEC led the lobbying effort of a broad coalition of industries, as previously reported.

"I want to commend and thank the American Council of Engineering Companies for their hard work as leaders of the coalition promoting repeal," said Rep. Wally Herger (R-Calif.), sponsor of the repeal legislation. "The coalition was instrumental to our success in getting the broad, bipartisan support necessary to pass this important measure out of the House."



Lead House sponsor of 3 percent repeal Rep. Wally Herger (R-Calif.) (left) thanks ACEC President Dave Raymond for the Council's lobbying leadership on the bill after its passage.



Council Asks Senate to Substantially Increase Water Infrastructure Funding

ACEC is pressuring the Senate Appropriations Committee to protect water funding, urging committee members to provide a minimum of \$1.55 billion for the Clean Water State Revolving Fund (CWSRF) and at least \$990 million for the Drinking Water State Revolving Fund (DWSRF).

The House Appropriations Committee has recommended severe cuts to both programs, providing only \$695 million for the CWSRF and \$829 billion for the DWSRF.

"These are extremely cost-effective government programs—for every dollar the federal government invests, more than \$2 is matched or made available for environmental improvements," ACEC President Dave Raymond wrote to committee members. "Additionally, each \$1 billion invested in water and wastewater infrastructure creates up to 27,000 new jobs with average annual earnings of more than \$50,000, many of them in engineering firms."

ISSUES ON THE MOVE

New highway/transit program

3% withholding repeal

Funding for water

WHAT'S NEXT

House action before year-end

Bill awaits president's signature

Final appropriations by the end of the year

ACEC Successfully Challenges Faulty Federal Procurements

ACEC continues to challenge procurements for engineering services that fail to follow QBS or appear to have other procurement irregularities. After being notified by Member Firms, the Council has successfully challenged low-bid procurement actions by federal agencies and even local communities.

Notable examples include a recent Department of Health and Human Services procurement of A/E services with cost as a selection factor, which the agency corrected. The Council also worked with a number of Department of Defense agencies to solicit for engineering services under the appropriate procurement category, ensuring wider participation and competition from the A/E industry.

"These actions are important steps forward and underscore the value of ACEC membership and engagement," said Jim Blake of Johnson, Mirmiran and Thompson in Maryland.

Congress Weighs In On Regulatory Burdens

House committees recently sent to the floor several bills to control regulatory actions from the Environmental Protection Agency (EPA) that could hamper economic growth.

The most significant is legislation backed by ACEC. The Transparency in Regulatory Analysis of Impacts on the Nation, or TRAIN, Act (H.R. 2401) requires a Cabinet-level interagency committee to study the cumulative impacts of major EPA air pollution rules on the nation's economy and their impact on jobs. If enacted, the bill will delay the rules for at least six months until the study is completed.

Amendments to the bill would delay the implementation of the utility MACT, a mercury and air toxics rule for power plants, by one year following the study's eventual completion and would require EPA to consider cost and feasibility considerations when setting air quality standards under the Clean Air Act.

The House has also approved the Clean Water Cooperative Federalism Act of 2011 (H.R. 2018), which would limit several areas of EPA's ability to override or interfere with state water permit decisions or Section 404 Corps permits, including approved state water quality standards, state Sec. 401 water quality certifications, state NPDES permits, or section 404 dredging or filling permits.

The outlook for these bills in the Senate is uncertain, particularly in light of threatened vetoes by the White House.

For More News

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

Resolute On Repeal

Senator Scott Brown Leads a Successful Bipartisan Effort to Repeal the Flawed 3 Percent Withholding Mandate

In an exclusive interview with ACEC, Sen. Scott Brown (R-Mass.), a strong supporter of the engineering industry, talks about his legislation to repeal the 3 percent withholding mandate, the importance of a multiyear surface transportation program, and what he believes is needed to improve the fragile U.S. economy.

Brown was elected to the U.S. Senate in January 2010 to fill the term of the late Sen. Ted Kennedy. He previously was elected three times to the Massachusetts Senate and served five years as a Massachusetts State Representative.

Brown is a member of the Senate Committee on Armed Services, the Committee on Veterans' Affairs, the Homeland Security and Governmental Affairs Committee and the Senate Committee on Small Business and Entrepreneurship. >>





Sen. Brown (center) discusses 3 percent repeal strategy with ACEC President Dave Raymond (left) and ACEC Chairman Terry Neimeyer outside the senator's office.

growth and help achieve greater energy independence here at home?

BROWN: Congress must develop a clear energy policy for the country that uses an “all of the above” approach, which includes renewable technologies and nuclear power as well as more domestic resources at home to reduce our dependence on foreign oil. We should encourage energy efficiency efforts and give consumers the choices they need in order to reduce their energy use. Most important, we cannot impose a new energy tax during this tough economy. I do not support a cap-and-trade scheme, but I am open to other options and proposals to address our nation’s energy and environmental needs.

ACEC: President Obama has proposed raising individual income tax rates, which would impact many small engineering firms and other businesses that are organized

as S corporations or partnerships and pay business taxes at the individual rates. What is your view of such taxes, and how can small businesses be protected?

BROWN: I do not believe now is the time for anybody’s taxes to be raised. In fact, I have never supported increasing taxes. You’re absolutely right that allowing the individual rates to go up would hurt a lot of small businesses that are organized as S corporations and partnerships. As the growth engines of our economy and powerful job creators, small businesses should not be threatened with higher taxes.

The most important signal Washington can give small businesses is certainty. Proposing new taxes sends an entirely opposite message. Uncertainty causes small businesses to put off new hiring and to restrain investment. With the federal health care bill, the EPA and other regulations coming out so fast, higher future costs of operation are looming over businesses large and small, undermining our fragile economic recovery.

I do believe our economy could use a tax overhaul, with certain loopholes and deductions eliminated in return for lower rates across the board. That’s the way to achieve strong growth. ■

ACEC: The Council has been working to repeal the 3 percent withholding mandate since it was passed in 2006. With the recent passage of repeal legislation in the House, the focus has shifted to the Senate, where we greatly appreciate your strong leadership. What led you to introduce S. 164?

SEN. SCOTT BROWN: I first became aware of the 3 percent withholding mandate while I was visiting businesses throughout Massachusetts. A common theme I heard from businesses, both large and small, was that increasing government regulations were like a wet blanket on their ability to make money, expand and eventually hire new employees. One of the more egregious federal mandates I heard about was the 3 percent withholding rule. Eliminating this mandate is a common-sense, bipartisan initiative that will hopefully remove some of the doubt and allow businesses to properly plan for future growth.

ACEC: How effective was ACEC and the coalition in supporting your efforts to pass 3 percent repeal legislation in the Senate?

BROWN: The ACEC/U.S. Chamber business coalition seeking to repeal the 3 percent legislation was extremely effective, and I am deeply appreciative of those efforts.

ACEC: Jobs and the economy will be the dominant issues in the upcoming presidential and congressional campaigns. ACEC continues to advocate sustained, long-term infrastructure investment—such as passage of a multiyear surface transportation program—as critical to economic growth. What would you like to see in a bipartisan jobs package?

BROWN: Our nation’s infrastructure is integral to keeping our economy running. I believe it is important to set clear goals for restoring and revitalizing our roads, airports and sewer systems. We must come together, not only to provide necessary funding for transportation projects, but also to ensure that our systems remain competitive into the future.

ACEC: Energy remains an issue with potential for bipartisan action in Congress. What elements would you like to see in a bipartisan energy package to spur

JAMES KEIGLEY

ACEC Years-Long Persistence Against 3 Percent Pays Off

The Council has provided leadership for the coalition of business and industry organizations that oppose the 3 percent withholding mandate since the law was first established in 2006.

Intended as a tax enforcement mechanism, the 3 percent provision will require federal, state and local governments that spend more than \$100 million annually on goods and services to withhold 3 percent from almost all contracts and payments.

ACEC quickly realized that the with-

holding mandate will impose significant cash flow and administrative burdens on tax-compliant engineering firms.

The U.S. Chamber of Commerce turned to ACEC to lead a nationwide advocacy effort for more than 100 business and industry organizations committed to repealing the 3 percent mandate.

The result: The U.S. House of Representatives passed 3 percent repeal legislation by an overwhelming bipartisan vote of 405 to 16 at the end of October. Repeal legislation has also passed in the Senate, and the president is expected to sign the bill into law.



At a U.S. Chamber of Commerce-sponsored Capitol Hill press conference in September, ACEC Chairman Terry Neimeyer said the 3 percent mandate has "an enormous negative impact on our industry."

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Fall Conference Delivers New Insights

On Future Markets, Solutions to Industry Challenges

The state of the nation's transportation and energy markets and future business opportunities for Member Firms headlined ACEC's recent Fall Conference in Las Vegas.

