INSIDE THIS ISSUE:
The Changing Landscape of Project Delivery
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CONSTRUCTION

CHIEF EXECUTIVE OFFICER

Trends in Project Delivery

Over the last couple of years, contractors began embracing new and innovative project delivery methods that allow the entire construction team, from the architect, to the engineer to the subcontractors on the project, the ability to formulate budgets, project scope and achievable time lines from beginning to end on a project. Many contractors are finding and adopting applications for model-enabled processes such as Building Information Modeling (BIM) and Integrated Project Delivery (IPD) for many of their projects. In fact, an increasing number of general contractors now require BIM deliverables.

These types of project delivery methods allow the project construction team to work together in a manner that can save the project owner time and money in the long run. AGC has aggressively advocated before the legislature on several bills that would expand the use of design-build project delivery methods and authorize increased funding levels for one of the state’s largest project owners, the public agencies. Project delivery methods such as design-build are now allowed with many public agency and owners for projects in such markets as public infrastructure, healthcare and education. The advantages to these project delivery methods include a single point of accountability. There are other advantages as well, such as faster project completion dates as constructability problems are quickly identified and issues surrounding those problems are resolved. Resolving problems and issues sooner rather than later results in lower project completion costs, fewer change orders and fewer claims and allows for more building innovation that can keep project costs down.

Construction innovation will begin to play an even a bigger role in California’s economy. With the current economic downturn and the even slower recovery, it is evident that traditional funding and delivery methods simply cannot keep up with California’s growing infrastructure gap.

One such innovation in project delivery was the establishment by legislative order in 2009 of the Public Infrastructure Advisory Commission (PIAC) for the purpose of allowing state and regional transportation agencies to develop performance-based partnerships. The PIAC specifically authorizes Caltrans and regional transportation agencies under the Business, Transportation and Housing Agency to enter into public-private partnerships (P3s) with the common goal to develop a California P3 market. The private market sector can include financing, design, construction, maintenance and operation of transportation facilities and partner with the public agencies in creating innovative solutions to the state’s vast infrastructure needs. AGC actively participates on the PIAC and has a seat on the Commission. In addition to reviewing proposed P3 projects, the Commission advises transportation agencies of suitable P3 opportunities, helps establish best practices, and provides procurement-related services upon request. The P3 approach encourages a “life cycle” approach to planning and budgeting through the use of long-term contracts.

Industry studies have also shown that integrated project delivery methods such as design-build are essential to achieving or exceeding Leadership in Energy and Environmental Design (LEED) certification goals (certified, silver, gold, and platinum) and maximizing sustainability. AGC is using LEED project delivery for its headquarters office remodel. When the remodel is completed, it is hoped we achieve a LEED silver certification.

With a focus on rebuilding California’s public infrastructure in California, the long-term effort will require a variety of project delivery tools. Using new technologies increases the awareness of their benefits. AGC offers its members a wide variety of training that will increase your working knowledge of construction techniques. For instance we offer training in BIM and LEED certification. To find out more about available class schedules, visit AGC’s website at www.agc-ca.org under meetings and events.

– Thomas T. Holsman

Associated General Contractors of California
Highway and Transit Projects at Risk in Governor’s Budget

By Mark Watts, Executive Director – Transportation California

A key component of the Governor’s 2010/11 state budget is a transportation funding shift that would forever change the way California funds its highway projects and virtually eliminate state transportation bonds. The funding shift is designed to save the General Fund about $1 billion in 2009/10 and 2010/11 by using funds previously earmarked for transit funding to instead pay debt-service costs on state transportation bonds.

Details of the Proposal

The Governor proposes to eliminate the state sales tax on fuel (state sales tax only, not local, on gas and diesel) and make up most of the lost revenues with an increase in the per gallon (excise) gas tax. The gas tax increase would be capped so that ultimately motorists would not pay more than they do now in state gas and sales tax combined, which is calculated to be 34 cents per gallon. For 2010/11, the proposal would reduce fuel sales tax revenues by $2.8 billion.

The budget proposal offsets a portion of the revenue loss with an initial 10.8 cents per gallon gas tax increase, which would generate nearly $1.9 billion for the following:

- $629 million for state highways
- $629 million for local roads
- $603 million for debt service on transportation bonds

This proposal would result in a net reduction in transportation revenues of about $1 billion in 2010/11. In addition, the proposal would completely eliminate state support for mass transit programs traditionally funded by the state. Under current law, about $1.6 billion would have been provided for these purposes from the sales tax collected on diesel (approximately $350 million annually), the 9-cents per gallon gas tax increase from 1990 (approximately $65 million annually), and the spillover ($879 million in 2010/11 and Proposition 42 (approximately $315 million annually).

Finally, while providing California motorists with a tax cut equivalent to about five cents per gallon at the pump initially, as indicated above the proposal includes scheduled increases in the excise tax to offset increasing debt service costs due to expected allocations of Prop 1B and other state bonds.

Impacts

State Transportation Programs
- The excise tax backfill would fully fund the estimated $629 million in annual loss of Prop 42 funding for the State Transportation Improvement Program (STIP);
- State intercity rail and other state programs funded traditionally by Public Transportation Account (PTA) would be funded by the existing estimated remaining PTA balance of $1 billion, until this balance is depleted.
- There will be a loss of five-year STIP capacity of an estimated $800 million due to elimination of state transit funding from the California Transportation Commission’s 2010 STIP Estimate.

Local Government Transportation Impacts
- No return to last year’s proposal to transfer $1 billion in local gas tax revenues to the state general fund.

Transit
- PTA losses would amount to about $1.6 billion. This would eliminate State Transit Assistance (STA funding grants to transit agencies) and STIP transit capital funding, as well.

Why Construction is at Risk
- Massive reduction of transportation funding resources that will severely impact economic recovery and threaten job stability throughout the state;
- Swaps the growing Proposition 42 funding base for reliance on the declining revenue stream of the excise tax on gas and diesel;
- Eliminates important “protection” measures built into Proposition 42/1A by eliminating the source of funding for Proposition 42. These protections include limited borrowing restrictions by the Legislature of one occurrence in 10 years, with no loans permitted while outstanding balance exists, and payback is required, with interest, within three years. In contrast, Article XIX permits borrowing for up to three years of the excise tax with no interest requirements and no restriction on consecutive or limited year borrowing.
- The residual “tax capacity,” achieved by the partial full funding backfill, is approximately equal to five-cents per gallon, or $976 million. This could be filled by other new General Fund taxes to the detriment of the proposed gradual General Fund relief anticipated by the scheduled indexing to fund Proposition 1B debt service.
- The loss of STIP capacity will negatively impact all county STIP programs. There will be less funding available to address highway capacity construction projects. Many small and suburban counties enjoy higher highway STIP capacity due to urban counties absorbing PTA STIP funds within their county share of the STIP.
- The elimination of state support of mass transit comes on the heels of several years of radical cuts by the state and will throw local transit services into a tailspin, requiring even more service cuts or fare increases.
- The mass transit cuts come at a time when the state, by policy through AB 32 and SB 375, is demanding reductions in vehicle miles of auto traffic. Failure to meet historical state transit support levels threatens Californians’ mobility, and will also severely limit choices by regional agencies in providing balanced transit/highway improvements in the coming years.
- Unlike the Proposition 42 highway components in this proposal, no new source of transit funding is provided.

