

ACEC INSIGHTS

AMERICAN COUNCIL OF ENGINEERING COMPANIES OF MASSACHUSETTS

March 2011

President's Message

By Lisa A. Brothers, PE, LEED AP BD+C, President and CEO, Nitsch Engineering



The last few months have kept us busy here at ACEC/MA, as we continue to diligently work toward important milestones with and for our member firms. I am constantly amazed by the hard work that the board, the committees, The Engineering Center (TEC) staff, and our Executive Director, Abbie Goodman, do on a daily basis to keep us advancing. Together, we all work to maintain and drive ACEC/MA's core purpose: "To promote the business environment by providing advocacy and resources that enhance and advise the engineering industry." Here's a sampling of what we've been doing since the last issue of *Insights*.

New Lien Law for Design Professionals

On January 5, 2011, Governor Deval Patrick signed into law S2512, which is now Chapter 424 of the Acts of 2010: Lien Law for Design Professionals. We are pleased that our collaboration with AIA/Massachusetts (American Institute of Architects/MA), Boston Society of Civil Engineers Section/ASCE (BSCES) and Massachusetts Association of Land Surveyors and Civil Engineers (MALSCE) during the 2009 and 2010 legislative sessions to advocate and advance the passage of this legislation

paid off. ACEC/MA held a briefing on February 4, 2011 to educate our member firms about this major legislative win for ACEC/MA and our member firms. A summary of the new Lien Law is also included in this newsletter.

2011 Design Professionals Day

This year Design Professionals Day at the State House will be held on Tuesday, May 10, 2011. The event is designed to be a simple channel of communication for us, as professional engineers and land surveyors, to provide a unified voice to present, advocate, promote and advance policies. This is an important advocacy effort that I strongly encourage you to attend. In 2009 and 2010, ACEC/MA members focused on advocating for the new Lien Law for Design Professionals—clearly Design Professionals Day can have a major impact! Last year, 80 members gathered at the State House to voice our industry's concerns—our goal this year is to have even more members participate! ACEC/MA sponsors and coordinates the annual Design Professionals Day and prepares members for the one-day event by educating them on the issues concerning the industry in advance of the meetings. We do this by providing members with briefing sheets on key issues and arranging

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Smart Dollars and Holistic Green: Facilitating Continuous Improvement of Operations

By Jean Carroon, FAIA, LEED AP, Principal, Goody Clancy



Operations and maintenance (O&M) can be 60% to 85% of total expenditures over the course of a building's life. This investment can be significantly reduced if considerations of maintenance, service life and the potential for continuous improvement of operations are part of the initial design strategy. If the design actively considers both short- and long-term operations and maintenance, it is good for the bottom line and good for the environment. It will reduce the obvious energy and water resource consumption and the less obvious, but still significant, amount of materials needed for cleaning, repairs and replacement of finishes and systems.

Immediate Operations and Maintenance

Because operations and maintenance begin the minute a building is occupied, during the design process, it is worthwhile to review the available metrics for sustainable

operations and maintenance, such as LEED® Existing Buildings: Operations & Maintenance, The Green Globes® for Continuous Improvement of Existing Buildings tool, BOMA Go Green and BREEAM In-Use. Understanding and facilitating best practices for the O&M team ensures that the building will not only be designed for green, but can actually be green.

Reviewing these metrics during design can raise awareness about strategies for a non-toxic building approach and site maintenance that might otherwise be overlooked. It can also link different parts of the design in simple but sometimes overlooked ways. Cleaning costs and impacts are reduced by designing the exterior of a site for source control of dirt, including draining exterior areas away from the entrance, avoiding messy plants and providing enough hardscape to scrape the material off shoes.

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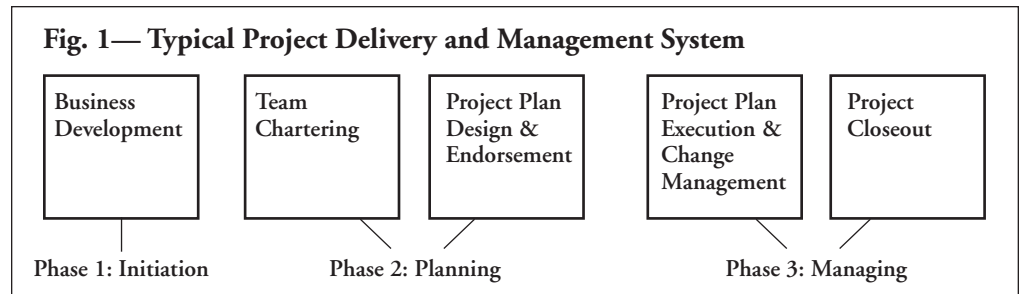
Effective Communication for Project Delivery, Project Management and Team Development

Part 2: Planning Phase—Building Strong Team Relationships

By Paul Weisman, PE, CPCC, President/CEO, Weisman Consulting, LLC
and Michele Simos, President, SimosConsulting



This is the second installment of a series of articles that addresses the topic of effective communication in the context of supporting the project delivery and management process. For our purposes, we will be referring to the following schematic (Figure 1) to identify the core parts of the project management system.



Our first article, which was published in the last issue of *Insights*, addressed Phase 1—Initiation, focusing on business development and relationship building. The following points were made:

- **Connecting** is a critical success factor in forming and building respectful and trusting relationships. Before getting down to business, ask the potential client about their weekend, inquire about their family or talk about sports or the weather. Authentic small talk makes a big impact.
- **Listening** creates an environment of trust. When people feel listened to, they feel acknowledged and heard. By listening and asking questions rather than dominating the conversation by speaking, you will gain an understanding of your potential client's needs, motivators and social style.
- **Intentions** determine how the conversation will flow. A conversation aimed at selling, for example, will be meaningless if you do not have the client's best interests at heart. Coming from a place of curiosity and striving to understand their needs will engender trust in a way that opens up the conversation and fortifies a growing relationship.

In this article, we identify the second phase of the Project Delivery and Management (PDM) system as Planning, which includes Team Chartering and Project Plan Design and Endorsement.

Effective Team Chartering: Focus on Communication

It may seem obvious, however, in our practice, we frequently hear about project launches that fail to engage everyone on the team. We believe that team chartering should be more than a networking event or a launch party. Fundamentally, team chartering is at the heart of the project and will determine:

- Whether the project stays on track
- What deadlines and milestones will be met
- How mistakes will be handled
- Who has the last word in the chain of command
- How to communicate to individuals about their day-to-day activities
- How to make and manage project decisions and changes

Ideally, after the project manager (PM) assembles a team with the right skills to get the job done, he or she gains the team's agreement on the following:

- Purpose and Alignment
- Roles/Responsibilities
- Goals and Expectations
- Approach
- Decision Making
- Skills and Expertise
- Resources Needed
- Authority
- Agreement

CSI: The Sales Meeting

By Richard Friedman, President, Friedman & Partners



A night doesn't go by without a crime show laying out the clues that solve a complex crime. In the A/E/C business development (BD) process, our offenses may not be as gruesome as what is seen on television, but they can certainly interfere with our success. Analyzing the "scene" of a sales meeting can help offer clues for turning those meetings into quality prospects.

CLUE #1: Prepare for Your Meeting

■ Understand Your Prospect

- Anticipate your prospect's pain points.
- Know what keeps them up at night.

■ Be Ready to Articulate How Your Services/Products Can Help Your Prospect

The prospect shouldn't have to drag this information out of you during the meeting!