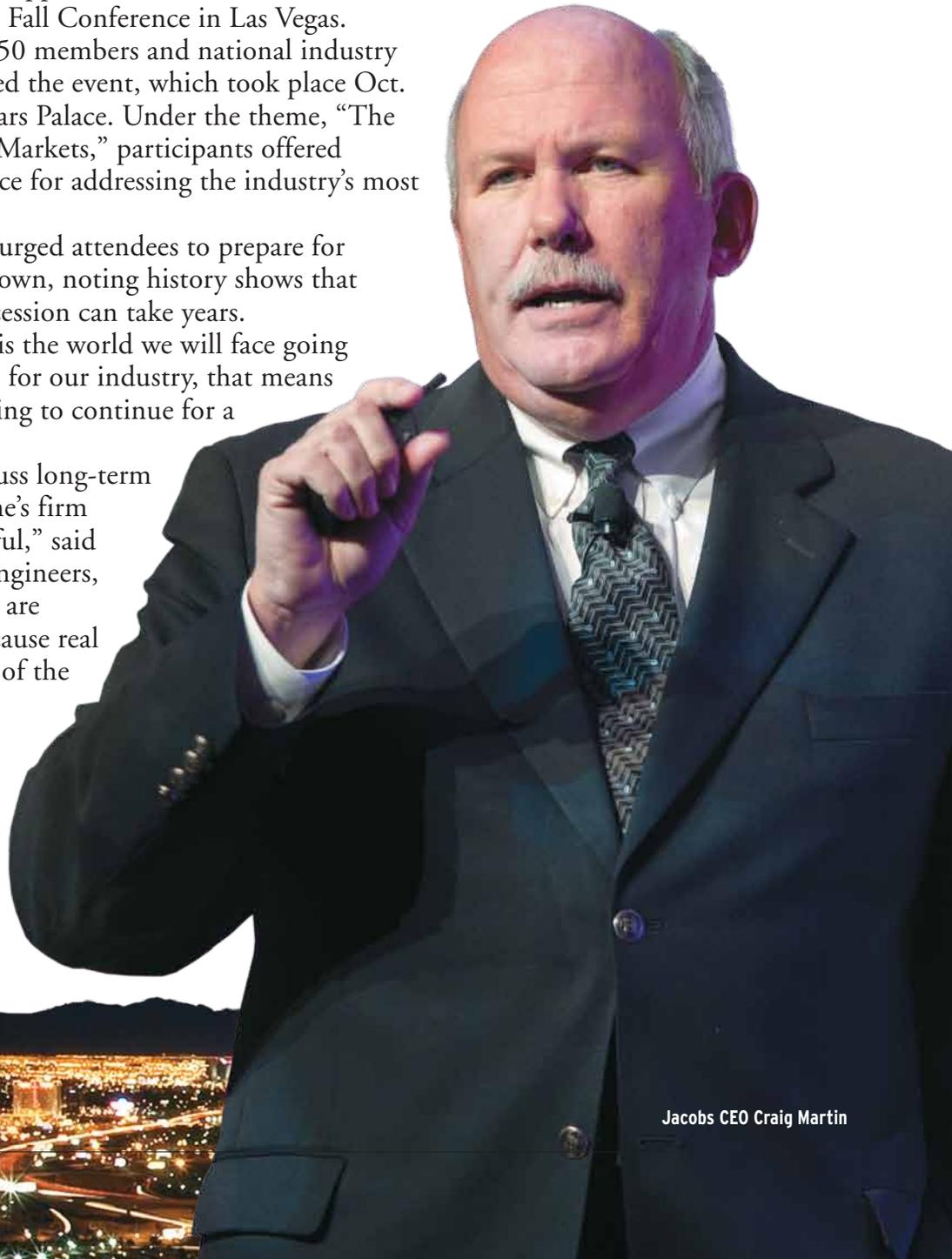
More than 750 members and national industry experts attended the event, which took place Oct. 19–22 at Caesars Palace. Under the theme, “The Road Ahead in Engineering Markets,” participants offered compelling insights and advice for addressing the industry's most pressing challenges.

Jacobs CEO Craig Martin urged attendees to prepare for a prolonged economic slowdown, noting history shows that complete recovery from a recession can take years.

“The world we're in today is the world we will face going forward,” Martin said. “And, for our industry, that means scarcity of funding is also going to continue for a long time.”

“Listening to speakers discuss long-term trends on how to position one's firm going forward was very helpful,” said Timothy Haener of J-U-B Engineers, Inc., in Boise, Idaho. “There are threats to our industry that cause real concern to the sustainability of the engineering practice.”

“This was an excellent conference with sessions and speakers pertinent to the issues all of our businesses must deal with,” said Stu Monical of MKK Engineers in Greenwood Village, Colo.



Jacobs CEO Craig Martin



ACEC Chairman Terry Neimeyer,
CEO of KCI Technologies



AMEC Earth & Environmental
President Hisham Mahmoud



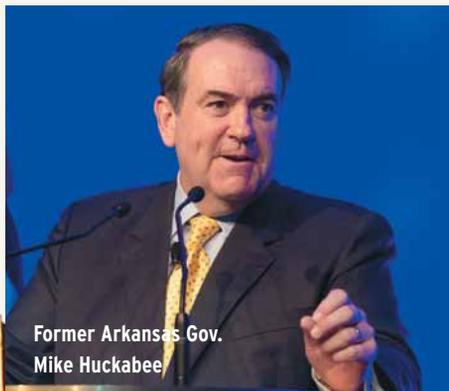
Nevada Gov. Brian Sandoval



CDM CEO Richard Fox



Sargent & Lundy CEO
Alan "Bud" Wendorf



Former Arkansas Gov.
Mike Huckabee

Speaker Highlights

- **Jacobs CEO Craig Martin** advised attendees to enhance their procurement and risk management skills because clients are becoming increasingly sophisticated. "Firms must be acutely aware of the 'new normal' to be well positioned for the future," he said.
- **CDM CEO Richard Fox** said the market must embrace innovation, and engineers must contribute to increased construction productivity. "Engineers need to focus on how to build something as much as how to design it," he told attendees.
- **Hisham Mahmoud, president, AMEC Earth & Environmental**, considered the challenges of globalization. "If you are a regional or local firm and don't think you're competing globally, think again," he said.
- **Alan "Bud" Wendorf, CEO, Sargent & Lundy**, forecast dramatic growth in the natural gas sector. "One-third of natural gas currently goes to electrical production," he said. "In 20 years, it will be closer to 50 percent."
- **Nevada Gov. Brian Sandoval** promoted his state's infrastructure achievements as he welcomed attendees to Las Vegas.
- **Former Arkansas Gov. Mike Huckabee** implored Congress to substantially invest in the nation's infrastructure, calling it a "fiscally sound and reasonable way to rebuild this country."





Hofmeister Calls for 'Independent Commission' To Avert 'Energy Abyss'

John Hofmeister, founder of Citizens for Affordable Energy and former CEO of Shell Oil, proposed a bold solution to the nation's looming energy crisis.

"Fundamentally, our energy infrastructure is on its last legs," Hofmeister said at the Conference. "We are on the path to an energy abyss, with gas lines, brownouts and blackouts."

Hofmeister attributed the crisis to the U.S. political system, which "is driven by the perversity of partisanship and political timetables."

"Fixing our energy system will take decades," he said. "It can't be done in a two-year election cycle."

Hofmeister proposed creating an independent regulatory commission for energy modeled after the Federal Reserve Board. The commission would create a 50-year plan for the nation's energy future, focus on making energy consumption more efficient, discuss issues related to environmental protection and build an infrastructure that is robust, risk-based and intelligent.

And he called on engineers to do their part.

"You and your predecessors built our incredible 20th-century energy infrastructure," he told the audience. "Now, in the 21st century, we need to do it all again."

ACEC/PAC Achieves Record Fundraising

ACEC/PAC raised a record \$145,400 at the Fall Conference. Arnie Rusten of BergerABAM, Inc., in Federal Way, Wash., won the annual ACEC/PAC Sweepstakes \$10,000 grand prize; Blake Murillo of Psomas in Los Angeles won the \$5,000 second prize; and Harlan Quenzer of Schmucker, Paul, Nohr & Associates in Mitchell, S.D., took the \$2,000 third prize. The five \$1,000 prizes went to David Winter, Hart Crowser, Inc., Seattle; Tom Collins, Collins Engineers, Inc., Chicago; Mel Sears, Parsons Brinckerhoff, Portland, Ore.; Theresa Patten, Crede Associates LLC, Portland, Maine; and Tom Haselden, BP Barber, Columbia, S.C.



Peter Mesha, group president of engineering at Wight & Company, and wife, Loren, tour the Hoover Dam Bypass, winner of ACEC's 2011 Grand Conceptor Award for the year's most outstanding engineering achievement.

Awards

■ **Jack Beemer of David Evans and Associates** in Bend, Ore., received the 2011 ACEC Chairmen Emeritus Award.

■ **Christopher Cook, Abonmarche Consultants**, Benton Harbor, Mich.; **Robert Hutterman, Lu Engineers**, Pittsford, N.Y.; and **Smita Shah, SPAAN Tech**, Chicago, received the 2011 ACEC Community Service Award.

■ **Nine Member Organizations** were recognized for surpassing their 2011 ACEC/PAC fundraising goals: Alaska, Indiana, Maryland, Massachusetts, North Dakota, Oregon, South Carolina, South Dakota and Washington. Hawaii and Wisconsin were recognized at the spring ACEC Annual Convention for meeting their 2011 goals.

■ **Twenty-one Member Organizations** received awards for achieving their membership goals: Alaska, Arkansas, Colorado, Connecticut, Hawaii, Louisiana, Maryland, Metropolitan Washington, Minnesota, Missouri, Nebraska, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Texas, South Carolina, Vermont, West Virginia and Wisconsin.

Winners of the ACEC 2011 Young Professional of the Year Awards appear on page 24. Winners of the 2011 QBS and ACEC Scholarships were previously published.

Bart Patton, senior vice president at Kleinfelder, and wife, Joni, enjoy the Vegas panorama during a Fall Conference reception at Caesars Palace



2011 College Of Fellows Inductees

- **Marc Alper**
Alper Audi, Inc.,
St. Louis
- **Philip Beer II**
USI Consultants, Inc.,
Indianapolis
- **Lisa Brothers**
Nitsch Engineering,
Boston
- **Philip Budde**
Strand Associates, Inc.,
Madison, Wis.
- **William Brock Johnson**
Garver, North Little
Rock, Ark.
- **Michael Matthews**
H&A Architects &
Engineers, Glen Allen,
Va.
- **Craig Musselman**
CMA Engineers, Inc.,
Portsmouth, N.H.
- **June Nakamura**
Kennedy/Jenks
Consultants, Inc.,
Honolulu
- **Jon Nishimura**
Fukunaga & Associates,
Inc., Honolulu
- **Chris Poland**
Degenkolb Engineers,
Oakland, Calif.
- **Ted Williams**
Landmark Engineering,
Inc., Havre De Grace,
Md.
- **Roy Yamashiro**
Consulting Structural
Hawaii, Inc., Honolulu
- **D. Dale York**
LBYD, Inc.,
Birmingham, Ala.
- **David Young**
CDM, Cambridge,
Mass.