Mark Watts serves as Executive Director of Transportation California, a coalition of construction and labor groups who advocate for improvements for California’s transportation system. AGC is a charter member of Transportation California.
Bimla Rhinehart Balances Multiple Interests at CTC

Less Than a Year Since Her Appointment, CTC Executive Director Focused On Building Relationships, Juggling Transportation Programming Priorities

By Carol Eaton

Although it’s been less than a year since Bimla Rhinehart was appointed to serve as Executive Director of the California Transportation Commission (CTC), she already knows how she will ultimately measure her own success in the role.

“If I’ve done a good job of facilitating effectively, collaboratively and cooperatively the issues between the department [Caltrans], local agencies, the legislature, the [CTC] commissioners and staff, I will have been successful in this job,” she said. “And [I’ll have been] really successful if I’ve continued to build and maintain the relationships with the transportation stakeholders utilizing an open and transparent process – while also making good policy decision and maximizing taxpayers’ investment.”

Rhinehart’s relationship-building skills and her ability to juggle multiple competing priorities and demands have proved vital as she has taken on the leadership of CTC in a time of intense funding challenges for transportation construction in California. Appointed to the position in April of last year, she brought with her a background of nearly 23 years experience with Caltrans, including extensive hands-on project delivery experience. She served for four years as the Division Chief of Right of Way and Land Surveys, and previously served as the Acting Division Chief of Budgets and Deputy Director of External Affairs and Special Projects Manager, among other roles. Rhinehart received a B.S. in Finance and Accounting from the California State University, Chico.

In her role as Executive Director of the CTC, Rhinehart reports to the 11-member Commission and is responsible for overseeing the Commission’s staff of 19 and its annual budget of $3.6 million. The Commission is responsible for programming and funding several billion dollars annually for transportation projects throughout California in partnership with regional transportation agencies and the California Department of Transportation. It is also responsible for advising the California Secretary of Business, Transportation and Housing and the California Legislature on key transportation policy matters.

While the current transportation funding challenges in California are formidable, there are also some opportunities as well. Last year the legislature opened the door to allow public-private partnership projects in the state through the passage in February 2009 of SB 4, which will allow demonstration projects to be delivered through public-private partnership and design-build. The first proposals were eligible to be submitted as of January 2010.

It was the CTC’s job to adopt guidelines for enacting SB 4, a collaborative process that entailed working closely with Caltrans, the legislature, local agencies and industry to solicit input on what those guidelines should include. “All eyes were on California in developing the guidelines, and we really did a lot of outreach to other states to see what they have done,” Rhinehart said. “We want to make sure that the first [public-private partnership] project out the door is the right project. All of the Commissioners are very supportive of public-private partnerships and really want to see California shine,” she commented.

The current economic environment makes it imperative for transportation leaders such as Rhinehart to search for creative ways to keep transportation projects rolling; in some cases that essentially requires the equivalent of “robbing Peter to pay Paul” as a short term fix. One example of that was the federal stimulus funds California received, which Rhinehart said helped fill the hole created by the state’s inability to sell enough bonds to fund Prop 1B this year, given the overall state of the economy and California’s dire financial situation. But transportation leaders almost universally agree that a more long term, stable funding source is ultimately needed. “Eventually, there just isn’t anything else that we can tap into,” she said.

Rhinehart sees alternative delivery and project funding approaches such as public-private partnerships, design-build, lease-leaseback, and other methods as ultimately playing an important role in helping California meet its infrastructure needs in the future. “Whether it’s creative procurement processes or creative financing approaches, it’s very important [to use alternative methods],” she said. “We have such an infrastructure deficit, and funding in the state and throughout the U.S. is not available to support the amount of the deficit that we’re looking at.”

Part of Rhinehart’s challenge is to manage and prioritize the demands for requests for projects from multiple agencies with competing priorities throughout the state. “Resources are so limited, and every project in my mind is a good project,” she commented. “My goal is to make sure that we work very closely with our transportation partners in helping them prioritize with limited resources, while working within the criteria set forth either in legislation or in various guidelines. We also work closely with them to maximize other creative funding that may be available, because state dollars are getting very scarce.”

Being a vocal proponent on the need for infrastructure funding is another part of Rhinehart’s job. “Every year, Prop 42 is at risk,” she commented. “We do a lot of outreach, testifying on the critical needs for transportation funding, just so we don’t lose what little we do get. It is important we speak with one voice on how important stability in transportation funding really is.”

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The Changing Landscape of Project Delivery

By Carol Eaton

Whether it is design-build, integrated project delivery, public-private partnerships or the incorporation of processes and methodologies such as lean, virtual design and construction or partnering on projects, the landscape of project delivery is continuing to shift away from the once predominant, often contentious hard bid environment of the past.

Evidence of the ongoing evolution is everywhere and has hit virtually every public and private sector market, from a wide array of federal projects to state and local government entities as well as private owners embracing alternative delivery methods on their hospitals, educational facilities, parking structures and everything in between.

“There is a continuing shift away from the traditional design-bid-build delivery to those deliveries that bring the contractor and subcontractors forward into the process starting as early as conception,” comments David Wilson, Vice President, Clark Construction Group – California LP in Oakland. “Design/build, public-private partnerships, integrated delivery, CM-at-risk and similar deliveries all have this common feature and are increasingly the preferred methods of delivery.”

For its part, Clark has been one of the leaders in alternative project delivery processes. Just a few examples include Clark’s recent award of a $431 million Highland Hospital Acute Tower Replacement project to be delivered via design/build for the County of Alameda (see page 7 for more); the UCSF Mission Bay Building 19A Neurosciences Laboratory and Clinical Research facility, which is currently under design as part of a public-private partnership; and its work on the California Prison Healthcare projects utilizing integrated project delivery, among others.

