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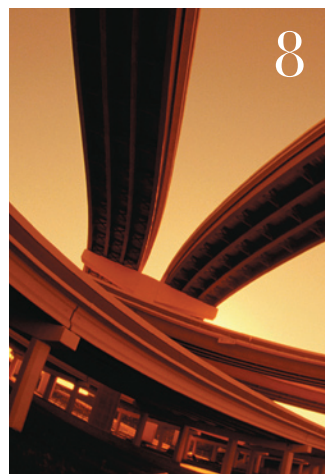


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## 2008 EEA: History in the Making

The 42nd Annual Engineering Excellence Awards (EEA) once again reaffirmed the remarkable impact our profession has on the quality of life we enjoy.

Magnusson Klemencic's Olympic Sculpture Park in downtown Seattle won the Grand Conceptor Award as the year's best engineering triumph for its imaginative example of restorative engineering.

The new University of Phoenix Stadium, home of the NFL's Arizona Cardinals, features a revolutionary movable 9,500-ton playing field that can be wheeled from under the dome to the outdoors for access to natural sunlight and rain.



The new Kay Bailey Hutchison Desalination Facilities in El Paso, Texas, taps vast brackish groundwater from beneath the desert floor and converts it into drinking water.

The new Springfield (Va.) Interchange decongests what was perhaps the nation's worst traffic clog.

For a complete wrap-up of EEA winners, see page 25.

This edition of *Engineering*

*Inc.* also features reports on how Member Firms are using strategic mergers and acquisitions to boost market share; how they are enhancing employee morale; and the latest in marketing and branding techniques.

A new Coalitions page highlights the achievements of ACEC's coalition partners; this edition features the Council of American Structural Engineers, the Council of Professional Surveyors and the Council of American Mechanical & Electrical Engineers.

Orrin B. MacMurray  
ACEC Chairman

David A. Raymond  
ACEC President & CEO

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## Member Firms Make *Fortune's* List of 'Best Companies to Work For'

Three ACEC Member Firms—CH2M HILL, David Evans and Associates, Inc. and Kimley-Horn & Associates—recently were named to *Fortune* magazine's 2008 list of "100 Best Companies to Work For."

More than 400 companies participated in the annual survey, which polls employees at the nation's largest companies about their work environment, including questions about executive management, job satisfaction and workplace camaraderie. Participating companies also are evaluated for diversity, compensation and quality of employee benefit programs.

Kimley-Horn & Associates, an engineering and land-planning firm out of Cary, N.C., was ranked No. 38. *Fortune* commends it for a wide range of attributes, including a diverse project portfolio and the freedom it provides employees. The firm also was recognized for encouraging employees to pursue their individual career goals.

John Atz, the firm's senior vice president and principal regional leader, says it's Kimley-Horn's vision that makes it special. "Kimley-Horn is a special place to work because we all have an interest in the success of the firm," he says. "Whether it is through a shared vision that inspires folks, an open communication policy that informs staff, a bonus program for all employees that rewards performance or a generous retirement plan that ensures a financial legacy, we all see how we can contribute and be recognized."

At No. 54 on this year's survey was Englewood, Colo.-based engineering and construction services firm CH2M HILL. CH2M HILL was commended for its competitive compensation and benefits packages, open communications practices and employee ownership culture, where employees own 100 percent of company stock.

"We owe a huge thanks to every one of our employees whose collective efforts truly make CH2M HILL a great place to work," says Chairman and CEO Ralph Peterson.

"This ranking is a testament to the core values that our firm strives for every day by respecting our colleagues, delivering value for our clients and sharing the rewards of success with our employee owners."

At No. 73, the final ACEC member on the list was Portland, Ore.-based engineering consultancy David Evans and Associates. Another employee-owned

firm, David Evans was noted for its overtime pay structure, which allows all employees—salaried and hourly—to earn additional pay. Salaried workers reportedly are paid hourly wages and hourly workers are paid time and a half.

David Evans, the company's founder and chairman, says keeping employees happy and motivated is the key to its success. "Only by continuously trying to make our company the best place to work can we retain the outstanding, creative and dedicated people we have," Evans said.

## School-Based Engineering Efforts Target Younger Learners

Buoyed by concerns that the United States needs to produce more engineering graduates to compete with those from other increasingly industrialized nations—China and India, to name two—several organizations and even some concerned corporations are launching programs designed to attract young students, some as early as elementary school, to the engineering profession.

The American Society for Engineering Education (ASEE)—which released a report recently stating that 62 percent of engineering degrees awarded at U.S. colleges and universities in 2006 went to foreign nationals, up from 50 percent in 2000—maintains a website dedicated to attracting more youths to the profession.

Dubbed ASEE K12 Engineering Center, the online destination is a portal for students and educators with access to a range of engineering resources, including a free publication about why K–12 engineering education is important, a national database of public-private outreach campaigns supporting engineering education in public schools, and a free guidebook to engineering education for high school students, among other tools.

Simulation and modeling software provider Autodesk offers a link to its Student Engineering and Design Community, where teachers and aspiring engineers can download free graphics and design programs, often scaled-down versions of technologies

used by professional engineers.

Siemens, the worldwide engineering and technology provider, offers a link to its Global Opportunities in Product Lifecycle Management program, a massive grant and educational effort that reportedly reaches some 956,603 students annually at 9,355 participating educational institutions.

ASEE is not alone in its efforts.

A longtime proponent of better science, technology, engineering and mathematics (STEM) instruction in schools, chip-maker Intel Corp. has sought to generate interest through its Engineering is Elementary curriculum, a collection of technical courses created by the Boston-based Museum of Science. That program now is in use by 500 schools across the country.

The Society of Women Engineers offers dozens of foundation-funded programs, school-based activities, contests and special regional events intended to pique girls' interest in engineering as a potential career.

And Project Lead the Way, a nonprofit organization that supports better STEM education in schools, offers a suite of design and technical courses that K–12 schools can integrate throughout their standard curriculum.

The jury still is out on whether these programs are having their desired effect. But ASEE plans to release a study in conjunction with the National Research Council later this year examining the impact of such efforts during primary school.



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Because Terra is a risk-retention group, Terra gives all its profits to its owner/

insureds (on a tax-deferred, capital-gains basis). While past performance may not be an indicator of future performance, it's worth noting that Terra's stock value has achieved a new-record high for *79 consecutive calendar quarters*; i.e., every quarter since the company became a risk-retention group in 1988.

**TRUTH:** Those who bought stock at \$10 a share in 1988 can now redeem it for more than \$240 a share. Subtract their capital gain from what they've paid for their PL insurance since 1988, and their net cost is \$0. Or, in some cases, a negative (which in that case is something to be very positive about).

Terra has been so profitable because it's well managed and because its owner/insureds are well managed, too. **TRUTH:** By applying unique risk-management programs developed and/or underwritten by Terra, Terra owner/insureds experience a phenomenally low claim frequency; on average, about one claim per \$28 million in revenue they generate per year. And that's *all* claims, about half of which are closed at *no cost* to our owner/insureds.

Terra provides a variety of prospectively rated and retro plans to firms that bill from \$500,000 to more than \$100 million per year. If your civil engineering firm is in that category and you're ready for a rewardingly different approach to PL insurance, visit Terra's website, e-mail, or call.



# Falling Dollar Turns U.S. Into Low-Cost Producer

By Joe Salimando

Recent business headlines tell a sad story: “A 16-Year Housing Slump?” asks *Baron’s*. “Debt Reckoning: U.S. Receives a Margin Call,” notes the *Wall Street Journal*.

Such bleak prognostications bring to mind the old saying, “It’s always darkest just before it turns pitch black.”

But it’s not all doom and gloom for market watchers. As the U.S. dollar continues to lose value (see *Figure 1*), there is another side of the declining coin:

- A weaker dollar makes it increasingly difficult for multinational and U.S.-based firms to financially justify the offshoring of jobs;
- U.S.-based construction—including the revitalization of existing buildings and even the reuse of abandoned industrial facilities—starts to look like a much smarter play;
- Foreign governments are holding vast amounts of U.S. dollar-denominated securities. This is especially true for countries such as China and for Middle Eastern oil exporters. For them, it’s quickly becoming a game of “use it or lose it”—a fact that could lead to increased investment on U.S. shores.

## United States vs. China

The United States might be en route to becoming a better manufacturing location than China. Why?

- China has allowed its currency to appreciate versus the U.S. dollar;
- The decision to peg the

renminbi’s value relative to the dollar is hurting the Chinese economy, stimulating increased inflation (8.7 percent on an annual basis in February 2008);

- China has struggled in the manufacturing game of late—problems often linked to a talent shortage, particularly in engineering sectors. “The main drawback of Chinese applicants for engineering jobs...is the educational system’s bias toward theory,” states a recent article in *The McKinsey Quarterly*. “Compared with engineering graduates in Europe and North America, who work in teams to achieve practical solutions, Chinese students get little practical experience in projects or teamwork.

“The result of these differences is that China’s pool of young engineers considered suitable for work in multinationals is...no larger than the United Kingdom’s.”



CORBIS/JUPITER IMAGES

## Why Build in the United States?

There is an aging workforce in the United States, and some would argue we have our own skill/talent problems. But we also have a major advantage over other countries: immi-

gration, legal and illegal. The United States attracts people and, in its own way, welcomes those who want to succeed.

That advantage, taken with the dollar’s decline, makes the prospect of building on our shores advantageous.

The Japanese started construction on four new U.S. auto assembly plants in the past three years. Korean auto manufacturer Kia recently decided to build a plant in Georgia. The India-based IT services firm Tata Consultancy Services (TCS) just opened a new facility in Cincinnati, Ohio, which includes 200,000 square feet of office space and can accommodate up to 1,000 TCS associates, most of whom will be locally hired from the region and its universities.

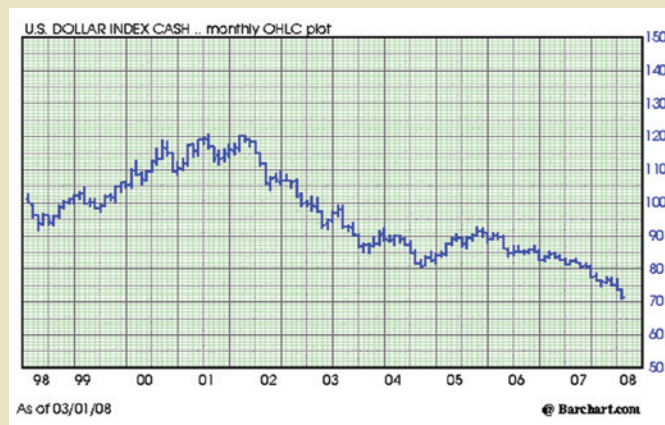
In March, German auto manufacturer BMW announced plans to cut its German workforce by 7.5 percent over two years, moving production to the United States, where car output is expected to rise by 50 percent between 2008 and 2012 (thanks, in large part, to a \$750 million expansion of the company’s South Carolina plant).

An Associated Press report detailing the decisions at BMW quoted one source as saying, “This is completely driven by the plunge in the dollar. It is untenable to produce at a much higher cost in Germany.”

*Joe Salimando writes frequently on the construction industry at [www.eleblog.com](http://www.eleblog.com). He can be reached at [ecdortcom@gmail.com](mailto:ecdortcom@gmail.com).*

**FIGURE 1**

The U.S. dollar index, a measure of the dollar’s value against several foreign currencies, has declined from approximately 120 in 2001–2002 to the low 70s in early 2008.



Source: [www.barchart.com](http://www.barchart.com).

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## BUDGET RESOLUTION TO RESTORE HIGHWAY FUNDS; H-1B VISA LEGISLATION INTRODUCED; ACEC ADVOCATES FOR INCREASED WATER FUNDING

### Budget Resolutions Would Restore Highway Funds

A budget shortfall in the Highway Trust Fund that threatens funding for 2009 highway projects would be remedied under provisions in U.S. House- and Senate-passed budget plans.

Though both resolutions passed by narrow margins, the votes handed ACEC and its coalition allies an early win in what will be a yearlong fight to ensure that federal surface transportation programs are fully funded in 2009.

ACEC members converged on Capitol Hill during the Annual Convention in late April to lobby House and Senate offices in support of the trust-fund fix and other industry issues.



"Congress needs to act this year if we're to head off a serious shortfall in the Highway Trust Fund that could reduce funding to the states by 32 percent," said ACEC President Dave Raymond. "The votes in March are only the first steps in the process—the tough part remains ahead of us as we attempt to secure these budget recommendations into law."

Both resolutions provide additional funding to restore the F.Y. 2009 shortfall, ensuring that highway and transit projects are funded at the SAFETEA-LU-authorized levels of \$43.2 billion and \$10.3 billion, respectively. The Senate resolution goes a step further, adding an extra \$4 billion for new transportation spending as part of a future economic stimulus package.

House and Senate negotiators are working to hammer out a compromise budget resolution. Though not binding, the budget resolution provides House and Senate appropriators with a blueprint for spending priorities in 2009.

### ACEC-Backed H-1B Visa Legislation Introduced

ACEC supports two legislative measures that would increase the availability of H-1B visas used by U.S. companies to retain and recruit highly skilled talent.

H.R. 5630 and H.R. 5642, introduced by Reps. Gabrielle Giffords (D-Ariz.) and Lamar Smith (R-Texas), respectively, seek to significantly increase the current yearly cap of 65,000 H-1B visas. The Giffords bill (H.R. 5630) would raise the visa cap to 130,000 in 2009 and 180,000 in subsequent years based on demand. Smith, the senior Republican on the U.S. House Judiciary Committee, wants to create short-term relief for H-1B visa applicants by increasing the cap to 195,000 for fiscal years 2008 and 2009.

The need for legislative relief was underscored in April when the U.S. Bureau of Citizenship and Immigration Services received approximately 200,000 applications for the 65,000 available H-1B visas for 2009. As it did last year, the agency will use a lottery system to choose H-1B recipients.

ACEC continues to advocate for more H-1B visas to address the persistent shortage of engineers in the United States. The Council also is helping guide legislation through Congress that would provide financial aid incentives to encourage more young people to pursue engineering degrees.



Rep. Gabrielle Giffords (D-Ariz.)



Rep. Lamar Smith (R-Texas)

AP PHOTO/SCOTT APPLEWHITE

ISSUES ON THE MOVE	WHAT'S NEXT
Budget plans to restore highway funds	House, Senate appropriators to act in spring
Contractor tax enforcement legislation	Possible floor action before summer
A/E retainage issue	FAR Council to respond before summer

### ACEC Advocates for Increased Water Funding

ACEC President Dave Raymond urged U.S. House and Senate appropriators to restore funding for the Clean Water State Revolving Fund (SRF) to \$1.35 billion for F.Y. 2009.

