THE ZWEIG LETTER

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Bureaucrats, regulators and government officials

Mark Zweig

EDITORIAL

Mark Zweig offers six common sense pointers on how to work with them.

Anyone who is in the planning, design, or construction business has to deal with government – with planning departments and building safety officials, at a minimum – but most likely also with a variety of regulators, selection committees, government official clients, city councils, and politicians as well.

No matter what your sentiments are about the government, you cannot avoid 'em in this business. Here are a few pointers that will hopefully help you be more successful:

1) **Play by their rules**. You have to know the rules. The way they want site plans drawn. The way they want proposals made out. The way they want their invoices to look. The way they want to be communicated with. All of this stuff is critical and you need to know it and follow their mandates and desires.

2) **Make them look good**. Most people like to look good – to their bosses, coworkers, constituents, and the public at large. Understand that. Don't embarrass anyone you don't have to. Be sensitive to their need to not look bad or lose face with any person or group they need to please.

3) **Don't make enemies**. You cannot afford to create enemies anywhere at any level. You don't need anyone out there – but especially those who have the power to really get back at you – who wants to see you suffer. You do, however, want people in government who want to help you. This is something I instruct all my workers on and my architectural and business students as well.

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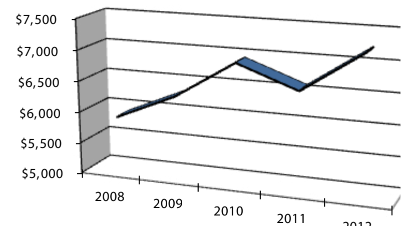
I have found that regulators, in particular, like to be asked for their opinion. Many will freely share it and that can be critical to your ability to do your job. I like asking before acting on something that could have negative consequences.

TRENDLINES

Living expenses



The amount firms pay for rent and utilities per employee increased to $7,234 this year, according to the 2012 Financial Performance Survey, after declining last year for the first time in recent years. In 2011, the median rent and utility cost per employee dropped to $6,573, after climbing to a high of $6,926 in 2010. In 2009, the median rent and utility cost per employee was $6,314, up from $5,991 in 2008.
– *Margot Suydam, Survey Manager*

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A/E BUSINESS NEWS

COMMERCIAL REBOUNDS: Development and construction of commercial real estate – office, industrial and retail buildings – rebounded in 2011, the first year to post gains since the recession began in 2007, according to a report, "How Office, Industrial and Retail Development and Construction Contributed to the U.S. Economy in 2011," released by the NAIOP Research Foundation.

The total economic impact of the development (pre-construction, construction and post-construction) of commercial real estate during 2011 added $261.6 billion to the GDP, compared to $231.7 billion in 2010, a 13 percent increase, according to the report.

Construction spending on commercial real estate totaled $92.3 billion, a more than 12 percent increase over 2010. This spending supported nearly 2 million jobs nationally.

The increases in construction spending and activity resulted in the building of 238.3 million square feet of new space, an increase of 2.5 percent from 2010. This new space has the capacity to house 610,000 jobs with an annual payroll of $26.8 billion.

"2011 was a transition year for the U.S. economy and the construction sector," said the report's author, economist Stephen Fuller, PhD, Dwight Schar Faculty Chair, University Professor and the director of the Center for Regional Analysis at the George Mason University. "The U.S. economy shifted from a federal stimulus to private-sector driven growth pattern and construction spending grew accordingly."

In addition to the advances made in 2011, forecasts for 2012 call for project construction spending to increase and to accelerate further in 2013 and 2014, according to the report.

"For the first time we are seeing across the board increases in this sector," said Thomas Bisacquino, NAIOP president and CEO. "We believe this is the most solid evidence yet of a strengthening recovery."

The impact of the new spending was felt throughout the nation. The following states posted the highest amounts of direct spending in all three phases of development across all categories of commercial real estate (number in parenthesis refers to that state's rank in 2010):

1) Texas (Previous rank: 2), $7.9 billion in spending, 150,102 jobs supported
2) New York (1), $6.5 billion in spending, 83,762 jobs supported
3) West Virginia (48), $5.9 billion in spending, 100,889 jobs supported
4) California (3), $4.5 billion in spending, 70,817 jobs supported
5) Arizona (14), $4.2 billion in spending, 74,117 jobs supported
6) Utah (26), $3.6 billion in spending, 77,550 jobs supported
7) Florida (4), $3.4 billion in spending, 64,970 jobs supported
8) Illinois (10), $3.0 billion in spending, 50,136 jobs supported
9) Massachusetts (21), $3.05 billion in spending, 41,382 jobs supported
10) (tie) North Carolina (7), $3.05 billion in spending, 55,920 jobs supported

GREEN HOME BUILDING UP: McGraw-Hill Construction latest SmartMarket Report: "New and Remodeled Green Homes: Transforming the Residential Market," estimates that the green homes share of the construction market was 17 percent in 2011, equating to $17 billion, and expected to rise 29-to-38 percent by 2016, potentially a $87-to-114 billion opportunity, based on the five-year forecast for overall residential construction.

The report reveals that two of the key factors driving this market growth are the fact that green homes are seen as having higher quality and that they save consumers money.

"In the current residential market, there is an enormous need to differentiate your homes for consumers," says Harvey Bernstein, vice president of Industry Insights and Alliances at McGraw-Hill Construction. "When builders are able to offer homes that not only are green, but also offer the combination of higher quality and better value, they have a major competitive edge over those building traditional homes."

This report, produced by McGraw-Hill Construction in conjunction with the National Association of Home Builders and Waste Management, is designed to provide key insights into product and market opportunities in the single-family home building and remodeling industries. It is backed by proprietary research surveys and the power of the McGraw-Hill Construction Dodge database.

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4) **Don't go over someone's head when there's a problem without first trying to resolve it with them.** I know a local general contractor who is loathed by building safety because any time an inspector fails him for one thing or another he immediately calls the head of building safety and tears into him. Therefore, none of the inspectors want to see his jobs pass. He created a mess that no amount of "nice" behavior can solve at this point.