Early Collaboration, Increased Value

“Our preferred delivery method depends on our client’s needs and the constraints they must work within,” Wilson adds. “We can provide the most value when we can get involved early and collaborate with our clients, users, designers, subcontractors, jurisdictional authorities and other groups that inevitably provide input and have an impact on the success of all projects. We find that we do the most good when we get all these groups under the same tent and work towards inclusive, collaborative decisions.”

McCarthy Building Companies also has extensive experience and expertise with a range of project delivery methods and processes. Among some of its larger projects, McCarthy has an approximately $162 million design/build project underway at the College of San Mateo; recently broke ground on the $79 million new Adult Correctional Facility for Placer County in Roseville via design/build (a project utilizing a number of lean principles – see page 11 for more); has six design/build parking structures currently in design in Southern California; and recently com-
completed construction of the $153 million Patient Care Tower at Mission Hospital in Mission Viejo utilizing integrated project delivery and partnering, to name just a few.

“To me, it’s just an exciting time to be in our business,” comments Frances Choun, McCarthy’s Vice President of Business Development for its Northern Pacific Division. “There is a whole paradigm shift happening, and our clients are seeing the value of bringing teams together early and collaborating early on. Whether it’s design/build, or utilizing IPD, or just bringing the subs on board earlier in the process, we’re definitely seeing a lot more of these opportunities.”

Hensel Phelps Construction is another AGC member contractor leading in the use of alternative project delivery processes. The company has myriad projects underway or in the works utilizing CM at Risk or design/build, including the $130 million Alaska Airlines LAX T6 renovation that is currently in preconstruction; ongoing and past work at UC Irvine, including the UCIMC Clinical Laboratory and the $98 million UCI Medical Center shell and site improvements project; and the $170 million Harbor Medical Center Surgery / Emergency Replacement project underway via design/build in Torrance, CA.

Design/Build: ‘Method of Choice’

“We are definitely seeing design/build become a method of choice, and there is constantly legislation pending authorizing its use in more and more venues,” comments Wayne Lindholm, Executive Vice President, Pacific Division for Hensel Phelps Construction. “It’s unfortunate that California is so dysfunctional that we cannot get sweeping legislation to allow the process but instead there are baby steps for this state,” he adds. He notes that the federal government is increasing its use of the design/build delivery method, such as the $498 million Camp Pendleton Hospital project that is just coming out.

“What is driving the shift is the one point responsibility,” Lindholm says. “The owner is assured a project without the change orders and headaches; they usually even reduce their staffs accordingly. Design/build also cuts about 25% out of the schedule as you start actual construction before the design is 100% complete.” He cautions, “You have to be careful though; the owner must understand their role and staff to make timely decisions such as medical equipment or programming changes in order to not disrupt the flow of work.”

continued on page 9

Clark Design/Build Awarded $431 Million Highland Hospital Job

The County of Alameda recently awarded Clark Design/Build of California the $431.8 million contract for the Highland Hospital Acute Tower Replacement project. The design/build team, led by Clark, includes SmithGroup as lead architect and Ratcliff and Shah Kawasaki Architects as associate architects.

The contract includes construction of replacement facilities to be completed in three phases over seven years, representing the largest healthcare investment in the history of Alameda County.

The project’s first phase, to be completed by 2012, includes the construction of a 78,000-sq.-ft. medical office building. This three-story facility will be built over a 176-space parking structure and will include connectors to the new hospital. Phase two is the construction of a nine-story, 169-bed acute care tower. Built above a below-grade central utility plant, the tower will include intensive care, medical/surgical beds, and labor and delivery, neonatal intensive care, and miscellaneous diagnostic, treatment, and support functions. Following the completion of the new acute care tower, Highland Hospital’s existing tower will be demolished and a one-acre interior courtyard, dining terrace, and connecting structures will be built. Phase two is expected to be complete in 2016 and phase three the following year.

According to David Wilson, Vice President, Clark Construction Group – California LP, delivering the project via design/build provides the opportunity for a fully integrated approach to the project from the entire design and construction team. “The project presents many very complex issues created by the existing campus, evolving medical technology, program requirements and schedule issues created by state mandates,” he comments. “Alameda County selected the design/build delivery to gain the flexibility, schedule efficiencies and budget discipline that can come from working collaboratively with the contractor during design.”

“Collectively, we all bring our extensive and diverse experience delivering healthcare projects to bear as design proceeds,” Wilson says of bringing all the key members of the owner’s team, design team, contractors and major subcontractors onto the project from the outset. “As a result, the design decisions are made with a full spectrum of input and a buy-in by the entire team. Also, the project lends itself to phasing and fast-track strategies which are possible with the contractor engaged during design. Function, quality, budget and schedule are preserved while closing the time gap between decisions and their implementation.”

Wilson notes that the project presents numerous challenges, including working around a fully operational, historic hospital that dates back to the 1920s. The hospital is located on a crowded and steeply-sloped site within a residential neighborhood. “Access and logistics must take these and other neighborhood issues into account,” Wilson notes. “We will work hard to be a good neighbor by strictly controlling construction traffic, reducing noise and visual impact, and generally minimizing disruption to the daily activities of the Hospital and the neighborhood.”

The design/build team will salvage some of the historic materials from the demolished buildings and rebuild them as architectural elements in the construction and the landscape. The project will be designed to earn a minimum LEED® Silver certification from the U.S. Green Building Council. Demolition and excavation is expected to start in April and foundations for Phase 1 are planned for the early summer.
San Mateo County Community College District Sold on Design/Build as Delivery Method

By Carol Eaton

One public owner that has fully embraced the promise of design/build as a delivery method is the San Mateo County Community College District (SMCCCD). In 2002 SMCCCD became one of three districts statewide authorized by California AB 1000 to use design/build as part of a pilot program to ascertain the method’s success in community college construction. (The other two were San Jose-Evergreen CCD and LACCCD.) Given the success of that pilot program, about two years ago, the state passed legislation that authorized all 72 community college districts in California to use design/build on projects $2 million and above.

Since 2002 SMCCCD has completed or currently has in the works multiple projects both large and small via design/build, and Jose D. Nuñez, Vice Chancellor, Facilities Planning, Maintenance & Operations, SMCCD, is an ardent supporter of the delivery method. He points to improved quality, better teamwork, greater control from an owner’s standpoint, improved performance from the team and schedule savings as key benefits.

“I’m very pleased with the quality of the work, not just in the buildings but in the roadways, the parking, the safety aspects of it,” he comments. “Just the caliber of folks that work on the design/build side is a big plus,” he says.

“Then also from my experience, I’ve saved anywhere from six to 12 months off the project time,” Nuñez adds. “In the long run that’s going to save me money in terms of escalation, fees and other things. More importantly, I get to get my facility that much more quickly and put it to use.”