- How your services/products will address your prospect's pain points.
- How your services/products will make your prospect (or their clients) more successful.
- Qualitatively speaking, convey the value. (This should be customized to the prospect—not a "one size fits all" proposition.)
- Why your service/product is superior to competitors' offerings.

CLUE #2: Establish Yourself in Your Entrance and Introduction

■ Establish/Reinforce Rapport with Your Prospect

- Take a deep breath before entering the room, and practice smiling if you need to. Smiling relaxes both you and others. (Hidden clue: visit the restroom before your meeting to avoid the embarrassing "pesto-in-teeth" phenomenon.)
- Take note of what's on the walls of your meeting room. This could provide clues to the individual's family, passions outside of

work, professional association involvement, alma mater, and many other conversation "connectors" that facilitate relationship building. If your business model necessitates selling to architects, you may find a set of drawings lying around—this could be the perfect entrée to learn more about a particular project.

- Ask probing, open-ended questions. Your goal is to get them to talk. Then, keep your mouth closed until either they convey a challenge that you can address or they ask a question. Examples of useful questions include:

"In reviewing your website (or print article) about your company, I see that you..."

"What have been your biggest challenges/frustrations with respect to...?"

"Tell me more about Project XYZ."

"What do you know about our firm?"

In general, clients are relaxed and at their best when fielding questions and participating in a robust discussion.

CLUE #3: Control the Meeting

■ Control the Pace of the Meeting

- The pace of the meeting should be deliberate, but not rushed. Speaking fast and rushing through a presentation indirectly conveys the concern that the value of what you're trying to sell does not warrant the person's time. Instead (without ignoring other "clues"), adopt the attitude that your client cannot afford to not hire you/your firm and hear what you have to say.

■ Carefully Read Verbal Cues

- Maintain eye contact. If more than one person is present, be sure not to focus solely on the perceived decision-maker.

■ Have a Thoughtful Discussion

- Most people feel more at ease having a thoughtful discussion versus presenting/

being presented to—never lose sight of this! In general, clients are relaxed and at their best when fielding questions and participating in a robust discussion. In contrast, introductions and "elevator speeches" can often be rushed, stilted, and ripe with nervousness. So go easy on yourself and the prospect—present less and engage more.

■ Stay on Message

- Don't digress unless your prospect invites you to do so. When this happens, be sure to steer the conversation back to the subject at hand so you don't run out of time.

CLUE #4: Plan for the Next Step

■ Seize the Reins to Cross the Sales Process Finish Line

- Clients need to hear what you can do for them: how you can save them time or make them money.

■ Ask Questions (Especially Open-Ended Ones) in Closing

- *What additional questions do you have?*
- *What additional information can I provide?*
- *Are there others within your organization I should meet with?*
- *When are you planning to... (begin soliciting proposals, make a decision, etc.)?*

■ Move the Discussion towards an Actionable Event

- *I will follow up with you in 10 days. Do you prefer phone or e-mail?*
- *What's the best day and time to call?*

Following these steps can help close the deal and improve your business development efforts.

Rich Friedman is President of Friedman & Partners, a marketing and management consulting firm serving the United States and Canadian architecture, engineering, environmental consulting and construction industries. He can be reached at 508/276-1101 or rich@friedmanpartners.com.

Legal Implications to A/E Firms in the Use of Social Networking Websites: Minimizing the Legal Risks

By Damian LaPlaca, Partner, Donovan Hatem LLP



A/E firms are increasingly using social media sites such as LinkedIn, Twitter, Facebook, blogs and wikis. While these are effective tools for connecting with existing clients and locating new businesses, social media can also increase the firms' professional liability.

The following social media scenarios could create a conflict for A/E firms:

1. An employee posts someone else's copyrighted work product, renderings or project photos onto his or his employer's Facebook page
2. An employee posts information through a website that violates the firm's confidentiality agreement with a client
3. An employee spreads false rumors on Facebook about his own employer, damaging the employer's reputation
4. An employee discloses confidential company information on his Twitter update
5. An employee commits professional malpractice when giving advice on Facebook

While each scenario is an employee action, it can cause liability for the employer. Firms need to take preemptive action to avoid potential liability, and they must take prompt, corrective action at the first indication of inappropriate employee use of firm and employee-owned technology.

Adopting and enforcing a firm-wide, carefully drafted technology use policy will help minimize a firm's liability risk. However, a recent study found that only one-fifth of companies worldwide have formal policies governing the use of social media.

A technology use policy will reduce inappropriate employee conduct and deter employees from exposing the firm to potential liability. It should be in print, and its acceptance should be acknowledged in writing or by email. The policy must be updated often, allowing flexibility for innovations in technology.

A sample technology use policy that governs social media could include the following:

Section 1: A brief discussion of potential employer and employee liability from the use

of computing equipment, including the use of social networking websites.

Section 2: Clear definitions of all ambiguous or important terms in the policy, including what forms of technology are covered and prohibited.

Section 3: A list of disciplinary actions available to the employer for violations of the policy, which should range from a verbal reprimand to termination.

Section 4: A statement prohibiting oral amendment of the policy, or only allowing oral amendment by specifically defined upper-level employees with knowledge of the policy.

Section 5: A provision extending the application of the use policy to personal time spent on social media sites and employer-provided technology devices.

Adopting and enforcing a firm-wide, carefully drafted technology use policy will help minimize a firm's liability risk.

Section 6: A prohibition of the following: 1) accessing or transmitting sexually explicit content, 2) accessing or transmitting discriminatory content, 3) sending or posting politically or potentially defamatory content, 4) sending or posting confidential company or client information without authorization, 5) using, reproducing, posting or sending copyrighted material without authorization, 6) sharing employee passwords and using another employee's passwords or computing equipment without proper authorization, and 7) accessing, sending or posting unprofessional content.

In addition, it is critical for the employer to convey that employees have no reasonable expectation of privacy on their work-related computer and that the employer may monitor technology use. According to recent studies, 66 percent of employers monitor the Internet connections of current employees. Monitoring employees' technology use can increase productivity, ensure information is kept confidential and decrease employer liability.

This can be done through the following provisions:

- Employees have no reasonable expectation of privacy for use of any employer-provided computing equipment, including e-mails, social media, remote access to an employer's computing systems or information or other employer-provided technology.
- The employer may conduct announced and unannounced inspections of the computing histories of employees on a regular basis.
- In addition to an employee's computing history, an employer can access an employee's work-related or personal computer file content, emails, and other content created or accessed by an employee.
- The employer has the right to, and will, keep copies of all computing passwords, and the existence of a password will not create any reasonable expectation of privacy for an employee.

Without a comprehensive and effective technology use policy, firms are not protected from the hidden risks that exist in the use of social media. However, adopting an effective policy is only half the battle—enforcement of the policy is equally important to the policy's success. Adopting and enforcing a policy is a firm's best course of action to minimize liability while still enjoying the benefits of the use of the technology.

With an effective policy and enforcement, firms should have no fear in furthering business goals through the use of social media.

Damian LaPlaca is a Partner at Donovan Hatem LLP in Boston, Massachusetts and specializes in professional liability matters, commercial litigation, employment and intellectual property matters. He can be reached at 617/406-4645 or dlaplaca@donovanhatem.com.