5) **Treat everyone with courtesy and respect.** I have found that regulators, in particular, like to be asked for their opinion. Many will freely share it and that can be critical to your ability to do your job. I like asking before acting on something that could have negative consequences.

6) **Contribute to both sides.** I am not going to tell you how to do this but you really have to be careful about coming out too strongly for one politician over another. You could lose. Then, where will you be? Don't alienate anyone!

MARK ZWEIG is the Chairman and CEO of ZweigWhite. Contact him with questions or comments at mzweig@zweigwhite.com.

THE ZWEIG LETTER

**38 West Trenton Blvd., Suite 101
Fayetteville, AR 72701**

Mark Zweig | Publisher
mzweig@zweigwhite.com

João Ferreira | Managing Editor
jferreira@zweigwhite.com

Christina Zweig | Contributing Editor
christinaz@zweigwhite.com

Tel: 800-466-6275
Fax: 508-653-6522
E-mail: *info@zweigwhite.com*
Online: *www.thezweigletter.com*
Twitter: *twitter.com/zweigwhite*
Blog: *zweigwhite.blogspot.com*

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TOP PLAYER

Four keys define their success

They are doing high-quality work, treating people with respect, following through on commitments they make and surrounding themselves with people who do the same.

While American politicians feud about funding American transportation infrastructure, **Cambridge Systematics** (Cambridge, MA) is turning its eye to emerging markets.

The 261-person transportation planning, policy and technology services firm is already expanding into some of those international markets, as well as diversifying its offerings, says Brad Wright, president and CEO. While the company continues to grow and strategize for the future, its success is already clear for all to see. The firm secured a respectable spot in **THE ZWEIG LETTER** 2011 Hot Firm List, coming in at No. 102.

In this interview, Wright talks about the essential tenets that mark Cambridge Systematics' success and the inspiration he received from his parents.

THE ZWEIG LETTER : What does it mean to be a Hot Firm?

Brad Wright: From my perspective, a "Hot Firm" is a company that is growing and dynamic because it is able to consistently attract new and repeat business, recruit and develop industry leaders and give back to the community.

TZL: How did you get where you are today?

BW: I had great mentors and have always been motivated to take on a new challenge. My parents instilled core values that have served me well and I have learned a great deal from each of the managers and clients that I worked for throughout my 20-plus year career in the transportation sector. I've been fortunate to observe firsthand how great companies are run prior to moving into the role of CEO at Cambridge Systematics.

Brad Wright, President and CEO, Cambridge Systematics.

TZL: Do you remember your first paid job? What did you learn then that still influences the way you work today?

BW: My first paid job consisted of mowing lawns and performing various other odd jobs for neighbors. Dating back to that first job and throughout my career it seems that being successful comes down to doing high-quality work, treating people with respect, following through on commitments that you make and surrounding yourself with people who do the same.

TZL: What is it in your DNA that drives you to success? Is it audacity and risk-taking; a can-do attitude and a relentless pursuit of perfection; something else more abstract?

BW: I don't think anyone would describe me as a huge risk-taker, but I am extremely competitive, expect a lot of myself and the people I work with and like new challenges.

TZL: In today's difficult business climate, what does it take to succeed? Is the spectrum of failure a motivator?

BW: As I noted above, being successful often comes down to doing high-quality work, treating people with respect, following through on commitments that you make and surrounding yourself with people who do the same. Closely monitoring and being able to respond quickly to changes in the market is critically important as well. And yes, the fear of failure is a motivator, but effective leaders acknowledge and learn from their past mistakes.

TZL: Where do you see this industry in 10 or 20 years? What trends are influencing it? What about your company?

BW: Our core business consists of providing transportation planning, policy and technology services for a mix of public and private sector clients. While there is a great deal of uncertainty about the future of federal transportation funding in the U.S., it is widely acknowledged that we need to invest more in our transportation infrastructure to remain competitive. Our industry has experienced a great deal of consolidation via mergers and acquisitions and a number of firms, including Cambridge Systematics, have expanded internationally to offset the downturn in the U.S. economy. I would expect to see continued globalization in the transportation sector, particularly as firms make a push into Brazil, India, Russia and China, where there is considerable investment in transportation infrastructure. In addition to our international expansion efforts, we are taking steps to diversify our client base as well as our service offering in order to meet the needs of current and future clients.

TZL: Do you hold someone as a special mentor? How did this person influence who you are?

BW: My parents have been a huge influence because they instilled the values that have enabled me to be successful in my personal life and in business.

TZL: What's the one trait you most admire in people and why?

BW: Selflessness. I have a great deal of respect for people who are quick to deflect credit and who take pride in helping others to be successful.

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"My parents have been a huge influence because they instilled the values that have enabled me to be successful in my personal life and in business."

OUTLOOK

Construction recovery underway

The question is, will progress continue?

By CHRISTINA ZWEIG
Contributing editor

With a historic low in home prices and a high level of foreclosures, residential construction is still far below desirable levels, but new developments have caused some increases in non-residential construction recovery. Looking forward into 2012, government regulation changes and material costs are expected to cause additional changes.

In a May 3 webinar "Construction Recovery at Last – But for how long and how strong?" moderated by Craig Roberts, director, Business Development RCD Group, Bernard Markstein, chief economist, Reed Construction Data, Kermit Baker, chief economist, American Institute of Architects, and Ken Simonson, chief economist, The Associated General Contractors of America, analyzed future activity within the various construction sectors.

Economic growth has been subpar coming out of the great recession, said Markstein. Nevertheless, recovery, though small, is still present. In his forecast for construction spending Markstein noted the "heyday of residential construction in 2005," and said, "certainly some comeback would be desirable but it will be a long slow struggle…"

Residential construction. "Basic trends have not changed that much. Going forward I do expect to see growth, but we are coming from a low level. The next couple years we will be nowhere near where we were," Markstein said.