SMCCCD currently has three major design/build contracts under construction, all of which include multiple subcontracts. McCarthy Building Cos. has eight subcontracts under the umbrella, approximately $162 million project known as the College of San Mateo Design/Build project, with major components including a 140,000-sq.-ft. student center building, 100,000-sq.-ft. wellness center, chiller plant, roadways/parking, 12 kv upgrade and more. Hensel Phelps is underway at SMCCCD’s Skyline College with a $70 million, five part design/build project, and Pankow is currently underway with the third major contract. McCarthy also previously completed an approximately $26 million science building, planetarium and observatory project for the owner, and Robert A. Bothman, Inc., San Jose, recently completed a multi-part athletic fields project that spanned all three of the District’s campuses.

Nuñez attributes some of the projects’ success to the use of partnering, which is integrated into every project the District undertakes. The partnering session that kicks off each project brings together the facilities team, users group including faculty members, staff and District officials, and the design and construction team. “We have the opportunity to discuss the project, the schedule and the nuances associated with each side of the house,” he says. “It provides a good opportunity for everyone to put what their concerns and issues are on the table and agree to certain standards and bylaws.”

In addition to the use of partnering, Nuñez cites several other best practices or “lessons learned” from an owner’s perspective to help ensure success on design/build projects. Among them:

- As an owner, be clear on the scope of the project in terms of program documents and communicate internally to avoid changes that would impact the scope once the project is underway.
- Provide the contractor as much site information and geotechnical information as possible early on to avoid unforeseen conditions that are the owner’s responsibility. “You want to do your homework way up front,” he notes.
- Require “read-ahead” schedules to avoid conflicts between construction activities and major activities underway on campus; develop a good relationship with the contractor; and maintain an open flow of communication. “I have an active campus with a bullet train going through it,” Nuñez says to describe the level of construction activity underway. “The worst thing I can do is shut the project down, so we need to know what’s coming.”

With the downturn in the economy over the past 12 to 18 months, Nuñez says he has seen a major spike in competition for the District’s projects, drawing interest from some firms that are not as experienced in the design/build delivery method. While he admits to being “somewhat leery” of using contractors that do not have a proven track record in the design/build delivery process, Nuñez notes that the District’s prequalification of contractors and detailed RFQ process provides some safeguards and gives the District the opportunity to scrutinize the financial, business and litigation history of companies before ever engaging their services.

“It’s definitely an owner’s market out there,” he notes. “On big projects proposals are coming in 20 to 30% below engineer’s estimate.”
Future Promise of P3s

Public-private partnerships (P3s) also hold promise for future growth in California, although there does not seem to be an abundance of those projects underway in the state at the moment. One notable public-private partnership project that is currently in the team selection process is for a new Long Beach Court Building. The Judicial Council of California, Administrative Office of the Courts has three teams shortlisted for the project that it says will be awarded around March. The three competing teams include contractors Clark Construction, Hensel Phelps and Heery/Barnhart, along with their respective design and development partners. The teams are vying for a contract that would have them finance, design, build, operate and maintain the new Court Building that would replace and more than double the size of the existing facility.

Lindholm notes that in today’s tough financial market, financing restraints restrict the growth of the P3 market. “Banks don’t mind doing the loans if contractors put up letters of credit, but that is very risky and takes a lot of cash in lieu of the bonds that we typically use to secure a project,” Lindholm points out. “P3s are used more widely in Canada and Europe, but they don’t have the bond coverages we are used to in the U.S.”

Choun concurs, commenting, “Right now because of the capital markets, we’re not seeing a flood of those opportunities. But I think once the economy turns around, we’ll be seeing a lot more of them.”

The increase in public-private partnership projects in California will be aided by last year’s passage of SB 4, signed by the governor, which authorizes Caltrans and regional transportation agencies to enter into public-private partnership agreements that may include private sector finance, design, construction, maintenance and operation of transportation facilities. The state subsequently set up a Public Infrastructure Advisory Commission (PIAC), chaired by Business, Transportation and Housing Agency Secretary Dale Bonner, with the purpose of assisting Caltrans and regional transportation agencies in development of public-private financing agreements for infrastructure projects throughout the state. The first proposals were eligible to be submitted to the California Transportation Commission for initial review as of January 2010.
In the current economic climate where the pressure is on to “build more for less,” owners as well as design and construction teams are continually looking for ways to bring greater value to their projects by shaving both schedule and cost. That focus makes the design/build delivery method a perfect fit when it comes to the highly specialized market niche of parking structure design and construction.

One contractor who knows a thing or two about the parking structure market is McCarthy Building Companies. The company recently completed some nine design/build parking structure projects in Southern California alone and currently has half a dozen additional design/build parking structures in the design phase in that region. Al Carroll is executive vice president, parking structures for McCarthy in its Newport Beach office.

Carroll points out that the collaborative environment fostered by design/build can be particularly important in this market sector. “Since parking structures are such a highly specialized product type, this collaboration between the architect, engineer and contractor and their understanding of the many nuances and means and methods of design and construction allows for the design to incorporate efficient and effective building techniques that have been developed and refined over the past 50 years,” he says.

Just a few of the design/build parking structure projects that McCarthy recently completed include the 20-40 Pacifica (1,900 cars), Kaiser Panorama City Medical Center (800 cars), and Mission Hospital (1,500 cars). The company is currently in the design phase on six design-build parking structures, including San Diego Miramar College (800 cars), among others.

The shift in liability from the owner to a single source entity – the design/build contractor – offers another key advantage for a project owner, Carroll points out. And he only sees increased growth in this delivery method in the future.

“Five to 10 years ago our market was split evenly 50:50 between traditional design-bid-build projects and design-build projects. Now almost 90% of our projects are performed under a design-build delivery,” he comments. “Within the past few years we have seen a seismic shift towards design-build as a lot of public entities are finally embracing this delivery method and realizing the significant benefits in cost, time, reduced liability for the design and avoiding costly budget overruns and/or significant delays to their projects.”
Lean, VDC Being Utilized on Placer County’s First Major Design-Build Project

By Carol Eaton

Today’s owners are beginning to look to service providers such as contractors, engineers and designers to provide more comprehensive support across the entire lifecycle of their buildings, according to the recent “FMI/CMAA Tenth Annual Survey of Owners,” released in November 2009. FMI sees that shift from a “project centric” approach to more of a “life cycle cost” type of approach on projects as a key factor helping fuel the increasing use of tools that include lean practices, building information modeling and integrated project delivery.