Wayne Horlacher, principal/vice president of Atkins, leads the discussion at the CIO Roundtable. Seated from left: James Walsh, chief technology officer, AECOM; Steve Ross, CIO, Thornton Tomasetti, Inc.; Chris Pinckney, CIO, Psomas; and Cora Carmody, senior vice president, information technology, Jacobs Engineering.



A standing-room-only seminar about business development metrics was one of more than 30 professional development sessions presented at the Fall Conference.

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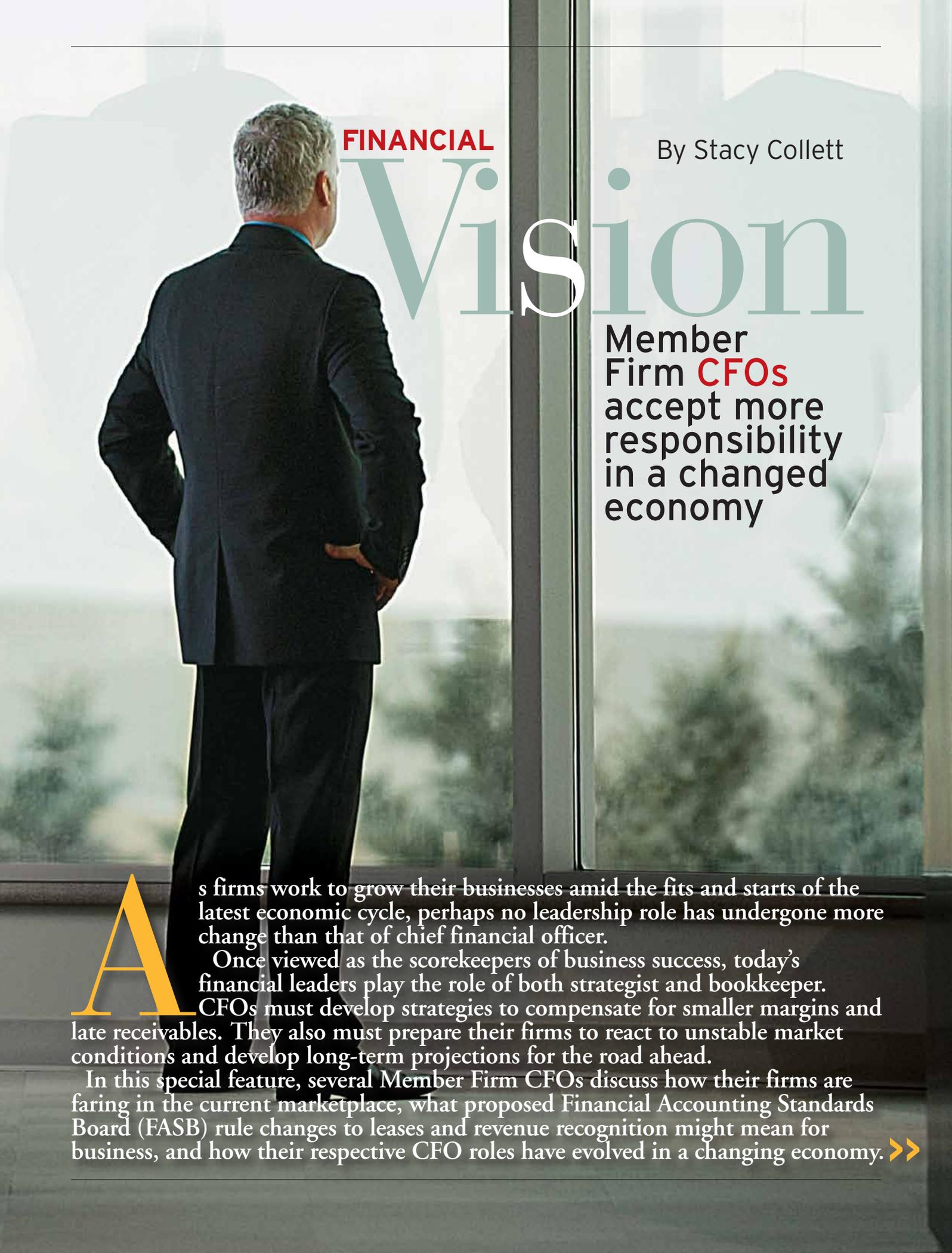
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FINANCIAL

By Stacy Collett

VISION

Member
Firm CFOs
accept more
responsibility
in a changed
economy

As firms work to grow their businesses amid the fits and starts of the latest economic cycle, perhaps no leadership role has undergone more change than that of chief financial officer. Once viewed as the scorekeepers of business success, today's financial leaders play the role of both strategist and bookkeeper. CFOs must develop strategies to compensate for smaller margins and late receivables. They also must prepare their firms to react to unstable market conditions and develop long-term projections for the road ahead.

In this special feature, several Member Firm CFOs discuss how their firms are faring in the current marketplace, what proposed Financial Accounting Standards Board (FASB) rule changes to leases and revenue recognition might mean for business, and how their respective CFO roles have evolved in a changing economy. >>

Looking for a Solution

Woolpert, Inc.

Headquarters: Dayton, Ohio

Specialties: Design, geospatial, water and energy firm

F.Y. 2010 Revenues: \$118.85 million

Woolpert, Inc., CFO **Josh Heid** is considering several options to combat the proposed FASB changes to revenue recognition, including being more specific on deliverables when writing contracts. "It's my understanding that if you have that in the contract and can identify deliverables throughout the contract, then you can take profits at those occurrences. That's an education for our project managers and legal staff," Heid says.

The administrative burden of tracking those deliverables will also be a challenge.

Regarding proposed lease rules, "that would mainly impact our balance sheet," he says. "We don't own our real estate; we lease all of our buildings and the majority of our equipment. My biggest concern is with our third-party vendors and banks—adjusting loan covenants and understanding the impact of these accounting changes."

The Dayton, Ohio-based firm is retooling its current service offerings to be more vertically focused after two years of relatively flat revenues. Like most firms, margins have narrowed amid increased competition. "Where we would have 10 to 15 competitors going after a



Josh Heid

project in the past, that number has doubled," Heid says. Still, he says, the firm has been able to maintain a strong cash position, primarily by "not investing in growth."

Heid says the role of today's CFO can be closely compared

to that of a chief operating officer. "Profit is getting squeezed, so there's more focus on efficient operations and reducing overhead," he explains. "I'm definitely more involved in operational meetings with our different business units."

Smaller Firms Feel the Pressure



David Chambers

Delta Engineers, Architects & Land Surveyors, P.C.

Headquarters: Endwell, N.Y.

Specialties: Engineering, architectural and land surveying services

F.Y. 2010 Revenues: \$10 million

As competition for new work heats up, **David Chambers**, CFO of New York-based **Delta Engineers, Architects & Land Surveyors, P.C.**, says a lot of mid-size firms are suddenly moving into traditionally small firm

territory. "We're seeing very competitive price bidding for local contracts that aren't constrained by the federal qualifications-based selection rules," he says. "Everybody is sharpening their pencils and doing whatever they can to lower bids."

In that sense, even going after new business could prove cost-prohibitive. "You have to assess your potential for getting the work and what the return is going to be," Chambers explains. "Is it even worth it to get into that kind of competition and just knowing you're spinning your wheels?"

The competition squeeze, coupled with a push-out in receivables and lower staff utilization rates, has forced Delta, which deals primarily in government contracts, to take unprecedented financial measures, such as using previ-

ously untapped lines of credit to manage cash flow.

Such measures could be tested further if the new FASB regulations governing revenue recognition take effect. "If we have to go back and restate our financials to account for projects that are ongoing rather than projects gone through, that's going to be a huge nightmare." On the lease side, "my foreign locations are certainly a concern. I'm going to have to disallow interest expenses that are currently wrapped up in those operating leases," he says.

Chambers says these and other business changes make the CFO's role increasingly complex.

"We're beginning to experience shifts in how we're delivering projects. Joint ventures, design/build—all are new to us," he says.

Riding Shotgun

RS&H

Headquarters: Tallahassee, Fla.

Specialties: Facilities and infrastructure consulting

F.Y. 2010 Revenues:

\$144 million

Ken Jacobson remembers when the CFO was largely an executive record-keeper, whose job was to set up controls, maintain assets and handle compliance issues. But that has changed.

“I used to liken this firm to a car—I’m looking out the back window, and the CEO is looking out the front window,” says Jacobson, executive vice president and CFO at **RS&H**, a facilities and infrastructure consulting firm in Tallahassee, Fla. “Now we’re *both* looking out the front window.”

With margins tightening across the board, Jacobson says the CFO has become more forward-looking and involved in every decision, from proposals to marketing costs. In a buyer’s market, “some fee structures are so ridiculous that

we’ve had to walk away” rather than doing the project at less than cost, Jacobson explains. The firm also spends more money to *get* jobs. “We put more effort into our presentations and spend more time on the proposals, and that increases our costs,” he says.

With revenues down just 4 percent in 2011 and cash balances holding steady, Jacobson says RS&H is holding its own in the current marketplace. But proposed FASB rule changes that would affect how firms report revenue for ongoing contracts and operating leases could spell trouble ahead.