He called on Congress to reject President Bush's budget request of \$555 million, which represents a cut of \$134 million from the current level and a reduction of more than 50 percent of what the SRF traditionally received for several years before F.Y. 2005.

In letters to the appropriators, Raymond noted that "the need for increased investment in our nation's 16,000 wastewater systems is tremendous and has been well-documented," citing EPA's most recent "needs" survey, which reported that publicly owned treatment plants will need \$202 billion in capital investments over a 20-year period to remain in service.

"The nation has made significant progress in enhancing water quality since passage of the Clean Water Act in 1972," Raymond said. "If we are to continue this trend and realize the goals set forth in the act, it is critical that Congress take action to restore funding to the SRF program. Congress needs to reject this request and restore appropriate funding."



ACEC President Dave Raymond

### New Development in Effort to Repeal 3 Percent Withholding

As ACEC and its coalition allies continue efforts to repeal the 3 percent withholding mandate, the House of Representatives has adopted legislation addressing contractors and their tax liabilities.

The House approved the Contracting and Tax Accountability Act of 2007 (H.R. 4881), introduced by Rep. Brad Ellsworth (D-Ind.), which would bar any individual or companies that have seriously delinquent federal tax debt from contracting with the federal government. This would apply to anyone with an outstanding tax debt for which a lien has been filed, unless the taxpayer has agreed on a payment plan with the IRS or is appealing the debt.

Under H.R. 4881, potential contractors would be required to certify that they do not have tax debt, and would have to authorize the IRS to share certain information about the contractor's tax status with federal agencies.

ACEC and its allies in the contracting community are closely monitoring the progress of this legislation and are advocating the full repeal of 3 percent withholding before any new requirements are imposed.

In addition, ACEC has submitted comments to the U.S. Treasury Department highlighting serious problems with the implementation of 3 percent withholding, such as whether withholding can be passed on from prime contractors to subcontractors, and how withholding will interact with prompt-pay laws.

### Small Firm Council Members Weigh In on Retainage; SBA to Review Practice

The Small Business Administration's (SBA's) Office of Advocacy is proceeding with a review of retainage policies following input from ACEC members concerned about the effect on smaller firms.

Retainage is a practice followed by federal agencies where a percentage of payment—typically 10 percent—is withheld from federal A/E contracts. In some instances, the retainage fee is not released until the related project has been completed, which often can take years. The practice can have a negative effect on a firm's cash flow, especially small firms.

"Retainage requirements pose a significant burden on small firms," said ACEC Small Firm Council Chairman Gregg Ten Eyck of Denver-based Leonard Rice Engineers, Inc. "The law is unclear about when retainage fees will be released, resulting in an interest-free loan to the federal agencies at small firms' expense. We look forward to working with SBA and the [Federal Acquisition Regulatory Council (FAR)] to address this issue."

The SBA's Regulator Review and Reform Initiative was established to identify issues for federal agency review to determine if they are outdated, ineffective, duplicative or overly complex. As part of the initiative, SBA has requested that the FAR Council review the practice of withholding retainage fees and reduce their impact on A/E firms.



ACEC Small Firm Council Chairman Gregg Ten Eyck

### FOR MORE NEWS

For weekly legislative news, visit ACEC's *Last Word* online at [www.acec.org](http://www.acec.org).









# A VERY **BIG** DEAL

By Samuel Greengard

**Strategic mergers  
and acquisitions help  
boost market share**

**T**ony Franceschini knows mergers. As president and chief executive officer of Stantec, Inc., he's spent the better part of 15 years inking the kinds of deals that have helped turn his half-century-old firm into a multinational engineering powerhouse with more than \$600 million in sales and 8,500 employees.

MICHEL S. SALLERON/GETTY IMAGES



"Acquisitions have accounted for roughly two-thirds of our growth since the mid-1990s," says Franceschini. "It has been a very successful strategy."

One not without risk. The business world is littered with the shipwreck debris of mergers and acquisitions (M&As) gone awry. Like a jeweler in search of the perfect diamond, he says, successful corporate marriages rely on attention to detail.

"The reality is that a deal must amount to more than the sum of its parts," explains Franceschini. "The goal is to create an equation where one plus one equals three."

Even in the shadow of the recent economic downturn, many companies are eyeing M&A deals—either as buyer or seller.

"Acquiring companies often are looking for increased revenue streams, while those positioning themselves to be sold usually are looking to leverage their expertise into greater financial and business opportunities," says Andrew J. Sherman, a senior partner at the Washington, D.C.-based law firm of Dickstein Shapiro.

Whereas a spate of high-profile M&As in media and technology sectors have come under fire for creating a monopolistic culture responsible for limiting customer options, increased merger activity in the engineering industry isn't likely to yield the same criticisms, says Ray Kogan, president of Kogan & Company, a McLean, Va.-based consulting firm.

"Within any local or regional market, there are plenty—many engineering firm principals would say, too many—firms that are qualified to do almost any project. Consolidation in the industry through mergers and acquisitions may tend to 'prune the tree' of those firms that might not otherwise survive in the long term, but I don't believe that any consumers of engineering services will be hurt at all. In fact, typically acquisitions result in a stronger firm that can bring more capabilities to any given project or client."

Though it's difficult to get an accurate read on the raw number of M&A transactions under way, industry-watchers say

**A**cquisitions have accounted for roughly two-thirds of our growth since the mid-1990s. It has been a very successful strategy.

TONY FRANCESCHINI  
STANTEC, INC.



deals are likely to continue in substantial numbers in the months and years ahead.

But these transactions can quickly spell doom if they are not conceived and executed carefully, legally and sensibly.

There are, among other things, strategic issues to mull, cultural factors to weigh, financial matters to examine and human resources concerns—including pay and roles—to address. Even when companies engage in the required up-front analysis and conduct comprehensive due diligence, there's no assurance the deal will work.

"There are a lot of unknown variables," says Kogan. "There are no guarantees."

**T**ypically acquisitions result in a stronger firm that can bring more capabilities to any project or client.

RAY KOGAN  
KOGAN & COMPANY



### Building on Success

Mergers and acquisitions have long played an important role in the business world. Buying, selling and combining assets enables organizations to grow, while improving their market position and financial standing.

Rather than create a new product, service or business line from the ground up, acquisitions provide a gateway to instant competition. Well-orchestrated deals can fill gaps and address niches that would otherwise require intensive recruiting, training and management—not to mention steep acquisition costs.

Colvin T. Matheson, managing director of Matheson Financial Advisors in Falls Church, Va., says a number of factors have contributed to the recent flurry of M&A activity. A shortage of talent and a backlog of projects have made companies more conscious of acquiring talent by purchasing other companies. And an unusually fragmented market has fueled demand for strategic pieces that can help a company boost its market share and revenues.

Age is another contributing factor, says Matheson. Many principals of small engineering shops are approaching retirement. Though they'd like nothing more than to cash out and begin enjoying their golden years, many are finding that the next generation of leaders often lacks the capital or experience to confidently take the reins.

"There are a lot of cases where there's a real talent deficit," says Matheson. The second tier of executives is adept at managing projects, but it isn't ready to run a firm. It comes down to a basic question: Do we close the doors or look for someone who can buy us out?

At Miami-based PBS&J, President Todd Kenner says he receives two to three inquiries a week—almost all from small firms looking for a suitor. The firm also receives an occasional feeler from a larger company interested in exploring a merger or acquisition.

Kenner says PBS&J has completed 18 deals since 1990 and "looked at" hundreds of firms over that span. "One of the

# Considering a Merger or Acquisition? Here's a Must-Do List:

**Identify a strategic need.** Technical expertise, footprint, geography, market share, customer reach and growth opportunities are just a few factors to consider.

**Identify suitors or acquisition targets.** Examine the industry, including competitors, to discover potential opportunities and matches.

**Understand the culture.** Once you've identified a potential buyer or seller, take a close look at the culture, including attitudes, work styles and philosophy. It's essential to observe work patterns up close and personal, and address any yellow flags up front. An incompatible culture is a deal breaker.

**Know your potential partner.** Understand the assets, liabilities, expertise, intellectual capital and customer list that the merger or acquisition partner brings to the table—and how the deal makes sense strategically.

**Don't skimp on due diligence.** Spend the required time—often 90 days or more—poring over the potential partner's finances, legal and compliance records, HR practices, IT systems and more.

**Make sure you've got the valuation right.** Examine cash flow, P&L statements, project backlogs, billings and client lists.

If you're a seller, begin preparing for a sale 18 to 24 months ahead. Ensure that you have accrual-based financial statements, industry-standard software and strong project management systems in place.

**Frame a sound agreement.** It's important to look beyond the basics. An agreement must cover exit strategies for principals, contingency clauses, severance policies and a host of other issues.

**Integrate companies and systems.** Pay and benefits, job titles and organizational charts, workflow and IT systems all are key elements of building a successful enterprise.

**Monitor performance and make necessary adjustments.** It's important to give people the space to do their work—without feeling as though Big Brother is watching. It's also necessary to keep an eye on key metrics and business practices and understand where to make tweaks and changes.

**Don't be afraid to admit to a mistake.** Unfortunately, some deals just don't work. If it's clear that certain employees aren't fitting in, or that a deal isn't paying dividends, it might be prudent to pull the plug—or at least look at restructuring options. It's unlikely that things will improve by themselves.



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Engineering Sustainable Solutions







biggest drivers is the ability to design, build and operate projects in-house," he says.

Firms with engineering roots now are looking outward to expand their portfolio of offerings. Over the last few years, a spate of companies has moved beyond core engineering functionality and into architecture and construction. "Executives at larger companies understand that it is one of the biggest drivers for building market share, increasing revenues and expanding a market presence," notes Kenner.

So far, his firm has done a good job of delivering on that promise. PBS&J has emerged as an industry heavyweight—partly due to its ability to absorb strategically significant firms in the right geographic areas. That list includes EIP Associates, a 100-person environmental and urban planning services firm with headquarters in Sacramento, Calif., and approximately \$12 million in revenues (October 2007); and Eco-Science, a 22-employee Raleigh, N.C.-based firm specializing in environmental services (March 2008).

Still, not every deal has lived up to expectations. Kenner says as many as one-third of the company's acquisitions have fallen short of pre-established goals, though these transactions mostly took place in the 1990s.

"It's important to learn from mistakes and get better over time," he says. PBS&J has amassed a team of experts that can hit the ground running when a potential deal arises. The team includes M&A experts from finance, human resources, operations, legal, compliance and other areas. Their objective: to "get a fix on things quickly and efficiently," says Kenner.

### Gaining an Edge

The first step in any merger or acquisition is ensuring a strategic fit. It's relatively straightforward to determine whether a target company has potential to reinforce or expand the core business and enhance shareholder value. An engineering firm might seek to add architectural and construction services to its product portfolio, or address fast-growing niche areas, such as water infrastructure or environmental services. It also might target key geographies.

Far more difficult is determining how to mesh two distinctly different cultures. "Culture is a soft and somewhat intangible thing that often boils down to trusting your gut," says Matheson. "If business goals don't match and the companies have incompatible styles, the merger or acquisition is doomed."

Dealmakers have to think about company values, attitudes, work habits, ethics, principles, goals and pay and benefits. They also have to engage in face-to-face meetings

and give executives time to observe activities and business processes.

"Understanding culture can feel like trying to nail Jell-O to a wall," says Stantec's Franceschini. He advises companies to create a list of no more than a dozen of the most crucial elements and to use some type of metric or scorecard to track compatibility. "Unless we feel that we can operate as a single team with a balanced organizational structure, we pass on the deal," he says. "If the cultural fit isn't there, it really doesn't matter how good the strategic or financial aspects appear to be."

No merger or acquisition can be justified by a balance sheet alone. "You're buying a lot of intangibles, including intellectual capital," says Franceschini. Firms must deal with people and client contacts. If executives don't buy into the approach or they've already got one foot out the door, the deal is in trouble.

But if those pieces fall into place and executives like what they see, they can move from exploration into the due diligence phase of the process.

Due diligence involves scrutinizing the suitor's finances, IT systems, project management practices, human resources, compliance and other factors. It's vital to understand how competing networks and enterprise applications would merge.

An acquiring company also must set a valuation for the target firm. Getting a fix on assets, a firm's inventory of projects and cash flow is paramount.

"When you acquire an engineering firm, you really are buying existing contracts and a backlog of work," says Matheson. It is important to know where the target company stands on various projects. "Whether they are ahead of schedule, on schedule or behind schedule determines how income is measured and it can skew the valuation significantly. The acquiring firm can wind up overpaying or underpaying for the target company."

There also is a need to address compensation and benefits. An acquiring firm usually wants to retain the principals of the target company for three years or longer or have them sign non-compete agreements,

**E**xecutives at larger companies understand that [M&As are] one of the biggest drivers for building market share, increasing revenue and expanding a market presence.

TODD KENNER  
PBS&J



explains Kogan. If these executives decide to leave early, they might be required to forfeit part of their cash or compensation from the sale. Acquiring firms also must adjust the pay structure for former principals to reflect employee as opposed to ownership status. The change means former owners might have to go without bonuses, perks and equity they were accustomed to in the past.

The due diligence period, which usually lasts 90 to 120 days, is an intense and critical time for these transactions. Internal teams and swarms of outside accountants, attorneys and consultants likely will descend on target firms to pore over every aspect of the business. In the wake of devastating accounting scandals, from Enron to WorldCom, firms are increasingly wary of suspect bookkeeping, and the evaluation process can sometimes be tedious. A majority of large engineering firms are privately owned, which means they aren't always subject to the same accounting standards as public companies. Still, financial review and valuation is a difficult and often time-consuming endeavor.

"It can become extremely nit-picky and impersonal," cautions Matheson. "The buyer and seller must be significantly committed to the deal in order for it to survive."

### Constructing a Future

Once cultural analysis and due diligence are complete and companies sign an agree-

ment, there remains the onerous task of structuring the financing (usually through operational cash, borrowing, stock or some combination of these methods) and creating the new business.

The process can prove both exhilarating and terrifying as elements of risk and opportunity collide.

"It's all about moving forward in a way that minimizes disruptions, distractions and obstacles," says Gordon Meurer, vice president at Lakewood, Colo.-based Kennedy/Jenks Consultants.