Virtually every major construction company with an eye to the future is utilizing one or more of those tools on at least some of their projects. A number of AGC member contractors are recognized leaders in the use of BIM, lean or IPD on their projects. One example is Turner Construction Co., which Building Design & Construction magazine last year recognized as the leading contractor in the adoption of BIM technology nationwide. According to the magazine’s ranking of “Top 170 BIM Adopters for 2009” (July 2009 issue), Turner held 530 BIM seat licenses, the most of any “pure” contractor on the list, and its portfolio of projects utilizing BIM in 2009 represented more than $20 billion of construction on 100 projects. Additional AGC firms ranking on that Top BIM Adopter list included McCarthy Holdings (McCarthy Building Cos.), Hensel Phelps Construction, Swinerton Inc. Skansa USA Building, and Balfour Beatty Construction, among others.

McCarthy Building Companies is one of the firms that have taken the lead in utilizing virtual design and construction (VDC) technologies on its projects in recent years. Chris Pechacek, preconstruction director for McCarthy in Roseville, describes VDC as the “convergence of BIM, lean practices and integrated project delivery.” He is heading up the effort in his region to integrate various VDC processes into McCarthy projects from the earliest stages.

“My job is to help set our teams up, not only our design and sub-trade partners but also internally, to help them transition from more traditional mindsets into collaborative approaches and processes,” Pechacek says.

One project in which he has been involved setting up lean processes and BIM is the $79 million Adult Correctional Facility at the Bill Santucci Justice Center (the South Placer Courthouse) in Roseville. McCarthy is delivering the project as part of a design/build team with HDR Architects for Placer County.

McCarthy broke ground in late November 2009 on the nearly 200,000-sq.-ft. project. Phase 1, to be completed by 2011, will have 390 beds, including 120 minimum security beds, a medical unit, administration and intake/booking/transportation, as well as a correctional kitchen and other support functions. The facility is planned to allow expansion of up to 980 beds as well as the possible future addition of a state-funded courtroom. There will also be a subterranean connection to allow direct access to an inmate holding center in the new courthouse.

The South Placer Courthouse project is incorporating a variety of lean elements to identify and eliminate waste, including a lean steel review process that eliminated the need for shop drawings and cut turnaround time to less than half, according to Pechacek. The team also utilized reverse pull schedules, which identified critical items not picked up earlier and allowed the team to modify the schedule to accommodate them, as well as weekly work plans. “With lean processes, it goes back to aligning all the interests of the team members and getting everyone to understand what they are, what are the project constraints, who needs what, when, how and why, and what level of detail do they need? Once you work through that, people can shift and share the workload to what is most efficient so the team actually starts working together towards a common goal rather than in their separate silos,” Pechacek notes.

Virtual design and construction technologies such as BIM have played a major role in the project so far, with the team performing “in model” reviews in lieu of paper or even electronic PDF shop drawings and mock up models in lieu of physical, in place mockups. Scheduling has been incorporated into the model as well, with installation scheduled and sequenced on the model first to detect and resolve any conflicts prior to them becoming field issues.

The design/build team is utilizing the full extent of BIM capabilities on this project, Pechacek points out. “We are actually doing the design and construction virtually. So we go through the clash resolution, find optimal sequence/scope, then “as-built” the outcome of that coordination process, which gives us a virtual as-built,” he notes. “Then we go and fabricate and install to that as-built.”

Pechacek says that one of his key challenges is helping guide team members who may not have experienced the lean or VDC processes before and helping them to understand the culture and approach. “When I first put out that we are going to build to the model, not to paper, that was a tough concept for some,” he says. “There is learning curve [with incorporating lean]; it just doesn’t happen overnight.”
Griffith Tests Innovative New Komatsu Excavator on Port of LA Job

New Hybrid Excavator Being Put Through Paces on Berth 102 Project

As the new emission requirements from CARB trickle down to agencies throughout California, contractors are beginning to see strict controls for off road diesel equipment. The Port of Los Angeles has developed an environmental compliance plan with some of the most stringent emission requirements in the country, and Griffith Company has just begun construction with its JV partner The Dutra Group on one of these projects. The $48 million Berth 102 Wharf and Backland Improvement Project requires all equipment over 50 horsepower to have Tier 2 engines with Best Available Control Technology (BACT) filters to filter diesel particulates from the exhaust or Tier 3 engines.

This, then, is the perfect project for Komatsu to showcase its new Hybrid PC200LC-8 excavator in Southern California. In conjunction with Road Machinery and Savala Equipment, Griffith Company is currently putting the new technology through its paces. Powered by the Komatsu Hybrid System, the Hybrid PC200LC-8 uses a newly developed electric swing motor, power generator motor, capacitor and an EPA compliant Tier 3 diesel engine.

Komatsu developed its revolutionary hybrid system to work on the principle of swing energy regeneration and energy storage using the Komatsu Ultra Capacitor system. Komatsu’s Ultra Capacitor provides fast energy storage and instantaneous power transmission. The kinetic energy generated during the swing braking phase is converted to electricity, which is sent through an inverter and then captured by the Ultra Capacitor. This captured energy is then discharged very quickly for upper structure rotation and to assist the engine as commanded by the hybrid controller when accelerating under work load conditions. In tests comparing the standard PC200LC-8 hydraulic excavator to the Hybrid PC200LC-8, the hybrid model reduced fuel consumption by approximately 25-40%, depending on the application.

Komatsu’s goal is to meet increasing global environmental concerns through the development of innovative equipment designed to reduce environmental impact, including CO2 reduction. By developing a successful hybrid excavator in the largest construction machine segment (20-22 ton), Komatsu’s green technology will have a substantial impact on saving fuel and reducing greenhouse emissions. “Komatsu’s decision to apply its engineering excellence to the largest construction machine segment clearly signals our commitment to developing environment-friendly equipment,” says Dave Grzelak, Chairman and CEO of Komatsu America Corp. “Since the company’s inception, Komatsu has been setting the global standard for technology and engineering excellence and now that tradition continues with the introduction of the Hybrid PC200LC-8 excavator.”

Griffith Company is putting the Hybrid excavator to the test as its crews install storm drain at Berth 102 as part of the backland improvements. “It’s exciting to bring this technology to our jobs at the Port,” comments Tom Foss, AGC California Past President and President of Griffith Company. “We see it as a large effort on behalf of the industry to provide reductions in diesel emissions and do our part to help clean up the air.”

Griffith Company showcases new Komatsu Hybrid Technology on Berth 102 at the Port of Los Angeles.
If Your Employees Contracted H1N1, Is It An OSHA Recordable?

By Bo Bradley

Usually it's fairly clear what you need to record on your OSHA 300 log each year.