*Damian LaPlaca gratefully acknowledges the assistance of Pamela C. Selvarajah in adapting this article from *Legal Implications of the Use of Social Media: Minimizing the Legal Risks for Employers and Employees*, 5 MD. J. BUS. & TECH. L. PROXY 1 (2010), prepared by Damian LaPlaca & Noah Winkeller. Pamela Selvarajah is at Boston University School of Law and worked at Donovan Hatem LLP during the summer of 2010.*

MA PE and PLS Board Issues New Guidelines

By Joel P. Goodmonson, ME, PE, PLS, Executive Vice President, Architectural Engineers, Inc.



The Massachusetts Board of Professional Engineers and Professional Land Surveyors has adopted several advisory and policy guidelines that affect licensees and businesses providing engineering and land surveying services in Massachusetts. In particular, the board adopted guidelines regarding:

- Digital Signatures and Handwritten Signatures
- Stamping Each Page of Multi-Page Plans
- Use of the Title “Engineer”

Many vendors provide software designed to create encrypted digital signatures. The board encourages licensees to investigate available products and determine with their client which product will meet the needs of both parties. Keep in mind, simply scanning a copy of the licensee’s seal and signature and applying this facsimile to a document does *not* meet the Board’s Policy Guideline.

Policy Regarding Digital Signatures

The Board voted to adopt the following policy:

- Whenever all parties to a transaction agree to transmit a document bearing an original signature and stamp electronically, the document must be accompanied by a properly encrypted digital signature. A digital signature must have an electronic authentication process attached to it such that it can only be associated with the Licensee, is capable of verification, and is linked uniquely to the underlying documents in a manner that invalidates the signature if any part of the document is changed.
- The digital certificate and associated private key used to digitally sign the documents must be under the sole and exclusive control of the Licensee, e.g. kept on a smart card when access to the computer used to apply the digital signature cannot be controlled.
- The handwritten signatures of the licensees must be affixed adjacent to and below the Licensee’s seal.

Pursuant to M.G.L. c.112§ 81M, “[p]lans, specifications, plats and reports whenever stamped with the seal of a registered professional engineer or professional land surveyor shall be signed by the registrant named thereon. ***The use of facsimile signature stamp shall not be deemed to comply with this section.***”

Advisory Ruling RE:

Stamping Each Page of Multi-Page Plans

The Board voted to adopt the following policy relating to the stamping of engineering or land surveying plans filed with public authorities:

Licensed engineers and land surveyors shall stamp and sign their seal on *each* individual page of a set of engineering or surveying plans when filing those plans with a public authority, unless otherwise authorized by statute.

Pursuant to M.G.L. c.112§ 81M, licensed engineers and land surveyors are required to place their stamp (seal) on plans, specifications, plats and reports prepared by them when those documents are filed with public authorities and to sign their stamp. Similarly, M.G.L. c.143§ 54A prohibits certain state and municipal authorities from accepting any engineering plans or specifications that do not bear the seal of registration of a professional engineer. The purpose of requiring a stamp on these documents is to indicate that, based on either direct preparation or supervision, the licensee whose seal is on those documents considers the information contained in them to be safe for public health, property and welfare in conformity with accepted engineering or land surveying standards in an area in which the licensee is competent.

If a licensee stamps and signs only the first page of a set of plans, it is possible for work to be added, subtracted or amended on the plans without approval, knowledge or review of the licensee. By contrast, when a licensee places his or her stamp and signature on each page of a set of plans, it is clear that he or she is taking responsibility for the plans and related specifications, if any, or drawings contained on that page. By requiring licensees to stamp and sign each page of a set of design or survey documents, the Board seeks to eliminate any confusion as to which engineering and/or survey work the licensee intended to certify and thus further the public protection goal of the stamping requirement.

Advisory Ruling RE:

Use of the title “Engineer”

The Board voted to adopt the following policy regarding use of the title “Engineer:”

M.G.L. c.112§ 81D states that “a person shall be construed to practice or to offer to practice engineering (1) who practices any *branch* of the profession of engineering; or who, by verbal claim, sign, advertisement, letterhead, card, or in any other way represents himself to be a

professional engineer (2), or through the use of some other title implies that he is a professional engineer; or who holds himself out as able to perform, or who does perform any engineering service or work or any other professional service designated by the practitioner or recognized by the educational authorities and engineering.” (*emphasis added*)

The Board interprets *branch* to mean any one of the fundamental branches of engineering enumerated under M.G.L. c.112§ 81E together with those additional fundamental branches currently licensed by the Board and any of their sub-branches.

The fundamental branches include: aeronautical, chemical, civil, electrical, heating-ventilating-air conditioning, industrial, mechanical, metallurgical, mining, safety, fire protection, sanitary and structural as well as agricultural, control systems, environmental, manufacturing, marine, nuclear and petroleum engineering.

Therefore, the use of the title “Engineer” in a manner that the Board determines is inconsistent with the aforementioned provisions shall be subject to disciplinary action per M.G.L. c.112§ 65A.

The provision of this opinion, however, shall not apply to:

- Persons licensed as engineers under M.G.L. c. 146, who are not qualified to engage in the practice of engineering as defined in M.G.L. c.112§ 81D.
- The work ordinarily performed by persons who operate, maintain or install machinery and/or equipment per M.G.L. c.112§ 81D.
- Persons who are exempt from the provisions of the registration law by virtue of M.G.L. c.112§ 81R
- Persons who are not registered/licensed in Massachusetts but who hold a current license to practice in another state or jurisdiction and who declare or otherwise qualify their title in a manner that does not imply they are qualified to practice in Massachusetts (e.g. Professional Engineer, Kansas).

Joel P. Goodmonson, PE, is Executive Vice President at Architectural Engineers, Inc. in Boston, MA and is Vice Chair, Massachusetts Board of Registration of Professional Engineers and Professional Land Surveyors. Mr. Goodmonson can be reached at jgoodmonson@arcengrs.com or 617/542-0810.

ACEC, ASCE and APWA Join to Form Institute for Sustainable Infrastructure

By Peter A. Richardson, PE, LEED AP, Vice President and COO, Green International Affiliates, Inc.



Many engineers regularly consider a variety of sustainable design features—such as cost effectiveness, energy efficiency and sensitivity to the environment—during their daily design work. However, the general public (and environmentalists in particular) may not necessarily recognize professional engineers as knowledgeable in sustainability and green building unless the engineers have acquired additional credentials.

The success of the US Green Building Council's Leadership in Energy & Environmental Design (USGBC LEED) program, along with numerous other green building and sustainable design certification programs on the market today, demonstrates the need for engineers to engage this topic and stake their rightful claim as the stewards of the nation's infrastructure.

The three leading national engineering organizations—the American Council of Engineering Companies (ACEC), American Society of Civil Engineers (ASCE) and American Public Works Association (APWA)—which together represent both the public and private sectors of engineering, have realized this need and collaborated to develop the Institute for Sustainable Infrastructure (ISI).

ISI is a new, joint-venture, 501(c)(3) non-profit organization devoted to ensuring that engineers are properly trained in sustainability by developing a robust designer's certification program and a new infrastructure project rating tool for civil infrastructure.

The ISI has defined “**sustainability**” as a *set of environmental, economic and social conditions in which all of society has the capacity and opportunity to maintain and improve its quality of life indefinitely, that is, without degrading the quantity, quality or the availability of natural resources and ecosystems.*

ISI will focus on the sustainability of civil infrastructure and will measure against the “Triple Bottom Line”—economic, environmental and social impacts.

The ISI program is not intended to compete with LEED, which focuses on energy efficiency and environmental sensitivity for buildings. Rather, ISI will focus on the sustainability of civil infrastructure and will measure against the “Triple Bottom Line”—economic, environmental and social impacts.