Meurer speaks from experience. In June 2007, his 25-person firm, Meurer & Associates, was bought by Kennedy/Jenks. "We had been talking about succession planning and opportunities for our staff. We had examined how we could best serve the Denver market better," says Meurer. "Although I'm 62, I still have energy and enthusiasm. I want to continue to work. Selling the company wasn't a retirement strategy. It was a way to maximize the company's value and expertise."

When Kennedy/Jenks approached him in fall 2005, Meurer already had begun weighing his options, including a sale to someone who would keep the 28-year-old company independent.

**I**t's all about moving forward in a way that minimizes disruptions, distractions and obstacles.

GORDON C. MEURER  
KENNEDY/JENKS CONSULTANTS



But the executive team ultimately agreed that an external acquisition would pay greater dividends. After a couple of years of discussions, meetings, negotiations and due diligence (including nine months of cultural analysis), the companies decided to make a deal.

The two entities faced myriad challenges, from getting used to different procedural systems, to morphing accounting methods, to syncing human resources processes and handling other business functions. But, so far, the marriage has worked. "One of the keys was that Kennedy/Jenks welcomed our input and didn't minimize or marginalize our experience," says Meurer. "Although the deal was an acquisition, it really felt like a merger between two equals."

Today, the former Meurer & Associates office operates independently and retains its own name, which is widely known in Colorado. "What really has changed," says Meurer, "is our ability to work with clients that we, as a smaller firm, weren't equipped to handle. Employees and customers have recognized that the new structure is beneficial. Our people have been able to grow and expand their careers beyond what would have been possible as a separate company."

Although some firms, such as Kennedy/Jenks, allow acquisitions to operate under their existing name, others firms do not. Stantec and PBS&J, for example, absorb sellers and fully integrate them into their respective organizations—usually within a few months. "We believe in a single company with a single mission. Autonomous operations run contrary to this approach," says PBS&J's Kenner.

Despite enormous challenges and all the risks, M&As remain viable options for many engineering firms. Says Sherman: "If you do your homework, manage the process and have realistic expectations, a merger or acquisition can deliver impressive results. It can create new business opportunities and income streams within a much shorter time frame." ■

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





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It's  
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About

By Kim Fernandez

# Attitude

Involvement, communication keys to improving workplace morale

**H**ave concerns about your benefits package? Got an idea for a corporate outing? Fed up with having to wear a tie to work? Just plain unhappy?

If you work at Sargent & Lundy, your boss wants to hear about it. When the Chicago-based firm decided several years ago to create a place online where employees could make suggestions about how to improve life at the office, the thinking was simple: Motivate your employees by making them feel valued.

Company executives say the feedback—good or bad—helps them shape the firm's culture. What's more, at a time where good talent is increasingly hard to find, it enables them to stamp out potential problems before they can sap morale.

"Having your employees engaged is critical," says Pamela Petrich, Sargent &

Lundy's vice president of human resources. "There's a lot of employee involvement. This is a tool that's very much at the forefront of the upper management of the company. And employees are encouraged to use it."

A lot of engineers might be wary of openly criticizing their employer, especially

when those in charge might hear about it. But Sargent & Lundy wants its people to say what's on their mind.

"Engaged employees are employees who are motivated, who care about their jobs and who care about their employers," says Petrich. "And we're constantly looking for ways to keep our employees connected to the organization."

That, experts say, is the right move, especially as competition for top-flight engineers heats up throughout the industry.

"There's a major talent shortage, especially in engineering and the sciences," says Beverly Kaye, author of *Love 'Em or Lose 'Em: Getting Good People to Stay* and *Up Is Not the Only Way: A Guide to Developing Workforce Talent*.

"Any company that thinks the atmosphere or the culture of the company doesn't count is making a big mistake,"

# Morale Builders

Consultant and author Beverly Kaye says taking steps to make employees feel appreciated can go miles in the attitude and morale department. Here are a few inexpensive ideas about how to show appreciation to your staff:

- Give free tickets to sports or entertainment events.
- Give employees gift cards to local merchants or popular eateries.
- Allow employees to participate in the hiring process for a new manager.
- Give subscriptions to favorite magazines and have them sent to employees' homes.

she says. "It is the major differentiator between one company and another. And the company that keeps its most talented engineers probably is going to win in the long run."

## Making Connections

Throughout the industry, more firms are introducing programs to help new and veteran workers feel a kinship with their employers.

At Portland, Ore.-based David Evans and Associates—recently named to *Fortune* magazine's 2008 list of the "100 Best Companies to Work For"—executives consider employee satisfaction a key indicator of the firm's overall success.

"Employee satisfaction is at the forefront," says Michelle Willis, the firm's associate director of human resources. "That, in and of itself, says that we value how our employees feel about the organization."

Barry Barber, human resources director at Kimley-Horn and Associates, Inc., which also made *Fortune's* list, says there is no substitute for good talent.

"From the beginning, our culture has centered on providing an environment for our people to flourish," says Barber.

In order to recruit and retain talented employees, Kimley-Horn offers several benefits, including employee ownership.

"We are privately owned by the practicing professionals of the firm," explains

Barber. "Approximately 12 percent of our employees are owners and no one owns more than 5 percent of the shares. We have a proven ownership transition plan that ensures financial stability and provides opportunities for new owners."

At David Evans, executives show their appreciation by paying employees for every hour worked. Salaried employees receive their agreed upon wage, plus a straight rate after 40 hours worked and hourly employees get time and a half.

Firms also are finding ways for employees to help one another.

At Malcolm Pirnie, a White Plains, N.Y.-based firm, mentoring programs to foster camaraderie have been implemented. An online system matches employees with mentors and provides the opportunity for both parties to offer feedback on their experiences.

"People get their greatest career growth through experiences, through projects and through people on the job," says Al Brockwell, Malcolm Pirnie's director of talent and organization development. "We use mentoring in conjunction with classroom training."

David Evans employees are eligible for DEA University. The two-year-old pro-

**E**ngaged employees are employees who are motivated, who care about their jobs and who care about their employers.

PAMELA PETRICH  
SARGENT & LUNDY



**F**rom the beginning, our culture has centered on providing an environment for our people to flourish.

BARRY BARBER  
KIMLEY-HORN AND ASSOCIATES



gram offers special brown bag training sessions, where staff has an opportunity to discuss everything from striking a good work-life balance to technical skills.

The idea: to create an environment within the firm where everyone eventually is learning from everyone else.

Put a few strong minds together in a room and good things are bound to happen, says Kaye. "Having smart peers who other engineers can problem solve with and hang out with is important. The more I can provide my team opportunities to work in tandem with one another—help one another and be creative with one another—the greater chance I have of building a positive climate."

## Climbing the Ladder

Experts agree: It is crucial to foster an environment where success is rewarded with opportunities for advancement.

Gary Topchik, author of *Managing Workplace Negativity*, says keeping the lines of communication open along the chain of command helps employees get ahead. It also helps project managers keep team members on task and on point.

"The manager has to figure out what makes each employee tick," says Topchik. "What is the motivational factor to get that person to perform better than they're currently performing? Is it more responsibility? Is it being more visible? Working independently? Learning something new? Once they find out what it is, if they can supply it, it'll really help with motivation."

Sargent & Lundy, for example, is



developing a database that will give each employee access to information about his or her own customized career path within the organization. When the system launches, it will provide each employee with his or her own personalized virtual space with access to training modules and internal and external links, including information to help them get ahead relative to their individual experiences and goals.

Malcolm Pirnie employees have access to similar assessments through the company's talent management program. "It really helps people to have a clear idea of what their various career path options are in the company," says Brockwell.

David Evans and Malcolm Pirnie also periodically survey their employees, using an outside company to solicit ideas and feedback. Executives say the surveys, though basic, are an affirmation to employees that their opinions matter.

Willis says much of what David Evans has done in recent years to improve workplace morale is the result of employee feedback.

The surveys "help to guide our activities so that we know where to put our efforts

and where we might be lagging behind," she says.

"There are a number of things that are ingrained in our company that acknowledge that people have challenges on the job and at home," adds Malcolm Pirnie's Brockwell. "The work/life balance is important to us, and we know that their happiness and contentment certainly comes through in the work they do for our clients."

Some managers often are reluctant to ask for feedback for fear that the demands—a heftier paycheck, for one—will be too high. But that isn't often the case, says Kaye.

"A major step for managers to take is a very simple one: ask your people why they stay with the company and what you can do to keep them," says Kaye. "Ask them individually. Listen hard to what they say, and provide for things you can do within your control."

Petrich agrees. In her experience, small changes and initiatives go a long way toward keeping employees happy.

"Someone said they'd like to create a book club," she says. "We looked at our budget and went ahead to start a book club. We have all kinds of athletic programs that we sponsor and support. We have a Toastmasters group. When the Chicago Public Schools were looking for science fair judges, we opened that up to our employees. So they go to various schools to judge science fairs, and they can say, 'I represent Sargent & Lundy and I'm an engineer.'"

It's the little things, she says, that give employees a strong sense of ownership in the firm, and a sense that their managers value their input beyond their area of expertise.

"The more motivated the workforce is, the more productive they'll be, and the better your bottom-line results," says Topchik. "It's well worth trying to get people to be motivated in the workforce. It's a huge payoff." ■

*Kim Fernandez is a freelance business writer living in Bethesda, Md.*

**T**here are a number of things that are ingrained in our company that acknowledge that people have challenges on the job and at home.

AL BROCKWELL  
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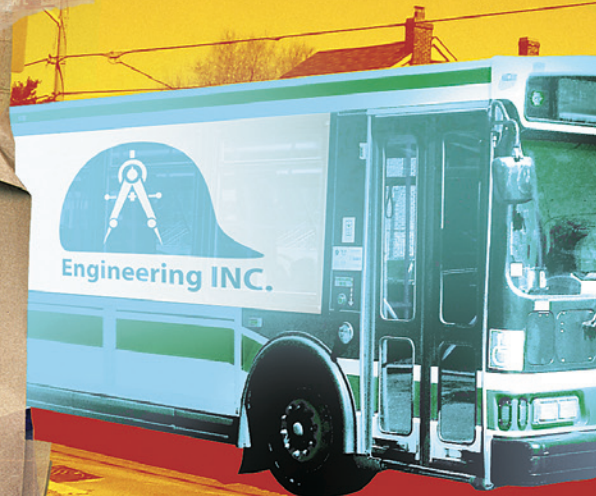
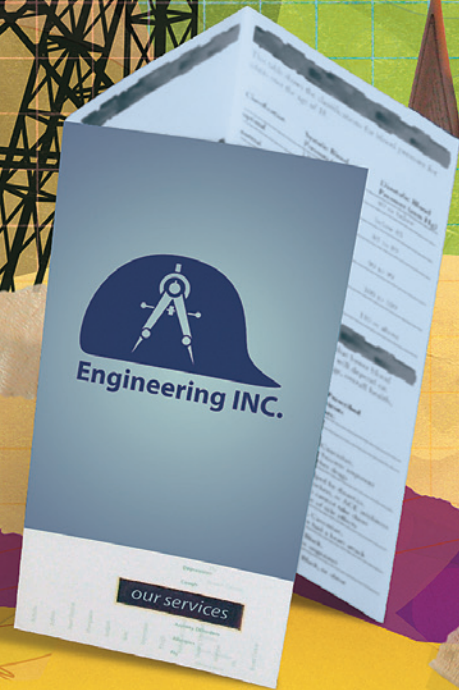
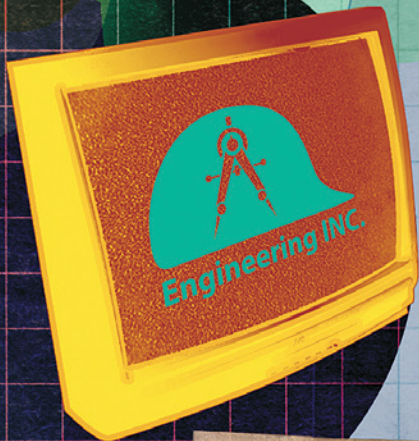
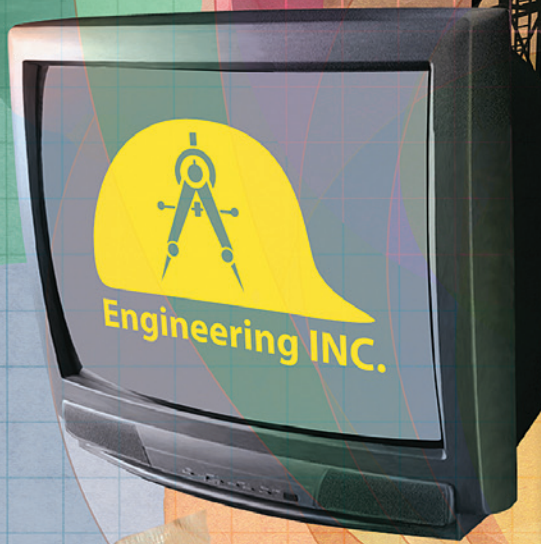
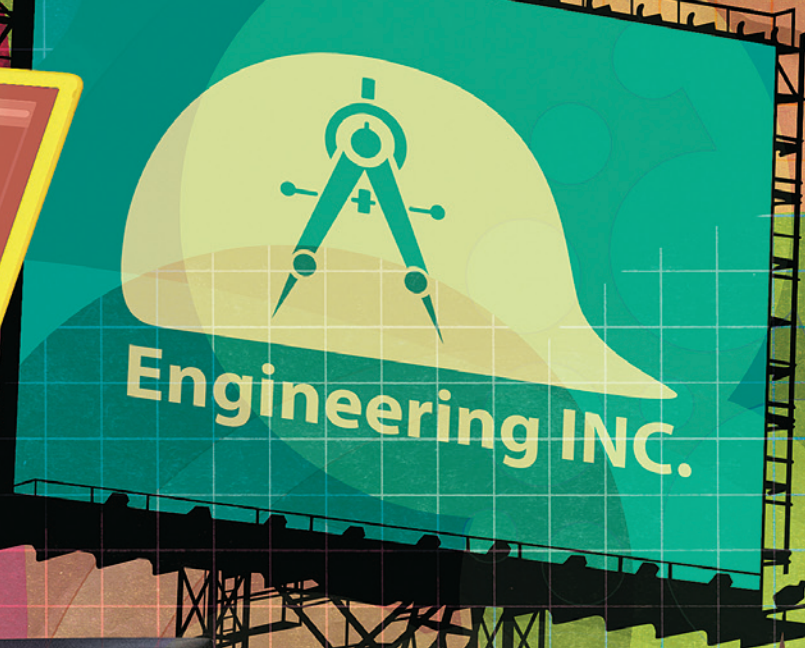
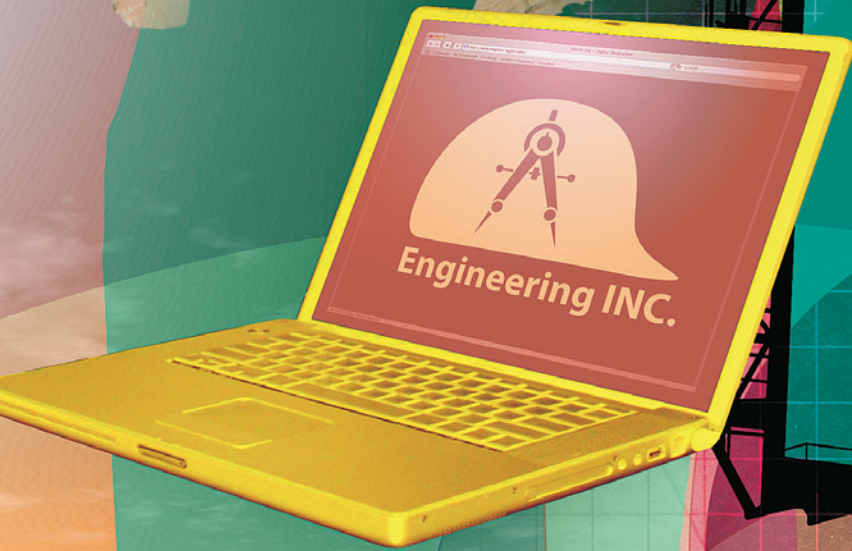
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# BRAND WITH ING POWER

By Jim Parsons

## Firms realize the benefits of effective marketing

**A**s a rule, engineers pride themselves on their ability to tackle any type of technical challenge, whether it's creating a new structure or infrastructure system, or striking the ideal balance between natural and built environments. ■ But that same enthusiasm often doesn't carry over to marketing—an important and potentially lucrative practice that all too often is overshadowed by ongoing projects. ■ The aversion to marketing is not merely a reflection of engineers' preference for logical "left-brain" work. Although most firms recognize and appreciate the marketing-equals-more business mantra, they often consider these efforts low-priority chores to be performed when time permits, or if a major project opportunity arises.