ACEC has submitted comments to FASB expressing serious concerns about its proposals to decouple the reporting of costs and revenues for ongoing contracts, and to treat all leases as capital leases. Both proposals, currently under consideration by FASB, would have significant impacts on A/E firms.

“We can deal with the lease change, but this revenue recognition rule is just a sea change for us,” Jacobson says. “We’re on a percent-complete accounting method now for financial accounting and tax purposes. Our average project time is two and a half years. We’re doing larger projects for NASA and larger roadway work and bridges. For shorter-term projects, I think the impact would be minimal. But, if we can’t recover revenue over two to three years, that’s going to be significant.”

In the near term, Jacobson plans to keep RS&H ahead of the industry curve. “It’s a much tougher business now. You’ve got to change. If you don’t, you’re just not going to be around,” he says.



Ken Jacobson



Pete Dyke

All Boats Rising

ARCADIS U.S.

Headquarters: Highlands Ranch, Colo.

Specialties: Environmental, water, infrastructure and building firm

F.Y. 2010 Revenues:

\$1.44 billion

Pete Dyke, CFO of **ARCADIS U.S.**, the domestic arm of a large international design consultancy with environmental, water and infrastructure expertise, says business and economic changes require his financial team to take on more responsibility. “We’re getting more involved in some multidimensional, strategic elements” within the firm, he says, such as more functional leadership than just accounting and finance and leading firmwide cross-functional initiatives.

“I think CFOs are spending more time developing their people and expanding the capabilities of their teams, and that allows them to play a different role in the company,” says Dyke.

He’s constantly looking for opportunities where members of his staff can gain experience in these new business-centric roles. They work on cross-functional projects, get involved in strat-

egy development and do more sophisticated analysis intended to improve performance or inform strategic decisions.

Dyke’s most difficult challenge right now is staying ahead of the curve and anticipating market changes. “Finding those areas where you can fine-tune the business a bit to get more margin and provide more value to the client is getting more difficult,” he says.

Thanks to a diverse portfolio of clients and the solid position of its parent company, the firm’s revenues, margins and liquidity remain solid.

“We’ve done a pretty good job of continuing to maintain margins and find those improvements where we can keep the firm performing where we need it to be,” he says. “We put a lot of emphasis on the technical capabilities of our staff and some unique solutions to problems our clients are facing. It comes down to the talent you have. We’re getting fair value for the services we provide.”

There’s little question the role of the CFO has changed. “You can’t rely on your old bag of tricks,” says Dyke. “You need to continue to look for those new ways of finding value and be able to retain that value for the firm.”

It's Not Us, It's Them

Hanson Professional Services, Inc.

Headquarters: Springfield, Ill.

Specialties: Engineering, architecture, planning and allied services

F.Y. 2010 Revenues: \$62.2 million

At Hanson Professional Services, Inc., in Springfield, Ill., margins are smaller, but not necessarily with regard to their net multiplier, says CFO **Jo Ellen Keim**. “The client is obviously much more cost sensitive. They’re constantly challenging us. But it really hasn’t decreased that much given the recession. In part, that’s because we’re not just working with the same clients that we were three years ago,” she explains. “They’ve come and gone, and the type of work we

do for them has changed. So there’s been a shifting to try to maintain that multiplier.”

Margins have suffered more, at least at Hanson, as a result of staff changes, she says. “We have reduced our staff as a result of the economy. Consequently, our utilization has suffered. We do right-side over time, but it takes us a while to do that,” she explains.

Though liquidity improved initially after staff cuts and several old receivables came in, Keim says that bump has leveled off. The question is where to go from here. “We’re starting to borrow again. Part of that is a good thing because we’re starting to grow, and part of it is a bad thing because clients are paying slower,” she says. “So we’re putting more emphasis on collections and strategies to collect faster, though we’ve never

been stressed about it. We have always had—and still do have—a strong balance sheet.”

Keim doesn’t see her role as CFO changing as much as the world around her has. “In many engineering firms, a CFO has always been a strategic business partner, because the other people in the firm are engineers. You were the person they looked to for guidance in

business. The outside world is what’s changed—the economy, government regulations, scandals such as Enron, the financial crisis and all these other things that have broadened the role of the CFO. When these things happen in an engineering firm, who is going to address it? With increased government regulations, it’s going to fall on the CFO to be in compliance.”



Jo Ellen Keim

A New Approach



Karl Palvisak

GAI Consultants, Inc.

Headquarters: Pittsburgh

Specialties: Engineering and environmental consulting

F.Y. 2010 Revenues: \$85 million

GAI Consultants, Inc., is changing the way they look at prospective clients.

“We’re building on our philosophy of working with high-quality clients,” says **Karl Palvisak**, vice president and CFO. “We perform informational checks on all new clients just to see if there are any red flags that we need to be concerned about.” The firm uses Dunn & Bradstreet, Google searches, and Uniform Commercial Code queries to collect information. “You can see what states they do business in and

if there’s any pending litigation or collections against them,” Palvisak says.

The background checks have turned up a few high-risk clients that warranted further discussion with GAI’s president and CEO, Gary DeJidas, but the majority of the Pittsburgh-based firm’s work (70 percent) comes from repeat clients.

GAI has remained financially profitable during the recent downturn by steadfastly maintaining a diversified client base, by being diligent in AR collections, and by making several key acquisitions. With employee costs escalating and billing rates falling, the firm has taken steps to reduce overhead, such as moving to a self-insured health care plan.

Administrative costs associated with FASB rules are also taking their toll. “Our legal and accounting fees are going through the roof,” says Palvisak.

“We now have four CPA firms because we operate in four different regions of the county. Until they get a unified FAR audit report, which is coming, we’re virtually tied to each of these firms who have connections to ensure timely and accurate filings in those states. Several states made it very difficult to get approved rates, so we went with local firms rather than risk not having a current approved rate.”

Palvisak describes his role as CFO as that of an educator to the firm’s engineers. “We’re trying to get each project manager to think like a businessperson and actively engage in collecting accounts receivable,” he says. “It’s all part of being that spoke in the wheel that pushes us forward.” ■

Stacy Collett is a business and technology writer based outside Chicago.

Uncommon

Member Firms collaborate on some of the industry's most

Combating Asian Carp Invasion

Engineers plan to equip the Coon Rapids Dam in Brooklyn Park, Minn., with a barrier that prohibits destructive Asian carp from migrating up the Mississippi River.

PROJECT:
Asian Carp Barrier,
Coon Rapids Dam,
Brooklyn Park,
Minn.

FIRM:
Stanley
Consultants, Inc.,
Minneapolis

The Asian carp is an aggressive, invasive fish that, as it makes its way up the Mississippi River, is threatening sport-fishing lakes across Minnesota and the Great Lakes.

To prevent these potentially destructive fish from migrating, a number of barriers have been proposed, featuring, among other elements, electricity, acoustics, lights and air bubbles, all proven effective when used on small dam projects.

But many of these methods might not work for larger proj-

ects. Take the 1,000-foot-long Coon Rapids Dam in Minnesota, for example. Martin Weber, project manager and principal water resources engineer for Stanley Consultants, says such measures and any behavioral barrier would be difficult to build and maintain given the dam's high flow and cold weather climate. "The only practical solution to meeting the state's Three Rivers Park District's goal of preventing further upstream migration of the Asian carp at the dam and protecting the \$2 billion Minnesota fishing industry was to improve the natural barrier characteristics, namely high-water velocity and head (water drop), that Coon Rapids Dam could potentially provide. Modifications included a new crest gate system and modified operating procedure that provides the necessary water velocity and head more consistently throughout the year," he says.

Asian carp grow huge, like to eat, and reproduce and ruin habitat for native fish. The carp migrate during floods when high waters carry them over barriers. They can swim up to 25 feet a second and jump 10 feet.

Stanley Consultants began conducting studies in 2010 on the carp's habits and behavior and worked closely with regional fishery experts to determine the best way to stop their migration. The company also performed hydrologic and hydraulic evaluations of the dam and determined that altering its flow regime, along with additional operational and physical changes, could create a barrier 99 percent effective at preventing upstream migration.

"Necessary improvements to the dam would include a new spillway gate system, a new stilling basin and measures that will extend the life of the structure, such as general repairs and maintenance upgrades," Weber



Martin Weber

explains. Earlier this year, the company presented its evaluations and recommendations to the Minnesota Department of Natural Resources and other stakeholders. The Minnesota state legislature passed a bond bill over the summer that would fund the dam renovation project, but the final design package and construction timeframe have yet to be released.

To analyze the hydraulics of the dam and evaluate the potential creation of a physical barrier, Stanley Consultants assembled a team to detail potential solutions to the carp problem.

"Working with experts in dams, gates, hydrology, and river hydraulics, and with engineers and designers, we developed a presentation that could be understood by both expert and nonexpert stakeholders, and the public," Weber says.

Innovation

unique and unusual projects

Bacteria-Eating Wastewater Plant

PROJECT:
Hamby Creek
Wastewater
Plant Upgrade,
Thomasville, N.C.

FIRM:
Pease Engineering
& Architecture, PC,
Charlotte, N.C.

Faced with a growing population and new discharge limits, officials for the city of Thomasville had no choice but to update and expand its outdated wastewater treatment plant.

Beginning with preliminary designs in 2003, Charlotte-based Pease Engineering & Architecture determined that the best option was to create a biological nutrient removal facility with an average treatment capacity of 6 million gallons a day, up from 4 million gallons a day.

Though choosing a biological nutrient removal system, which removes phosphorous and nitrogen from the nearby effluent streams, is required by federal and state mandate, it was Pease that recommended the implementation of the Cannibal Solids Reduction Process, a technology that reduces the amount of solid waste produced by sludge wastewater treatment systems.