ISI's project rating program will take a two-pronged approach by considering:

- Pathway Contribution: “Doing the right thing” within a community
- Performance Contribution: “Doing things right” by engineering high-performing projects

Often, engineers are not at the table when large infrastructure projects are being planned. Engineers are called upon after the fact to make the vision work. By adopting the principles of sustainability and training engineers to better understand economic and social factors, in addition to environmental

factors of sustainable engineering, ISI believes that engineers will be called upon earlier in the process in order to ensure that solutions requiring the development of large-scale infrastructure are truly sustainable.

The ISI rating tool will examine the triple bottom line under ten categories and four levels. Approximately 40 pilot projects are currently being evaluated to determine how well the tool works with actual projects and to make any final adjustments before Version 1 of the rating tool is released in May 2011.

This initiative takes on greater urgency, in part, because many indicators suggest natural resources are being depleted faster than the world's ecosystems can replenish them, and waste streams are already exceeding the capacity of natural bio-systems. This condition is expected to worsen as the world's population increases and becomes more affluent. It will lead to severe degradation of the environment and quality of life unless trends are reversed.

We are already designing and building the infrastructure for 2050 and beyond. Taking rightful ownership of sustainable infrastructure is critical to the future of the engineering profession.

Peter A. Richardson, PE, LEED AP is Vice President and COO of Green International Affiliates, Inc., a 60-person civil and structural engineering firm located in Westford, MA. He currently serves as the BSCES liaison on the ACEC/MA Government Affairs Committee. He can be reached at 978/923-0400 or prichardson@greenintl.com.

Chapter 424 of the Acts of 2010 Signed Into Law: Lien Law for Design Professionals

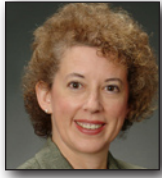
On January 5, 2011, Governor Deval Patrick signed into law S2512, which is now Chapter 424 of the Acts of 2010. The new law, which will take effect on July 1, 2011, will provide additional legal protection to engineers, land surveyors, architects and related licensed design professionals.

ACEC/MA worked closely with AIA/Massachusetts (American Institute of Architects) to advocate for passage of this legislation. It was a major legislative priority for ACEC/MA, AIA/Massachusetts and other design professional organizations during the most recent legislative session. It was also one of our priorities at the 2009 and 2010 Design Professionals Days held at the State House.

Thanks to all our members and coalition partners who worked tirelessly to help win passage of this legislation, especially Senator Karen Spilka and Majority Leader James E. Vallee, our Legislative sponsors, and their staffers, Erin Souza (Majority Leader Vallee's office) and Michael Wright (Senator Spilka's office).

ACEC/MA Members to Gather for Design Professionals Day on May 10

By Abbie Goodman, ACEC/MA Executive Director



The passage of the new Mechanic's Lien Law for Design Professionals last January demonstrates once again the power of our grassroots advocacy at the state level. ACEC/MA members, working with coalition partners from the state's other industry organizations, strongly advocated for passage of the law during Design Professionals Day at the State House for two consecutive years.

Assisting our members in achieving higher professional, ethical, business and economic standards is part of the ACEC/MA mission. When we advocate for issues like the lien law that affect our engineering businesses, public leaders really do listen. They may not always agree with our views on specific laws or regulations, but they are always interested in hearing what professionals from their home districts have to say. This is how legislators educate themselves—and they truly want to hear from us.

You can help educate legislators by participating in the upcoming Design Professionals Day at the State House on Tuesday, May 10, 2011.

ACEC/MA cosponsors the annual Design Professionals Day at the State House with leaders from other engineering and design-related associations, including the Boston Society of Civil Engineers Section/ASCE (BSCES) and the Massachusetts Association of Land Surveyors and Civil Engineers (MALSCE). At press time, we are still determining the priority bills for this year, but our advocacy will generally focus on infrastructure funding, dam safety, and harnessing private sector innovation.

REGISTER BY APRIL 29

To participate in Design Professionals Day, register by **April 29** at www.surveymonkey.com/s/DesignProfessionalsDay2011. You will need to list your State Senator and State Representative in the online registration form; find their names by inserting your home address at www.wheredoivotema.com/bal/myelectioninfo.php.

The ACEC/MA team will arrange meetings between representatives of member firms and their respective Massachusetts State Representatives and State Senators. If you are new to the

event and want to partner with others who have done this before, we'll pair you up with engineers and land surveyors and you'll join them for their legislative appointments.

We hold advance issue briefing sessions to help you prepare to discuss the issues. You can participate in an issue briefing session at The Engineering Center or by conference call on the following dates:

- Wednesday, May 4: 10:00–11:00 AM
- Thursday, May 5: 2:30–3:30 PM
- Friday, May 6: 10:30–11:30 AM

ACEC/MA will post and email the briefing sheets we will be using in the meetings with State Representatives and State Senators in early May. If you have any questions, contact Bailey Boykan at 617/227-5551 or bboykan@engineers.org or Susan D'Olimpio at 617/305-4111 or sdolimpio@engineers.org.

Abbie Goodman is the ACEC/MA Executive Director at The Engineering Center. She can be reached at agoodman@engineers.org or 617/305-4112.

New Massachusetts “Prompt-Pay” Law Governs Private Construction Contracts

By Amanda Yun Sirk, Donovan Hatem LLP



Massachusetts recently inserted a new Section 29E into Chapter 149 of its general laws. It will significantly affect payment provisions in private construction contracts, requiring construction payments to be paid promptly.

The prompt-pay law, effective as of November 8, 2010, will govern all prime construction contracts for private projects greater than \$3 million (except 1–4 unit residential projects). Although primarily directed at general contractors and their subs, the law will have an impact on design professionals performing construction phase services. The primary elements of the new law are described below.

Pay Applications

The prompt pay law creates a timetable for periodic progress payments. Periodic pay requests must be accepted every 30 days, and the law provides a 15-day deadline for approval or rejection after the submission, with an additional seven days for every tier below the prime. Payment must then be made within 45 days of approval. If a payment application is not approved

within the required time period, it is deemed approved unless it is rejected prior to the date for payment. The law requires that any rejection be made in writing, with an explanation of the “factual and contractual basis” for the rejection, and be “certified as made in good faith.”

Change Orders

The prompt pay law creates a 30-day time limit for approval or rejection of a request for an increase in the contract price. Similar to pay applications, if a change order request is neither approved nor rejected, it is deemed approved. If deemed approved, the change order may be submitted for payment in the following pay request. Any rejection must be made in writing, with a “factual and contractual basis,” and be “certified as made in good faith.”

Other Provisions

The prompt pay law invalidates pay-if-paid clauses as void and unenforceable with two minor exceptions. It also provides that any contract provision requiring a party to continue performance when a payment is overdue by at least 30 days is “void and unenforceable” except for disputes regarding quality of work or notices of default.

Design Professionals

Design professionals will need to exercise increased diligence in their timely review and approve contractor invoices and proposed change orders, or provide a reasonable written explanation for their rejection. If a design professional facilitates the general contractor's over-payment to a subcontractor by failing to review and appropriately reject unwarranted items of work, it could generate a cause of action by the general contractor against the design professional. Similar scenarios can be envisioned where an owner claims to have overpaid.

If you are involved in private construction contracts, we urge you to carefully review this new law, which can be found at Chapter 293 of the Acts of 2010: www.malegislature.gov/Laws/SessionLaws/Acts/2010/Chapter293.

