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ALTERNATE PROJECT DELIVERY & CONSTRUCTION CONTRACT ADMINISTRATION

AIA CONSTRUCTION CONTRACT ADMINISTRATION KNOWLEDGE COMMUNITY

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As a profession, we are facing a great and exciting challenge. Not since the invention of the elevator have architects seen such opportunity for fundamental changes in every aspect of our profession. The new buzz words and phrases include "Integrated Project Delivery," "BIM," "Design-Build," and "Sustainable Green Design." The intent of this article is to provide an overview of the interlocking relationships and opportunities provided by the changes in how we practice and the impact of these changes primarily in the arena of Construction Contract Administration.

Integrated Project Delivery is defined by the AIA in their publication "Integrated Project Delivery: A Guide" as follows:

> "IPD is a project delivery approach that integrates people, systems, business structures and practices into a process that collaboratively harnesses the talents and insights of all participants to optimize project results, increase value to the owner, reduce waste, and maximize efficiency through all phases of design, fabrication and construction.
>
> IPD principles can be applied to a variety of contractual arrangements and IPD teams can include members well beyond the basic triad of owner, architect, and contractor. In all cases, integrated projects are uniquely distinguished by highly effective collaboration among owner, the prime designer, and the prime constructor, commencing at early design and continuing through to project handover." (1)

The essence of this definition is the establishment of a fully integrated project team, in which each participant becomes a stakeholder. It binds together the Owner, the Design Team, and the Constructor, all at the very inception of the project, bringing their individual strengths and sharing in each decision as the project unfolds. Through this approach the collaborative and shared benefits make for a stronger bond and a more successful project.

The second new term, "BIM," or "Building Information Modeling," is a tool for the development of the project by all stakeholders in "real time." It is the creation of a computerized model of the building, which is accessed by Owner, Designer, and Constructor. Changes, enhancements, clarifications, etc., appear simultaneously to each stakeholder. While this approach adds efficiency and therefore value to the project, it clearly raises issues of document integrity, ownership, and liability.

Each of these complications must be recognized and fully addressed in the development of the team's contractual relationships.

The third term is "Design-Build." By definition, it is a method of project delivery wherein a single entity contracts with the Owner to provide both design and construction services. This approach can take many forms, but the three most basic are:

- Architect-led, where the Architect assumes the lead role of the entity. This approach offers the greatest protection to the Owner, in that, through the Design-Build entity the design professional has a direct contractual relationship with the Owner, protecting the fiduciary relationship between the Architect and the Owner. In addition, as a result of this contract the Owner is assured of the design and functionality desired.
- Builder-led, where either the entity or the Owner would enter into a contract with the Architect. In the former scenario, the Architect is bound to the entity through privity of contract. This can have a significant risk of a conflict of interest; in fact, the law in many jurisdictions prohibits the direct contract between an Architect and Design-Build entity because of the conflicts of interest. The preferred scenario in this approach is the latter, where a tri-partite contract is required between the entity, the Architect, and the Owner. This preferred approach protects the fiduciary relationship between the Architect and Owner, which might be compromised by a direct contract between the Architect and the entity. It also takes Design-Build much closer to Integrated Project Delivery.

  In some jurisdictions you can only have Design-Build when there are separate contracts between the Architect and owner, thereby obviating the inherent conflict of interest when the Architect is not contracted directly with the Owner.
- Developer-led, where the Owner has a contract with a single Design-Build entity that includes a developer, builder and architect; and the Design-Build entity not only designs and builds the project, but also finances it and, in some cases, maintains the facility for a significant number of years before turning it over to the Owner. This approach, called "Public-Private Partnership," or "P3," has been prevalent in Europe and Canada for years, and is now being used in the United States, mostly on the west coast in large public projects.

Design-Build, in all its variations, provides a more unified approach to all aspects of the design and construction process, compared with Design-Bid-Build and Design-Negotiate-Build. Under this process there is a commitment to meet the Owner's design, program and performance standards or guidelines, within an agreed-upon budget and schedule.

There are many advantages of Design-Build and other non-traditional collaborations. Owners, both private and public, are more frequently demanding that their projects be accelerated to provide a quicker return on their capital investment. Decisions whether to proceed with these investments are based on exhaustive cost/benefit analyses. The Owner's decision to proceed with a project is based on the trust that the Building Team can deliver the project within these assumptions. The challenge to the team is to quickly and creatively address the program needs of the Owner, while respecting the financial realities of the project pro forma.

The process requires an honest dialogue between all Team members from the very inception of the project. Before the first line is drawn, the Builder should analyze the Owner's conceptual budget and guidelines, and evaluate how realistic the Owner's expectations may be. The Architect must then balance the aesthetic and spatial expectations of the Owner and, with the assistance of the Contractor, further confirm or challenge the Owner's budget.