"The challenge is making marketing a priority," says marketing consultant Mel Lester of The Business Edge in Shawsville, Va. "As long as you see it as overtime or an extra-time activity, you will never be good at it."

Another source of reluctance stems from the common association of marketing with sales and the negative perception of cold calls, suspicious motives, and the resilience necessary to rebound from unsuccessful sales pitches.

Other firms see little need—if any—to market themselves, due to the overall prosperity of the past several years, a consistent client base or the belief that they simply are above such practices.

"When business is good and you have a big backlog, the perceived importance of marketing diminishes," says Lester.

Though the ultimate objective of marketing is to generate new business, it brings value in other ways, too.

"Marketing is a carefully defined and crafted strategy for raising awareness of what a firm is, and what it can do to help clients get the best results," says Donna J.



**M**arketing is a carefully defined and crafted strategy for raising awareness of what a firm is, and what it can do to help clients get the best results.

DONNA J. CORLEW  
SCHNEIDER CORPORATION



Corlew, business development manager for the Schneider Corporation in Indianapolis and president of the Society for Marketing Professional Services. "Without it, there's no way an engineering firm can survive and grow."

Marketing also helps an engineering firm differentiate from its peers, a key factor in a business environment increasingly dominated by price and commoditization.

"As an industry, we've become our own worst enemy in that regard, especially when working for contractors or architects," says Nick Cerro, director of marketing for the C&S Companies in Syracuse, N.Y. "When a client considers everyone equally qualified, you need to convey the experience of working with your firm, and how you can serve them differently—and better."

Another factor that distinguishes effective marketing is its emphasis on long-term, strategic goals, rather than the short-term focus of winning a specific project. It also can help a firm gain immediate visibility in a new geographic area or service market.

"Marketing helps establish and build your brand, and helps you gain recognition of your expertise and capabilities," says Alethea O'Dell, marketing director for San Francisco-based Degenkolb Engineers, "which also spotlights its advocacy on earthquake safety issues as part of its marketing strategy."

Prospective clients aren't the only tar-

gets of a sound marketing strategy. In an age where talent is increasingly hard to come by, engineers also are promoting their profession.

"Given the engineering industry's talent shortage, the image a firm projects will go a long way in its ability to recruit the next generation of engineers," Cerro says. "It also will cultivate a greater appreciation of what the profession offers to society among clients, decision-makers and the public."

### Breaking Down Barriers

That engineering firms often struggle with marketing comes as no surprise to O'Dell.

"On the inside, you're always thinking about your firm, but forget that current and prospective clients are not," she says. "You may have the greatest technical skills in the world, or do something really great. But without marketing, those qualities and accomplishments won't take you anywhere."

Lester agrees, noting that effective marketing boils down to communication—a skill that not all technically minded people have or know how to do well. "There are few practitioners who excel at it, and most others are brought into it grudgingly," he says.

That doesn't mean marketing talents can't be cultivated. Doug Tholo, strategic business development manager for the Howard R. Green Company in Cedar Rapids, Iowa, says personality studies have found that the majority of engineers are honest and caring—"the same traits that are needed to influence somebody to buy something. If engineers feel that they can be themselves in marketing settings, people will trust them."

But, like any project, success requires a significant upfront investment. Poorly executed marketing campaigns often suffer from inconsistency, improper follow-up, mixed or unclear messages and a lack of distinctive elements that make positive, lasting impressions.

"That's why a marketing strategy needs the full buy-in and support of senior management to ensure that it receives the time

and resources necessary to be effective," says Corlew. "You have to have a plan and follow through on it."

Consistency is equally essential for building a bond of trust with customers—even if they aren't customers yet.

"Too many firms respond to a [request for proposal] and expect something to happen overnight," says Tholo. "It won't because the buyers don't know them. Building trust is something that we as an industry don't do extremely well. We tend to be engineers first, and businesspeople second."

### Essentials for Effectiveness

Some look at effective marketing strategies as an exercise in matchmaking—determining how their firm can help clients achieve positive results. That process begins with thoughtful research and assessments.

Winslow "Bud" Johnson, president of Stamford Marketing Group in Stamford, Conn., says, "It means analyzing the market and what it needs; analyzing your services and how well they meet those needs; analyzing your prices to make sure they are competitive, yet profitable; and analyzing promotional tools to select a mix that works best."

**G**iven the industry's talent shortage, the image a firm projects will go a long way in its ability to recruit the next generation of engineers.

NICK CERRO  
C&S COMPANIES



When looking to build an effective marketing plan, the best sources often are customers themselves.

"We learn as much as we can about specific markets and prospective clients, making sure that there's a need in an area where we can provide the best service," says Tholo. "Then we visit those clients and ask open-ended questions about the issues and challenges they're dealing with."

The key, says Tholo, is to be genuine and sincerely interested in what the client has to say. "You want to create an atmosphere where they truly want to talk to you," he explains.

Such conversations are best orchestrated by the firm's senior managers and not business and development staff. "You're there to listen, not sell," says Tholo.

The modern marketer's toolbox contains a virtually unlimited range of "traditional" and "new media" options for positioning a firm's expertise and capturing clients' interests. Tools range from brochures, trade articles, and media relations, to conference papers and presentations, web seminars and sponsorships.

Johnson advises looking to competitors and as far as other industries for clues that might help firms cultivate a distinctive image. "You can learn a lot from, say, the packaged goods industry, or firms that market to entirely different customers or in other parts of the globe," he says.

Some engineering firms also are making use of company websites as a marketing tool, though Johnson says many don't know how to properly gauge its effectiveness.

"Some sites have cluttered designs where the messages get lost, while others are difficult to navigate and contain outdated information," he says. "Websites need constant attention to their look and content in order to attract visitors and get your messages across."

Despite the advent of technology, experts say, there still is no substitute for the personal touch.

"You can't replace the value of face-to-face relationships," Cerro says. "Anything

you can do to educate and interact with people is going to be effective marketing." Many firms, for example, take active roles in their clients' professional organizations, keeping them abreast of important issues and trends.

Good networking also helps with those dreaded "cold calls."

"When you've learned something about a prospective client, either directly or through a third party, it's much easier to 'warm up' that call because you already have a connection," says Corlew.

### Operational Issues

Increasingly, successful marketing of engineering services is a company-wide effort, not the domain of designated business development specialists or client liaisons. Firms are finding ways to integrate marketing with all major business functions, largely because it touches so many different areas—new projects, recruitment, community and stakeholder relations, and professional development, to name a few.

"The days of having marketing separate from operations are over," says Corlew.

Firms can no longer afford for marketing to be an afterthought. "I encourage firms to budget time for marketing activities the same way they budget time for projects," Lester says. "They need to identify specific tasks, monitor time and resources used in performing them, and if a conflict arises, they immediately need to reschedule those tasks."

When business slows, engineering firms should resist the temptation to pare down their marketing efforts and resources in the name of controlling overhead.

"Economic downturns actually provide an ideal opportunity to stand apart from competitors that may be stepping back," O'Dell says.

Marketing cutbacks also risk inconsistency, causing clients to question whether the firm has the stability necessary to be a partner now, or in the future.

"Laying off marketing coordinators will have a negligible impact on the bottom line," says Lester. "What is important is

**T**he best marketing is when clients are talking about you. That's how you make a lasting impression.

ALETHEA O'DELL

DEGENKOLB ENGINEERS



the return firms are getting on that investment, not just the cost of it."

That leads to perhaps the biggest challenge of marketing—establishing a direct correlation to business results. Unfortunately, there are no ready-made measurements available. That's due, in large part, to the individual nature of engineering firms and the inability to control external influences tied to a given project's success.

"It shouldn't just be proposal wins or the number of client call-backs," Cerro says. "Each firm needs to define what success looks like, and devise its own metrics to measure it."

Just as marketing spans an engineering firm's entire operational spectrum, so too should responsibility for its success.

"The business development professional can't do it without a technical person's knowledge," Tholo says. "Everybody plays a role, and the performance indices should be designed to encourage people to work together."

That includes not simply telling clients and customers what you can do, but actually doing it—probably the best marketing tactic of them all. "If you're the best at serving customers before, during and after the sale, success will take care of itself," Lester says.

O'Dell agrees. "The best marketing is when clients are talking about you," she says. "That's how you make a lasting impression." ■

*Jim Parsons is a freelance business writer living in Bristol, Va.*



# ... ENGINEERING DESIGN ...



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ENGINEERING INFRASTRUCTURE SOLUTIONS...FOR A CHANGING WORLD

2008

# AWARD WINNERS

Reach New Heights in Engineering Excellence



From a revolution in stadium design to a state-of-the-art molecular research facility, the achievements of the 2008 Engineering Excellence Award winners reflect the industry's enormous impact on every aspect of life, nationally and worldwide.

ACEC Member Firms entered 158 projects in this year's EEA competition. A 33-member judging panel of industry experts and professionals from across the nation provided comprehensive analysis to determine the top 24 winners—eight Grand Awards, 16 Honor Awards and the “Grand Conceptor Award” for the year's best engineering effort.

Judging criteria included uniqueness and originality; technical, social and economic value; complexity; success of the project in meeting goals; and advancement of a positive public image of engineering excellence.

And the 2008 EEA winners are ...



ACEC 2008 ENGINEERING EXCELLENCE AWARDS

# GRAND CONCEPTOR AWARD

Olympic Sculpture Park, Seattle, Wash.

Magnusson Klemencic Associates—Seattle, Wash.

Creative engineering has transformed a blighted industrial wasteland into a stunningly picturesque urban waterfront in downtown Seattle.

The project team had to overcome soil stability challenges for the 8.5-acre coastal site that rises 40 feet above the original grade. In addition, it had to mitigate contaminants from the site's six decades as an oil storage facility.

More than 200,000 cubic yards of imported soil were strategically placed to form the park's complex elevated levels. Pioneering "decoupled" shoring walls were used to keep soils in place, and subsequently, also comprising a unique capping system to diminish contamination.

An innovative rainwater drainage system redirects runoff to the Puget Sound. A new stabilization buttress in the water reinforces an aging seawall, while the location doubles as a habitat for endangered Chinook salmon.

The new Olympic Sculpture Park features a continuously sloping 2,200-foot Z-shaped path linking three land corridors; each has a distinctive panoramic view. The project's re-created beachfront is the first engineered beach on a major U.S. city waterfront.

Now home to 21 works of art and nature, the park provides a breathtaking public recreation experience, an example of urban artistry and sustainability, and a world-class engineering feat.





# GRANDAWARDS

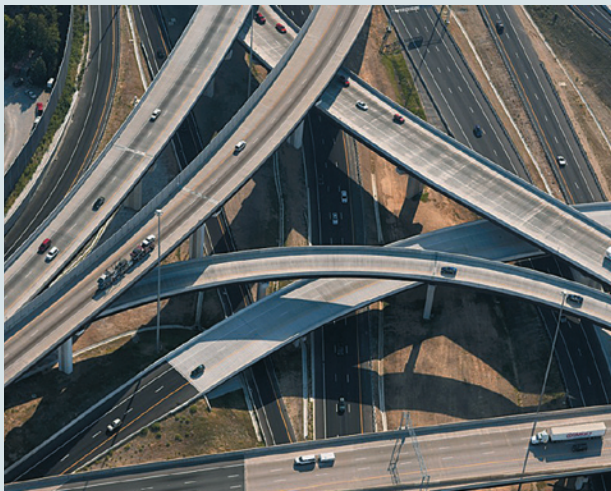


## University of Phoenix Stadium, Glendale, Ariz.

Walter P Moore—Houston, Texas

The futuristic University of Phoenix Stadium, site of this year's NFL Super Bowl, includes North America's first "completely operable" playing field and the first "inclined" retractable roof. The project team designed a distinctive 9,500-ton natural grass playing field that can slide from its game-day position inside the stadium to outside the facility for sunshine and nourishment. When the grass field is outside, the indoor facility becomes a state-of-the-art concert or convention venue.

The stadium's 500,000-square-foot retractable roof allows flexibility for stadium events in air-conditioned comfort or opened to the outdoors. In its first year of operation, the stadium hosted 180 events, including college football's Fiesta Bowl. It has raised the bar for future multi-purpose stadium design.



## I-95/I-395/I-495 Springfield Interchange, Springfield, Va.

HNTB—Arlington, Va.

The new Springfield Interchange replaces a previous traffic junction that became known as one of the nation's worst traffic clogs—tying up more than 300,000 vehicles per day, and yielding the highest accident rate on the Washington-area Capital Beltway.