Amanda Yun Sirk is an Associate in the Professional Practices Group at Donovan Hatem LLP in Boston, Massachusetts. Amanda specializes in professional liability matters and provides loss prevention, claims management and contract review services to design professionals on a nationwide basis. She can be reached at 617/406-4573 or asirk@donovanhatem.com.

What Have We Done For You Lately?

With the support of our member firms, ACEC/MA works hard to protect and promote your business in a variety of ways. In addition to our robust programs, our recent efforts include the following.

February 2011

LEGISLATIVE AND REGULATORY

- Organizing the May 10, 2011 Design Professionals Day at the State House: Members from ACEC/MA, BSCES & MALSCE will visit our State Senators and State Representatives to discuss the importance of maximizing private sector innovation, infrastructure funding, dam safety and other issues. We are reviewing the 5,300 bills filed in January to determine which ones may have an impact on our industry. Fact sheets on the appropriate legislative issues will be created for use on Design Professionals Day and will be posted on the ACEC/MA website.
- Worked successfully in collaboration with AIA/Massachusetts for the passage of the Mechanic's Lien Law for Design Professionals (S2512). The governor signed the mechanic's lien law (Chapter 424 of Acts of 2010) in January of 2011.
- Held a member briefing on the new mechanic's lien law for design professionals.
- Continue to work to educate municipalities and others on the benefits of using Qualifications Based Selection (QBS) to procure professional engineering services. ACEC/MA prepared a PowerPoint QBS presentation presented to both the Massachusetts Municipal Association (MMA) and Massachusetts Highway Association (MHA) last spring and is currently scheduling additional presentations. The presentation is posted on the ACEC/MA website for all member firms to use.
- Preparing an ACEC National Minuteman Fund request for the potential creation of a QBS.org website.
- Testified at four public hearings held around the Commonwealth for the Water Infrastructure Finance Commission and prepared written testimony as well to submit to the Water Infrastructure Finance Commission.
- Held a Freshman Legislative Breakfast at The Engineering Center to welcome and introduce them to ACEC/MA and to offer our assistance to them on any issues related to our industry.
- Wrote three letters to the Boston Globe editor in response to various articles in the Globe that relate to our industry. Tweeted and posted the letters on the website.
- Setting up meetings with new chairs of the Transportation and Environmental Committees in the legislature.
- Worked on letters seeking co-sponsors for the Dam Safety Bill refilled by Senator Pacheco and Representative Straus.
- Fielded many media inquiries looking to speak to structural engineers about all the recent snow-induced roof collapses.
- Launched @ACECMA on Twitter.
- Solicited scholarship applications for the ACEC/MA Education Corporation.

PROFESSIONAL PRACTICE

- Sold-out the 12th Emerging Leaders Program for registration. This highly regarded six-week seminar for rising stars of member firms focuses on leadership, business financial management, risk management, marketing, strategic planning, government affairs and human resources.
- Sold-out our second Odyssey Program for future C-level leaders in our business practice. This extended leadership skills development program runs over nine months with eight formal training sessions and one individual session.
- Held a senior executive roundtable discussion on January 11, 2011 to discuss ways to better promote high-level conversations.
- Developing a Senior Leadership Roundtable program to be launched in May 2011.
- Developed and launched an Effective Writing Training Program to be held on March 1, 2011 with the goal of offering this program twice a year.
- Developing a new program for professionals new to our industry.

MASSACHUSETTS AGENCIES

- Held meetings and presentations with Thelma Murphy, US EPA to discuss stormwater reporting issues for municipalities, Kathy Baskin, Director of Water Policy for the Executive Office of Environmental Affairs (ACEC/MA Environmental Affairs Committee), to discuss the Sustainable Water Management Initiative; met with Ed Adelman, Executive Director of the Massachusetts State College Building Authority (MSCBA), to discuss business issues relating to procuring and performing design contracts. ACEC/MA has several representatives on Technical Advisory Committees: Joe Freeman on the MEPA Greenhouse Gas Advisory Committee, Sean Wooster on the DEP Solid Waste Master Plan Advisory Committee, and Fran Yanuskiewicz on the DEP Sustainable Water Resources Advisory Committee.
- Represented on the MA School Building Authority Advisory Board (Dom D'Eramo), the MSBA Designer Selection Panel (Leo Peters), the MassDOT Construction Streamlining Task Force and the Joint MassDOT/ACEC/MA/CIM Accelerated Bridge Program (ABP) Task Force.
- Continued to hold partnering meetings with key agency leaders at MassDOT, MBTA, MassPort, DCAM and DCR to discuss issues of concern to members (ACEC/MA TALC Committee).
- Attended FHWA's Regional Summit Every Day Counts program rollout.
- Invited April Anderson Lamoureux, State Permit Ombudsman/Director for the Executive Office of Housing & Economic Development, to discuss the new MassWorks Infrastructure Program (Private Sector Committee) on April 12, 2011.

**American Council of Engineering Companies of Massachusetts (ACEC/MA), The Engineering Center,
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ACEC

AMERICAN COUNCIL OF ENGINEERING COMPANIES
OF MASSACHUSETTS

ACEC/MA Program Committee: SMART Conversations Presentation

By Joan DeLorey, RPLU, Vice President and Partner, Ames & Gough

More than 25 ACEC/MA members sharpened their communication and project management skills during the November 16 breakfast program, SMART Conversations:® *Essential Communication Skills for Project Management, Project Delivery and Team Development*, presented by the Program Committee. Paul Weisman of Weisman Consulting, LLC was the featured presenter.

According to Mr. Weisman, a conversation has three basic parts—Listening, Speaking and Asking—and SMART Conversations follow five principles.

Principle 1: Connecting Precedes Content

Leading off, participants were asked to think about a past project that stood out as having run smoothly. Five factors that lead to project success were identified: good collaboration, clearly defined goals, clearly identified roles and responsibilities, good chemistry among the team members and asking questions.

Mr. Weisman discussed how teams that build SMART Cultures™ can come together while respecting their differences, talk together where dialogue is a common language technology, think together where learning can flourish and lead to discovery and act together to produce synergistic results. He described how SMART Conversations can lead to greater collaboration and improved technical and people skills. He also identified the four conditions of SMART

Conversations: 1) Shared Meaning, 2) Authenticity, 3) Respect and 4) Trust. He noted that these conditions are intertwined with an “avoid” or “attack-trigger” style.

Principle 2: Relationships are Co-Created

Mr. Weisman contends that each person in a relationship is responsible for 50% of that relationship. Attendees participated in a demonstration that reviewed how beliefs are formed and expressed in any given situation.

Principle 3:

Honor Others Through Shared Respect

According to the first part of Principle 3, engaged listening through asking, telling and balancing creates respect and trust. The second part of Principle 3 deals with discussing the “undiscussables.” He quoted Mark Sanborn, a leadership speaker, who believes that “in teamwork, silence isn’t golden; it’s deadly.” He presented six tools for addressing “undiscussables”: 1) ask permission (opening the door), 2) have a conversation with a positive intent, 3) reveal whatever feeling is making the conversation a difficult one, 4) use the do/don’t skill, 5) ask open-ended questions that encourage a response, and 6) state your observation without blame. He emphasized the importance of bringing issues to the surface early, without blame or judgment, using the SMART Conversations skills and tools.