Reed Construction Data reports total residential construction spending, which includes improvements, was flat at $235.5 billion in February after slipping 0.1 percent in January. New residential construction spending, without improvements, decreased 1 percent in February after rising 2.1 percent in January. Total residential construction spending was up 4.9 percent year-to-date compared to the same period a year earlier, while new residential construction was up 7.4 percent in the latest available figures.

Much of the lack of growth is attributed to a high level of foreclosures. In some areas distressed home sales make up as much as one-third of the market. Furthermore, even non-distressed homes are being affected by these sales because in order to sell they must be prices competitively. In an area with many distressed home sales these sale prices are often used as comparables, dragging down appraised values of other homes. This is one of many factors leading to increased hesitancy of young or new homebuyers purchasing homes. Instead this segment of the population is often choosing to rent.

If all foreclosed homes were released now instead of over the next four years it would crush the market, but would be it better over the long-term? "It would devastate prices and make folks nervous about doing things, we need to feed (foreclosed homes) into the system consistent with demand," Baker said about potential short-term effects.

Nonresidential. "Nonresidential looks good, near term going forward," Markstein said. "The first quarter is looking better than initially expected." He highlighted commercial starts, especially in the retail and institutional sectors.

Nonresidential building construction spending dropped 1.4 percent at a seasonally adjusted rate in February after falling 1.3 percent in January. However, on a year-over-year not seasonally adjusted basis, spending was up 8.3 percent and year-to-date it increased 8.9 percent compared to the same period in 2011, according to Reed Construction Data.

Developments and economic turmoil in Europe are some of the chief risks to the forecast, Markstein said. Despite calling oil prices a threat, Markstein said, "The U.S. is a little more resilient on oil prices than we were before. We have moved off some oil dependence and are more energy efficient."

The expectation is for spending totals to strengthen throughout 2012 and 2013 as the economy grows, companies expand in response to growing demand and some producers move production from overseas back to the United States, Markstein said.

"We won't have material prices going up at same rate as we did in 2010 and 2011… Though global demand is down, the supply on some things is improving," Simonson said.

The availability of financing remains an issue, though it was noted that the net percent of banks that had been tightening standards for commercial real estate loans shows slight loosening.

Heavy engineering. Federal spending cutbacks are significant in heavy engineering, and Congress has continued a tumultuous battle with transportation funding. At the end of March, a 90-day extension of transportation funding was passed. This is the ninth temporary extension to take effect since the last long-term funding authorization expired in September 2009.

According to Reed Construction Data, Heavy engineering (non-building) construction spending dropped 1.9 percent on a seasonally adjusted basis in February, after falling 0.9 percent in January. On a year-to-date not seasonally adjusted basis, heavy engineering spending increased 7.9 percent from the same period in 2011. All of the major heavy engineering spending categories were down for the month of Febru-

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> "Basic trends have not changed that much. Going forward I do expect to see growth, but we are coming from a low level."

STRATEGY

P3s are gaining steam in N. America

P3s allow for risk management, bundling of projects, cost management, and bring value-added expertise to the project – and ultimately, value to taxpayers.

By LIISA SULLIVAN
Correspondent

The development of the public-private partnership, or the P3, has evolved because the United States is faced with an aging infrastructure, coupled with the reduction of local, state, and federal government budgets for repair and improvements to older infrastructure.

The P3 was developed to address this problem and to bring private capital and know-how to public projects.

What is a P3? In general, a P3 is a contractual agreement between a public agency (federal, state, or local) and a private sector entity. Through the P3 agreement, the assets, skills and resources of the public and private entity are shared to deliver a service or facility for the general public's use.

P3s have been successful on a multitude of projects throughout the U.S., including transportation, water/wastewater management, urban development, school/university and utility projects.

One case study. David Zaiser, partner at **KSS Architects** (Philadelphia, PA), says that his firm has designed successful and engaging learning environments for higher education institutions, schools, and communities throughout the country using P3 agreements.

Ted Rowe, President, MTE Consultants, Inc.

"We recently completed a project where we worked with an institution and a developer to build a new university administration building off campus. The combination of resources and expertise resulted in a building that excels in design and economics," he says.

Zaiser offers the following reasons for pursuing a P3:

1) **Developers focus on the bottom line**. Colleges and universities are generally large institutional bureaucracies that force projects through a process that a private-sector entity can complete quicker. Private-sector entities, such as developers, are generally bottom-line oriented. If it doesn't make sense financially, the project doesn't make sense to pursue. For this reason, developers offer the possibility of a more streamlined, less expensive approach.

2) **Off-campus building relieves on-campus space pressures**. Whether it's an acquisition or a lease, developers are well-suited for determining what options make the most sense for off-campus projects. They are sensitive to details like tenant delays or restoration claims. Understanding the potential for these issues, and their costs, upfront can help all parties better manage the project to meet the goals for success at the lowest cost.

3) **Developers offer alternative financing structures**. Whether it's a lease-to-own structure, a straight lease, or simply a turnkey approach to a construction project, an institution can work with a developer in many ways to structure a project to suit the needs of an institution, including those that require no capital funds. Institutions can even structure just portions of projects with a developer with the balance being accomplished more conventionally. The key is to understand that partnering with a developer provides the institution options it simply would not have on its own. Some of these options create a revenue stream, such as student housing, which can be used to secure construction funding through a developer when an institution would otherwise be forced to use capital funds or float a bond.

4) **Developers can act as the third, straw-party negotiator for the institution.** Developers are well-placed for negotiating these kinds of deals because they understand commercial property economics. Institutions that are used to 50- or 100-year buildings may not understand the economics of a commercial property, which are typically driven by their lease values. Institutions may not be prepared to complete an analysis that thoroughly and consistently questions the value of every portion of a real-estate asset.