This is the log that you post by February 1st each year on your jobsite bulletin boards and in your office. For 2009 and beyond, something new has been added to the mix. Most of us have heard all about the H1N1 virus and the panic surrounding it. In response to this epidemic OSHA has posted a notice on OSHA's Web site that work-related cases of 2009 H1N1 are now recordable. The notice reads: "Employers are responsible for recording cases of 2009 H1N1 illness if all of the following requirements are met:

• the case is a confirmed case of 2009 H1N1 illness as defined by CDC;
• the case is work-related as defined by 1904.5; and
• the case involves one or more of the recording criteria set forth in 1904.7 (e.g., medical treatment, days away from work).


Following is just a partial sampling of the regulation 1094.5 from the OSHA website. Some of what it includes is as follows:

1904.5(a) Basic requirement. You must consider an injury or illness to be work-related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing injury or illness. Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the work environment, unless an exception in § 1904.5(b)(2) specifically applies.

1904.5(b) Implementation.

1904.5(b)(1) What is the “work environment”? OSHA defines the work environment as “the establishment and other locations where one or more employees are working or are present as a condition of their employment. The work environment includes not only physical locations, but also the equipment or materials used by the employee during the course of his or her work.”

1904.5(b)(2) Are there situations where an injury or illness occurs in the work environment and is not considered work-related? Yes, an injury or illness occurring in the work environment that falls under one of the following exceptions is not work-related, and therefore is not recordable.

1904.5(b)(3) How do I handle a case if it is not obvious whether the precipitating event or exposure occurred in the work environment or occurred away from work? In these situations, you must evaluate the employee's work duties and environment to decide whether or not one or more events or exposures in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing condition.

For a complete copy of the regulation and the complete form, please follow this link: http://www.osha.gov/recordkeeping/new-osha300form1-1-04.pdf.

This represents a change in policy regarding flu recording. While OSHA has always required that work-related cases of communicable diseases such as tuberculosis and hepatitis A be recorded, cases of the common cold and flu (including H1N1) were exempt from the recordkeeping requirement. Don't be mistaken that this only applies to clinics and hospitals, OSHA states that this applies to “all establishments covered by PART 1904.”

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<table>
<thead>
<tr>
<th>Service Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 foreman field systems</td>
<td>$5,500</td>
</tr>
<tr>
<td>2 concurrent user office systems</td>
<td>$9,100</td>
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<tr>
<td>3 day implementation planning in Houston</td>
<td>$5,100</td>
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<tr>
<td>3 day follow-up at your office (expenses included)</td>
<td>$6,600</td>
</tr>
<tr>
<td>2 day follow-up at your office (expenses included)</td>
<td>$4,400</td>
</tr>
</tbody>
</table>

Total Cost: $30,700

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From the creators of HeavyBid estimating software
How to Get Your Attorneys’ Fees Back When Winning A Construction Lawsuit

By Kim Wind

A law enacted in 204 BC barred Roman advocates, the “first attorneys” or the “orators of ancient Rome,” from taking fees for their services, but this law was banned by Emperor Claudius. By A.D., Roman attorneys could be paid for their legal services. And, the practice of requiring the losing party to a civil dispute to pay the winning party’s attorneys’ fees and costs is traced back to Roman law. This practice continues to date and it is called the “English Rule.” Countries such as England, Austria, Switzerland, and Sweden follow this rule. In America, the rule is that attorneys’ fees and costs are provided to the winning party if and only if it is provided within the contract or within a statute. This is called the “American Rule.” Every party to a construction dispute asks their attorneys before they file a legal action: Will we get our attorneys’ fees back if we win? The answer is to first look at your contract. Is there a prevailing party attorneys’ fees clause in your contract? If not, do not despair. There may be statutes that apply to your situation, some of which are mentioned in this article, which will help you get your attorneys’ fees back if you win.

Contracts between the owner and general contractor and/or general contractor and subcontractor often have a “prevailing party” attorneys’ fees clause in them. These clauses are usually found at the end of a contract (for some reason). Sometimes the clauses are written only “one way” too, i.e. the owner will get its attorneys’ fees if a dispute arises and it has to incur attorneys’ fees against the general contractor to enforce the contract, or the general contractor will get its attorneys’ fees if a dispute arises and it has to pursue the subcontractor for its breach. However, under California law, any “one-way” prevailing party attorneys’ fee clause in a construction contract will be made reciprocal by the court. This means that the court will essentially rewrite the contract and make the “prevailing party” clause a “two way” clause. The end result is that even if the contract has only a “one way” clause, after the court is done, the winning party will recover its attorneys’ fees. More importantly, the trial court has no discretion to deny an award of attorneys’ fees to the winning party. California Civil Code Section 1717; Silver Creek, LLC v. Blackrock Realty Advisors, Inc., (2009) 173 Cal. App 4th 1533. In sum, if there is a prevailing party attorneys’ fees clause in the construction contract — even if it is written only “one way” — whoever wins the action, wins its attorneys’ fees. This applies even if your attorneys’ fees exceed the amount in dispute. The court has no power to deny this award. It is the winner’s right!

There is a slight catch. The winning party gets only its reasonable attorneys’ fees back. Haire v. Stevenson (1987) 196 Cal. App. 3d 1249. Thus, after you win, your attorney will file a motion listing the basis for its fees (i.e. invoices, or a billable hour summary) and requesting that the court find the fees reasonable. The court will then examine the fees. Factors of “reasonableness” include experience of the attorneys versus their rate and the necessity of the work. The court cannot deny an award of attorneys’ fees to

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the winning party. However, it can eliminate any fees incurred that it felt were unreasonable. In practice, the courts usually will award all of the attorneys’ fees to the party who wins the case.

There are also statutes called the Prompt Payment statutes set forth in Civil Code Section 3260 and Business and Professions Code Section 7108.5, where the “prevailing party” in a construction dispute is entitled to attorneys’ fees. Note that there is only one prevailing party or winner to a dispute. Under California law, there is only one final judgment in an action, and the party with the net judgment in their favor is the successful or prevailing party within the meaning of California Code of Civil Procedure Section 1032.

Recently, some general contractors who have been sued by subcontractors and lost the case, but failed to be sanctioned under the Prompt Payment Act by the court, have requested “prevailing party” attorneys’ fees under this statute. There is no appellate case law on point that supports this theory that the prevailing party under the Prompt Payment Act (versus the winner of the case) wins its attorneys’ fees. In fact, there is an un-published 4th District Appellate decision that rejects this idea. Worthington Construction, Inc., v. LA Contractors Corporation (2004) 2004 WL 2677088.