Principle 4:

Value Shared Interest over Self-Interest

Divergent and convergent conversations can be effectively used to develop common ground in problem solving and brainstorming to create a shared strategy. To demonstrate, attendees broke into groups to participate in a divergent conversation. Following this activity, each group summarized its conversation using these tools and skill sets. One group indicated that the SMART Conversations skills/tools could be very beneficial in a design/build project delivery process. Other groups indicated that this process could be useful internally when working as a sub-consultant, as a prime and in dealing with clients.

Principle 5:

Seek Synergy Through Shared Understanding

Mr. Weisman noted that people similar to one another can have an easy conversation, but people who are different from one another can have richer conversations by finding common ground through dialogue.

Paul Weisman of Weisman Consulting, LLC is a professional engineer, certified executive coach and certified facilitator of SMART Conversations,® an intellectual property he has owned since 2006.

Joan DeLorey is a Vice President and Partner with Ames & Gough and currently serves as Co-Chair of the ACEC/MA Programs Committee. She can be reached at 617/328-6555 or by email at jdlore@amesgough.com.

President’s Message

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appointments with legislators. This focused and thorough approach aims to elicit interest and participation and to make advocacy for the novice and/or experienced easy! Stay tuned for more information on this upcoming event.

Social Media

The ever-increasing popularity of social media has radically changed how businesses operate. The more people utilize social networking sites for employment, social entertainment and consumerism, the more businesses will adapt and embrace social media as a business tool. To strengthen our communications with our members, ACEC/MA joined Twitter and you can now follow us at <http://twitter.com/ACECMA>. We will use this medium to share our successes, post the latest news impacting our industry and keep you informed on ACEC/MA related

activities/issues. We hope to be on *LinkedIn* soon—another popular social media outlet for networking and employment. Stay tuned!

ACEC/MA Senior Executive Program

On January 11, ACEC/MA held a CEO/senior leaders focus session at The Engineering Center (TEC). Led by ACEC/MA past presidents Mike Powers of Symmes Maini and McKee Associates and Jim Pappas of Stantec, this focus session discussed the reconfiguration of the ACEC/MA Senior Executive Program. The goal of the discussion was to determine if leaders of our member firms believed a “leadership program of such a high level is necessary to improve our industries’ and firms’ performance, product and image, thus making us all stronger.” Twenty-two leaders attended this focus session, engaged in an active discussion, and concluded that the program was necessary to foster progress. The first Senior Executive Roundtable of the program will be scheduled for late spring 2011. We look forward to an invigorating conversation.

Effective Writing Session

On March 1, we held our first effective writing session—a sold-out program designed to improve the quality and effectiveness of the participants’ writing. Thanks to Mike Paster of GEI, Erik Michnovetz of CDM, and Elizabeth Tyminski of TEC for planning and coordinating this successful event. The need to develop and offer this program to our members was identified at a meeting of the ACEC New England Regional Presidents (and senior leaders) held in July 2010. We will continue to identify and discuss new initiatives and opportunities at the next meeting with the regional leaders to be scheduled in July 2011.

Insights contains a wealth of relevant information that I encourage you to take the time to read. To everyone passionate in advancing ACEC/MA’s mission, my many thanks!

Lisa A. Brothers, PE, LEED AP BD+C, is President and CEO at Nitsch Engineering in Boston. She can be reached at 617/338-0063, x220 or lbrothers@nitscheng.com.

Smart Dollars and Holistic Green

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Choices in materials can significantly reduce the amount and frequency of water, materials and energy needed for both cleaning and maintenance. The General Services Administration (GSA) has a portfolio of over 1,600 owned buildings, 25% of which are considered historic. The historic buildings typically have an operating cost of 10 percent less per rentable square foot than the non-historic buildings. Analysis shows that the passive design of the buildings is responsible for the lower utility costs, and the durable historic materials decrease the cleaning and maintenance costs.

A basic part of operations is continuous commissioning of the building systems and inclusion of the commissioning in operating and maintenance processes so that no separate recommissioning process is required. However, even under a continuous commissioning program, periodic review by a third party is important to ensure that operating and maintenance processes are appropriate. Ideally, existing building commissioning (EBCx) is a whole-building process performed by a third party that is not directly involved in operations.

If only the building systems are reviewed, EBCx might miss the linkages that contribute to changes in performance. For instance, if the site design provided important solar shading and the trees have died, been pruned or simply failed to flourish, the cooling loads will spike and possibly be addressed as only a systems problem. Ideally, multiple design elements are linked—a green roof provides lower air temperature at intake valves, and efficient lighting and interior and exterior shading all work together to lower demand for cooling. It's easy for the memory and the understanding of these synergies to be lost over time.

Even in relatively new buildings EBCx has been shown to obtain energy savings of 5% to 20% with modest capital expense. Documentation by Portland Energy Conservation, Inc. of 27 million square feet of EBCx in 2008 found a typical project payback of less than two years for costs that ranged from \$0.05 to \$1.25 per square foot, depending on the size of the building and the complexity of the systems. The larger the facility, the lower the EBCx costs, but the larger savings by percentage were most often found in the smallest facilities.

As EBCx often demonstrates, savings or payback from very simple actions can be significant. One of the most important steps in

maintenance is to replace HVAC filters on schedule. When the GSA audited 176 million square feet of space, they found that expired filters increased building energy use by up to 10%. Replacing the expired filters on schedule with new high-performance filters provided an estimated operational savings of \$1.08 million for 10.8 million kWh/year.

The important consideration for the design team is to make conscious decisions about service life of all parts of a building and the level of effort and materials required for maintenance and replacement.

Service Life and Resource Consumption

Reduced resource consumption is usually thought of only in terms of water and energy, but all building materials are resources that used other resources to reach their market form. According to the U.S. Environmental Protection Agency, 49% of the raw resources consumed every year in the United States are used for making new buildings. Every part of material use has an upstream and downstream impact on the environment and human health. The extraction, fabrication and transportation of materials used in new construction are responsible for more releases that are toxic to humans than any other sector, including electricity. The global warming impact of new construction (before operation) is second only to the electric industry, which sends most of its output to building operations for lighting, cooling, ventilation and refrigeration.

Extending the service life of buildings and building components reduces environmental degradation because it avoids the negative impact of new replacement materials and can be abstractly viewed as stretching the original environmental investment of construction across time. The important consideration for the design team is to make conscious decisions about service life of all parts of a building and the level of effort and materials required for maintenance and replacement. Using materials for roofing, walls and flooring that have a long service life and are repairable is often better for the environment than a so-called green material that will not last as long and might need more maintenance.

On a lifetime cost analysis, materials that are more durable are generally a better investment, but the current commercial market system

supports short-term investments with rapid payback. We do not currently include much of the environmental cost in the pricing or regulation of products. As the full social cost of this becomes recognized in terms of human health and climate change impacts, this may change.

In *How Buildings Learn*, Stewart Brand pointed out that well made and well cared-for buildings can last hundreds of years, but the systems within these buildings, such as HVAC, fire detection and protection, lighting and plumbing, will have much shorter life cycles. Designing with consideration of service life and cycles of replacement can reduce the level of effort and materials needed to make change and permit buildings to embrace new technologies as they become available.

Anticipating changes in technology is not always easy, but trying to allow for it should still be part of design strategies. The rapid developments in electronics have quickly made rigid workstation design impractical. For example, liquid crystal display (LCD) monitors use a third of the energy required by the cathode ray tube monitors, but continuing evolutions of computer hardware and information technology may change the whole concept of desktop monitors.