The project involved widening of roadways, demolition and replacement of 50 bridges, major intersection reconfigurations, design of 15 signalized intersections, and enhancements to six miles of local arterials and streets.

The new interchange accommodates more than 500,000 vehicles a day, with easy traffic flow, faster commutes, and increased safety.



## Cobble Mountain Reservoir Dam Project, Springfield, Mass.

CDM—Wethersfield, Conn.

Valve failure at the Cobble Mountain Reservoir Dam would have been catastrophic: loss of the system's entire water supply—and thus drinking water and fire protection—for the 250,000 residents of Springfield, Mass. and its surrounding communities, as well as likely worker fatalities.

Workers had to be lowered down a 233-foot-deep, 10-by-5-foot air shaft to access the 1900-era reservoir valve system. The project team's design of a mechanical underwater plugging system successfully isolated the valves in the dry. Workers are now able to drain and depressurize the valve, allowing full rehabilitation—all without safety incident or interruption of service.

The effort protects Springfield's water supply and serves as a model for hazardous valve replacements at similar reservoirs nationwide.



# GRAND AWARDS

## U.S. 24 Bridge Rehabilitation Over Rouge River, Dearborn, Mich.

Wade Trim—Taylor, Mich.

The 1930s-era U.S. Route 24 Bridge over the Lower Rouge River in Dearborn was suffering from extensive cracking and substructure movements which would ordinarily require its replacement.

Instead, the project team designed an innovative, alternative approach of installing tensioned steel bars vertically into the original concrete bridge abutments to increase design load. They also installed engineered backfill with biaxial geogrid in horizontal layers to reduce soil pressure against the abutment walls by 75 percent.

The project's innovations saved considerable costs, were completed three months ahead of schedule and avoided significant environmental impairment to the river from construction.



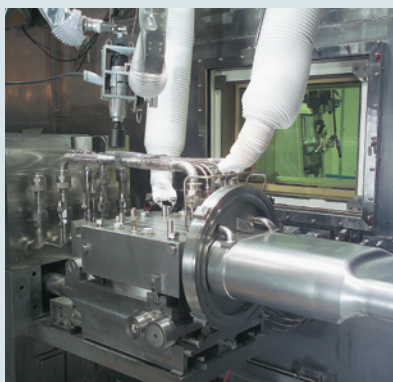
## Spallation Neutron Source Target Hot Cell, Oak Ridge, Tenn.

Merrick & Company—Aurora, Colo.

The Spallation Neutron Source Target Hot Cell facility generates the world's most powerful pulsed neutron beams, which are critical in the advancement of material science and molecular research.

Neutron research helps scientists improve materials used in a multitude of products such as high-temperature superconductors, powerful magnets, aluminum bridge decks and stronger, lighter plastic.

The project team designed the target hot cell—a shielded, confined “operating room” 30 feet high by 14 feet deep and 100 feet long—with walls of 40-inch-thick high-density concrete and a stainless steel liner. It includes a movable intracell shield door and a material transfer system. The structure protects users from intense radiation, and allows confinement and removal of hazardous vapors and radioactive waste.



## Discovery World at Pier Wisconsin, Milwaukee, Wis.

Graef, Anhalt, Schloemer and HGA (Joint Venture)—Milwaukee, Wis.

Seemingly floating above water, the 120,000-square-foot Discovery World at Pier Wisconsin science and technology museum is a gleaming showpiece of structural and mechanical engineering.

The project team created the museum's “floating” illusion by designing a unique Z-frame to slip over pipe piles driven into Lake Michigan to assure structural stability. An aquarium built beneath the lake withstands downward forces as well as hydrostatic pressures of 1,040 pounds-per-square-foot.



The complex also features interactive exhibit areas, performance and digital theaters, exploration laboratories, and a 250-seat lakefront amphitheater. A rolling lawn extending to the lakefront doubles as the ceiling for the underground parking facility and a “green roof” stormwater mitigating system.

## Tacoma Narrows Suspension Bridge, Tacoma, Wash.

Parsons/HNTB (A Joint Venture)—Bellevue, Wash.



The new Tacoma Narrows Suspension Bridge—the second suspension bridge built in the United States in the past 40 years—eases enormous traffic tie-ups, and can withstand

an earthquake of 8 on the Richter scale—a must for the region's high seismic activity.

The project team used a ground-breaking cast-in-place dredged caisson foundation system to achieve extreme support requirements—the equivalent of two 20-story buildings underwater—supporting 510-foot-tall concrete towers.

The bridge also features 5,400 feet of joint-less superstructure, a 2,800-foot main span housing four lanes, and a pedestrian and bicycle path. The lower level is designed to accommodate additional highway expansion in the future.

# HONORAWARDS

## ★ Large Animal Housing and Training Center, Ames, Iowa

Merrick & Company—Aurora, Colo.

A new state-of-the-art animal research facility is a critical weapon against potential bioterrorism. The facilities will be used to study deadly animal pathogens—as five of the six most deadly bio-threat agents worldwide are found in animals.

The design allows scientists and veterinarians to safely conduct research on a variety of endemic and zoonotic diseases—those which are communicable to humans from animals under natural conditions. The new 153,000-square-foot complex features elaborate air-filtration systems, air-tight animal housing quarters, horizontal and vertical containment barriers, flushable flooring systems, special carcass disposal and effluent decontamination systems.



## ★ National Armed Forces Center for the Intrepid, Fort Sam Houston, Texas

Syska Hennessy Group—Fairfax, Va.

A state-of-the-art rehabilitation complex at Fort Sam Houston addresses a serious shortage of facilities available to treat severely injured soldiers from Iraq and Afghanistan.

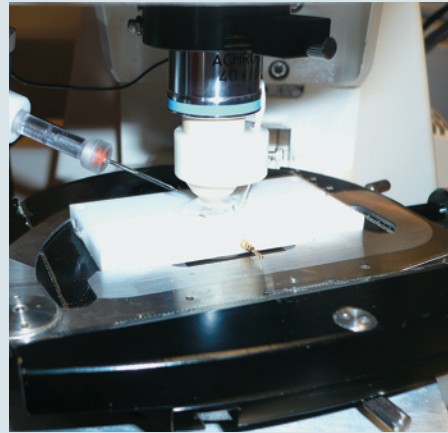
The project team provided mechanical and electrical design for a broad array of leading-edge rehabilitation systems including a computerized gait laboratory, a prosthetics fabrication lab, swimming and wave pools, and a Computer-Assisted Rehabilitation Environment (CAREN)—a 21-foot simulator dome with a 300-degree screen where rehabilitative virtual realities are displayed. Today, the center provides treatment for hundreds of severely wounded soldiers.

## ★ Dr. Hudspeth Ear Cell Laboratory, New York, N.Y.

AKF Engineers—New York, N.Y.

A pioneering marriage of science and engineering has resulted in a state-of-the-art ear research facility that one day may lead to inventions that will eliminate the need for hearing aids.

Ear cells are extremely sensitive and require any advanced research to be performed in an environment free of acoustic or magnetic interference. The project team designed an “isolation” test chamber featuring an inner box—which absorbs ambient noise—and an outer box—which shields magnetic fields. Strin-



gent quietness criteria also required special high-static pressure acoustic air silencers and draft-free ceiling diffusers. The result is a world-class testing chamber that allows scientists to perform experiments that otherwise could not be achieved.



## ★ Eleanor Schonell Bridge, Brisbane, Australia

International Bridge Technologies—San Diego, Calif.

Australia's first bridge solely dedicated to bus, pedestrian, and cycle transportation also provides a critical passage over the Brisbane River connecting Dutton Park and the University of Queensland—previously serviced only by ferry.

The cable-stayed 1,280-foot Eleanor Schonell Bridge features several ecologically sustainable design features, such as solar panels to collect energy for night lighting and the “smart” collection and treatment of storm water. The bridge is a charming addition to the Brisbane region which also eases traffic congestion and reduces vehicle emissions. Motorists no longer have to travel longer routes to and from the university.



## ACEC 2008 ENGINEERING EXCELLENCE AWARDS

# HONORAWARDS

### Overflow Controls for New Jersey Gold Coast, Hoboken, N.J.

CH2M HILL—Parsippany, N.J.

Groundbreaking engineering is eliminating a trash and debris problem from sewer overflows that has plagued new luxury and recreational development along New Jersey's Gold Coast.

The project team's patented screening technology was utilized on 11 sewer system components to eliminate the discharge of debris from the overflows. The components include seven screening facilities, two pressurized vortex separation facilities, two consolidation conduits and other related projects for the 150-year-old system. The result significantly improves water quality along the waterfront without compromising the aesthetic appeal of the riverfront's revitalization.



### Penobscot Narrows Bridge & Observatory, Waldo/Hancock Counties, Maine

FIGG—Denver, Colo.

Maine's first cable-stayed bridge replaces a 75-year-old regional landmark with an eye-catching structure featuring both state-of-the-art cable technology and the world's tallest public bridge observatory.

The project team designed an advanced cable-stay cradle system to simplify long-term maintenance, and a pressurized nitrogen gas system around the stays to inhibit corrosion. The 1,161-foot main span also contains the world's first installation of a strand monitoring system that allows easy and inexpensive force load inspection of the individual cable stays. During its first season of operation, the 420-foot-high observatory attracted more than 72,000 visitors.

### Frederick Douglass-Susan B. Anthony Memorial Bridge, Rochester, N.Y.

Erdman Anthony—Rochester, N.Y.

The new Frederick Douglass-Susan B. Anthony Memorial Bridge provides a majestic landmark to a rapidly developing downtown Rochester skyline.

The new bridge replaces a deteriorating structure with the first true arch bridge in the U.S. It carries I-490 over the Genesee River and several downtown streets, and features a three-rib arch span with 12 braces and a fanned cable arrangement. A new pedestrian walkway is cantilevered over the river, offering sweeping downtown views and connecting to an existing promenade.



The design is enhanced with a subtle lighting that illuminates the arch and cables from the ground up, creating a soft glow that also illumines both the pedestrian walkway and the driving experience.

### Gozzer Ranch Wastewater Treatment System, Coeur d'Alene, Idaho

Welch Comer & Associates—Coeur d'Alene, Idaho



The proposed 350-lot luxury Gozzer Ranch Golf Course development now has a state-of-the-art wastewater treatment facility despite having no access to a municipal system.

The project team designed an effluent reuse system around a filter membrane bio-reactor—the first such reuse permit issued by the state—which treats up to 130,000 gallons per day. No chemicals are used in the treatment process and the effluent is converted into irrigation and landscaping water for the golf course. Activated carbon scrubbers protect the surrounding area from odors. An existing community drainfield also was taken out of service to eliminate a major potential environmental hazard.

# HONORAWARDS

## Kay Bailey Hutchison Desalination Facilities, El Paso, Texas

CDM—Cambridge, Mass./Moreno Cardenas—El Paso, Texas

Groundbreaking engineering has produced North America's largest inland desalination plant to provide an abundant drinking water source to the arid El Paso region.

The 27.5-million-gallon-per-day plant taps vast brackish water from beneath the desert floor and converts it into drinking water using reverse osmosis membranes. A solar-fueled deep-well injection system also deposits concentrated waste steam more than 3,500 feet underground with no adverse environmental impact. The project now serves as a model for other communities seeking sustainable options to meet long-term water supply needs.

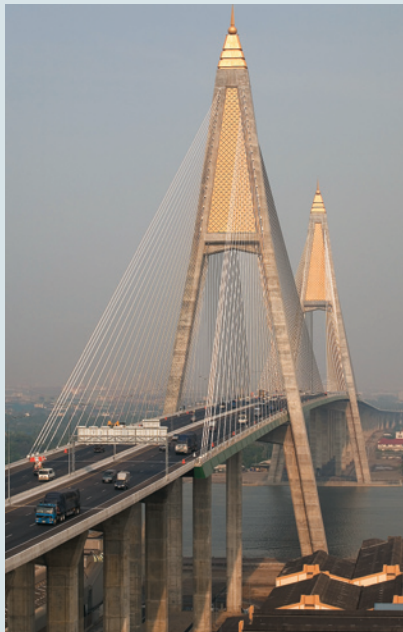


## Chao Phraya River Bridge, Bangkok, Thailand

PB—New York, N.Y.

A majestic new gateway to the city of Bangkok is also Thailand's longest bridge—longer than any cable-stayed bridge in the U.S.

The highly efficient 120-foot-wide superstructure includes two gleaming 613-foot-high A-shaped towers, each topped with a 26-foot-tall gold-colored Thai-styled spire. For longevity and simplicity of maintenance, the design eliminates several commonly used but frequently troublesome bridge components. Labor intensive bearings were replaced by easy-to-service bumpers; in addition, tie-down devices such as steel rods, which require extensive inspection and maintenance, were replaced by concrete counterweights.



## Bradford Woods Wastewater Treatment System, Bloomington, Ind.

Natural Concepts Quality Water Engineering LLC/American Structurepoint, Inc.—Indianapolis, Ind.

An environmentally friendly alternative to a traditional wastewater treatment plant has become an innovative complement for the 2,500-acre Bradford Wood nature preserve, Indiana University's leading international outdoor education park.

Aligning the need to replace an aging wastewater treatment system with the center's dedication to environmental sustainability required the project team to design a wetlands-based system



mimicking the purification process of a natural wetlands. The system includes a subsurface-flow constructed wetland, a vegetated re-circulating gravel filter, and a soil absorption system. In addition to a cost-effective alternative to wastewater treatment, the project also has become a valuable teaching and research tool for the university.



## Saving St. Anne's, Grand Forks, N.D.

Stanley Consultants—Minneapolis, Minn.

The century-old St. Anne's home for senior citizens—listed on the National Register of Historic Places—was targeted for demolition until creative engineering reversed its fate.

In response to flood devastation, the construction of more than 30 miles of new levees and floodwalls was mandated for the Grand Forks area, forcing many structures such as St. Anne's—which stood in the floodwall's path—to be either relocated or demolished. Alternatively, the project team designed an innovative eight-foot floodwall that wraps around every intricate corner of St. Anne's, but does not actually touch the building's exterior and connects with the new municipal floodwall. The innovative design saved St. Anne's from demolition, safeguarded the building, and is part of the community's new flood protection system.



# HONORAWARDS

## Lake Brazos Labyrinth Weir, Waco, Texas

Freese and Nichols, Inc.—Austin, Texas

Uncertain water levels and frequent costly repairs on an outdated spillway prevented Lake Brazos from becoming an attractive waterfront destination for the city of Waco.