"Many other opportunities exist for institutions that partner with developers," Zaiser says. "If you think working with a developer is an option open only to private institutions, note New Jersey Bill S-2548, introduced by Sen. Raymond Lesniak, which recently passed in cash-strapped New Jersey and encourages state colleges and universities to form public-private partnerships to improve their campuses in lieu of floating bonds to secure their own capital funds. The new legislation allows private developers to have financial and administrative responsibility for on-campus construction. In essence, this allows private entities to own buildings on state-owned land, which allows institutions to avoid a capital funding issue and to lease the buildings instead."

Canada catches up. MTE Consultants, Inc. (Kitchener, ON), a 200-person engineering and consulting firm, has identified P3s as a focus area.

"We see P3s as the way of the future for our clients," says Ted Rowe, president. "These partnerships allow for efficiencies because they are based on the expertise of the owner and the contractor. This can lead to lower costs, pro-

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"These partnerships allow for efficiencies because they are based on the expertise of the owner and the contractor."

Where the process starts

Wally Hise

MARKETING METRICS

Generate leads and create opportunities proactively so you're not waiting for the next RFP.

The first step in the sales lifecycle is to identify a future contract, project, or follow on a piece of business. Listed below are three good sources to generate new leads. Consider whether you are maximizing the potential of each one while building your sales pipeline.

- **Past and present customers**. These individuals/organizations can be your fastest and easiest sources to secure new work. Sometimes firms have the attitude that they are "handling" each of their current customers. But what does that mean? Do you have specific and established procedures for talking with these customers about upcoming opportunities and opportunities within other divisions or subsidiary companies? When was the last time you talked with your past customers and what did you talk about? Did you talk on the phone or go to the meeting with the objective of getting new work? The time you initially spent cultivating that customer and the relationship should not be wasted.
- **Published resources**. How many publications received in your office are read from cover to cover? The answer is probably very few. We all have great intentions of "plowing through the stack" on the next airplane ride or when this proposal is finished. The reality is that we almost never do it. Why not engage your support staff and project team (or other individuals who can assist with lead generation, appointment setting, lead management, etc.) in reviewing and clipping articles from newspapers, web sites, and trade journals on a daily or weekly basis? Look for any kind of change in the industry, customer or competitor organizations, or geographic area that would give you a leverage point. Have these compiled into a folder for you to review on your next trip. Better yet, have your team follow-up by setting a meeting with the customer when a lead is generated.
- **Participation in professional organizations**. Target customer-oriented groups or associations for membership, speaking opportunities, sponsoring special events, or other participation. Having the opportunity to interact with current and future customers on an equal level through participating in such organizations is a salesperson's dream. When your staff request corporate support to do this (membership dues, etc.), require that they regularly attend meetings, generate contact lists and volunteer for committees and boards.

Statistics show that you need to make up to seven contacts with a potential customer before you will actually secure a new project. This is the amount of time it takes you to establish a relationship, which is how you win new work. Concentrating efforts on past or present customers eliminates the seven necessary contacts because you already have an established relationship. So why not use it?! This can be one of your keys to expediting new work.

Consider the following list of "contact ideas" for past or present customers.

1) Arrange a walk-through of a current or recent project (show your accomplishments and expertise).
2) Ask for three possible leads for new customers/projects (referrals, within or outside their organization).
3) Inquire about the condition of a project six months after completion (follow-up).
4) Ask if they have any additional projects (follow on or new work).
5) Request a debriefing on the project (wrap up or closeout).
6) Ask for a letter of recommendation (even if you don't need it now).
7) Interview the customer on a technical or business issue for a newsletter article for internal or external publication (seek their views, opinions and expertise).
8) Ask them to review your marketing plan or account management strategy (treat them as the expert).
9) Arrange for him or her to speak at a professional function, local chapter meeting, national conference, or industry forum (give them the spotlight).
10) Have the customer participate in a roundtable discussion about "what clients think" (you can even do this at the local office level).
11) Invite them to a luncheon or social engagement (entertainment).
12) Request a mid-project debriefing outside of the regular project meeting (and don't charge them for it).

I'm sure you can think of other ways to engage or reengage, energizing and capitalizing on existing relationships. Try extending the list to 15 ideas, then get some of your colleagues together over lunch and brainstorm actions to put the ideas to work for you!

WALLY HISE is vice president of federal marketing for **HDR Engineering, Inc.** (Omaha, NE). Contact him at wally.hise@hdrinc.com.

Where are the design professions headed?

Ed Friedrichs

FROM THE CHAIRMAN

Embrace these five directions and you'll dominate the profession and make the world a better place.

Mark Zweig asked me to speak to his class in the school of architecture at the University of Arkansas recently, encouraging me to "tell it like it is" to his class of young architects about to enter the real world. The title of his class is, "Everything they don't usually teach you in architectural school." I described the five themes that I have been following for a few years now. I am more convinced than ever that failure to pursue these paths will make an architect (or engineer for that matter) irrelevant in the very near future, so I thought I'd share them with you.

- **BIM:** Let's face it. Contractors and their subs don't actually build buildings from architects' and engineers' drawings. They're really built from shop drawings and other fabrication documents created by contractors, subcontractors, fabricators and manufacturers.

  Building information modeling, a parametric, three-dimensional modeling tool, is rapidly becoming the norm in the design professions. This shared electronic model for a building with multiple applications (quantity take-offs, interference checking, energy performance modeling) is being used by everyone involved with a project (including the owner), from conceptual design through facility management. While interesting (and the Holy Grail for architects, engineers and contractors for years), its full impact has yet to be completely felt. But it's coming fast as more subcontractors embrace it and manufacturers begin to add broader parametric information to the designer's tool kit.

  We're approaching a point where architects and engineers will no longer need to do construction documents. After all, this is the lowest reward/highest liability part of our work anyway. So how will architects and engineers survive the seeming loss in fees if they no longer do working drawings? See "Evidence-based design" and "Biomimicry" below. Architects' and engineers' roles need to evolve toward leadership that adds long-term, measurable value for clients. This is where the action will be; not in fighting to preserve turf.

  Yet to be overcome is the assignment of liability among parties when they're all contributing to the same model for construction. But this will also be solved before long as the reality of the improvements to construction and constructability become more evident.