Lighting and controls are also changing rapidly, and some of the technologies allow for greater flexibility in reconfiguration. Digital addressable lighting interface (DALI) is a control system structure that reduces energy use with simplified wiring requirements. Changes in lighting clusters and dimming can be made by reprogramming with no change in the wiring. The promise of LED lighting is that the wiring can be low-voltage without the need for conduit and junction boxes so that it is easier to route.

In addition, as awareness of the finite amount of fresh water in the world begins to move to center stage, it is probable that technologies that reduce the use of potable water will become more cost-effective, and the ways in which we use water to move energy and waste will change. This may suggest that major piping, like wiring, should be easily accessible.

Futuristic buildings often become obsolete themselves, but designing for the layers of service life in a building acknowledges what hundreds of years of renovations have demonstrated: some parts of buildings are replaced more frequently than others because

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Smart Dollars and Holistic Green

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of changes in technology and service life. Facilitating this replacement supports the ability of buildings to have a longer life with a looser fit, which in turn avoids the environmental impact of whole building replacement.

Continuous Improvement

One of the lessons of environmental awareness is that everything is connected, and this lesson is as applicable to the building industry as it is to nature. Fragmentation of the building and design industry often leads to the impression that sustainable design is a one-time action resulting in a new or renovated facility that wears a green label with a fixed management plan that ensures green. Nothing could be further from the truth. Environmental sustainability and the resulting operational cost savings is not a one-time event or even a series of events. It is a continuous process that involves a different way of thinking, consistent learning loops and active participation of both the building maintenance staff and the building occupants.

Schools, colleges and universities, in particular, have recognized that an informed and motivated user group can significantly lower operational costs. The fourth Student Energy Waste Watch Challenge at the University of New Hampshire in 2008 saved more than \$16,000 in energy costs in residence halls and on-campus apartments over an eight-week winter period.

Harvard University estimates that the Shut the Sash programs in the medical school and chemistry departments, which encourage researchers to close fume hood sashes, saves an estimated \$188,000 per year in energy costs.

Education of building occupants can encourage simple behavior changes, such as climate-appropriate dress codes, to allow increase or decrease in the ambient indoor temperature. The California Energy Commission estimates a 1% to 3% energy savings for each degree a summer thermostat is set above 72° F. Upgrading ambient and task lighting rather than increasing ceiling light takes best advantage of lighting and can still be tied to occupant sensors.

Despite digital communications, paper use is on the rise. Paper production uses one-third of the wood harvested in the United States and is the third most energy intensive of US manufacturing industries, using 11.5% of all energy in the industrial sector. Consolidating the locations and reducing the number of copiers and printers per occupant reduces the amount of use, saving both energy and paper.

Reducing operational and maintenance costs, which also reduces environmental impacts, may be most challenging because it requires the ability to change. Leith Sharp, founding director of Harvard University's Green Campus

Initiative, speaking at the GreenBuild conference in 2008, stressed that "the global environmental imperative requires us to change the way in which we do almost everything. The end goal, environmental sustainability, is a moving target. Therefore, any organization or individual that is serious about addressing the environmental imperative needs to expand their capacities for engaging in the process of change itself."

The exciting challenges for the building community are to keep abreast of new science, new materials and emerging technologies, and to redefine boundaries and expectations in our approach to design solutions, which include facilitating maintenance and operations. We have a tremendous opportunity and responsibility to use our creativity in new ways that have direct impacts on the fiscal, human and environmental well-being of the world.

Jean Carroon, FAIA, LEED AP is a principal with the design and planning firm Goody Clancy. She is a member of the National Trust for Historic Preservation Sustainability and the Advisory Group of the AIA Historic Resources Committee. Her new book, Sustainable Preservation: Greening Existing Buildings (John Wiley & Sons), was released in November 2010. Jean can be reached at 617/850-6651 or jean.carroon@goodyclancy.com.

Effective Communication: Part 2

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When holding the team chartering meeting, it is critical that all voices be heard and that the people involved feel that they can speak honestly and openly without the fear of criticism or retribution. In other words, they need to have a dialogue.

But what is a dialogue? Dialogue is a conversation style that encourages the free flow of conversation where everyone's thoughts and feelings are heard, respected and considered. Dialogue fosters learning, collaboration, open communication and teamwork. Strictly speaking, dialogue can take place only when the following four conditions are present:

1. Shared Meaning—are we talking about the same thing?
2. Authenticity—can we be *real* with one another?

3. Respect—can we show respect by listening to everyone's thoughts and feelings without judging them?
4. Trust—can we extend trust to one another?

When everyone has a stake in the conversation and the project outcome, they will buy into and commit to the process because they have a common goal. Facilitating and supporting an open *dialogue* builds a safe space in which people can listen to one another, consider all perspectives and create synergy; *the whole is greater than the sum of its parts*.

To understand the concept of dialogue it is helpful to understand what it is *not*. Figure 2 illustrates the different levels of conversation based on the *intention* behind each. Notice that as learning and dialogue increases, the quality of conversation and learning increases.

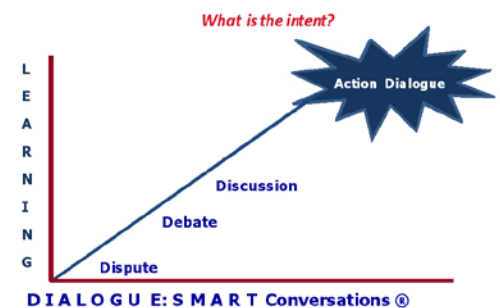


Fig. 2 — Levels of Conversation

Material used with permission from SMART Conversations®

For example, *dispute* is at the low end of the spectrum. From our perspective, the intention behind dispute is to win/be right/control. When two or more people are fighting over something, they cannot see the other's side, and they are only concerned with their self interest.

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Effective Communication: Part 2

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Next, we define *debate*, which is a civilized, orderly conversation that adheres to formal rules of engagement. That said, at the end of each debate, you still have a winner or loser, which also illustrates the intention of win/be right/control.

In *discussion*, many would argue that people openly and respectfully exchange ideas. If we look more closely, we will see that during a discussion, we are thinking about what we are going to say in response to someone else's comment or idea. And, oftentimes, the participants engage in discussions in accordance with their self interest at the center and with a hidden agenda. Again, we believe this is an organized, civilized way to win, be right or be in control.

In a nutshell, dispute, debate and discussion are conversation *strategies*; they are not considered forms of dialogue since the underlying intention is to control the outcome. Dialogue, on the other hand, holds the intention of understanding others' perspectives and being open to having your mind changed through the process of listening, speaking and asking questions.

Therefore, when posing and responding to the project chartering questions below, it is important to remember to ask open-ended questions as often as possible to encourage an open conversation and the most collective learning. Further, open-ended questions, which begin with What? When? and How?, are neutral in nature and hold the intention to *learn* and *solicit information* as opposed to leading the speaker to a particular conclusion, which is another version of win/be right/control.

Team Chartering Questions

Purpose and Alignment—Why is this team being formed? What purpose will it serve? What challenge, problem, issue or opportunity will it address? How is the work of this team in alignment with the larger goals and strategies of the organization?

Roles/Responsibilities—Who is the team leader? What is their role? Who is responsible for facilitation, logistics and information management? How will each person be involved in decision making? Who has the final word?

Goals and Expectations—What are the specific goals for this team? When will we know we have completed our work? Who are our customers and stakeholders? What are their needs and

expectations? What are the challenges?

Approach—How and when will the team meet? What are the norms or ground rules that the team will agree to? How will we hold each other accountable?

Decision making—How do we make decisions? Who has the last word on all decisions? What decision making strategy will we use? When will we use consensus decision making? Under what circumstances will the decision be delegated?