The creative project team designed a customized 3,000-foot-long labyrinth weir containing 25 V-shaped cycles over the foundation of the 45-year-old existing spillway. This eliminated the need for spillway replacement and for the river to be diverted during construction. It reduced cost and environmental impact and assures more reliable lake levels with less maintenance. Lake Brazos can now fulfill its potential as a hub of downtown Waco's revitalization.



## Tule River Fish Return System, Sequoia National Park, Calif.

Blair, Church & Flynn Consulting Engineers—Clovis, Calif.

Inspired engineering now prevents fish from being trapped at a Southern California Edison hydro-electric facility—a problem that left unresolved would have shut down one of Southern California's key sources of power.

The project team's solution included two fish ladders to divert fish around the facility, down a mountainside, and back to their natural habitat. The innovative system of pipes, ladders and channels maintains critical water flow and depth, maximizes oxygenation and fish protection, and ultimately reduces the risk of any disruption to the power plant.



## First Avenue District School, Newark, N.J.

Paulus, Sokolowski and Sartor—Warren, N.J.

A school for pre-kindergarten to eighth-grade students features numerous innovative and sustainable design strategies for lowering operating costs, improving energy efficiency and providing a state-of-the-art learning environment.

The project team's LEED Standard design features effective north and south daylight sensors to provide artificial lighting as needed, geothermal heating and cooling systems to reduce fossil fuel dependence, roofs clad in a white single-ply membrane to reduce the "heat island" effect, and high-performance insulation and waterproofing. Hailed as a new standard in 21st century educational facilities, the school serves as a benchmark of quality and technology for schools nationwide.



## Project FROG Prototype, San Francisco, Calif.

Degenkolb Engineers—San Francisco, Calif.

Resourceful engineering has led to the creation of a state-of-the-art modular classroom facility, providing overcrowded school systems with an economical alternative to trailers.

The Flexible Response to Ongoing Growth (FROG) initiative includes stylish prototype modular buildings which can be configured to create conventional classrooms, labs, auditoriums and other specialized educational spaces. The design also features a steel truss-like structural system to meet strict seismic criteria and ensure occupant safety in the event of an earthquake. It offers the same flexible, cost-effective and deployment advantages as trailers, but with an interior layout and environment much more conducive to learning.

# 2008 EEA NATIONAL FINALISTS

## FIRM NAME ACEC/ALABAMA

Malcolm Pirnie

TTL

## ACEC/ARIZONA

David Evans and Associates  
Holben, Martin & White  
Consulting Structural Engineers  
Premier Engineering Corporation

## ACEC/ARKANSAS

Garver Engineers

## ACEC/COLORADO

Burns & McDonnell

FIGG

M-E Engineers

Merrick & Company

Merrick & Company

Merrick & Company

## ACEC/CONNECTICUT

Gibble Norden Champion Brown  
Consulting Engineers  
PB

## ACEC/DELAWARE

Pennoni Associates

## ACEC/FLORIDA

FIGG

URS Washington Division

## ACEC/GEORGIA

Brown and Caldwell

URS Corporation

Uzun & Case Engineers

## ACEC/IDAHO

CH2M HILL  
Project Engineering Consultants

Welch Comer & Associates

## ACEC/ILLINOIS

Earth Tech

ENTRAN

Hanson Professional Services

Huff & Huff

Strand Associates

V3 Companies of Illinois

## PROJECT NAME

Granular Activated Carbon Master  
Planning Project  
Cypress Point

Low Distortion Projection  
Euclid Avenue/Park Avenue  
Bike/Ped Overpass  
Camelback Road Pedestrian  
Underpass

Lighting Up the Big Dam Bridge

Town of Erie—Lynn R. Morgan  
Water Treatment Plant Expansion  
Penobscot Narrows Bridge &  
Observatory  
Laurance S. Rockefeller Preserve  
Visitor Center  
Large Animal Housing & Training  
Facility  
Spallation Neutron Source Target  
Hot Cell  
Conservation Planning Using  
Hyperspectral Science

Adaptive Use of Wauregan Hotel

Route 15 Bridge Over the  
Housatonic River (Sikorsky Bridge)

Market Street Renovation Project

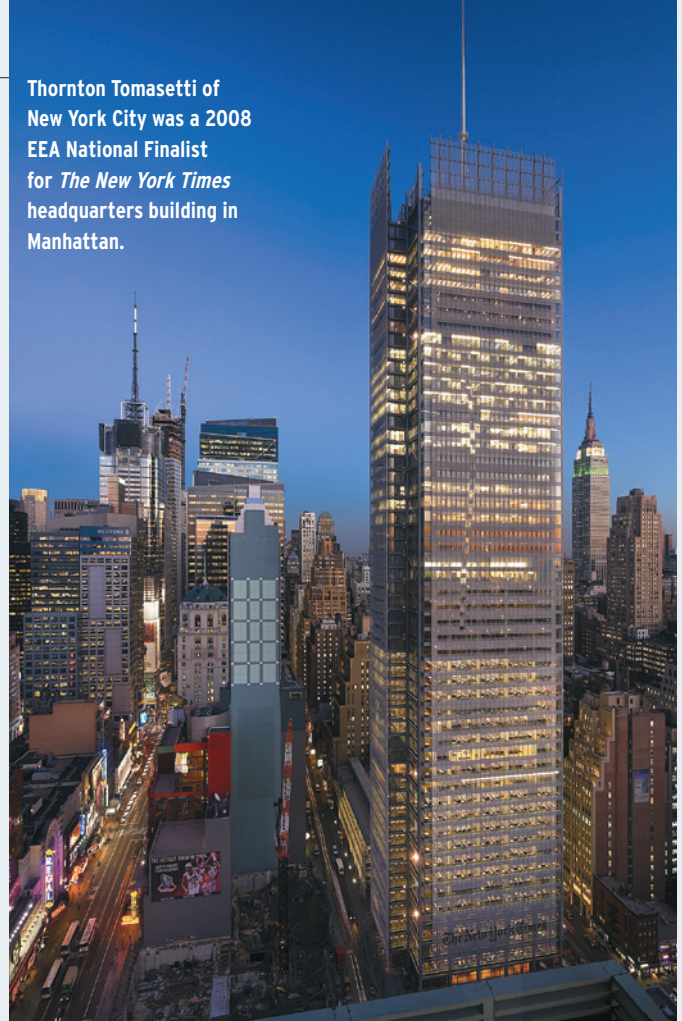
I-280 Veteran's Glass City Skyway  
Double Track Bridge Over the  
New River

Custer Avenue East CSO Storage  
Facility  
Peachtree Road Corridor  
Gwinnett Environmental &  
Heritage Center

US 95: Setters to Bellgrove  
Happy Valley and Amity  
Roundabout  
Gozzer Ranch Wastewater  
Treatment & Effluent Reuse  
System

Veterans Memorial Tollway—  
Des Plaines River Valley Bridge  
FAI 80/94 (Kingery/Borman  
Expressway)  
Reconstruction of the South  
Tri-State Tollway  
Bioswales for Stormwater/Water  
Quality Benefit I-294  
Open Road Tolling Plaza 66  
DeKalb & Plaza 69 Dixon  
I-355 South Extension

Thornton Tomasetti of  
New York City was a 2008  
EEA National Finalist  
for *The New York Times*  
headquarters building in  
Manhattan.



## ACEC/INDIANA

Applied Engineering Services  
Natural Concepts Water Quality  
Engineering/American  
Structurepoint

Plant 1 Expansion, Knauf Insulation  
Bradford Woods Wastewater  
Treatment System Replacement  
Project

## ACEC/IOWA

MSA Professional Services

Alternative Wastewater Systems  
Design Guidance

## ACEC/KENTUCKY

FFEB JV

Fuller, Mossbarger, Scott &  
May Engineers  
GRW Aerial Surveys  
PB Americas

A Joint Venture Getting Up to  
Speed in the Big Easy  
Manchester Goes Green: A Landfill  
for the Ages  
AMP-Ohio Hydroelectric Projects  
I-64 Riverside Expressway  
"Restore 64"

## ACEC/MAINE

Haley & Aldrich

Non-Stop Shopping

## ACEC/MARYLAND

George, Miles & Buhr/KCI  
Technologies

Rummel, Klepper & Kahl and  
Corman Construction  
Rummel, Klepper & Kahl and  
Corman Construction  
Sidhu Associates

Mattawoman Wastewater Treatment  
Plant—Upgrade for Enhanced  
Nutrient Removal (ENR)  
Frederick Douglass Bridge Over  
Anacostia River  
Swan Point Wastewater Pumping,  
Water Reclamation Facilities  
Telemetry/Alarm Control  
Instrumentation for Water  
Distribution System  
New Design Water Transmission  
System

Whitman Requardt and Associates



# 2008 EEA NATIONAL FINALISTS

## FIRM NAME

### ACEC/MASSACHUSETTS

CDM

Nitsch Engineering

R.G. Vanderweil Engineers

### ACEC/METROPOLITAN WASHINGTON

HSMM

HNTB

Syska Hennessy Group

### ACEC/MICHIGAN

Fishbeck, Thompson, Carr & Huber Michigan State University (MSU)—  
Parking Ramp No. 6

Harley Ellis Devereaux Technical Center  
Orchard, Hiltz & McCliment New Methods to Predict SSOs in  
Wayne County's NHV/RV  
District

Parsons Corporation US-23 and Lee Road Roundabout  
Interchange

Wade Trim US-24 Bridge Rehabilitation Over  
Rouge River

### ACEC/MINNESOTA

Bonestroo

Earth Tech

Ericksen, Roed & Associates

LHB and Donohue & Associates

Stanley Consultants

### ACEC/MISSISSIPPI

Malcolm Pirnie

Managing FEMA: Post-Katrina  
Engineering Cost Recovery

### ACEC/MISSOURI

Burns & McDonnell

GeoTechnology

Harrington & Cortelyou

HDR

Horner & Shifrin  
TranSystems

Walter P Moore

### ACEC/MONTANA

WGM Group

Brooks/South/Russell Intersection  
Improvements

### ACEC/NEBRASKA

HDR

Lamp, Rynearson & Associates

West Dodge Expressway  
Shadow Lake

### ACEC/NEVADA

Kimley-Horn and Associates

Town Square Las Vegas—Elevated  
Left Turn Access

### ACEC/NEW JERSEY

CH2M HILL

Maher Terminal Redevelopment

## PROJECT NAME

Cobble Mountain Reservoir  
Dam Project

Rainwater Harvesting Using  
RainUSE<sup>TM</sup> Software

WGBH Corporate Headquarters

NGA Chiller Plant Renovation  
I-95/I-395/I-495 Springfield  
Interchange

National Armed Forces Center for  
the Intrepid

Michigan State University (MSU)—  
Parking Ramp No. 6  
Technical Center  
New Methods to Predict SSOs in  
Wayne County's NHV/RV  
District

US-23 and Lee Road Roundabout  
Interchange

US-24 Bridge Rehabilitation Over  
Rouge River

Cascade Creek Realignment Project  
Water Treatment Plant  
Improvements

Cobalt Condominiums/University-  
Central Marketplace

Chatfield Wastewater Treatment  
Plant

Saving St. Anne's

Managing FEMA: Post-Katrina  
Engineering Cost Recovery

ConocoPhillips Hydrogen  
Compressor Project  
Subsurface Utility Engineering for  
226 Bridges

Ozark Scenic Riverways Site  
Sensitive Design

Route 367 Conversion  
Lower Meramec Lift Station  
Ste. Genevieve Project Lee Island  
Wetland Mitigation

Branson Landing Storm Sewer  
Improvements

Brooks/South/Russell Intersection  
Improvements

West Dodge Expressway  
Shadow Lake

Town Square Las Vegas—Elevated  
Left Turn Access

Maher Terminal Redevelopment



Lighting Up the Big Dam Bridge in Pulaski County, Ark., was designed by 2008 EEA National Finalist Garver Engineers, LLC, of Little Rock, Ark.

## CH2M HILL

Dewberry

Hatch Mott MacDonald

Intertech Associates

Langan Engineering &  
Environmental Services  
Paulus, Sokolowski and Sartor  
Paulus, Sokolowski and Sartor

## ACEC/NEW MEXICO

CH2M HILL

HDR

## ACEC/NEW YORK

AKF Engineers

Arup

Barton & Loguidice

Bergmann Associates  
C&S Companies

Earth Tech Northeast

Ecology and Environment  
Engineering  
Erdman Anthony

Greeley and Hansen/Hazen and  
Sawyer/Malcolm Pirnie

Halcrow HPA

Halcrow HPA

Hardesty & Hanover

Hazen and Sawyer

Lochner Engineering  
Naik Consulting Group  
PB

PB Americas  
Stantec Consulting Services  
STV  
Syska Hennessy Group

Tectonic Engineering & Surveying  
Consultants

The Louis Berger Group

The RBA Group

Thornton Tomasetti  
Weidlinger Associates

NHSA Innovative Engineering  
Supports the Gold Coast  
Upper and Lower Aetna Dams  
Restoration  
Tampa Bay Seawater Desalination  
Plant Modifications  
Wireless E-911 Communications  
Center, Sheriff's Department  
The Prudential Center

First Avenue District School  
Weehawken Waterfront Park

Kirtland AFB Bulk Fuels Facility  
Remediation  
East Side Source of Supply  
Transmission Pipeline

Dr. Hudspeth Ear Cell Laboratory,  
Bronk Building  
United States Air Force Memorial  
Oneida-Herkimer Regional Landfill  
Facility  
Route 17 Horseheads  
Binghamton-Johnson City Sewage  
Treatment Plant Upgrades  
34 Freeman's Bridge Road Site  
Remediation  
Miami-Dade Water Reuse  
Feasibility Study  
Frederick Douglass—Susan B.  
Anthony Memorial Bridge  
Newtown Creek Water Pollution  
Control Plant Upgrade/  
Contract 35

Jebel Ali Port Expansion  
Khalifa Port Planning  
Rehabilitation of Hollywood  
Boulevard Over Intracoastal  
Waterway  
Croton Water Treatment Plant Site  
Preparation  
The Great Lawn  
Fulton Street Transit Center  
Chao Phraya River Bridge  
Third Avenue Bridge  
Genesee Riverway Trail  
Ninth Precinct Reconstruction  
The Wild Center, Natural History  
Museum of the Adirondacks  
Pelham Rock Slope Stabilization

National September 11 Memorial  
& Museum  
Long Island Non-Motorized  
Transportation Study  
The New York Times Building  
Pier 3 Cruise Ship Canopy