Recent economic turbulence has rendered typical allowances for escalation unreliable. As the project progresses, the Builder must advise the Team as to the current market condition of particular building

materials and systems. The Team must then quickly analyze the economic and constructability impact of different solutions, testing them against the limitations of the overall project budget.

The marketplace also presents challenges in terms of material availability. The Builder must keep the Team apprised of long-lead items, or potential shortages. The Team can address these delivery issues by the sequencing of bidding and procurement of the project components. The Team should focus on the critical items in the design process to allow them to be completed ahead of the balance of the project. In the typical Design/Bid/Build process, months can be lost before the entire project package is completed and released to the market.

Finally, the process presents the opportunity for the key members of the building process to work collaboratively for the benefit of all parties, avoiding adversarial relationships. It gives the Architect the opportunity to design efficiently to the budget, without going through exhaustive redesigns. It gives the Builder the opportunity to make suggestions that can benefit price, schedule and constructability early in the process. It gives the Owner the best value for their capital investment, at an accelerated pace. The positive balance of all three entities results in the success of the process.

Design-Build can also promote Sustainable Green Design by addressing sustainability issues early in the process, when the collaborative approach can have the greatest impact.

As I have written in "Architect-Led, Design-Build, and Green: Ensuring Successful Project Delivery" as published on the AIA's Soloso Web Site:

> "Sustainability is important to the built environment. Buildings contribute over 40 percent of the impact on global warming and greenhouse gases. Sustainable design includes the following:
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> - Reducing fuel consumption
> - Recycling resources within the building systems;
> - Designing with renewable or recycled materials.
>
> All of these elements are relatively easy to accomplish within the design-bid-build process, but are more readily achieved when handled through design-build.
>
> Other green design issues include:
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> - Reducing fuel consumption by designing with efficient systems;
> - Selecting and installing insulation for its greatest use in limiting heat gain and loss;
> - Specifying glazing to provide the most natural light and ambient warmth;
> - Integrating lighting with natural light, and selecting lamps with greater efficiency;
> - Selecting mechanical systems based upon their use of renewable resources;
> - Geothermal, solar, passive and hydro-power, are proven systems;
> - Recycling storm and non-sewage waste water;
> - Specifying green roofs to utilize storm water and provide significant insulation, thereby reducing the need for more energy to heat and cool buildings;
> - Specifying renewable or recycled building materials that leave a lasting supply for future construction.
>
> These issues are readily achievable as part of an integrated team approach to the design and construction process. Architect led design-build affords the opportunity to see this process through to fruition by providing the platform for detailed team evaluation, from project inception through completion.

Design-build is an effective way to achieve sustainability, meet desired design goals and ensure project success." (2)

Through adoption of these new tools and a clear recognition that the roles of the stakeholders are rapidly evolving and the lines of responsibility becoming more intermingled, we have the opportunity to develop new models for truly achieving a broader definition of "Design Excellence."

All of these tools have a direct impact on how we practice, starting with the preparation of Construction Documents and running through the services required in Construction Contract Administration.

The traditional Design-Bid-Build Project Delivery Services require development of fully detailed and coordinated drawings and bid manuals delineating the complete scope of work. During the Construction Contract Administration Phase our services require the following:

- Act as Owner's agent and representative
- Review shop drawings
- Assist with coordination issues
- Respond to RFIs and issue ASIs
- Attend job meetings
- Review alternates and substitutions
- Review and approve requisitions for payment indicating acceptance of work
- Notify Owner of deficiencies
- Create punchlist
- Prepare final Acceptance of Substantial Completion
- Provide Post-Completion Services as defined in the Owner-Architect Agreement

This is our traditional role and gives us the greatest comfort. It does, however, limit our control over the final product, as most decisions are made primarily with an eye to cost and budget, the two areas most controlled by the Constructor. We are either an adversary to the Constructor or relegated to a minor informational role. Only when we have a sophisticated client can we truly exert influence over the decision-making process.

With the Builder-Led Design-Build delivery method, our services change from the beginning. Normally the team is presented with a set of Bridging or Scope Documents, very much similar to our traditional Design Development Packages. The program and design intent have been fully developed. Our role is to assist the Design-Build Team in finalizing the design and providing sufficient documents for permit application and approvals. Our Construction Contract Administration role is based upon the following:

- Prior agreement with Constructor for review, approvals and monitoring of project performance.
- Our general responsibilities to protect the Public's Health, Safety and Welfare, which need to be coordinated with our role as defined by our contractual relationship with the Constructor as Client.
- While there is no direct contract with the Owner there is a potential conflict with our fiduciary responsibilities. Under law in most jurisdictions we as Architecrts are required to protect the fiduciary interests of the Owner, regardless of the contractual relationship. While there is no direct privity of contract we are still obligated to the Owner, even when the actual client—the Design-Build entity—has directed us to take an action that is not in the Owner's financial interests.