- **IPD:** Two important issues are driving more and more construction toward integrated project delivery: above-referenced BIM and the weariness of a body of clients having to pay for the inherent conflict built into today's contracting methodologies. Blame it on the lawyers, the insurance companies or the courts but the "blame game" has reached a crescendo that clients simply won't put up with anymore. At the moment, we're seeing contractors predominantly taking the lead in assembling and managing a full delivery team, offering clients a single point of accountability. The opportunity will quickly be lost if architects and engineers don't step forth and lead.

- **Lean construction:** Embracing both BIM and IPD, this science of continual improvement of every aspect of the construction process, similar to "lean manufacturing," has become a way of life for a number of advanced practitioners. Lean is defined in Wikipedia as "a way to design production systems to minimize waste of materials, time, and effort in order to generate the maximum possible amount of value. Designing a production system to achieve the stated ends is only possible through the collaboration of all project participants (owner, A/E, constructors, facility managers, end-user) at early stages of the project. This goes beyond the contractual arrangement of design/build or constructability reviews where constructors, and sometime facility managers, merely react to designs instead of informing and influencing the design."

  What if every party to the construction process was driven by the same values and objectives instead of setting each other up as adversaries? Frankly, no one has time or tolerance for conflict anymore (except, perhaps, our brethren in the legal profession). And lean construction can accelerate the building process. Since "time is money," clients quickly understand the benefits.

- **Evidence-based design:** Popularized and practiced in healthcare design and being adopted in more and more areas of the profession, designing with an explicit performance objective in mind that goes well beyond space and energy efficiency is emerging as a key interest among clients. In today's highly competitive world, the places we make are important tools to enhancing the performance of every organization we design for. In healthcare, it's "How can we reduce our rates of infection; the duration of post-operative recovery; patient healing and effectiveness of our nursing staff." For a retailer, it's "How do I increase sales; build customer loyalty; reduce shop-lifting?" For a corporation, it's "How can I enhance the effectiveness of my work teams; reduce

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absenteeism; improve recruitment and retention?" Clients want us to express this in hard metrics in order to weigh the return on investment they will achieve.

The places we make can have a meaningful and measureable impact on the entities we make them for. Great design must be a "both/and" proposition. It must be both beautiful, inspiring an uplifting emotional response and improve the performance metrics of the entity we make it for. Your clients' eyes will light up if you start using a performance vocabulary to present your designs. In a short period of time, they're going to come to expect and demand nothing less.

- **Biomimicry:** The term coined by Janine Benyus in her wonderful book of that title models an approach to the world of the future that learns from and emulates nature. Going beyond rather prosaic concerns for carbon footprints and toxins, this approach asks a much more fundamental question, "How does nature do things?" Why is a termite mound 20° cooler than the surrounding ambient temperature without a mechanical system that consumes energy? Why is a spider able to produce a strand with higher tensile strength than any material man has yet created, yet makes it out of fly parts at ambient temperatures while emitting no toxins? After all, our planet and the species that inhabit it have had several million years of trial and error to figure out what really works. The future of our profession, and our world, depends on our interest in and ability to learn from natural systems.

Other than the rudiments of BIM, primarily the use of 3D visualization software as a design tool, very little of this is taught in architectural or engineering schools. The opportunity to add value to your clients that can be calibrated in real dollar terms has never been greater, particularly through evidence-based design and biomimicry. Working drawings… who needs working drawings? So, to educators, young aspiring professionals, as well as more "seasoned" professionals, I offer this challenge: embrace these five directions and you'll dominate the profession and make the world a better place. After all, isn't that why we all entered this field in the first place?

EDWARD FRIEDRICHS, FAIA, FIIDA, is a consultant with ZweigWhite and the former CEO and president of **Gensler**. Contact him at efriedrichs@zweigwhite.com.

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ary, although all except transportation and conservation and development were up on a year-to-date basis compared to the previous year. The forecast for heavy engineering has been revised downward multiple times throughout the year.

THE ELECTION. Problems in Washington are made worse by an election year.

"It is a convenient excuse to say, 'Let's wait until after the election,' but I'm not really sure what they are waiting for," Baker said.

"Construction ultimately is driven by population growth and economic growth and I think we will continue to have those close to trend rate," Simonson said. "Specific categories will be affected by what kind of tax decisions we get and partially by regulation.

"Aspects of construction: labor and immigration rules will be affected by who is in the White House, but Likely to still have a lot of gridlock between Congress and White House regardless, so we won't see wide-sweeping changes," he said.

Among the most affected by government decisions are the wind and solar markets, which are dependent on tax credits and government mandates. These tax credits are about to expire and it will be difficult to for congress to find a way to renew them. Simonson projects that growth on renewable energy won't be as strong as it was in the past few years, and wind and solar may come practically to a halt in some states in the next year.

TOP PLAYER, from page 3

TZL: Describe the most challenging thing you have ever done/the biggest challenge you have taken on outside of work.

BW: Being a father to three young boys can be challenging at times. They have boundless energy, curiosity and a willingness to drop the gloves with each other at any time of the day. This also is the most rewarding part of my life.

TZL: What question would you ask of another Hot Firm leader?

BW: What steps have you taken to preserve the culture of your firm while driving growth?

TZL: What lesson learned would you pass along to a recent college graduate embarking on a career in the A/E/P and environmental consulting fields?

BW: It was a piece of advice that I was offered and it is applicable to any field: put yourself in situations where you may be uncomfortable at first. This is how you learn and grow.

P3s, from page 5

vides an ability to focus on how the design gets constructed and the specific strengths of the parties involved can result in the project being completed within a shorter time period. Those involved can focus on the end result and it reduces and shifts some of the financial and scheduling risks onto the party actually completing the work."

MTE has identified two options to pursue: One is to partner with the owner/municipalities in providing planning, preliminary design and contract administration. The other is to partner with a contractor to provide detail design and construction oversight services.

