

Construction Contracting in Traditional and Alternative Project Delivery Systems: Finding the Framework that's Right for the Owner and the Project

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1 Legal rights/duties of construction entities: contractors, design services firms, subcontractors and suppliers

A contract allocates responsibilities and benefits among the parties. It also often allocates risk, which is at the center of this presentation.

The first step in allocating risks is to identify them. The second step is to identify the party most able to control, manage, avoid, or mitigate those risks. The parties should endeavor to settle on a contract that ensures that no party is saddled with risk inadvertently, risk over which they have no control, or risk for which they are not being compensated.

In the construction context, various project delivery methods have been developed to deal with the different ways in which owners, developers, contractors, and designers view and accept risk. A well-articulated delivery system ensures that the contract allocates the project's risks to the party who has accepted and has been (or will be) compensated for bearing the risk.

Project Delivery is the process by which all of the procedures and components of designing and building a project are organized and put together in an agreement that leads to a completed construction project. Any project delivery system must account for the necessary project participants. These participants can be grouped loosely into three: owners, designers, and contractors. Each of those categories then can be subdivided into an array of subcategories.

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- **Owners** may include a single person or entity, or they may include a collection of entities with disparate interests, including project developers, passive investors, and the end users. Owners' representatives and construction managers also may be lumped into this category at times.
- **Designers** may include an assortment of architects and engineers and consultants.
- **Contractors** may include a general contractor, subcontractors, prime contractors directly engaged by the owner, and suppliers.

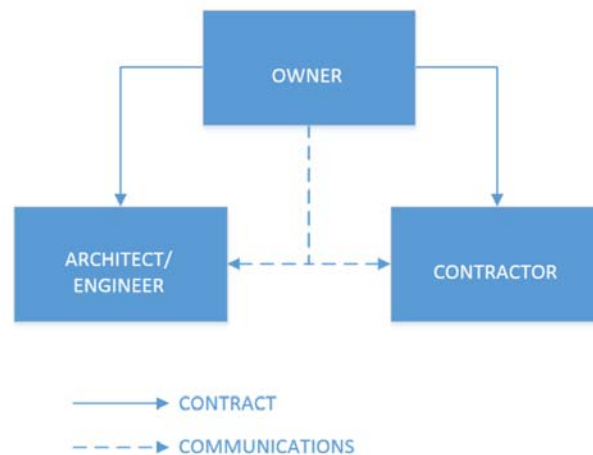
By their nature, each of the above groups have different interests. Owners typically are focused on obtaining a completed project as quickly and economically as possible. Designers are focused outwardly on achieving a similar goal, but inwardly they are wary of risks associated with a failure to anticipate foreseeable conditions that might take the project off track and increase costs. Contractors want to ensure that they complete the project on time and within budget, but also that the financial responsibility for unforeseen conditions (from design changes to underground obstructions) is attributed to the proper responsible party.

Fundamentally, if a project's schedule goes off track, or if costs exceed the budget, there is a reasonable likelihood that each of the above groups will seek to allocate fault to one or more of the others. Sometimes responsibility is clear. If an owner adds footage to the project, the change will lead to cost and time increases attributable to the owner. If the engineer fails to calculate structural loads properly, the remedy likely will require more time and money, and the fault will lie with the engineer. If a contractor's misunderstanding of the drawings leads to a misalignment, the cost of that remedy would be on the contractor.

In practice, responsibility may not always be so simple to allocate. More commonly cost and time overruns can be attributed to multiple sources, and each potentially responsible party will have an interest in minimizing the impact of their contribution. Indeed, even when only one party is to blame, the others may have a duty to minimize the financial effect of the error or change.

Efforts to allocate responsibility for construction delays and cost increases are the subject of constant debate among industry professionals and contractors. Those efforts have resulted in a collection of useful standard agreements published by such entities as the American Institute of Architects (AIA), the Association of General Contractors (AGC), the Engineers Joint Contract Documents Committee (EJCDC) and the Design-Build Institute of America (DBIA). The specifics of these standard form agreements are beyond the scope of this presentation, but each of the delivery methods discussed here can find good framework in these commonly used agreements.