Skills and Expertise Assessment—What skills/expertise is needed for team success? What are the skill gaps? Who will fill them?

Resources Needed—How much time and money will we need for this project? Are any other required resources needed?

Authority—What level of spending authority does the team have? What authority do they have for other resources? What approvals will be required and by whom?

Agreement—All members will be invited to sign the charter, indicating their agreement.

...it is important to remember to ask open-ended questions as often as possible to encourage an open conversation and the most collective learning.

Developing a High-Performing Team

Assuming that the PM has already selected a team and begun the chartering process, a natural team-building process begins. According to Dr. Bruce Tuckman, noted organizational development researcher, all teams develop according to the following stages: Forming, Storming, Norming and Performing.

Tuckman's model explains that as the team develops maturity and ability, relationships establish and leadership changes from directive to collaborative.

1. **Forming**—Team members rely on their leader for direction. Roles, responsibilities, team purpose and objectives are unclear. There is little or no conformance to processes. Leader is being tested.
2. **Storming**—Team experiences indecision. Members compete for positions and, often, power. Team purpose becomes clearer, yet

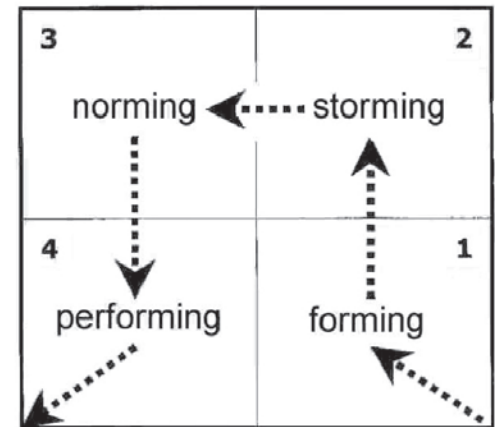


Fig. 3— Tuckman's Model: Stages of Group Development

uncertainty still exists. Division and alliances emerge as does the competition for power.

3. **Norming**—Team members begin to collaborate, respond to the leader's role as facilitator and make big decisions by consensus. Commitment and unity is strong. The team creates its own processes and accepts some of the leadership role.
4. **Performing**—A shared vision has developed among team members who are able to operate independently. Most decisions occur at the team level and problems are easily resolved.

To be successful throughout this progression, the team requires excellent listening skills, which demonstrate respect for one another's perspectives, ideas, thoughts and feelings. As in the team chartering process, this is an ideal time to hold an open dialogue, which fosters trust, deeper relationships and learning.

Project Planning and Design: The Meat and Potatoes

In this stage, the team occupies itself with the nuts and bolts of contributing their expertise to create a work plan. It is likely that most team members will work independently and that conflict would be minimal. While dialogue is an ideal tool for collaboration, it is not necessary when the work at hand does not call for considering a pool of different perspectives.

Following the completion of the work plan, the team is now ready to enter the endorsement phase of the project.

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Effective Communication: Part 2

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Endorsing the Project:

Where Undiscussables Live

During this phase, the PM must get buy-in from all stakeholders who need to agree to support the entire project. Because projects may be jeopardized due to scheduling issues, budget overruns, project delays and scope changes, open communication is critical. If communication shuts down, then “undiscussables” will thrive.

Undiscussables, the things we think and feel and are unwilling to share, often have major consequences. For example, consider the Hurricane Katrina tragedy; the U.S. Army Corps of Engineers took responsibility when they said that the levees failed primarily because they were built in a disjointed fashion using outdated data. Though officials at many levels knew that the levees were designed to tolerate the forces of a Category 3 hurricane—not a Category 4—no one apparently spoke up or listened. As a result, the August 2005 storm took the lives of 1,836 people, left untold numbers homeless and cost upwards of \$80 billion. Though dramatic, this is only one example of the cost of undiscussables and is an excellent case in support of using the dialogue process.

As mentioned previously, dialogue occurs when shared meaning, authenticity, respect and trust are present in a conversation. Otherwise, the conversation becomes a dispute, a debate, a discussion or something else. But setting up a safe environment is only the beginning. Once the four conditions are in place, people need to have the skills to talk about undiscussables in a way that is safe and non-judgmental. When people in an organization fear speaking up, the core conditions are violated and trust evaporates.

On the positive side, with practice and good intentions, people can learn how to safely and effectively talk about undiscussables. Here are some ways to broach a conversation about undiscussables:

- Open a conversation with positive intent.
- Request the individual’s permission to bring up a sensitive topic.
- Ask an open-ended question.
- State an observation without blame.

Dialogue occurs when shared meaning, authenticity, respect and trust are present in a conversation. Otherwise, the conversation becomes a dispute, a debate, a discussion or something else. But setting up a safe environment is only the beginning. Once the four conditions are in place, people need to have the skills to talk about undiscussables in a way that is safe and non-judgmental.

When undiscussables are handled well, they have the possibility to unleash productivity and drive the innovative solutions needed to complete extraordinary projects on time and on budget.

In this phase, collaboration and creating an atmosphere of openness and trust is paramount. To create an open process, team members need to pay attention to the four conditions above and do the following:

- Balance asking, speaking and listening
- Consider all opinions
- Encourage input

- Make decisions together
- Commit to an open dialogue

A closed process will shut down communication, create conflict and discourage information sharing and learning, thus creating a climate of distrust and disrespect.

In a nutshell, team endorsement creates an opportunity for all stakeholders, including team members, management, clients and subcontractors, to create an environment of open communication where no topic is off limits and where innovation, productivity and learning flourish. A climate of trust and respect can take teams anywhere they choose to go and give them the opportunity to accomplish extraordinary things.

In our final article in the next issue of Insights, we will address the third phase of the project delivery and management system: project execution and change management, and project closeout.

Paul Weisman, PE, CPCC, is President/CEO of Weisman Consulting, LLC, a firm that focuses on people, performance and organizational culture shaping. The content in this article draws on the 5 Principles of SMART Conversations®, a service of Weisman Consulting, LLC. Paul is also a member of the ACEC/MA Leadership Education Committee. He can be reached at 617/413-4291 or at paul@weismanconsulting.com.

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UPCOMING EVENTS – SAVE THE DATE

ACEC/MA Risk Management Breakfast Program

Wednesday, March 16, 2011
Westin Waltham-Boston, Waltham MA

Registration begins at 7:30 AM

[Click for more information](#)

ACEC/MA Engineering Excellence Awards Gala

Wednesday, March 23, 2011
Boston Marriott Cambridge
Registration begins at 5:30 PM

[Click for more information](#)

ACEC 2011 Annual Convention

March 30-April 12, 2011
The Grand Hyatt, Washington, DC

www.acec.org

ACEC/MA State Markets Breakfast Program

Wednesday, April 13, 2011
Westin Waltham-Boston, Waltham MA

Registration begins at 7:30 AM

[Click for more information](#)

Design Professionals Day at the State House

Tuesday, May 10, 2011

[Click for more information](#)

ACEC/MA Sustainability Rating for Civil Infrastructure Projects

Wednesday, May 18, 2011
Four Points by Sheraton Norwood, Norwood MA

Registration begins at 7:30 AM

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ACEC/MA Annual Dinner and Celebration

Wednesday, June 1, 2011
Westin Waltham-Boston, Waltham, MA
Details to be announced

ACEC 2011 National Fall Conference

October 19-22, 2011
Caesar's Palace, Las Vegas, NV

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