As for specific market focus, areas such as transportation, water/wastewater, hospitals, schools, are all sectors where MTE sees potential P3 growth.

"While Canada seems to be lagging behind the U.S. in this initiative, we see a growing government support of P3 partnerships," Rowe says. "With the reign on public dollars tightening, it will no doubt be pushed more to the forefront as we are forced to find new and creative ways to fund larger infrastructure initiatives."

WORKPLACE

Craft an effective work-at-home policy

There are many pros, and some cons. Make sure you are aware.

By BRYAN SULLIVAN
Correspondent

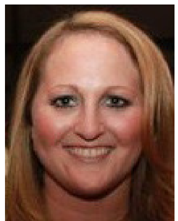
As work-life attitudes in corporate America change, so must policies. For instance, telecommuting is becoming more and more mainstream. As a result, HR mangers need to revisit polices to address problems that may arise while on the job. Careful planning and drafting of telecommuting polices is key and seeking the help of an HR consultant may be a smart move.

"In my opinion, companies with younger management are probably more likely to embrace telecommuting than companies with older management."

THE NEW GUARD. In a recent **THE ZWEIG LETTER** article on telecommuting (April 23 – issue No. 956), both Diane Whitehead, teleworking coordinator and a full-time teleworker at **CH2M Hill** (Englewood, CO) and Marisa Lynskey, HR director for **Project Time & Cost, Inc.** (Atlanta, GA), agreed that telecommuting is on the rise. They attribute this increase to economic and technological advancements. Also, as new and younger management replace the old guard, they will undoubtedly embrace this new philosophy on work-life balance.

Stephen Murphy, president of Carolina HR Partners, Inc. in Asheville, N.C., a consulting HR firm, also notes this increase.

"The impact of social networking, specifically, the changing way in which we interact and communicate with one another combined with changing em-



Marisa Lynskey, HR Director, Project Time & Cost, Inc.

ployee attitudes about work-life balance, are causing more companies to consider telecommuting," he says. "In my opinion, companies with younger management are probably more likely to embrace telecommuting than companies with older management."

BEFORE YOU DIVE IN... As with any policy, there are key points to grapple with before official enactment. Murphy shares some key points to chew on when considering a telecommuting policy for your firm's future. They include:

- The opportunity to telecommute should be determined on a case-by-case basis by the company.
- The supervisor should review the effectiveness of the telecommuting arrangement on a regular basis. If the arrangement is not achieving the desired results, the supervisor should revise or eliminate the arrangement.
- Not all types of work can be performed in a telecommuting environment; not all employees can be successful in a telecommuting environment.
- Employees will be subject to the same policies and procedures when working from home as in the office and companies have the same liabilities when employees work from home as in the office.
- Confidential data is more likely to be compromised when it is taken off-site.

Murphy also points out some questions to ask about telecommuting before proceeding. They include:

See WORK, page 10

SAMPLE POLICY

Project Time & Cost, Inc. (Atlanta, GA) shared its telecommuting policy with THE ZWEIG LETTER. While it totals seven pages and is too long to publish here, some key points addressed were: the employee had to work on site for one full year prior to telecommuting and have an outstanding record; designated office hours were agreed to; communication with supervisor must take place on a regular basis; the right to end the telecommuting policy was an option; and a self-certification safety checklist was signed off on. It looks like this:

ITEM	ISSUE	YES	NO
1	Are temperature, noise, ventilation and lighting levels adequate for maintaining your normal level of job performance?		
2	Is all electrical equipment free of recognized hazards that would cause physical harm (frayed wires, bare conductors, exposed or loose wires or fixture on the ceiling or walls?)		
3	Will the home's electrical system permit the grounding of electrical equipment (a three-prong receptacle?)		
4	Are aisles, doorways, and corners free of obstructions to permit visibility and movement?		
5	Are file cabinets and storage closets arranged so drawers and doors do not enter into walkways?		
6	Are phone lines, electrical cords, and surge protectors secured under a desk, or alongside a baseboard?		
7	Is the area in which PT&C equipment will be kept secured from unauthorized persons?		

ON THE MOVE

TRINITY RELOCATES: Trinity Consultants (West Burlington, IO), an international environmental consulting firm that specializes in industrial air quality issues, recently expanded its Iowa office with the hiring of **Allan Oestmann** as a senior consultant.

Oestmann has more than 30 years of experience in air quality issues, including air dispersion modeling, construction and operating permit support, PSD permits, environmental impact assessments, environmental audits, air toxics analyses, emissions inventories, visibility analyses, noise modeling and monitoring, and air quality monitoring. He has assisted clients in numerous states in a variety of industries, including electric power, gray iron foundries, municipal solid waste incinerators, hospitals, paper mills, glass manufacturing, and surface mining. He previously worked in the architectural engineering sector and for a surface coal mining concern. He is a member of the Air and Waste Management Association.

"We are pleased to bring Al's technical capabilities to our clients in Iowa and the Midwest. His extensive experience with air quality issues facing Midwestern companies is of real value, both to our clients and junior staff. As an experienced consultant, he will be invaluable in delivering the highest value to our clients," said Eugene Taylor, principal consultant and manager of Trinity's office in Burlington, Iowa.

Due to the steady growth of the office in serving Iowa companies, Trinity Consultants also recently relocated to 211 N. Gear Ave., Suite 50, in West Burlington. A satellite office is also available for clients in the Cedar Falls/Waterloo area under the direction of Managing Consultant **Lori Price**.

WISER HIRES: Wiser Company, LLC (Mufreesboro, TN) announced that **Steven Fones** has joined the company as the GEOINT Production division manager.

Based out of the St. Louis, Mo. office, Fones will lead Wiser's GEOINT Production and take on the responsibilities of managing the activities of the division. Fones will oversee the planning and execution of the programs, monitor the operations to ensure they are meeting the production goals and objectives of the division, and ensure the policies and procedures are followed. In addition, Fones' responsibility will be to guarantee the division is meeting the financial goals and the overall financial well-being of the division. Fones will also support business development and other divisions as needed.