2 Design-Bid-Build: The Traditional Construction Process



The traditional, and still most common, project delivery system is known as Design-Bid-Build. Under that approach, the owner engages a designer to prepare a relatively complete set of drawings and specifications.² The design phase often proceeds in three stages:

1. Schematic design;
2. Design development; and
3. Construction documents.

Project architects commonly retain other consultants, such as civil, mechanical, and electrical engineers, to assist them in developing a “complete” design package. Of course, most any industry participant will know that design packages are seldom fully complete. The complexity of most large projects makes that a cost-prohibitive pursuit. Nevertheless, the design documents under this approach are sufficiently detailed to enable contractors to bid for the work.

The owner then will select the contractor, usually based on the lowest responsive and responsible bid³ or some hybrid of price and technical merit. This competitive-bidding process increases the chances of obtaining lower prices for the project, and some public entities are statutorily required

² The designer may also provide additional services including environmental investigation, permitting, right-of-way purchase documents, hearings for public approval, and submissions for project funding.

³ A bid is considered responsive if it conforms to the project bid package requirements. A bidder is considered responsible if it appears likely to be able and willing to perform in accordance with its bid.

to pursue this approach. This then is a substantial advantage offered by the design-bid-build project delivery system.⁴

The owner's contract with the architect naturally precedes the construction contract,⁵ and the contractor's work is defined by the contract documents. But responsibilities need not be so clearly defined, and some standard agreements contemplate the provision of certain pre-construction services, including evaluation of constructibility and other recommendations by the contractor.⁶ Generally, these contract documents are intended to include all items necessary for the proper execution and completion of the work. Accordingly, the contractor prices the work based upon these documents.⁷

Once the contractor is awarded the contract, it engages numerous trades and suppliers through subcontracts, but maintains overall responsibility for completing the project on time and on budget. The architect's work also is not complete with the execution of the construction contract. To the contrary, although the contractor is obligated to perform the work in accordance with the contract documents, the architect remains involved in the administration of the contract. That includes the review of the contractor's shop drawings, acceptance or rejection of the contractor's work, review of payment requests, determination of completion dates, and at least preliminary resolution of disputes between the contractor and the owner.

Under the design-bid-build approach, contractor claims for additional time or compensation generally are submitted to the architect for review. Contract changes may be effected through written change orders, or otherwise at the direction of the architect. Communications between the owner and the contractor also generally go through the architect.

This positioning of the architect as intermediary between the owner and the contractor has obvious benefits. Owners often complain that contractors may inflate the significance of owner-driven changes. And contractors complain that owners too often seek to hold the contractors to fixed budgets on a project that is constantly changing. Architects are well situated to assess the significance of changes on the project schedule and budget. Moreover, the architect typically

⁴ It also, however, can be a draw back. Because the contractors do not bid on the project until the design package is complete, it is not until then that the owner discovers whether the budget is realistic. A round of construction bids that materially exceed expectations and budgetary constraints can result in substantial design cost increases as well as project delays.

⁵ AIA Form B141 is an example of a standard owner/architect contract.

⁶ See AGC Forms 230 and 250.

⁷ AIA Form A101 and A201 provide a standard form agreement for a fixed price construction contract under the design-bid-build model. See also AGC 230 (lump sum); AGC 230 (cost plus); AGC 250 (cost plus with a guaranteed maximum price); EJCDC No. 1910-8-A-1 (stipulated price); EJCDC No. 1910-8-A-2 (cost-plus or GMP); EJCDC No. 1910-8 (Standard General Conditions of the Construction Contract).

does not have a direct financial interest in the resolution of a dispute between the owner and contractor. Accordingly, the architect will have less of a conflict of interest in the dispute resolution process.

There are, of course, limitations and disadvantages to this approach. First, and perhaps most obvious, disputes over contract changes often hinge on contractor assertions that the architect's drawings and specifications are materially incomplete or defective. If the contractor's claim is correct, then the owner may have a right to compensation from the architect for the financial consequences of the defective design. Under those circumstances, the architect would hardly appear to be the appropriate decision maker with respect to the contractor's claim.