This un-published case makes sense. It would be against the purpose of the Prompt Payment statute to do otherwise. The two percent penalty set forth in the Prompt Payment Act was added to the statute by amendment in 1990. Prior to this amendment, the only sanction against contractors was a disciplinary action before the CSLB. Despite the threat of discipline, the Legislature found that there was a continuing problem with subcontractors receiving timely payment for their work, so they added the amendment to provide an incentive for contractors to pay subcontractors in a timely manner by providing remedies to the unpaid subcontractor. Under this statute, the “prevailing party” gets its attorneys’ fees. However, the most logical interpretation of the statute is that the prevailing party is the party who wins the entire case, and not the party who dodged punishment under the Prompt Payment Act. In short, general contractors will be awarded attorneys’ fees under the Prompt Payment Act if this statute applies and they win the case.

Although many of you reading this article wish Emperor Claudius was never born, you may recover your attorneys’ fees in a lawsuit if your contract provides for it and if there is statute to support an award. In most construction disputes, there is a legal basis to recover all of your attorneys’ fees back in a lawsuit if you win the case.

Kimberly J. Wind is a licensed California and Nevada attorney practicing in construction law since 1990 and is with the law firm of Andrade & Associates that has over three decades of legal expertise in the construction industry.

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Cassidy Shimko Dawson & Kawakami joined Sedgwick’s San Francisco office. With this move, Sedgwick has created a robust California land use practice, and bolstered its existing real estate practice.

Cassidy Shimko is known as one of the top boutique real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use litigation, and transactional work and will also provide a bridge between Sedgwick’s existing real estate, environmental and construction practices.

The four partners joining the firm include Stephen Cassidy, Anna Shimko, Paul Kawakami and Matthew Francois. Deirdre Dawson and Deborah Kartiganer joined as special counsel, and Luen Lam has joined Sedgwick as an associate.

Alliance Solutions Group Expands

Alliance Solutions Group-CA (“ASG”) recently announced the opening of new offices in Northern California to provide software solutions and consulting services for local construction and real estate businesses in that region.

Michael Guthrie will head up these newest locations in San Jose, Santa Rosa, and Concord, CA as general manager of Northern California Operations.

ASG provides a variety of software consulting services including software training, implementation, report writing, custom software development, and data conversions.

Real Estate and Land Use Firm Joins Sedgwick

On January 1, 2010 seven attorneys from the real estate and land use firm of Cassidy Shimko Dawson & Kawakami joined Sedgwick’s San Francisco office. With this move, Sedgwick has created a robust California land use practice, and bolstered its existing real estate practice. Cassidy Shimko is known as one of the top boutique real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use practices and the addition of the seven attorneys from the firm will dramatically increase Sedgwick’s ability to handle real estate and land use practices.

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Industrial Relations South Prepares for a Busy 2010

By Trude Ellingson, Industrial Relations – Southern California

2009 proved to be a good year for the Southern California Industrial Relations Department. We experienced another year of minimal grievance activity with most grievances dismissed before or at the second step. We successfully renegotiated the Laborers, Cement Masons and Teamsters Master Labor Agreements with agreed-upon increases coming in below the national average. We want to extend our gratitude and appreciation for the time and commitment given by those members who participated in our various committees, giving hours of their time to the Industrial Relations Departments of AGC. We couldn’t do it without you!

Looking forward, we are beginning preparations for negotiations with the Operating Engineers, Iron Workers and Teamsters. It is imperative that we have our members join with us in the bargaining process. Without your testimonials, day-to-day job experiences and pressing concerns, we cannot represent a strong argument at the bargaining table and reach the highest level of success. Let your voice be heard and contact us today!

A critical component of making this year a success is having an open line of communication between our members and the Industrial Relations Department. You can reach the Southern California department at (626) 608-5800 and Northern California at (925) 827-2422.
### Corrected Top 10 Projects Awards – From January 2010 Constructor
(Corrected, with Contractors Listed as Currently Known)

Following are the top 10 public project awards in California in November, 2009, compliments of McGraw-Hill Construction.

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Project City</th>
<th>Reported Low Bid Amount</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOD Army Medical Facilities (Repair/Minor Const)</td>
<td>Mobile</td>
<td>$750,000,000</td>
<td>Turner Construction</td>
</tr>
<tr>
<td>RFP/DB: Oakland Airport Connector (DESIGN/BUILD)</td>
<td>Oakland</td>
<td>$415,000,000</td>
<td>No official bid results available yet</td>
</tr>
<tr>
<td>Cedars-Sinai Advanced health Science Pavilion</td>
<td>Los Angeles</td>
<td>$245,000,000</td>
<td>Hathaway Dinwiddie</td>
</tr>
<tr>
<td>Bay Division Reliability Upgrade - Bay Tunnel</td>
<td>Newark</td>
<td>$215,294,530</td>
<td>Michaels/Jay Dee/ Coluccio JV</td>
</tr>
<tr>
<td>RFP/CM: Renovation Federal Office Bldg (50 UN Plaza)</td>
<td>San Francisco</td>
<td>$100,000,000</td>
<td>Hathaway Dinwiddie</td>
</tr>
<tr>
<td>Satellite Earth Terminal Station Facility (DESIGN/ BUILD)</td>
<td>San Miguel</td>
<td>$100,000,000</td>
<td>No bid results available yet</td>
</tr>
<tr>
<td>Orange Line Extension (Design/Construct)</td>
<td>Canoga Park</td>
<td>$ 100,000,000</td>
<td>No bid results available yet</td>
</tr>
<tr>
<td>CA/DOT Roadway Reconstruction With PCC Pavement</td>
<td>Placer</td>
<td>$ 89,979,959</td>
<td>Teichert Construction</td>
</tr>
<tr>
<td>CA/DOT Construct Bridges - Roadway</td>
<td>San Francisco</td>
<td>$80,775,457</td>
<td>MCM Constructors</td>
</tr>
<tr>
<td>South Region HS No. 7 (lease-lease back)</td>
<td>Los Angeles</td>
<td>$68,781,000</td>
<td>McCarthy Building Companies</td>
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<tr>
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<td>$50,000,000</td>
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</tr>
<tr>
<td>CA/DOT Reconstruct Ic- Construct Viaduct – Retaining Walls</td>
<td>San Francisco</td>
<td>$48,400,000</td>
<td>C.C. Myers, Inc.</td>
</tr>
</tbody>
</table>
Addressing Human Motivation in Construction Contracts

By Joel W. Darrington

Recently the industry has been focusing on how to better deliver construction projects, and rightfully so. However, the industry has not paid enough attention to how contractors are paid for their work. The usual way diminishes project performance.

Traditionally, contractors are paid based entirely on cost—that is, the contractors estimate how much it will cost them to procure the labor and materials, add a mark-up for overhead and profit, and present a lump sum or guaranteed maximum price to the owner or upper-tier contractor. This results in a chain of contracts that flow back to the owner, but do not interconnect project participants across contractual lines. As a result, each contractor operates under commercial terms that provide economic incentive for it to maximize its own project outcomes regardless of whether its actions would hurt other project participants or benefit the project as a whole.

