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Constructive COMMENTS

Risk Management Perspectives for the Construction Community

Assessing the Risk in Public-Private Partnerships

A public-private partnership is an arrangement between the governmental and commercial sectors to privately deliver a project or service that is traditionally provided by the public sector. This extreme form of contracting-out by the government is based on the realization that private sector innovation, technological skill, financial capability, and management expertise can generate quality public infrastructure and services in an economically efficient manner.

In recent years, governments at all levels have attempted to limit costs without reducing services. To meet demands that exceed their fiscal limitations, various initiatives have been created to rethink the role of government. This is especially true in creating and managing buildings and properties.

In the U.S., publicly-funded construction projects are often guided by an extensive series of costly regulations and mandates. Such mandates are in addition to the normal safety and quality requirements embodied in applicable codes and standards. For instance, on federally-funded projects, public clients and the contractors they select must adhere to contractual provisions on payment of prevailing wages, environmental reviews, minority contracting, small business set-asides, origin of materials, and other constraints that add substantially to the cost of construction.

A public-private partnership can shorten the time between pre-planning and the completion of the project by securing private financing and allowing the final outcome to be achieved with a minimum of regulation. The relationship established to fill a public need through a private partnership can be structured in a variety of ways from simple design-build to the private firm undertaking a project's financing, creation, operation, maintenance, management, and ownership.

Unbundling the Risk

The development of public-private partnerships is a key issue causing much concern among contractors, financial entities, and facility managers. Part of this concern is the unbundling of project risk in a way that creates challenges in understanding risks and creating systems to manage and insure these risks.

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For instance, unbundling the risk on a capital improvement project usually results in the private sector assuming those risks that are of a commercial nature and can be identified, appraised, and managed, leaving the residual risks to the government. Because each project arrangement is different, the risk profiles and resultant risk allocations differ. One fundamental issue that remains constant is the value in the transfer of risk.

Absorbing Business Risk

Every design and construction endeavor has both project risk and professional or design risk. When a public-private partnership is formed, the project risk usually becomes more extensive but more manageable. The professional risk—including basic design liability—often becomes greater and spread among the entities forming the private part of the arrangement.

Construction professionals involved in the planning, implementation, and day-to-day management of public-private projects need to assess their current risk management methods to address increased risk. Expanded roles may introduce new risks such as meeting fixed schedules and cost commitments, absorbing development and management costs, and facing reduced cash flow because the fee structures are often set up as deferred payments made during operation of the facilities.

While public-private projects are an important source of construction and investment income for many of the largest contractors, they can also be risky; tight schedules, complex design and construction, or innovative financing can create significant business risks. Financial pressure can often arise as there is often a time-lag between negotiation and receipt of fees.

The professional risk...often becomes greater and spread among the entities forming the private part of the arrangement.

Blurring Private Entity Exposures

The use of alternative project delivery and financing methods for public infrastructure projects blurs the common division of risks and rewards. Through negotiation, project risks should be allocated to the party best equipped to manage those risks. Contracts often include incentives that reward private partners for mitigating financial risk factors. Contracts should also assign governmental immunity to the partnership.

Under the public-private delivery model, the traditional relationship between project designer and project contractor changes significantly. The design effort in a public-private partnership is usually fully integrated into the project delivery team and managed by the contractor or developer.

Although all the parties need to share a new perspective, the design elements in particular need to be carefully managed. Designers need to be more creative in their responses to the contractors' needs for constructability and schedule and may find it difficult to maintain the integrity and public accountability that is associated with being licensed professionals.

Continuing Exposure of Professionals

Public-private partnerships increase business opportunities in return for assuming new or expanded responsibilities and risks. In a more entrepreneurial capacity as a developer and operator, the private entity may assume risks that the public entity never had. Third-party liability—in many cases the same risks that don't exist for a public agency—becomes important as a risk for private entities.

While government agencies have limited tort exposure (usually in the form of a cap), private entities usually do not. A contractor or designer with continuing management or maintenance responsibilities may find that its exposure is not capped in amount or time. Formal contractual agreements must clearly describe the public services to be provided and the standards to be met while providing the appropriate flexibility, incentive, and protection of profit-seeking private investors to provide improved public services and facilities.

Reaping the Benefits

Construction-related professionals are rightfully at the center of public-private partnerships. The skills of design and construction teams can provide the creative and management resources for large and complex programs, access to advanced technologies, and improvement of asset management and life-cycle cost practices. The public can benefit because new infrastructure can be financed with private market debt or equity that is to be repaid from project-derived, direct-user charges or government payments. ◆

Tracking Sustainability Developments

Although many of the concepts of sustainable design and construction have been around for decades, the recent awareness of the general public has stimulated rising interest and responsive actions.