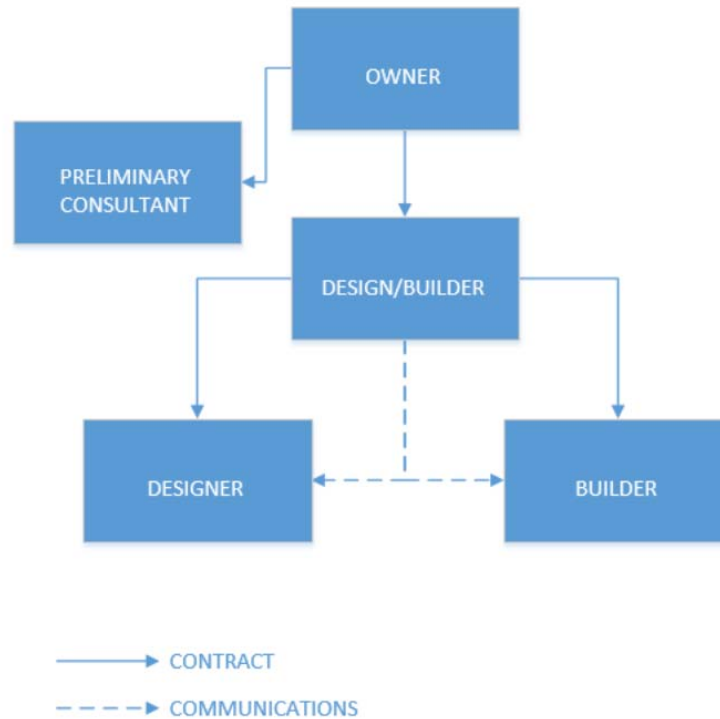
Perhaps less apparently, the architect may have an interest in allocating responsibility for numerous changes away from a design defect and toward an owner-driven change. If the project suffered a 60-day delay, and both an owner-driven change and a design defect could independently have resulted in that delay, the owner may be reluctant to leave the allocation of responsibility for the delay to the architect.

And what about the common projects that involve multiple designers, and even designs that are components of specialized products that are independently purchased by the owner? Predesigned and otherwise specialized systems are becoming common in the increasingly complex projects of today. Those elements, at a minimum, blur the traditional lines between owner, designer, and contractor.

Finally, but certainly not exhaustively, the traditional design-bid-build approach has found significant limitations in today's world of fast-track construction. Between tightening owner schedules and increasingly complex building systems, it is common in most significant construction projects to begin construction before all of the project elements have been designed to completion. As a result, it often is impossible for a contractor to review the project drawings and specifications and provide a reasonable price for the project's construction. Even where elements of the project are left off of the contractor's scope of work, it is often difficult to arrive at a fixed price for that scope of work where the yet-to-be defined elements will have some impact on it.

A common resolution to these uncertainties is, by its nature, insecure and unsatisfying. That is the cost-plus method of construction contracting. Under that method, the parties recognize that the project contains too many uncertainties to permit a reasonable fixed price bid. Accordingly, the contractor typically is provided recovery of its direct costs, plus components for overhead and profit. That approach offers little incentive for the contractor to reduce costs. To the contrary, the contractor generally will make more profit as the project costs increase.

3 Design-Build: The Fastest Growing Construction Delivery System



Design-build is the fastest growing project delivery system. Indeed, according to an RSMeans Market Intelligence report, the design-build method of delivery has grown from 30% to 40% on non-residential projects over the last decade, whereas the design-bid-build method has gone down by about 15%.⁸

Remarkably, however, the design-build system is not at all new. Indeed, it was the predominant mode of construction contracting until the twentieth century. Its origins trace back to the early master builders (e.g., the pyramids of Egypt, the Dome of the Cathedral in Florence, Italy).⁹ Ironically, the same concerns over increasing complexities that led builders away from the design-build approach in the twentieth century now are hailing them back to that very approach.