# 2008 EEA NATIONAL FINALISTS

## FIRM NAME

Wendel Duchscherer, Architects  
& Engineers  
Ysrael A. Seinuk

## ACEC/OREGON

GeoDesign  
KPFF Consulting Engineers

## ACEC/PENNSYLVANIA

FIGG  
Gannett Fleming

L. Robert Kimball & Associates

URS Corporation

## ACEC/SOUTH CAROLINA

BP Barber

Collins Engineers

Dennis Corporation

Hussey, Gay, Bell & DeYoung  
The LPA Group

## ACEC/SOUTH DAKOTA

HDR

## ACEC/UTAH

Bowen Collins & Associates/  
Corollo/MWH Americas/  
CH2M HILL/Black & Veatch  
Jones and DeMille Engineering  
J-U-B Engineers

## ACEC/VERMONT

Vanasse Hangen Brustlin

## ACEC/VIRGINIA

DJG

McKinney & Company

## ACEC/WASHINGTON

Huitt-Zollars

Magnusson Klemencic Associates  
Parsons/HNTB (A Joint Venture)  
Sparling  
Wood Harbinger

## ACEC/WISCONSIN

Earth Tech/CDM/CH2M HILL/  
Eisenhardt Group  
Graef, Anhalt, Schloemer &  
Associates, Inc. and HGA  
(Joint Venture)  
Milwaukee Transportation Partners

## PROJECT NAME

Kalamazoo Transportation Center

Carnival Center for the Performing  
Arts

Portland Aerial Tram  
Wayne L. Morse United States  
Courthouse

I-76 Susquehanna River Bridge  
Ned Smith Center Pedestrian  
Bridge and Trail

SR 4009 (Business Route 220)  
Bedford Springs Improvements  
Project

Archaeological Investigations of the  
President's House Site

Lower Dorchester WWT  
Expansion  
Bridge Management Database &  
3-D Scanning  
Dutchman's Creek Pedestrian  
Bridge and Trail  
East Cooper Water Supply No. 2  
SC 41 Over Lynches River and  
Swamp

I-29/12th Street Interchange  
Reconstruction

Metro Water Project

Richfield City—College Avenue  
Hooper City Vacuum Sewer System

Lime Kiln Bridge Replacement

Safety Rest Area and Information  
Center  
Southwest Animal Health Research  
Foundation

Sound Transit's Link Light Rail  
Section C-700 Initial Segment  
Olympic Sculpture Park  
Tacoma Narrows Suspension Bridge  
Platte Valley Medical Center  
Industrial Wastewater Pretreatment  
Facility

Green Bay Metropolitan Sewerage  
District  
Discovery World at Pier Wisconsin

Menomonee Valley Shops  
Redevelopment

## FIRM NAME

Strand Associates

## CEC/TEXAS

Bridgefarmer & Associates

Brown & Gay Engineers  
CDM/Moreno Cardenas

Chiang, Patel & Yerby

Cobb, Fendley & Associates  
Freese and Nichols  
HNTB

Jose I. Guerra  
Pate Engineers  
URS Corporation  
Walter P Moore

## CELSOC/CALIFORNIA

Blair, Church & Flynn Consulting  
Engineers  
CH2M HILL

Degenkolb Engineers  
Delcan Corporation

Hatch Mott MacDonald

Infrastructure Engineering  
Corporation  
International Bridge Technologies  
Kennedy/Jenks Consultants

Malcolm Pirnie

Penfield & Smith Engineers

Rick Engineering Company

T. Y. Lin International  
T. Y. Lin International/  
CH2M HILL (Joint Venture)

## PROJECT NAME

CTH ID Reconstruction

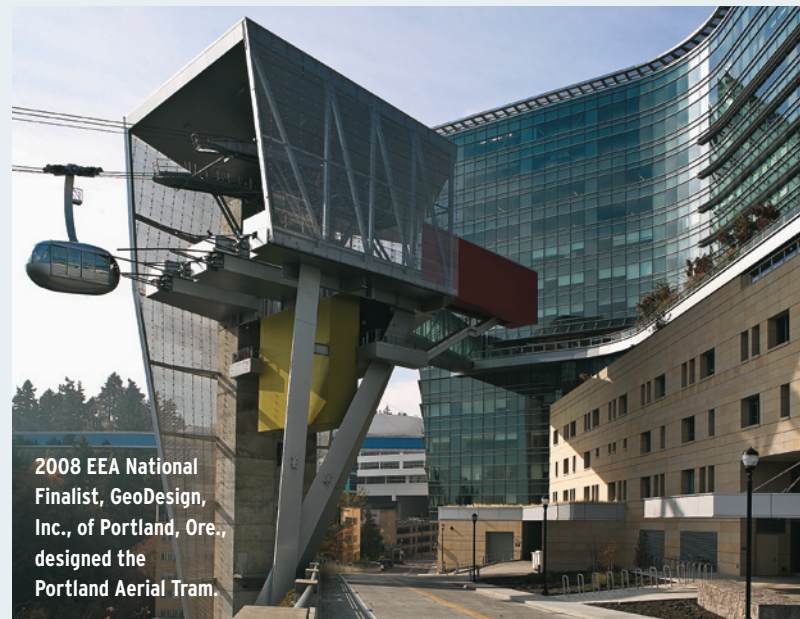
Bridge for I-40 Cross-town in  
Oklahoma City  
Natural Living  
Kay Bailey Hutchison Desalination  
Facilities  
Garland Water Operations Center:  
Security in the Shadow of 9/11  
Hurricane Mapping Project  
Lake Brazos Labyrinth Weir  
Dallas North Tollway Phase  
III-3-D Visualization  
Mexican American Cultural Center  
Verano at City South  
183A Toll Road Design-Build  
University of Phoenix Stadium

Tule River Fish Return System

T-TSA: Expansion of Water  
Reclamation Plant  
Project FROG Prototype  
Los Angeles Regional  
Transportation Management  
Center

Northern and Southern  
Sacramento River Crossings  
Graham Reservoir and Athletic  
Field Improvements Project  
Eleanor Schonell Bridge  
Redwood City Recycled Water  
Program

Nitrification Control Using  
Chlorite Ion  
Bitter Creek National Wildlife  
Refuge  
Water Quality Basin at Woodside  
Avenue  
Shibanpo Bridge  
New Benicia-Martinez Bridge



2008 EEA National  
Finalist, GeoDesign,  
Inc., of Portland, Ore.,  
designed the  
Portland Aerial Tram.



## 2008 EEA JUDGES

**ACEC** would like to thank the **2008 Engineering Excellence Awards Judges** for their time and dedication to this year's EEA competition.



**Charles Dull**  
Chief Judge  
Assistant Director of Engineering  
USDA Forest Service



**Jose Abreu**  
Director, Miami-Dade Aviation  
Department  
Miami International Airport



**David Barna**  
Assistant Director  
National Park Service



**Bernard Berson**  
President  
National Society of Professional  
Engineers



**Wayne H. Brown**  
Transportation Commissioner,  
Southern District  
Mississippi Department  
of Transportation



**Lt. Col. Wayne Bryant**  
Commander/Base Engineer  
Mississippi Air National Guard



**Mike Chapman**  
Senior Architect, Capital  
Improvements  
Naval Facilities Engineering  
Command



**Connie Crawford**  
Senior Vice President and Chief  
Engineer  
MTA New York City Transit



**Art deWit**  
CEO  
Baete-Forseth HVAC



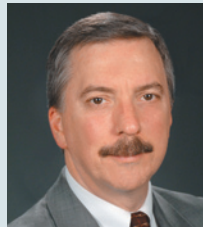
**Julia Forgue**  
Director, Department of Public  
Works  
City of Newport, R.I.



**Dave Haley**  
State Chief Architect  
State of Wisconsin



**Heidi Hamilton**  
Deputy Director, Public Works  
City of Minneapolis



**Jon Lambeck**  
Manager, Operations Planning  
Metropolitan Water District of  
Southern California



**Pat Leahy**  
Executive Director  
American Geological Institute



**Fred Lebed**  
President  
Burris & Lebed Consulting, LLC



**Ed Link**  
Senior Research Engineer  
Department of Civil and  
Environmental Engineering  
University of Maryland



**Fidel Marquez Jr.**  
Vice President, Chicago  
Operations  
Commonwealth Edison Company



**Marjorie Melton**  
President, Board of Public Service  
City of St. Louis, Mo.



**Karl Miller**  
Executive Manager, Power Group  
Kenny Construction Company



**Eric Mills**  
Western Regional Operations  
Manager, ECO Resources/  
Southwest Water Company



**D. Michael Mucha**  
Director of Public Works  
City of Olympia, Wash.



**Kathleen O'Brien**  
Vice President, University Services  
University of Minnesota



**Juan Ontiveros**  
Director, Utilities and Energy  
Management  
The University of Texas at Austin



**Anne Papageorge**  
Vice President  
University of Pennsylvania



**David Perini**  
Commissioner  
Division of Capital Asset  
Management Commonwealth of  
Massachusetts



**Ray Raposa**  
Executive Director  
New England Water Works  
Association



**Brian Sadden**  
Manager, Engineering  
Management Bureau  
San Francisco Public Utilities  
Commission



**Chris Warren**  
Deputy Executive Director and  
Chief Operating Officer  
Florida's Turnpike Enterprise



**Mickey Wilhelm**  
Dean, University of Louisville  
Speed School of Engineering



**Scott Williams**  
Manager, Mechanical Engineering  
Target Property Development



**Mac Yowell**  
Manager  
City-County Planning  
Commission  
Warren County, Ky.

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## COALITIONS ADDRESS RISK MANAGEMENT, GPS MACHINE GUIDANCE, FEE CALCULATIONS

The **Council of American Structural Engineers (CASE)** made progress at its Winter Meeting on several member benefit initiatives:

- Developed four new CASE Risk Management Tools to help members minimize risk, including a scope management checklist and a contract key-word scanning tool;
- Updated CASE standard contracts and guidelines;
- Initiated new claims consultation program to help firms reduce claims costs; and
- Formed joint committee on Building Information Modeling (BIM) with the Structural Engineering Institute.



CASE is a coalition of structural engineering firms within ACEC. It provides information and business practice products designed to increase profitability, improve quality, reduce liability and enhance management practices of structural engineering firms. Its Annual Summer Meeting will take place Aug. 20–22 in Minneapolis.

For more information or to join CASE, visit the website: [www.acec.org/coalitions/CASE](http://www.acec.org/coalitions/CASE).

The **Council of Professional Surveyors (COPS)** developed recommended contract language and disclaimer notes to limit firms' liability relative to the use of Global Positioning Systems machine guidance technology in the heavy equipment industry.



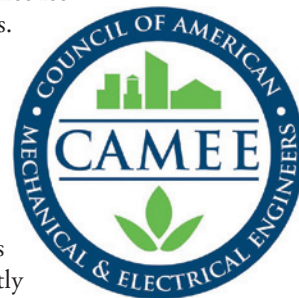
COPS also updated standard contract forms and quality control review sheets for various project types and issued guidelines for project kickoff meetings and the release of electronic data.

The Coalition joined with ACEC Government Affairs to address industry issues, including how to generate support in Congress for a National Surveyors Week and ensure that surveying graduates are eligible for loan forgiveness benefits under the proposed Higher Education Act.

COPS is a coalition of surveying firms within ACEC. Its goals are to strengthen the business environment and image of Member Firms with an emphasis on providing information about business practices and managing risk, and to be an advocate within ACEC for the interests of surveying firms.

For more information or to join COPS, visit the website: [www.acec.org/coalitions/COPS](http://www.acec.org/coalitions/COPS).

The **Council of American Mechanical & Electrical Engineers (CAMEE)** finalized free fee calculation spreadsheet for members. New standard contracts and risk management tools for mechanical/electrical (M/E) firms is slated for release this summer.



It also continued to sponsor teleconferences with the National Association of State Facilities Administrators (NASFA). Currently working on several business-related articles on BIM, LEED certification, environmental design, building commissioning and partnering with state agencies for industry magazines and trade publications, including *Engineering Inc.* and the *ASHRAE Journal*.

In addition, CAMEE worked with ACEC to develop new education course on BIM for mechanical/electrical/plumbing engineers. Release date: June 20, 2008.

CAMEE is a coalition of M/E engineering firms within ACEC. Its purpose is to recommend policies and develop programs to serve the needs of Member Firms engaged in M/E practice and to identify business needs of the M/E practitioner.

For more information or to join CAMEE, visit the website: [www.acec.org/coalitions/CAMEE](http://www.acec.org/coalitions/CAMEE). ■



To obtain contract documents created by CASE, COPS and CAMEE, go to ACEC's new Contracts Central: [www.acec.org/cc](http://www.acec.org/cc).

## On The Move



**Thornton Tomasetti** recently named managing principal **Thomas Z. Scarangelo** (second from right) as its chairman. **Daniel A. Cuoco** (far left), president since 2002, was promoted to president and CEO. **Robert P. DeScenza** (far right), former executive vice president, was promoted to COO. **Richard L. Tomasetti** (second from left), past chairman and CEO, remains active with the firm as founding principal and chairman of the newly formed charitable arm, the Thornton Tomasetti Foundation.



Richard J. Brauer

**Richard J. Brauer** has been promoted to president and CEO of **McFarland-Johnson**. Brauer, a former executive vice president, succeeds **Tom Coughlin**, who is retiring. Prior to joining McFarland-Johnson, Brauer served as transportation division manager at Fisher Associates and also was vice president of Sear-Brown Group, Inc.



Bradley L. Mallory

**Bradley L. Mallory** has been appointed president and CEO and a member of the board of directors of the **Michael Baker Corporation**. Mallory succeeds **Richard L. Shaw**, who is retiring as CEO, but will remain chairman of the board, as well as chairman of the board's executive committee. Formerly, Mallory served as COO of Michael Baker.



Alan Krause

**Alan Krause** was elected president and COO of Broomfield, Colo.-based **MWH**. As president, Krause replaces **Bob Uhler**, who remains CEO. MWH also elected **Don Smith** chairman of the MWH Global, Inc., board of directors. Smith replaces **Murli Tolaney**, who retired as chairman, but will remain as a senior adviser.



Jill Wells Heath

**Jill Wells Heath** has been promoted to CEO of **Mulkey Engineers & Consultants** in Raleigh, N.C. Heath, who is replacing firm founder **Barbara H. Mulkey**, will carry over her responsibilities as president into her new role as CEO.



William M. Stout

**William M. Stout** recently was named chairman and CEO of Harrisburg, Pa.-based **Gannett Fleming**. Stout succeeds **Ronald J. Drnevich**, who retired in January.