“No other plant in North Carolina has used this advanced

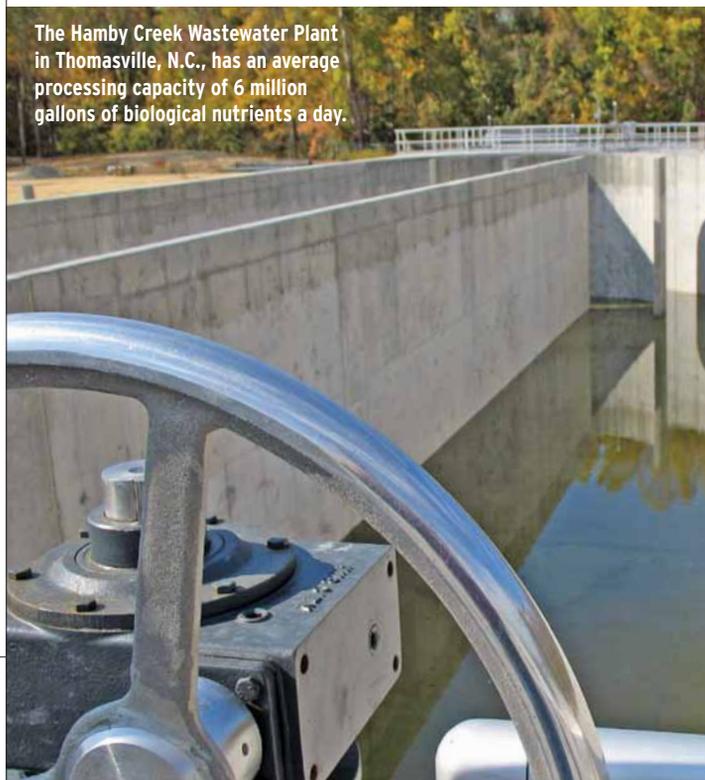
sludge-reduction process before,” says Keith Garbrick, senior civil engineer for Pease. The Cannibal system destroys biological solids through an interchange recycle flow between the aerobic activated sludge process and a specially controlled side stream bioreactor. The side stream bioreactor creates non-aerobic environment stresses and conditions aerobic bacteria to break down cells and increase biodegradability. The aptly named technology creates an environment that encourages bacteria to digest bacteria. “The Cannibal process was chosen based on its cost-effective ability to reduce the amount of sludge created by the treatment process, resulting in increased processing savings,” Garbrick explains.

Pease was tasked with obtaining all the necessary permit approvals, developing preliminary engineering and construction documents, implementing the Cannibal process throughout the plan, and providing construction services, including commissioning and close-out. The design scope also included a new emergency power generation system, as well as upgrades to the existing blower building, aeration tanks, four digesters, existing 55-foot clarifiers, and two interchange tanks for the Cannibal process. The approximately \$27 million upgrade and expansion project also included a new metering/screening facility, a degritting facility, a two-train oxidation ditch, secondary anoxic tanks,

and an effluent filter building with three disc filter banks and three medium-pressure ultraviolet disinfection units.

Because this marked the first time the Cannibal process was implemented in the state, Pease also had to demonstrate the system’s effectiveness and benefits for state reviewers. “A lot of meetings were held and much effort put forth in overcoming normal reactions to the introduction of new technology,” says Garbrick. The firm also educated the public about the project and its impact on the community, including Cannibal’s potential long-term financial and ecological benefits.

The Hamby Creek Wastewater Plant in Thomasville, N.C., has an average processing capacity of 6 million gallons of biological nutrients a day.



Keith Garbrick

Abandoned Mine Transformed Into Federal Archive

PROJECT:
Rock City
Business Complex-
National Archives
and Records
Administration,
Valmeyer, Ill.

FIRM:
Thouvenot, Wade
& Moerchen, Inc.,
Swansea, Ill.

As part of a deal to acquire a site upon which to relocate the town of Valmeyer in the wake of a catastrophic 1993 flood, the city purchased a nearby, defunct limestone mine. The mine remained unused until an Illinois developer made plans to turn the naturally cool, dark, 6 million-square-

foot underground facility into document storage space for the National Archives and Records Administration.

The first Archives Annex project undertaken by the developer exceeded the project budget by 10 percent due to design changes and unanticipated amounts of stone milling. In 2009, Swansea-based Thouvenot, Wade & Moerchen, Inc. (TWM), was hired to survey the space for the 75,000-square-foot Annex II. TWM employed 3D laser-scanning technology to map and model the mine's underground surfaces to prevent problems similar to those encountered during the design of the first Annex. "The information enabled developers to demonstrate the cost-effectiveness of using the abandoned mine as additional storage space," says Craig



Craig Brauer



J.R. Landeck

Brauer, TWM project manager.

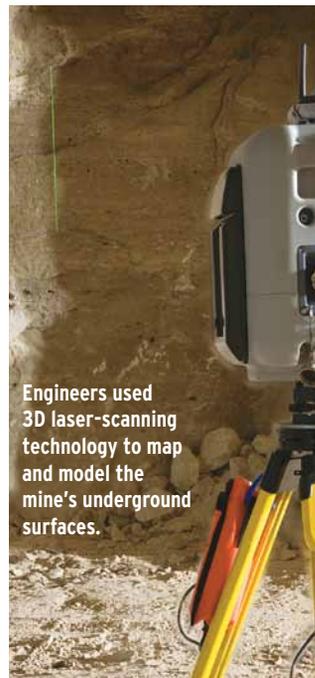
"The laser reflects off the rock surface to determine distance and angle. A computer program then creates a point cloud, or 3D model of the surface," explains J.R. Landeck, the firm's land survey manager. TWM configured the space to maximize storage capacity for the current second annex and any future expansions. "Our goal was to work with the architect to determine the best location within the caves to build the space, given the variable slope of the mine, and also to determine how to minimize milling costs and provide a level floor," adds Brauer. The company also designed the extension of the electrical, sewer, and life safety utilities into the facility, ingress and egress points, and provided construction oversight and survey staking services.

The massive number of data points that had to be collected to obtain the model of the surface area was the biggest challenge of the laser-enabled survey, according to Landeck. The scanner picked up more than 80 million data points from the jagged rock and cave surfaces (the equivalent of taking a measurement every centimeter). The software provider helped the team determine the most effective way to manipulate the data in order to configure the space as required.

"The technology proved to be an indispensable tool in repurposing this formerly abandoned mine into usable office and storage space with numerous benefits to the surrounding community," Brauer says.



The Annex II project in Valmeyer, Ill., added 75,000 square feet of secure document storage.



Engineers used 3D laser-scanning technology to map and model the mine's underground surfaces.

Colossal Pumping Station Guards New Orleans

The West Closure Pump Station, part of the Gulf Intracoastal Waterway West Closure Complex in New Orleans, is two football fields long and capable of pumping 20,000 cfs.

PROJECT:
West Closure Pump Station, Metairie, La.

FIRMS:
ARCADIS U.S., Inc., Highlands Ranch, Colo.

Bioengineering Group, Inc., Salem, Mass.

HNTB, Kansas City, Mo.

In the wake of Hurricane Katrina, Congress funded a massive \$14.5 billion program to provide enhanced flood risk reduction at the 100-year level for New Orleans and its surrounding parishes.

ARCADIS, with joint-venture partner Bioengineering, and in association with HNTB, was responsible for designing the project's \$350 million West Closure Pump Station, part of the Gulf Intracoastal Waterway West Closure Complex (GIWCC).

The project is, by any definition, massive. The pump sta-

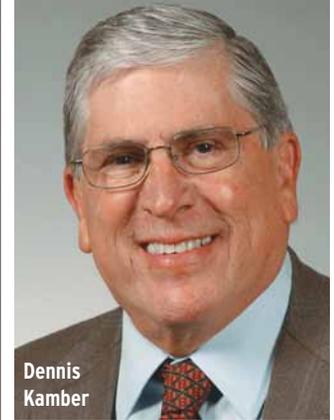
tion is longer than two football fields, more than 100 feet high, and capable of pumping 20,000 cubic feet per second (cfs) of internal drainage over the closure barrier. Eleven specially designed and constructed pumps are powered by an enormous 5,000-horsepower diesel engine.

The ARCADIS team began preparing alternative studies in 2006. By August 2008, team members had completed the innovation study. "Design of the entire station, from foundation through final features, has been an ongoing process in conjunction with the Corps of Engineers (COE) and the contractor," says Dennis Kamber, senior vice president, global water management for ARCADIS. The firm was also responsible for project management and coordinating design progress of GIWCC's other components. "We also designed many auxiliary components, including the access bridge, the safe house within the station, the wastewater treatment and potable water supply systems, fire suppression elements, and the fuel farm for the diesel engines," says Wayne Welch,

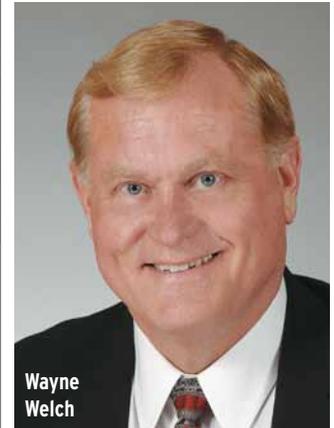
ARCADIS vice president and senior project manager.

ARCADIS and HNTB developed the pump procurement bid package for the contractor "to allow for early procurement of long-lead-time items, such as the pumps, engines and generators," says Dan Kellerman, HNTB vice president. The team also provided design coordination and management of the station's substructure and all structural and architectural design of the building's superstructure. "Engineering studies determined that 20,000 cfs pumping capacity was necessary to meet project requirements, which, in turn, determined the uniquely enormous size of the station," Kellerman says. "Designing a pump station of such size had never been done before." And there were concerns about the structure being situated on deltaic soils marshland. Together, the team designed piles and a foundation to bear the correct weight and vibration of the structure, and its many pieces of pumping equipment.