Fones joins Wiser after six years of serving as the site manager and as the Global Geospatial Intelligence Feature Data program manager at Northrop Grumman (previously 3001, Inc). Along with supporting the GGI Feature Data program, Fones also supported several state and federal programs providing project management and oversight.

He brings over 23 years of geospatial experience in the field of photogrammetry, orthophotography, planimetric data collection, geospatial intelligence programs, remote sensing, and GIS and project/program management.

BAXTER & WOODMAN PROMOTES: Baxter & Woodman, Inc. Consulting Engineers (Crystal Lake, IL), promoted **Sean O'Dell** to manager of the firm's infrastructure department. He will take on an expanded role that includes guiding the technical development of infrastructure department staff and providing public sector clients with proactive solutions to underground infrastructure challenges.

O'Dell has 10 years of experience and assists the firm's clients with infrastructure planning and rehabilitation. He is a member of the firm's Trenchless Technology Committee and has played an integral role designing projects utilizing various methods of trenchless technology over the past 5 years. His efforts have positioned Baxter & Woodman, Inc. on the "Top 50 Trenchless Technology Design Firms" in the nation list – as noted by Trenchless Technology publication.

"Sean's promotion is reflective of the firm's commitment to build and maintain a strong and dynamic management team that is ready to respond to our client's engineering and technology needs," said Louis Haussmann, vice president/COO of Baxter & Woodman, Inc.

WORK, from page 9

1) Can the work be performed off-site cheaper/faster/better than it can be performed on-site?

2) Is the employee able to manage his/her time and can he/she work with little (or no) supervision?

3) If the work to be performed involves confidential data, can it be secured?

CONSIDER TELECOMMUTING CHALLENGES. With new policies, come new challenges. This is the nature of change and without change a firm's future can be in jeopardy. For example, while some workers have the luxury of working remotely, interaction with others within the firm may be a challenge. You may want to consider some of these challenges when writing your telecommuting policy and ensure that they are addressed:

- Alienation of telecommuting employees due to lack of integration (connection) with company
- Jealousy from employees who are not allowed to telecommute
- Frustration of supervisors who are not able to interact with off-site employees as easily as on-site employees
- Telecommuting employees have to be able to balance the demands of home (family, chores, etc.) while working in the home

BENEFITS OF A WELL-DESIGNED POLICY. Benefits also prevail. Employee retention and increased productivity are positive outcomes on the human side. While operations' cost reductions are benefits on the accounting side. Murphy explains that employees who can successfully manage a telecommuting arrangement may be more productive and more satisfied with their job and companies, and in turn, reduce operating costs pertaining to the physical office space needed to house them.

According to a sample telecommuting policy on the website for the Society of Human Resource Management (www.shrm.org), before entering into any telecommuting agreement, the employee and manager, with the assistance of the HR department, need to evaluate the suitability of such an arrangement and pay attention to the following areas:

- **Employee suitability**: the employee and manager will assess the needs and work habits of the employee, compared to traits customarily recognized as appropriate for successful telecommuters.
- **Job responsibilities**: the employee and manager will discuss the job responsibilities and determine if the job is appropriate for a telecommuting arrangement.
- **Equipment needs**, work space design considerations and scheduling issues.
- **Tax and other legal implications** for the business use of the employee's home based on IRS and state and local government restrictions. Responsibility for fulfilling all obligations in this area rests solely with the employee.

OUTLOOK

Easing out of the recession

Firms are reporting improving backlogs and enhanced cash flows.

By LIISA SULLIVAN
Correspondent

With the first quarter over, A/E/P and environmental consulting firms are focusing on the future and examining the past. Most signs point to a slow, but steady financial recovery.

Josh Carney, President, Carney Engineering Group.

"The recession appears to be over for us, but like most, we are always wary of false starts."

Josh Carney, president of **Carney Engineering Group** (York, PA), a 10-person structural engineering firm, shares that his firm is currently carrying, approximately, an eight-month backlog.

"This has developed fairly recently, going from a less than two-month backlog in January," he says. "The project types vary, but most are concentrated in manufacturing, office and distribution."

Carney adds that projects currently under contract are mostly on aggressive schedules.

"We also have outstanding proposals for approximately twice that amount of work. The recession appears to be over for us, but like most, we are always wary of false starts. However, this does feel more real than other blips of work over the last three years," Carney says.

Paul Jewel, chief operating officer at

Paul Jewel, CFO, Nelson\Nygaard Consulting Associates.

Nelson\Nygaard Consulting Associates (San Francisco, CA), an 80-person engineering and planning firm, says that its backlog is also looking bright. As of late March, the firm has approximately nine months of contracted work.

CASH FLOW IMPROVING. Cash flow has improved somewhat for Carney Engineering Group during the first quarter.

"Monthly billings jumped by almost double compared to last fall, but as the bulk of the work didn't ramp up until around the beginning of February, it is just now really starting to flow in," Carney says. "We have not yet cut loose on new hiring, which is helping to hold our costs in check, but we do expect to add staff within the next month."

While Carney expects to see continued improvement, in light of the last three years, it is not as if they are sitting on anything that remotely looks like a reserve of capital.

Carney mainly attributes these improvements to willingness from the developer and manufacturing sector to commit to and move new projects forward.

"We saw much pricing last year, but not much moved. This year, they seem to be moving," Carney says.

Jewel says that he is also seeing an improving economy.

"While we have noticed that project budgets are a bit smaller this year when compared to last year, the volume of RFPs has gone up significantly for first quarter 2012, compared to first quarter 2011.

Jewel reports cash flow is about the same between last quarter 2011 and first quarter 2012.

Deborah Gill, Controller, CLARK NEXSEN.

Deborah Gill, controller at **CLARK NEXSEN** (Norfolk, VA), a 560-person architecture and engineering firm, says that cash flow is robust.