This approach further provides little or no incentive for non-cost performance. In addition to creating non-optimized economic incentives, the traditional compensation approach fails to address human motivations other than economic ones. Research in economics and psychology increasingly suggest that non-economic human motives also play a key role in job performance. This research shows that such motives interact in complicated ways with economic incentives for work.

In short, to improve project delivery teams also need to improve the contract incentives operating on project participants.

What is Intrinsic Motivation?

There are essentially two types of human motivation involved in job performance—economic and intrinsic. Economic motivation comes from contract incentives such as wages, bonuses or fines that are tied to the contractor’s performance. Alternatively, contractors may perform certain tasks because of their intrinsic motivation to do so. Intrinsic motivation arises from the contractor’s own desires and values (such as reciprocity, autonomy, or morality) and not because of external motivators such as payment. For simplicity, the party paying for the work is called the “owner” in this article, although it could be a prime contractor or upper-tier trade contractor with respect to a subcontractor, while the party doing the work is called the “contractor.”

Why worry about intrinsic motivation? Primarily because no contract can completely spell out in detail everything the contractor must perform to accomplish the owner’s goals. Contracts set forth minimum requirements, some in more details than others. But if the contractor were literally to do only what exactly the contract required, owners would not be pleased with the contractor’s performance. The problem is that the traditional compensation approach provides an economic incentive to do just that—provide the least amount of effort to accomplish the minimum requirements. Why is it then that many contractors go beyond this minimal approach? At least one reason is that these contractors have better intrinsic motivation. OK, so what is the point? It turns out that sometimes economic incentives undermine intrinsic motivation. Thus, owners who want to improve job performance should be aware of the impact of traditional compensation on these motivations—because when economic incentives impair intrinsic motivation, the contractor becomes less productive.

Incentives that Reinforce Intrinsic Motivation

There is good news, however. Intrinsic motivation can be reinforced by using certain kinds of contract incentives. The following practices, any or all of which could be incorporated into a contract, would tend to reinforce a contractor’s intrinsic motivation and thus lead to better job performance:

- Making contractors responsible for the means and outcome of their performance. This reinforces a contractor’s autonomy and need for self-determination—two key intrinsic motivators. It also signals the owner’s trust and thus improves the contractor’s self-esteem—another key intrinsic motivator.
- Having contractors participate in mutually setting goals with the owner. By involving the contractor in formulating project goals, the owner enhances the contractor’s sense of self-determination and communicates respect for the contractor as a collaborator.
- Personal communication regarding performance. In-person communication shows respect to the contractor, and thus reinforces autonomy and self-esteem. The sense of accountability from regular communication about performance also strengthens the feeling of autonomy, at least where the contractor is given sufficient ability to act on its own in pursuit of project goals.

Some practical applications of these general principles include:

- **Award Fees.** Traditional contracts provide the contractor with an overriding focus on cost performance, neglecting other important areas of job performance. Some savvy owners have set aside funds to pay bonuses to contractors for meeting or exceeding certain non-cost performance criteria, such as quality, reliability, customer satisfaction or innovation. In other cases, they may fund the bonus pool through cost-savings, and at least one owner tied the contractor’s ability to share in cost-savings to having an above-average score on their non-cost performance criteria. The goal is to make sure the economic incentives promote a successful project in all important areas, not just in cost. In addition, when award fees are based on the owner’s qualitative evaluation of job performance, rather than a contractor meeting specified quantitative goals, a contractor’s intrinsic motivation for better job performance is reinforced. The intrinsic motivation is further enhanced when award fee determinations are paired with fairly administered, periodic in-person performance evaluations and when contractors are involved in determining the project’s goals and performance criteria.
- **At Risk Fee Pools.** As mentioned above, traditional contracts give each contractor an incentive to maximize its own outcome, even at the expense of other team members or the
project as a whole. Some projects are implementing “at risk fee pools,” in which each participating member of the team is paid on a cost-plus basis and contributes all or a significant percentage of its profit into a common pool. This pool is then available to pay for cost overruns. If there are cost savings, some portion of the savings is usually added to the profit pool and distributed in accordance with the negotiated percentages in the incentive program. By having each team member share in a common pool, economic incentives are better aligned with the success of the project as a whole. Also, by tying each team member’s performance to the outcome of the others, intrinsic motivators such as reciprocity, fairness and social approval are reinforced.

Conclusion: Show Me the Money

All contracts involve incentives. Incentives can be implicit because they are inherent in the way the commercial terms operate, or they can be explicitly stated and addressed in an incentive program. But the choice is not between having incentives or not, it is between which incentives operate on project team members.

Given that there will be contract incentives, it only makes sense to be thoughtful in choosing incentives that will actually support the owner’s goals, rather than passively accepting the incentives inherent in traditional contracting. Social science research increasingly shows that traditional incentives provide less motivation to contractors than incentives that activate both economic and non-economic motives.

While this article has emphasized the importance of addressing contractors’ non-economic motivation to perform, it’s obviously true that a significant work motivation is the contractors’ need to make money. If unchecked, the profit motive can wreak a project and even hurt the actual accomplishment of that goal. By fostering contractors’ intrinsic motivations, and aligning incentive structures with those motivations, projects can be more successful for owners while better rewarding contractors both economically and psychologically.

Joel W. Darrington is an attorney in the Construction Law Practice Group of McDonough Holland & Allen PC in Sacramento. He specializes in design and construction transactions and has extensively researched various approaches to incentive plans and risk allocation. He also works closely with MHA shareholder Will Lichtig on projects using Lean Construction and Integrated Project Delivery.

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4See Gächter et al, at 1.
6Diana Hoag and Nancy Gunderson, Contract Incentives and Design-Build: Rethinking Acquisition Strategies, Desi-Buil DATEDLINE (February 2005).
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Contact Kristen Fracisco 925-827-2422 • fracisco@age-ca.org

SOUTHERN CALIFORNIA
FEBRUARY 23, 2010 • 7:30 – 10:00 am
AYRES HOTEL AND SUITES, ONTARIO CONVENTION CENTER
1945 East Holt Blvd., Ontario CA 91761
Contact Carol Hackler 626-608-5800 • hacklerc@age-ca.org

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YES, I WANT TO ATTEND OUTLOOK 2010! (Please indicate preferred session)

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FAX TO 925-827-2422, ATTN: KRISTEN

☐ SOUTHERN CAL FEBRUARY 23
FAX TO 626-608-5810, ATTN: CAROL

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