"Meeting the mandated completion date made conventional design-bid-build delivery



Dennis Kamber



Wayne Welch



Dan Kellerman

risky, so we and COE used the Early Contractor Involvement delivery approach," says Kamber.

Though rarely used by COE for civil works projects, the approach helped reduce risks and improved time to delivery. "Managing the design and construction of this project required an unparalleled level of coordination and innovation to provide this trustworthy component of the region's new hurricane risk reduction system," Welch says. ■

2011 ACEC Young Professional of the Year Award Winners

ACEC presented five Young Professional of the Year awards at its Fall Conference in Las Vegas. Selected by the ACEC Fellows, these young engineers were recognized for making significant contributions to the profession early in their careers.



Abbie Adams
EA Engineering, Science
and Technology, Inc.
Sparks, Md.

Adams began her career at EA Engineering, Science and Technology, Inc., as a mechanical engineer in 2003. She now manages \$1 million in engineering projects supporting the \$4 billion Base Realignment and Closure (BRAC) program at U.S. Army post Fort Belvoir.

She also uses her exceptional skills to mentor the next generation of engineers and to benefit underprivileged children. Adams coaches junior staff, providing leadership and teaching engineering skills. For four years, she has chaired the Day With an Engineer program for her local Society of American Military Engineers post, connecting 100 high school students with engineers to shadow for a day.



Emily Becker
Wright Water Engineers,
Inc.
Denver

A structural engineer, Becker is involved in all facets of water and wastewater systems, from master planning to design and permitting. She has performed construction observation on numerous projects, including a large regional stormwater detention and water quality pond, rehabilitation of a county park water system and upgrades to a wastewater treatment system in a mountain resort.

Becker is also a member of Engineers Without Borders and traveled to Peru to work with a small community in need of a clean and reliable water supply. The project included site selection and design of a hand-pumped well and included public health and community outreach components.



Amy Canfield
AECOM
Middleton, Wis.

A transportation engineer, Canfield specializes in the design of highway corridors. She is project engineer for five highway corridor studies, evaluating more than 300 miles of Wisconsin highway. In addition to planning and design, Canfield has led a series of meetings and workshops to build consensus for the U.S. 10 and WIS 114 corridor studies.

Canfield also is a frequent speaker at the Society of Women Engineers' "Engineering Tomorrow's Careers" summer camp for high school girls. She is a professional adviser for high school and college students and was co-chair of the 2006 Great Lakes Regional, where more than 350 students and faculty from 15 universities competed in steel bridge and concrete canoe competitions.



Katharine Duitsman
Felsburg Holt & Ullevig
Centennial, Colo.

Duitsman is a rising talent at Felsburg Holt & Ullevig, where she specializes in engineering solutions to traffic congestion. A transportation engineer, she is primarily focused on I-225, a highway serving the Denver metro area and a primary route to and from Denver International Airport.

She is part of a team working to widen a segment of I-225 and extend light rail in the corridor. Duitsman is also a member of the I-225/Colfax Interchange project team, which is designing improvements for commuters who need access to a nearby regional medical hub and local businesses, schools and neighborhoods.

She also participates in Girls Exploring Science, Technology, Engineering and Math.



Ryan Sisson
Tsiouvaras Simmons
Holderness
Greenwood Village, Colo.

A member of the firm's transportation engineering team, Sisson works with clients throughout Colorado, New Mexico and Arizona, including the Colorado Department of Transportation (CDOT), the New Mexico Department of Transportation and others.

He recently completed plans for a box culvert extension and Saint Anthony's Falls Energy Dissipator on State Highway 392, the first design of its kind for CDOT. He filled multiple roles on the project, including project manager, structural/hydraulic/roadway design engineer and drafting technician.

He also participates in Engineers Without Borders and the Institute of Transportation Engineers.

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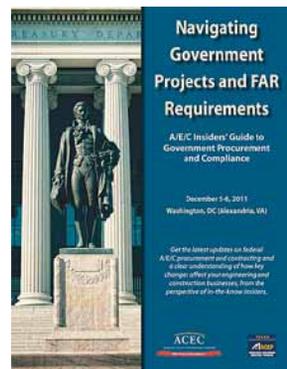
Online Education for Design and Construction

Firms Brace for Tougher Government Acquisition And Compliance Rules

Engineering firms engaged in federal projects must confront several recent changes to federal regulations and guidelines, including procurement integrity requirements, certification of overhead rates and environmental rules. Among the areas of increased oversight and enforcement are federally funded transportation projects. ACEC has long advocated for more consistency among states regarding Federal Acquisition Regulation (FAR) rules governing federal-aid projects.

Several provisions in FAR Part 31 stand to impact design firms that do business with the federal government, such as following the cost accounting standards set forth in the regulations and limitations on federal contractors for recovery of ordinary business expenses.

Robert Boyer, CH2M HILL vice president and former NAVFAC procurement officer, and Wayne Owens, CPA, T. Wayne Owens & Associates, will discuss the application of these rules as part of a new course, *Navigating Government Projects and FAR Requirements*,



which gives engineering firm principals an inside look at government procurement and compliance. The course will be offered Dec. 5 and 6 in Alexandria, Va. To register, visit www.acec.org/education/eventDetails.cfm?eventID=1304.

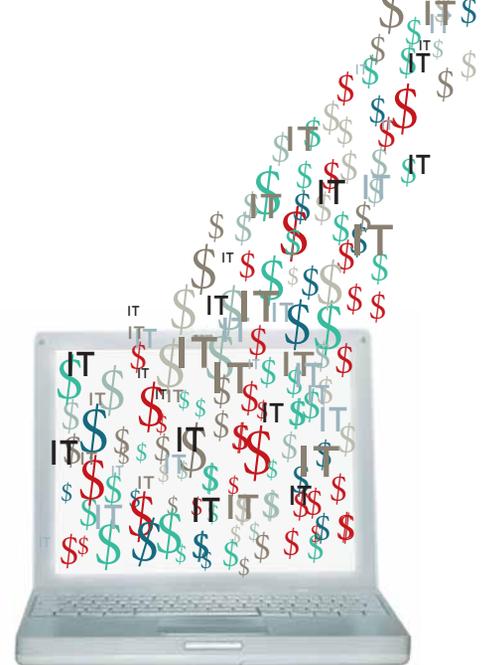
ACEC Member Firms Share Ideas on Vital Finance and IT Issues

Given today's volatile economy and challenging business climate, it's understandable why firms would be concerned about core operational issues. What's the right finance and information technology (IT) strategy for improved business efficiency? How can we achieve success? ACEC's Finance and Information Technology Forums aim to answer these and other questions. Featuring focused groups of finance and IT professionals from ACEC Member Firms, the forums present best practices and provide a collegial environment for professionals to problem-solve and network.

Key topics addressed by the Finance Forum include organizational challenges, the latest AASHTO Guide and FAR requirements, General Accounting rules, 401(k)s, incentive compensation, and mobile workforce and technology tools. On the IT side,

participants discuss integral and evolving business systems, including Citrix and VDI, unified communications, system optimizing, machine/user management/application and AutoCAD/BIM/Civil 3D updates, SharePoint, general network technologies and member benchmarking surveys.

Where does your firm stand on these issues? ACEC Member Firms may enroll representatives in either forum by contacting Andrew Fort at ACEC at afort@acec.org or by calling 202-683-4330. Membership includes a listserv that allows members to communicate year-round and invitations to annual face-to-face roundtable meetings.



Institute for Sustainable Infrastructure and Harvard Collaborate on Infrastructure Rating System

The ACEC-sponsored Institute for Sustainable Infrastructure (ISI) and the Zofnass Program for Sustainable Infrastructure at the Harvard Graduate School of Design will collaborate as part of a new partnership in support of sustainable infrastructure.

The move merges ISI's EnvISION and a rating tool developed by the Harvard Graduate School of Design onto a common platform.

For its part, ISI will look to integrate the tool into design projects across North America and will look to Harvard programs for in-depth research to support its objectives. For more about the collaboration, log on to www.sustainableinfrastructure.org.



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

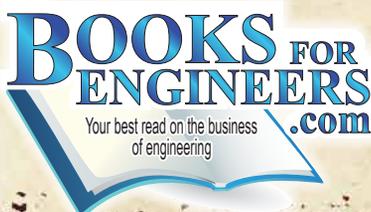
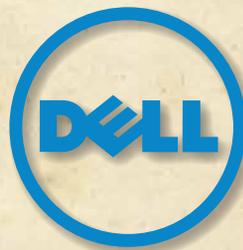
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Navigating the Dodd-Frank Act and Performance-Based Compensation

A Special Report From the ACEC Retirement Trust

The Dodd-Frank Wall Street Reform and Consumer Protection Act was enacted July 21, 2010, to address the 2008 meltdown of the financial industry. Dodd-Frank continues to be a work in progress, with more than 385 rules required and just 21 final rules in place. The evolving nature of the legislation means affected companies must navigate a changing landscape of requirements.

Two requirements that stand to have the most impact on A/E firm business through the end of this year and into 2012 include the so-called “say-on-pay” (SOP) and new “executive disclosure” rules.

Say-on-Pay: Approving Executive Pay

- **Rule:** Public companies were required to hold their first SOP vote in the first shareholder meeting on or after Jan. 21, 2011. A SOP vote is an advisory vote asking shareholders to approve the compensation a company pays its named executive officers. A SOP vote must occur at least every three years, but shareholders are also allowed to vote on having the SOP vote more frequently. Although advisory in nature, failed SOP votes will send strong signals to a company’s board of directors that executive compensation is excessive and could lead to shareholder derivative suits if adjustments are not made.
- **2011 Impact:** The 2011 proxy season saw shareholders generally electing to hold SOP votes annually. In addition, proxy advisers have been active in recommending negative SOP votes. Many of those recommendations have had a meaningful impact on shareholders’ votes. Every company that failed to receive at least a majority approval of its SOP vote previously received a negative recommendation from a proxy adviser. Proxy advisers have indicated that the most important basis for a favorable recommendation are a company’s “pay-for-performance” policies.