Sustainable design and construction seeks to avoid the depletion of energy, water and raw material resources, prevent environmental degradation caused by facility and infrastructure development over their life cycle, and create environments that are livable, comfortable, safe and that promote productivity. Here are some of the latest green developments.

Green Organizations Become Standard Setters

The U.S. Green Building Council (USGBC) has been recognized by the American National Standards Institute (ANSI) as an official standards developer. USGBC has been working with the ANSI processes through its partnership with the American Society of Heating, Refrigerating and Air-Conditioning Engineers and the Illuminating Engineering Society of North America on the development of a standard baseline for high performance green buildings in the commercial marketplace. In 2006, USGBC applied to become an ANSI-accredited standards developer. More information about USGBC is available at www.usgbc.org.

USGBC is not the only green organization that will be setting standards. More than a year ago, ANSI approved the application of the Green Building Initiative (GBI) as a standards-developing organization. GBI was the first sustainable building organization to become accredited to develop consensus standards. Its environmental design and rating system is known as Green Globes™. Information is available at www.thegbi.org.

Mechanical Contractors Form Green Organization

"Saving the world, one mechanical system at a time" is the slogan of the newly established Green Mechanical Council, or GreenMech. The organization has stated that it hopes to work with the USGBC and GBI to further sustainability by developing its own rating system and creating educational programs for the trades that design, install, and maintain mechanical systems.

GreenMech was formed by a group of mechanical industry manufacturers, educators, and associations, including the Mechanical Contractors Association of America. One of its goals is to develop a 100-point standard for mechanical equipment based on the energy used and pollutant produced. A system that uses zero net energy and produces no carbon dioxide or pollutants would achieve a perfect score of 100. Eventually, the GreenMech website (www.greenmech.org) would index mechanical systems by their ratings as a source of information for designers and clients.

GreenMech also hopes to package educational material from universities, suppliers, and others in forms that are easy for technicians to access. The organization has estimated that there are 130 million mechanical systems currently in place that could be made more efficient to reduce their "carbon footprints."

USGBC Moving Forward on Life-Cycle Assessment

The Leadership in Energy and Environmental Design (LEED®) Green Building Rating System™ that is the basis of the USGBC effort on sustainability gives points to everything from appropriate landscaping to bicycle racks. Now, the USGBC is attempting to simplify life-cycle assessments so that they become another component of the point system used to assign sustainability credits to projects. The incorporation of life-cycle assessments would assist in both documenting actual energy use as well as "embodied energy" in a product or system.

Homebuilders Lead Effort for ANSI Green Homes Standard

The National Association of Home Builders (NAHB) has joined with the International Code Council (ICC) to create an ANSI standard for green homes. Residential units in the United States are estimated to create about 21 percent of the nation's carbon dioxide emissions, which are known to be a major source of global climate change. In 2005, NAHB published its *Model Green Home Building Guidelines*, now a nationally recognized green building certification tool. ICC has been promoting green building requirements through its widely adopted family of international codes, which set minimum standards for energy efficiency and sustainable building practices for the construction industry. ◆

EJCDC Endorses AGC Document on Price Escalation

Responding to disruptions in the construction industry caused by unanticipated escalation in material prices, the Associated General Contractors of America (AGC) developed a contractual provision in which clients and contractors agree to equitable adjustments in the contract price based on significant fluctuations in the cost of construction materials. AGC published this model contractual amendment in 2004.

Now, the Engineers Joint Contract Documents Committee (EJCDC) has endorsed AGC's *Materials Price Escalation Clause Amendment*, AGC 200.1. The document provides methods by which clients and contractors can calculate an adjustment to construction commodities that increase or decrease in price. By indexing materials pricing against objective factors, the amendment allows contractors to provide lower bids to clients, rather than including pricing risks in bid proposals. EJCDC will reference AGC 200.1 in the forthcoming 2007 edition of EJCDC C-700, *Standard General Conditions of the Construction Contract*, as well as other construction-related contract documents.

According to *Engineering News-Record*, the price of cement is up 7.1% during the last year, with steel up 5.2% in that time. The overall producer price index for construction materials and components has jumped 22% in the past three years, more than double the 9% rise in the consumer price index, according to Ken Simonson, AGC's chief economist. Despite falling lumber and copper prices, steel, diesel fuel, asphalt, concrete, and aluminum prices remain high. With material demands worldwide, supply growth is uncertain.

For more information on AGC and EJCDC contract documents, go to the AGC website at **www.agc.org** or the EJCDC website at **www.ejcdc.org**. ◆

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For additional information on design firm practice management, please visit our website at www.Schinnerer.com or www.PlanetContractor.com. You can reach our Risk Management Department at 301/951-9753, fax at 301/951-5496 or email at vos.RMeducation@Schinnerer.com.

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