Randall A. Neuhaus

**Randall (Randy) A. Neuhaus** has been named president of **S&ME, Inc.**, an engineering and environmental services firm headquartered in Raleigh, N.C. Neuhaus succeeds **John R. Browning**, who will step down to a reduced schedule as a senior technical consultant.

**Pete Dyke** has joined **ARCADIS** as executive vice president and CFO for its U.S. operations. Dyke will be responsible for financial oversight, human resources, information technology and corporate financial governance of ARCADIS U.S.



## Discovery World at Pier Wisconsin

Milwaukee, Wisconsin

Engineering Excellence

Teamwork

Outstanding Design



Photography by John Korom

## MEMBERS IN THE NEWS

### Mergers & Acquisitions

**A**rchitecture and engineering consulting firm **HDR, Inc.**, announced two acquisitions: engineering firm **Doherty & Associates, Inc.**, and full-service consulting and engineering firm **Cummins & Barnard, Inc.**

Going forward, Boise, Idaho-based Doherty & Associates will conduct business as HDR|Doherty & Associates.

Under the new corporate structure, Doherty & Associates President Karen Doherty will be the design center manager for several transportation projects in the company's western region.

The firm also acquired **Cummins & Barnard, Inc.**, a full-service consulting engineering firm headquartered in Ann Arbor, Mich. Going forward, Cummins & Barnard, Inc., will conduct business as HDR|Cummins & Barnard.

The firm specializes in consulting and design services for industrial, institutional and utility power generation facilities within the United States.

Under the new corporate structure, William Damon III, Cummins & Barnard chief executive officer, will be a senior vice president and director of power consulting. James Connell, Cummins & Barnard president, will be a senior vice president and director of power facilities.



Karen Doherty



William Damon

## JORGENSEN ASSOCIATES, PC

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- ◆ A record of involvement with professional surveying societies and community organizations.
- ◆ Ability to obtain a Wyoming and Idaho PLS license within 6 months.

Jorgensen Associates offers a broad range of professional engineering, land surveying and planning services with offices in Wyoming and Idaho. Our client base is a result of the firm's 34 year reputation based on teamwork, integrity and our dedication to providing quality professional services. We offer competitive wages, performance bonuses, relocation assistance, a company vehicle, and a comprehensive benefits package.

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## Awards

**A**diele Nwankwo has been named "One of the Most Important Blacks in Technology for 2008" by *US Black Engineer & Information Technology* magazine. Nwankwo is a senior vice president in the Detroit office of **Parsons Brinckerhoff (PB)**.

*US Black Engineer & Information Technology*, the nation's most widely read minority technical magazine, sponsors the National BEYA Global Competitiveness Conference, which annually recognizes the ongoing achievements of black leaders in science, technology, engineering and math-related careers. According to the magazine, "These men and women are role models. Their accomplishments validate the contributions that African Americans make in technology and business."

Nwankwo has more than 28 years of transportation planning and engineering experience and has served as project manager on several projects. At PB, he has completed numerous major planning studies and programs for the Michigan Department of Transportation and for local metropolitan planning organizations.



Adiele Nwankwo

**A**ine Brazil, of **Thornton Tomasetti, Inc.**, recently was honored in New York by Girls Inc., a nonprofit organization that inspires all girls to be strong, smart and bold. Brazil was among a group of women and men who, by their work and example, were honored for creating a better future for girls.

Brazil, a managing principal at Thornton Tomasetti, is involved in the firm's design of high-rise office and residential buildings, hotels, hospitals and other projects.

"As a woman who often sat alone in the engineering classroom and later in the boardroom, Aine Brazil is a pioneer for young women and girls," said Girls Inc. President and CEO Joyce Roché. Brazil also has been featured in *The New York Times* and *Crain's New York Business* "New York's 100 Most Influential Women in Business."



Aine Brazil

## WE DO THIS TOGETHER.

Building a winner is a matter of coming together as a team. That's why the Arizona Cardinals would like to congratulate everyone who had a hand in making University of Phoenix Stadium one of the American Council of Engineering Companies' Grand Award winners for engineering excellence.



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**The Society for Design Administration (SDA)** is a professional organization comprised of administrative personnel in the design industry, including architecture, engineering, landscape architecture, interior design and construction firms. For over 45 years, we've promoted continuing education, best practices in the management of design firms, and professional standards for design firm administrative personnel.

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](http://www.sdadmin.org)**





## MEMBERS IN THE NEWS

### Welcome New Member Firms

#### **ACEC/Alabama**

**CDG Engineers & Associates,**  
Andalusia

#### **ACEC/Arizona**

**JG Engineering, Inc.,** Phoenix  
**Point Engineers,** Cave Creek  
**PolyPhase Engineering, LLC,**  
Scottsdale  
**Terrascope Consulting, LLC,**  
Phoenix

#### **ACEC/Colorado**

**Griffeth Structural, LLC,** Fort  
Collins  
**JLB Engineering Consultants,**  
Inc., Louisville  
**Moser and Associates, Inc.,**  
Denver  
**Navjoy Consulting Services,**  
Inc., Denver

#### **ACEC/Florida**

**Bengal Engineering Inc.,**  
Jacksonville

**K.M. Engineering Consultants,**  
Inc., Sunny Isles Beach  
**Olsen Associates, Inc.,**

Jacksonville  
**Randy Merritt, P.E.,**  
Crawfordville

#### **ACEC/Georgia**

**Collaborative Infrastructure**  
**Services, Inc. (CIS),** Conyers  
**ER Group, LLC,** Lawrenceville  
**Horizon Engineering, Inc.,**  
Marietta  
**ProcessWorx, LLC,** Lawrenceville  
**Sweitzer Engineering, Inc.,**  
Acworth

#### **ACEC/Hawaii**

**Bow Engineering &**  
**Development Inc.,** Honolulu  
**DSA Engineering, Inc.,** Honolulu  
**Lyon Associates, Inc.,** Honolulu  
**Yogi Kwong Engineers, LLC,**  
Honolulu

#### **ACEC/Illinois**

**Compass Surveying, Ltd.,**  
Aurora  
**Fuhrmann Engineering, Inc.,**  
Springfield  
**Thomas Engineering Group,**  
LLC, Oak Park

#### **ACEC/Indiana**

**Shrewsbury & Associates,**  
LLC, Indianapolis

#### **ACEC/Kansas**

**GeoSource, LLC,** Topeka

#### **ACEC/Kentucky**

**Sabak Wilson & Lingo, Inc.,**  
Louisville

#### **ACEC/Massachusetts**

**Stanley D. Elkerton, P.E.,**  
Consulting Engineer, Waltham

#### **ACEC/Michigan**

**Comprehensive Structural**  
**Services, Inc.,** Keego Harbor  
**Scott Civil Engineering**  
**Company,** Grand Rapids

#### **ACEC/Missouri**

**Donohue & Associates, Inc.,**  
Chesterfield

#### **ACEC/Montana**

**Great West Engineering, Inc.,**  
Helena  
**Kerin & Associates Consulting**  
**Engineers,** Bozeman

#### **ACEC/New Hampshire**

**Summit Engineering,**  
Portsmouth

#### **ACEC/New Mexico**

**Byrd's I Engineering, LLC,**  
Artesia  
**Radian Engineering, LLC,**  
Corrales

#### **ACEC/New York**

**WB Engineering, PLLC,** New  
York

#### **ACEC/North Carolina**

**Baker Engineering Consultants,**  
Inc., Raleigh  
**Barrier Geotechnical**  
**Contractors,** Charlotte

#### **ACEC/Oregon**

**Cascade Design Professionals,**  
Inc., Milwaukie  
**Catena Consulting Engineers,**  
Portland  
**McGee Engineering, Inc.,**  
Corvallis

**Moyano Leadership Group, Inc.,**  
Salem

**WRG Design, Inc.,** Portland

#### **ACEC/Pennsylvania**

**NTM Engineering, Inc.,** Dillsburg  
**Powerhouse Design Inc.,**  
Pittsburgh

#### **ACEC/Tennessee**

**EMC Structural Engineers, P.C.,**  
Nashville

#### **ACEC/Vermont**

**Resource Systems Group,**  
White River Junction

#### **ACEC/Virginia**

**T3 Design, P.C.,** Fairfax

#### **ACEC/Washington**

**Core Design, Inc.,** Bellevue  
**Knight Engineers, Inc.,**  
Vancouver  
**Westmar Consultants**  
**Corporation,** Kirkland

#### **CEC/Texas**

**AIA Engineers, Ltd.,** Houston  
**Dougherty Sprague**  
**Environmental, Inc.,** Richardson  
**JPH Consulting,** Sugar Land  
River, Houston

#### **CELSOC/California**

**Accurate Land Solutions,** San  
Leandro  
**Afinar,** Bakersfield  
**DZNE, Inc.,** Aliso Viejo  
**HMK Engineering, Inc.,**  
Calabasas  
**HTT Engineering,** Oakland  
**KOA Corporation,** Monterey Park  
**Mark Briner Consulting,**  
Lafayette  
**NA Engineering Company,** San  
Jose  
**Ocean Law,** Simi Valley  
**Shamrock Environmental**  
**Design & Development,** San  
Marcos  
**The LPACIFIC Group, Inc.,**  
Irvine  
**Tsubota Civil Engineering, Inc.,**  
San Ramon  
**WAU & Company,** Moraga



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## Calendar of Events

## 2008

## MAY

- 7** Women in the Boardroom (online seminar)
- 8** ACEC/Wisconsin Annual Meeting, Milwaukee
- 13** Strategizing Winning Proposals From Value Proposition to Differentiation on Deadline (online seminar)
- 15** Calculating Carbon Footprints—Potential Business for Engineering Companies (online seminar)
- 21** Strategic Planning for Your Company's Next Bus Drivers (online seminar)

28

Project Life Cycle Cost Estimation Methods (online seminar)

28

ACEC/Delaware Annual Meeting, Wilmington, Del.

29-30

Recognizing the Snares and Pitfalls in Construction Industry Contracts, Chicago

## JUNE

13-14

ACEC/Tennessee Annual Meeting, Franklin, Tenn.

16-17

Advanced Project and Program Management for the Engineering Industry, Northwestern University, Evanston, Ill.

18-21

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

## SEPTEMBER

5

International Employment Solutions for the 21st Century (online seminar)

15-16

Finance Forum, Chicago

## OCTOBER

19-22

ACEC Fall Conference, Montreal, Canada

## NOVEMBER

5-6

Human Resources Forum, Chicago

7

Trends in Business Ethics That Affect Engineers (online seminar)

Additional information on ACEC's events is available at [www.acec.org](http://www.acec.org).

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District School

Newark, NJ

ACEC 2008 HONOR AWARD

Weehawken  
Waterfront Park

Weehawken, NJ

ACEC 2008 NATIONAL FINALIST



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Sergio "Satch" Pecori is president and CEO of Hanson Professional Services, Inc., in Springfield, Ill.

## Hanson CEO Confronts Market Challenges, Slowing Economy, Importance of Advocacy

**Q.** Looking back on more than half a century of growth for Hanson Professional Services, what have been the primary market challenges you have faced and overcome?

**A.** When our firm was founded in 1954, we operated with just a few employees based in Springfield, Ill., providing geotechnical and structural engineering for a wide variety of clients in the United States and abroad. As the needs of these clients changed, we evaluated how we could change to continue to meet their needs. Essentially, Han-

son was determined to "fill the voids" our clients faced and expand our role and services to maintain these working relationships.

Throughout the years, we have expanded to include skill sets such as environmental, mechanical, electrical, civil, water resources and architectural services, all to benefit our clients. We also have expanded our geographic locations, spanning from West Palm Beach, Fla., to Anchorage, Alaska, to provide our clients with easy access to Hanson professionals across the United States.

**Q.** Transportation funding is a concern facing the industry at the state and national levels. What's the solution in your view?

**A.** The current federal stimulus package aims to put money in the hands of a wide variety of people to encourage individuals to buy goods and services, which is a short-term solution, in my opinion.

We need a federal stimulus package that will have a greater impact on the nation, that will improve our infrastructure, that will put people to work and have a beneficial long-term impact.

Our state and federal governments need the resources to address critical needs in transportation, including maintaining, updating and expanding

roads, bridges, railroads, airports and city infrastructures. Any new stimulus package should address these needs directly.

**Q.** What does a slowing economy mean for your firm?

**A.** The slowing economy affects our firm and clients in several ways. Some of our industrial clients are looking at slower expansion plans. The mortgage crisis has caused some of our development projects to stop and foreclosure actions to begin. The devalued U.S. dollar has caused foreign investors to acquire some of our competitors, thus changing that landscape.

way infrastructure due to the increase in fuel prices.

**Q.** As someone who has been active with ACEC/PAC over the years, can you describe how that involvement has been beneficial to your firm?

**A.** I view my participation in ACEC/PAC as playing an active role in supporting good government. Through PACs, we support members of Congress that have similar beliefs when it comes to transportation and other governmental-related issues that affect our industry. The bottom line is that we need elected officials

**"We need a federal stimulus package that will have a greater impact on the nation, that will improve our infrastructure, that will put people to work and have a beneficial long-term impact."**

Increased fuel costs have shifted some commodity traffic from highways to railways and waterways, thereby changing our business opportunities. The slowing economy has resulted in less personal spending, which means less tax revenue for states and cities, resulting in less money for capital improvements. In general, the slowing economy will affect us negatively for the most part, but will create some added opportunities in the areas of railway and water-

who support initiatives and funding programs that are crucial to the betterment of our country and the livelihood of our industry.

Participating in ACEC/PAC becomes more beneficial over time. For example, in order to create an adequate-to-exceptional transportation and infrastructure system, we need individuals who are willing to bring to members of Congress our continual awareness of the vital needs of our cities, states and the industry. ■

### About Hanson Professional Services:

**Headquarters:** Springfield, Ill.

**Total offices/employees:** 23 offices, 450 employees

**Key markets:** Telecommunications, government, energy, aviation, highways, railroads





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Potential annual saving for an average plan	\$14,500	\$97,500

*To find out more about the potential cost savings and other benefits of participating in the ACEC Retirement Trust, contact Nancy Barrette of Wachovia Securities, LLC, at 800-521-9463 or via e-mail at [nancy.barrette@wachoviasec.com](mailto:nancy.barrette@wachoviasec.com).*



<sup>1</sup>Average Investment Expense; Averages Book, 401k Source, 2007 HR Investment Consultants, Inc.

<sup>2</sup>Average Investment Expense represents dollar-weighted average based on average assets for the 12-month period ending 12/31/07.

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