- **Planning Tips:** The results of an SOP vote can be strongly influenced by proxy adviser recommendations. Public companies should seek positive recommendations from proxy advisers. To do so, companies should provide proxy advisers with the necessary information to support the company’s executive compensation structure. It is important to remember that advisers can make mistakes, and the company should challenge mistakes and request any necessary adjustments be made to the recommendations.

Executive Disclosures

- **Rule:** Dodd-Frank imposes two new disclosure requirements regarding executive compensation: (1) disclosure of “pay-for-performance” and (2) the ratio of the CEO’s total annual compensation compared with the median total compensation of all employees other than the CEO. The SEC should establish rules regarding these disclosures sometime between now and December 2011.
- **2011 Impact:** Even though the SEC has not adopted the CEO pay ratio rules yet, the “pay-for-performance” theory played heavily into the recommendations made by proxy advisers on SOP votes.
- **Planning Tips:** Companies should begin gathering the necessary data to calculate the CEO pay ratio. Furthermore, companies should request that proxy advisers provide information regarding their individual performance measures for “pay-for-performance.” Including proper disclosures will likely be vital to receiving a favorable recommendation from proxy advisers.

Final 162(m) Regulations And Performance-Based Compensation

- **Rule:** IRC Section 162(m) limits the total annual deduction a publicly traded

company may take with respect to compensation paid to a “covered employee” to \$1 million. “Performance-based compensation” is exempt from this limit. Properly structured equity awards, including stock options and stock appreciation rights (SARs), can qualify as performance-based compensation.

- **IRS Clarification:** Securities laws require that equity plans subject to shareholder approval must set forth an aggregate limit for the number of stock options or SARs that may be awarded. Proposed regulations issued by the IRS clarify that to qualify as performance-based compensation, the plan must contain a maximum limit on the number of stock options or SARs that may be awarded per employee. An aggregate limit is not sufficient, and the per-employee limit must be submitted to the shareholders in connection with shareholders’ approval of the plan. Comments on the proposed regulations were due Sept. 22. Public companies should consider adding per-employee limits to their plans to the extent such awards are to qualify as performance-based compensation.

In addition to meeting the requirements of Dodd-Frank, public companies seeking to take advantage of the performance-based compensation exception should also be aware of recent IRS guidance issued with respect to stock options and stock appreciation rights. These rules, together with the “say-on-pay” and “executive disclosure” rules of Dodd-Frank, pose a number of new requirements for which publicly held companies should be planning.



This article is provided by the ACEC Retirement Trust for educational purposes only, and is not intended to constitute legal or financial advice. Please consult your attorney or financial adviser for more information.

On The Move

STV Group, Inc., appointed **Dominick M. Servedio** executive chairman and **Milo E. Riverso** president and CEO. Servedio, who served as chairman and CEO for the past decade, will remain chair of the board of directors. Riverso, who served as president and chief operating officer for the past two years, will assume responsibility for the firm's day-to-day operations.

Pennoni Associates announced several appointments as part of a corporate realignment following its acquisition of Patton Harris Rust & Associates (PHR+A). **Charles Perry**, former PHR+A president, was named senior vice president and COO; **Nelson Shaffer**, executive vice president and former COO, was named chief administrative officer. The firm also appointed seven new regional vice presidents: **Andrew Bennett**, Pennsylvania North & West; **Ron Moore**, Delaware, Maryland and Washington, D.C.; **David Pennoni**, Philadelphia Metro/Southern New Jersey; **Susan Wolford**, Virginia; **David Lowdermilk**, Transportation; and **Andrew Pennoni**, Inspection and Testing.

The Michael Baker Corporation announced the following appointments: **G. John Kurgan** was appointed COO; **Michael J. Zugay** was appointed chief administrative officer, adding to his current responsibilities of executive vice president and chief financial officer; and **Dale Spaulding** was named president responsible for services for the state of New York. **Mohan Singh** was named vice president and senior director within the firm's federal business line.

Parsons appointed **Brian P. O'Kane** senior vice president and infrastructure division manager. He will oversee all global business activities within Parsons' infrastructure division.

Richmond, Va.-based **H&A Architects & Engineers** appointed **Benjamin Lilly** senior vice president. He also serves as director of embassy programs. Human Resources Director **Patricia Davison** was promoted to vice president.

Jim Meads and **Joe Meads** are now the sole owners of **Sain Associates**. The

announcement, part of a planned succession, follows the recent retirement of former CEO Randy Sain. Jim Meads is Sain's president and CEO, and Joe Meads is senior vice president. Also at the firm, **Vann Rutledge**, who was appointed vice president and corporate secretary/treasurer, also serves as controller. **Becky White** was appointed vice president and principal in charge of transportation and environmental planning projects.

Gannett Fleming promoted **John W. Kovacs** to senior vice president and Midwest region director. **Jonathan W. Sink** was named vice president and serves as senior geotechnical manager and assistant director of operations for the firm's Florida Geotechnical Group. **Thomas G. Zink** was named a vice president and serves as bridge practice manager for the firm's Northeast region and as deputy director of transportation for its New Jersey operations. **Thomas P. Daley** was named vice president. Based in the firm's Newton, Mass., office, Daley is a senior project manager responsible for managing the New England transportation practice.



Dominick M. Servedio



Milo E. Riverso



Charles Perry



Nelson Shaffer



G. John Kurgan



Michael J. Zugay



Dale Spaulding



Mohan Singh



Brian P. O'Kane



Jim Meads



Joe Meads

Members in the News

Welcome New Member Firms

ACEC/Arizona

Site Consultants, Inc., Tempe

ACEC/California

Boyd Consulting Services, San Juan Capistrano

CL Surveying and Mapping, Rancho Cucamonga

Coleman Engineering, Inc., Roseville

M.G. Wittgraf and Associates, Bakersfield

Parc Civil, Inc., Oceanside

SoundEarth Strategies California, Inc., Stockton

Structural Designs, El Dorado Hills

The "G" Crew (TGC), Glendale

WRECO, Walnut Creek

ACEC/Florida

Faulkner Engineering Services, Inc., Tampa

Lochrane Engineering, Inc., Orlando

Meskel & Associates Engineering, PLLC, Jacksonville

Wantman Group, Inc., West Palm Beach

ACEC/Georgia

Galarraga Engineering, PC, Suwanee

Kambill Engineering, Snellville

Robert and Company, Atlanta

ACEC/Idaho

Ruen-Yeager & Associates, Inc., Coeur d'Alene

ACEC/Illinois

Petrocon Engineering Testing Labs, LLC, Belleville

ACEC/Indiana

Cornerstone Engineering, Inc., Indianapolis

Indianapolis Testing Lab, Indianapolis

ACEC/Kentucky

Austin Engineering, Inc., Paducah

Short Engineering, LLC, Versailles

ACEC/Louisiana

Integrated Logistical Support, Inc., New Orleans

Royal Engineers and Consultants, LLC, New Orleans

Strategic Planning Associates, LLC, Metairie

TRC Companies, Inc., Baton Rouge

ACEC/Maryland

David Myers & Associates, LLC, Salisbury

Hoffman Borowski and Associates, Timonium

J.K. Datta Consultants, Inc., Baltimore

Kumi Construction Management Corporation (KCM), Baltimore

Shah & Associates, Inc., Timonium

Transtech Engineering Consultants, Inc., Columbia

ACEC/Massachusetts

Doyle Engineering, Inc., Waltham

ACEC/Metropolitan Washington
Chu and Gassman, Washington, D.C.

Ecology and Environment, Inc., Arlington, Va.

Project Management Services, Inc., Rockville, Md.

Weston Solutions, Inc., Washington, D.C.

ACEC/Michigan

BETA CAE Systems USA, Inc., Farmington Hills

Geo Precision Services, Inc., Rives Junction

ACEC/Mississippi

Airport Development Group, Inc., Jackson

Carpenter Engineering, Inc., Vicksburg

Lang Engineering, LLC, Hattiesburg

Mid-South Consulting, Inc. (MSC), Jackson

ACEC/Missouri

BFA, Inc., Washington

CM Engineering, Inc., Columbia

EPIC Systems, Inc., Saint Louis

Losli Engineering, LLC, Saint Charles

Thompson Design Consultants, PC, Kansas City

ACEC/New Mexico

First Americans, LLC, Espanola

Hands Engineering, Santa Fe

Renaissance Engineering, LLC, Albuquerque

ACEC/New York

Clifford Dias, PE, PC, New York

VRX, Inc., New York

ACEC/North Carolina

ColeJenest & Stone, Charlotte

Jamestown Engineering Group, Inc., Jamestown

Lighthouse Engineering, PA, Raleigh

Pabst & Hilburn, PA, Raleigh

Teeter Engineering Group, PA, Charlotte

ACEC/Ohio

Barr & Prevost, Columbus

Jedson Engineering, Inc., Milford

ACEC/Oklahoma

Gonzalez-De La Garza & Associates, Oklahoma City

J C Engineering, PC, Owasso

Jackson & Jackson Engineering, Oklahoma City

NewTran Solutions, Tulsa

ACEC/Oregon

Clearwater Engineering Group, LLC, Bend

SoundEarth Strategies, Inc., Portland

ACEC/Pennsylvania

Taras, LLC, Summit Hill

ACEC/Texas

Architectural Engineering

Diagnostics, LLC, Spring

Atkinson Engineers, Houston

Axxis Building Systems, Inc., Benbrook

Boa Marine Services, Inc., Houston

EBG Engineering, LLC, Dallas

H.J. Gruy and Associates, Inc., Houston

HNB Consulting Engineers, Inc., Dallas

Jorge Perez Consulting Engineers, LLC, McAllen

Kestrel Engineering, Inc., Houston

Mazingo Engineering, Inc., Houston

Mbroh Engineering, Inc., Dallas

Parkin-Perkins-Olsen Consulting Engineering, Inc., Dallas

Sandia Technologies, LLC, Houston

Sanpat Holding, Houston

Schmitz/Lamb Engineers, Houston

Specialized Hazard Services, LLC, Houston

Turbonetics Engineering & Services, Inc., Corpus Christi

ACEC/Virginia

Reynolds-Clark Development, Inc., Greta

ACEC/Washington

C.W. Felice, LLC, Redmond

ACEC/Wisconsin

Himalayan Consultants, LLC, Germantown

Zepnick Solutions, Inc., Green Bay

ACEC/Wyoming

Lowham Walsh Engineering & Environmental Services, LLC, Lander

Awards

Candy Toler, executive director of the American Council of Engineering Companies of Tennessee, was recently named Association Executive of the Year by the Tennessee Society of Association Executives, the highest honor awarded by the statewide organization.