"While, our backlog is down a bit, our cash flow remains strong as the majority of our projects (87 percent) are government related – local, state and federal. Cash flow tends to be pretty well assured when working in the governmental sector, but the increase in competition for these projects has greatly increased due to a decrease in private sector, affecting our backlog a bit.

Currently, CLARK NEXSEN has about eight months in its backlog.

Gill admits that there are some bureaucratic problems that can arise when working with the government, such as deleting electronic invoices for minor infractions such as formatting, but overall, cash flow is assured.

Additionally, to increase its footprint, CLARK NEXSEN recently purchased a Georgia-based engineering firm **Technicon Engineering Inc.**, which has added about 60 new employees to its roster.

"We purchased Technicon to diversify out of the federal market due to the increased competition," Gill says. "Technicon has a large industrial/manufacturing base."

Linda Ross, comptroller, **BHC RHODES** (Overland Park, KS), a civil engineering and surveying firm, reports that its backlog has been improving month-over-month and has been during the 2010 and 2011 fiscal years.

"As budgets for our public agencies

See RECESSION, page 12

TRANSACTIONS

BOWMAN BUYS: Bowman Consulting Group Ltd. (Chantilly, VA), a civil engineering, planning, landscape architecture, surveying, water/wastewater, environmental, pipeline design, geothermal energy, mining and exploration, and transportation consulting firm, announced that it is expanding its mining services through its acquisition of **PLS Group, Inc.**, a full-service civil engineering, surveying, and construction management firm with offices in Thatcher and Morenci, Ariz.

Bowman, a firm with a national service capability, is already established in the Phoenix market and continues to expand its presence in the Southwest.

"We look forward to growing our professional services to the mining industry in Arizona and throughout the Southwest," says Gary Bowman, president of Bowman.

"Bowman and PLS Group have very similar goals and culture and are both very focused on delivering exceptional service to clients. Both firms are accomplished in commercial, public and infrastructural markets, and combining forces will only expand and strengthen our current capabilities and relationships."

Thomas Palmer, the PLS Group principal who has joined Bowman as the branch manager for the two new offices, said: "I am very excited about forging this alliance with Bowman Consulting. With offices in Thatcher and Morenci, PLS Group has an established relationship with one of the world's largest mining companies, and has many on-going projects in Safford and Morenci with them. We're excited to continue that relationship with the support of the Bowman family. Teaming with Bowman allows us to tap into a wealth of knowledge and expertise that we may not currently have, but still keep the relationships and local presence that allow us to meet the needs of our clients in a way that other firms cannot."

PLS Group has enjoyed being involved in all types of projects, from boundary surveys to commercial and subdivision design to projects in and around the mines in Safford and Morenci.

PLS Group did the civil design, surveying, landscape design and construction management of the Burro Alley reconstruction in Morenci, currently being completed. Its staff has years of experience in the Gila Valley, the greater Phoenix and Tucson areas, across Arizona and throughout the Southwest.

FIRMS ON THE MOVE

ADEPTUS ENTERS SCENE: After evolving from a small firm into a national practice with clientele in over 15 states, Greenville, S.C.-based **Agnew-Rincon Architects** unveiled its new name, **Adeptus Architecture.**

The name change comes on the eve of the firm's 25th anniversary and serves to exemplify its consistent growth of clientele including major universities, municipalities, urban mixed-use complexes, institutional and commercial organizations.

Adeptus comes from the Latin meaning, "specialized expertise in a discipline."

"For the past 25 years, our firm's corporate vision has been to apply this type of 'specialized expertise' to all aspects of our practice – allowing us to provide superior client service and to envision and realize exceptional projects that address our clients' diverse goals, needs and budgets," said W. Barry Agnew, president.

"Our new name, Adeptus Architecture, better exemplifies the full range of services we provide to our diverse clientele."

As a multidisciplinary architectural, design and master planning firm, Adeptus Architecture prides itself on producing functional and cost-effective projects with emphasis on a design sensitivity that addresses both the human and natural environments.

With an extensive background in master planning, new construction, renovation/adaptive re-use and total project management, Adeptus has successfully designed over 1,000 projects since its establishment.

The firm's goal is to continue providing responsive, client-oriented solutions while addressing changing issues of development today.

SGM THE NEW NAME: Schmueser Gordon Meyer President and CEO Louis Meyer announced that after 26 years of continuous operation under the name Schmueser Gordon Meyer, the company's name has been changed to **SGM**.

Meyer said, "SGM is making this name change to acknowledge how much we have evolved over time. Initially, we provided traditional Civil Engineering and Surveying services. We now provide a more diverse set of services including energy management, water and wastewater contract operations, municipal town management, GIS mapping and asset management. SGM now has five offices in different geographic locations. Finally, we have added several new employees to our shareholder ranks, setting us up for consistent, stable leadership in the years to come. We will continue to provide the same level of service our clients have come to expect from us."

SGM, based in Glennwood Springs, Colo., has been offering client-focused civil engineering and surveying expertise to public and private sector clients since 1986. According to the firm, its new services compliment its core competencies of surveying and GIS mapping, wastewater, drinking water, transportation, land development, water resources, and structural engineering.

SEND US YOUR NEWS
Have you completed an acquisition or opened a new office? Want to publicize the good news in THE ZWEIG LETTER? Send the information to jferreira@zweigwhite.com and we will be happy to spread the news.

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have grown, our contracts awarded have increased, thereby, providing a better backlog for that particular market which we serve," she says. "The telecommunications market is on the rise. We attribute this to sales and usage of smart phones and Internet protocol, television services and the growth in demand for broadband."

Cash flow and operating capital have both improved for the first quarter at BHC RHODES.

"This is directly related to our higher utilization rates as well as the need and ability to grow. We have offered diversified services over the years and have been fortunate to be able to use the sectors that were stronger to offset others when they were experiencing stress due to the poor economy or simply changes in the market," Ross says.

Additionally, one year ago, BHC RHODES had 55 employees; today its staff totals 85 – now there's some healthy growth.

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