Under design-build, the owner typically seeks professional assistance from a consultant in the formulation of a program even before it hires the design-builder.¹⁰ The consultant prepares

⁸ See *Design-Build Institute of America*, <http://www.dbia.org/about/Pages/What-is-Design-Build.aspx> (visited June 8, 2015).

⁹ 2 Bruner & O'Connor Construction Law § 6:2.

¹⁰ AIA form B142 – 2004 offers a form of agreement between the owner and the consulting firm.

“Project Criteria” documents that, among other things, describe the nature of the project and include some design documents.

The design-build consultant performs numerous other functions for the owner as well, including many that previously were performed by project architects in the design-bid-build environment. The complete project design, however, rests in the hands of the design-builder. The owner retains that design-builder following receipt of the Project Criteria from the consultant. At that point, the design-builder assumes much of the risk for both the design and the construction of the project.¹¹

The Design Build Institute of America (DBIA) describes the design-build process as follows:

Design-Build is a method of project delivery in which one entity – the design-build team – works under a single contract with the project owner to provide design and construction services. One entity, one contract, one unified flow of work from initial concept through completion – thereby re-integrating the roles of designer and constructor.¹²

The advantage of the design-build approach rests in its unification of the designer and the builder in both interests and responsibilities. It gives designers and contractors more time to collaborate and identify potential problems early instead of later when every change costs time and money.

Theoretically, design-build also should minimize disputes over responsibility for work changes. This can be a significant advantage. Designers do not warrant their plans entirely. They typically are held to a “Standard of Care” in their industry. So long as they meet that standard of care, they generally are not responsible for errors. Owners, however, are bound by what is commonly known as the *Spearin Doctrine*,¹³ which holds that an owner impliedly warrants the constructibility of the plans and specifications that it provides to bidding contractors. This leaves the owner in an uncomfortable position of utilizing plans and specifications that met the designer’s standard of care but that nonetheless may be insufficient for the contractor’s needs.

In theory (and often in practice also), the design-build method of project delivery helps the owner to minimize its exposure. If the same entity is responsible for both design and construction, there is little risk that the owner will find itself stuck in a dispute between the designer and the contractor. Of course, nothing is perfect in construction, and the potential for disputes remains.

¹¹ AIA Form A141-2004 offers a form agreement between the owner and the design-builder. *See also* AGC Document 400 (preliminary design-build agreement); AGC Document 410 (agreement between owner and design-builder); EJCDC 1910-40-A (stipulated price); EJCDC 1910-40-B (cost-plus); DBIA Doc. No. 525 (Lump Sum); DBIA Doc. No. 530 (cost-plus with option for GMP); DBIA Doc. No. 535 (General Conditions).

¹² DBIA, *What is Design Build?*, <http://www.dbia.org/about/Pages/What-is-Design-Build.aspx> (accessed June 8, 2015).

¹³ *United States v. Spearin*, 248 U.S. 132 (1918).

For example, differences over the interpretation and application of the Project Criteria by the design builder can result in disputes. The potential for these disputes, however, is minimized as clarity and organization is improved in the Project Criteria.

Within the design-build framework, there are common sub-forms based on the focus of the design-build contractor. Thus:

3.1 Contractor-led

Under the most common design-build project, the contractor takes the lead. The contractor hires an architect to design its building, which the contractor then builds for the owner. The architect may be a contractor employee or a subcontractor.

3.2 Designer-led

Recently, architects have begun to embrace a lead role in the design-build approach. They contract with the owner both to design and to construct a building, and they procure the construction services either by subcontracting to a general contractor or by contracting directly with the various construction trades. A designer-led project allows an owner to have an advocate all the way through a project. The approach does, however, carry increased risks for the architect, and many firms steer clear of this approach as a result.

3.3 Joint venture

Particularly for large and complex construction projects, joint ventures among architects, engineers, and contractors may be formed to perform a design-build contract. (Alternately, those groups may choose to form separate limited liability companies or similar special-purpose entities, which can function similarly to a joint venture.) Although both architects and contractors are members of the joint venture, the architect commonly defers project coordination to the contractor.