In this mode our role is oftentimes limited to the requirements imposed by the Design-Build entity, relegating us to a minor role. Many of our design decisions are potentially compromised by budget and schedule. While the Owner or End User is the beneficiary of our work, the Design-Build entity is our true client. Our fiduciary role is limited and our Construction Contract Administration is almost non-existent. It is important that our contracts with the DB entity be specific in the services required, liabilities incurred and appropriate indemnifications to protect us from any team actions which are beyond our control.

Under the process of Architect-Led Design-Build, the services are defined by mutual agreement between the Design-Build Entity and the Owner. If bridging or scope documents are not provided, then the programmatic and performance requirements must be clearly spelled out and incorporated into the contracts. While the basic design phase services would parallel the traditional Design-Bid-Build approach, after approval of final design documents the level of detail required in construction documents will depend on the Design-Build entity's ability to define the scope required for each trade and actually buy out the job in its entirety. It is important to remember that in this delivery method, there are no change orders other than specific Owner requests or the direct result of hidden conditions that could not be reasonably expected or inferred from existing surveys or site inspections. Construction Contract Administration services take on a totally new dynamic in these projects. Our level of responsibility for areas of Project Administration expands into areas we are often unfamiliar with. We may be asked to provide actual supervision rather than observation, so we need to have both the skills required and the appropriate contractual language to both protect and compensate us for these new responsibilities. This is not an area for the inexperienced or the faint of heart!

Under Architect-Led Design-Build, our Administration role is defined by some if not all of the following:

- Prior agreements with Owner
- Potential conflicts with our HSW responsibilities
- Fiduciary responsibility to Owner, acting as Owner's Agent and Representative
- Responsibility for site logistics
- Responsibility for means and methods
- Responsibility for site safety
- Shop drawing review and approval
- Responsibility for coordination issues
- RFIs and ASIs direct to Sub-trades
- Job meeting management
- Review and acceptance of alternates and substitutions
- Review and approval of Sub-trade requisitions for payment indicating acceptance of trade work
- Notification to Owner of deficiencies and creation of appropriate remedial work
- Creation of punchlist
- Final acceptance of Substantial Completion and release of **Sub-trades**
- **Post-Completion Services as** defined in the Owner-Architect Agreement

In this approach the Architect is truly in the role of the Master Builder. All decisions related to design, execution and project delivery are fully within our control. It carries with it substantial risks and a different skill set than we are accustomed to. In Construction Contract Administration we stand in the role of the actual Constructor. We are responsible—and liable—for each aspect of the execution. We must

understand site logistics, construction means and methods, and all of the issues normally dealt with by the Constructor, whose the role we are actually filling.

Integrated Project Delivery is the newest addition to the Project Delivery Tool Box. As previously stated, it brings the Project Stakeholders together early in the process. It is shaped by a mutual agreement to deliver the defined project within an agreed cost and schedule, to agreed-upon levels of quality and performance. The contractual relationship is defined by making each of the participants a stakeholder in the team's performance, with compensation and profitability being tied directly to the team's performance. The role we play in Construction Administration is directly related to the services required by the team's approach to the project, but would normally follow the guidelines listed below.

- Prior relationships among the stakeholders, including the Owner, the Builders and the Designers
- Elimination of potential conflicts with our HSW responsibilities
- Fiduciary responsibility to the project by all the stakeholders
- Early shop drawing preparation and review
- Assistance with coordination issues
- Faster reviews of RFIs and issuance of ASIs
- Job meeting attendance
- Team review of alternates & substitutions
- Team review and approval of requisitions for payment indicating acceptance of work
- Notification to Owner of deficiencies
- Creation of punchlist
- Final acceptance of Substantial Completion
- Post-Completion Services as mutually agreed upon in the IPD agreement

Under this approach, much attention is paid to defining issues early in the process and developing mutually acceptable solutions. This team approach eliminates or minimizes the potential for conflicts. Disputes are mutually waived by the terms of the contract.

The last issue to discuss is BIM and its impact on the process. BIM must be viewed as a tool to ease the process of design and coordination. When used properly it should identify issues and conflicts in three dimensions before any construction starts. With this in place, the Architect's Construction Contract Administration role becomes extremely transparent. Issues of dispute are resolved and the project will ultimately proceed with fewer issues arising. The use of the tool does not depend on the Project Delivery Method but can be utilized to facilitate everyone's roles with less interruption and potential disputes.

The most important take-away is the understanding that each Delivery System brings a unique interpretation of the services and skills required in Contract Administration. We need to be skilled and nimble or we will not survive long in this changing environment.

(1) "Integrated Project Delivery: A Guide", Version 1, Copyright 2007, AIA National/AIA California Council
(2) "Architect-Led, Design-Build, and Green: Ensuring Successful Project Delivery" as published on the AIA's Soloso Web Site