During her tenure, Toler has increased participation for her organizations' Day on the Hill by 50 percent and helped ACEC/Tennessee achieve its annual ACEC/PAC goal for seven consecutive years through 2010. Toler also served on the ACEC 2008-09 Executive Committee as the NAECE president.

The award recognizes individuals who exemplify the very best in association management and play an active role in civic and community affairs.



Candy Toler

Calendar of Events

NOVEMBER

30 The Electric Utility Industry: Where's It Going? The Black & Veatch Survey (online seminar)

14 Keeping Clients for Life (online seminar)

DECEMBER

5-6 Navigating Government Projects and FAR Requirements, Alexandria, Va.

6 Top Legal Concepts Every Engineer Should Know (online seminar)

7 Marcellus Shale Gas Development: the Market and the Challenges (online seminar)

13 Show Me the Green: Using Appraisal and Finance Techniques to Get Your Green Projects Going (online seminar)

MARCH

9-10 ACEC/Wisconsin Transportation Improvement Conference, Milwaukee

APRIL

15-18 ACEC Annual Convention and Legislative Summit, Washington, D.C.

JUNE

22-23 ACEC/Virginia 2012 Annual Conference, Wintergreen, Va.

To sign up for ACEC online seminars, go to www.acec.org/education.

Additional information on all ACEC activities is available at www.acec.org.

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There were 20,638 copies of *Engineering Inc.* published for September/October 2011 issue; the average for the preceding 12 months was 19,729. The paid/requested outside county mail subscriptions for the September/October 2011 issue were 19,435; the average for the preceding 12 months was 18,857. The other classes mailed through USPS for the September/October 2011 issue were 753; the average for the preceding 12 months was 540. Total distribution for the September/October 2011 issue was 20,188; the average for the preceding 12 months was 19,397. Copies of *Engineering Inc.* that were not distributed during the September/October 2011 issue (office use, leftovers) was 450 and the average number of copies not distributed during the preceding 12 months (office use, leftovers) was 332. The percent paid/requested circulation for the September/October 2011 issue was 96%. The average percent paid/requested circulation for the preceding 12 months was 97%.

PSMJ | Resources, Inc.®

PSMJ congratulates the following clients for these recently closed transactions:



FSC Architects and Engineers of Yellowknife, NWT upon its sale to Stantec, Inc. of Edmonton, Alberta



Technicon Engineering, Inc. of Macon GA upon its sale to Clark Nexsen of Norfolk, VA



Clinard Engineering Associates of Nashville, TN upon its sale to Alfred Benesch of Chicago, IL

PSMJ is proud to have initiated the two transactions in the United States and honored to have served as the exclusive M&A advisor to the shareholders of all three selling companies. We wish them all prosperity and a bright future.

To learn more about putting PSMJ's M&A strength and experience to work for you, contact Susan LeComte at slecomte@psmj.com or 617-965-0055 ext.105.

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Mergers and Acquisitions

Large-Scale Consolidation Continues Despite Domestic M&A Slowdown

BY MIKE CAULEY

As of Sept. 29, 238 global industry mergers and acquisitions (M&A) had been announced, compared with 186 for the same period in 2010, an increase of 28 percent. Of these transactions, 118 involved a U.S.-based seller, almost equal to the 117 domestic deals for the same period last year.

Compare that against this year's domestic M&A activity, which through July had tracked up to 12 percent compared with last year. Taken together, these trends indicate a clear slowdown in domestic M&A activity.

In August and September, we saw the following (ACEC Member Firms in bold):

- **CH2M HILL** (Englewood, Colo.) announced its intent

to acquire global infrastructure planning and design firm **Halcrow** (London);

- **Tetra Tech** (Pasadena, Calif.) signed a definitive agreement to acquire Department of State consulting firm PRO-telligent (Arlington, Va.) and mining and industrial process engineering firm Metalica Consultores, S.A. (Santiago, Chile);
- **CDM** (Cambridge, Mass.) acquired environmental science and engineering consultancy E3 Consulting (Brisbane, Australia);
- **Stantec** (Edmonton, Alberta, Canada) signed a letter of intent to acquire transportation infrastructure consulting firm **ENTRAN** (Lexington, Ky.) and multi-disciplinary consulting firm

FSC Architects & Engineers (Yellowknife, Northwest Territory, Canada);

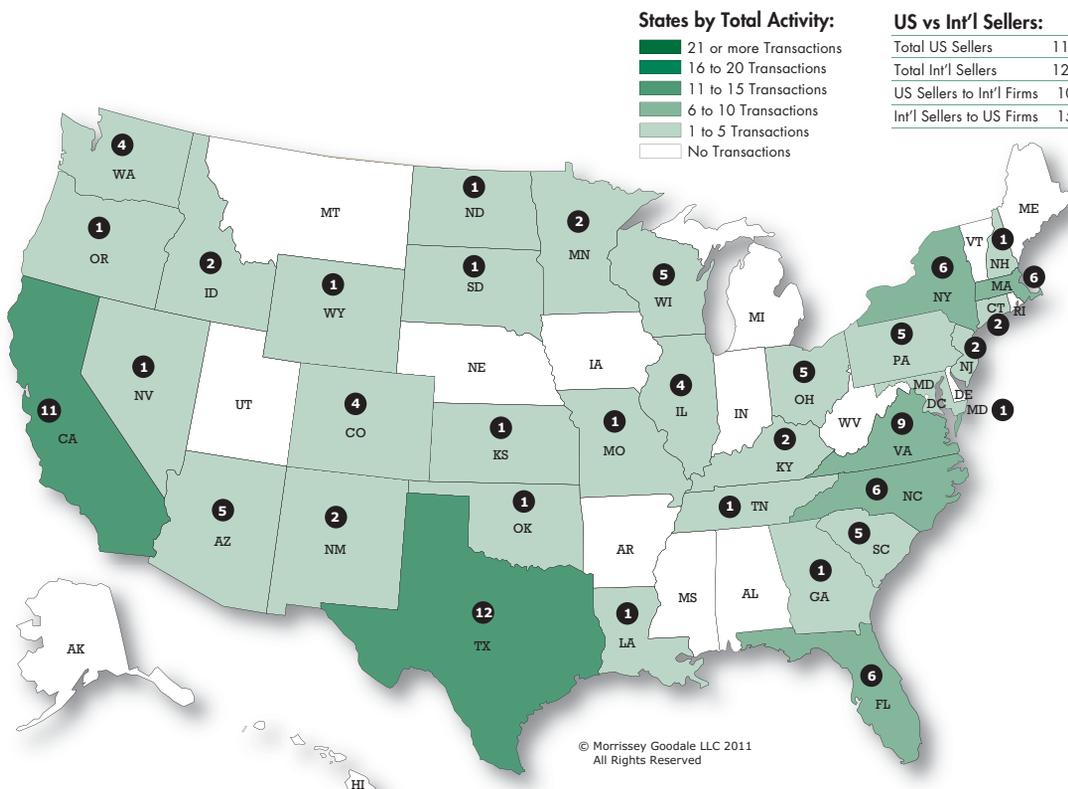
- **TRC Companies** (Lowell, Mass.) acquired environmental consulting firm The Payne Firm (Cincinnati, Ohio);
- **Terracon Consultants** (Olathe, Kan.) acquired building forensics engineering firm Dressler Consulting Engineers (Overland Park, Kan.);
- **WSP SELLS** (Briarcliff Manor, N.Y.) acquired hydraulic engineering firm WAZ Engineering (Holly Springs, N.C.);
- **Vanasse Hangen Brustlin (VHB)** (Watertown, Mass.) merged with transportation planning, traffic engineering and research firm Eng-Wong, Taub & Associates

(New York City);

- **Manhard Consulting** (Vernon Hills, Ill.) joined forces with civil, sanitary environmental and municipal engineering firm **Cowhey, Gudmundson, Leder** (Itasca, Ill.).

Larger firms continue to use M&A to improve their geographic footprint, add more diverse services and widen their client mix and/or increase bench strength. M&A plays a critical role in improving competitive advantage for many firms. Some use M&A to add resources and scale. Others contemplate selling to a larger firm to reap benefits through changed ownership and increased staff. Still others pursue M&A to exploit the void between smaller and larger firms.

2011 Merger and Acquisition Sales Activity Through Sept. 29, 2011



To view live up-to-date versions of the M&A heat maps that accompany this article and to see a list of the buyers and sellers in each state, go to www.morrisseygoodale.com.

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¹Renewal rate based on average year-over-year ACEC Life/Health Trust persistency metrics.

²Network statistic based on GeoAccess information and UnitedHealthcare standard network access mileage criteria, 2010.