With each of those entities invested in, and members of, the joint venture, they have a greater incentive to cooperate in the overall success of the project. The joint venture partners nonetheless maintain separate responsibilities, typically subcontracting with the joint venture. The extent of each venture partner's separate exposure for the joint venture's liability is prescribed largely by the joint venture agreement and their separate subcontracts.

3.4 Developer-led.

In a developer-led design-build project, the owner contracts with an independent developer to design and build the facility that will be owned and operated by the owner. The developer then subcontracts the design and construction tasks to external designers and constructors.

Regardless of the sub-type chosen for a design-build project, its potential benefits remain:

- It enables fast track/phased construction.
- It can lead to higher quality projects.
- It can reduce claims and litigation. Because the contractor is responsible for the design, disputes between the designer and contractor are eliminated.
- It helps to identify costs early.
- It can lead to better relations and communication, as well as greater contractor involvement throughout the process.

4 Some Other Approaches

The alternative approaches to construction project contracting are seemingly limitless. Many are beyond the scope of this introductory lecture. Here are just a few examples of some important alternative approaches:

- **Design-Negotiate-Bid.** This is a variation of the design-bid-build project delivery approach. Here, however, instead of selecting the lowest responsive, responsible bid, the owner selects a contractor for negotiations leading to the award of a contract. The selection may hinge on factors other than price, such as qualifications, expertise, reputation. Also, the negotiation process allows the parties to work together on issues including design, product selection, project phasing, scheduling, and budget.
- **Multiple-Prime Contracting.** This too is a variation of the design-bid-build project delivery approach. Here, the owner contracts with multiple prime contractors of different construction disciplines, such as general construction, earthwork, structural, mechanical, and electrical. The owner (or its construction manager) manages the project's budget and schedule. As a result, contracts for early work may be executed and commenced before the overall design is complete, thus facilitating the fast-track construction process.
- **Construction Manager.** An owner may retain a construction manager both to offer pre-construction input and to act as the owner's agent during construction. The owner pays its contractors directly, and the construction manager works with the owner and the contractors to manage the project.
- **Construction Manager at Risk.** The construction manager at risk delivery system has elements similar to the design-bid-build method. There, the construction manager at risk (CMR) typically guarantees completion of the project for a fixed (or guaranteed maximum) price following completion of the design. The difference, however, rests in the CMR's role as advisor to the owner prior to construction, offering schedule, budget, and constructibility advice during the project planning and design phases. Thus, the CMR serves a hybrid role of construction manager and general contractor.

- **Public/Private Partnership (P3).** In a public/private partnership, a private entity or group of investors provides some or all of the required capital with a commitment to deliver a completed project for a public sector owner in exchange for revenue that the completed facility is anticipated to generate.
- **Integrated Project Delivery (IPD).** An integrated project delivery method attempts to spread the risk, responsibility and liability for project delivery equally among the primary parties—the owner, the designer, and the builder, whether through partnership agreements or multi-party contracts.

Conclusion

None of the delivery methods discussed here is right for every project. For each situation, there will be advantages and disadvantages in the use of any specific method. The owner needs to carefully assess its particular project requirements, goals, and potential challenges and find the delivery method that offers the best opportunity for success. Many factors will affect the selection, including:

- The owner’s experience, qualifications and capability
- The magnitude, form, function, and complexity of the project.
- Time Constraints:
 - Sequencing of the project
 - Establishing the project timeline
 - Fast-tracking utilizing multiple contractors or contracts to condense the project timeline
- Cost /Budget/ Other Financial Challenges

Overall, however, efficiencies are increased when distribution of risk can be effected cooperatively and without unduly burdening a single project group. Time and again construction industry analysts have bemoaned the lack of cooperation, and the resulting lack of efficiency, endemic in the construction industry. Yet the uncertainties inherent in most any construction project understandably lead each group to engage in self-protective conduct even at the expense of the overall project good. Expanded use of computerized scheduling and building information modeling (BIM) will help address risk. But there is no substitute for a delivery system that fosters cooperative behavior and incentivizes candor and innovation. Elements of each project delivery system discussed above contribute to that, and recent indicators suggest that the industry is ripe for a shift toward greater efficiency through cooperation and innovation.