

Part 1: What Is Bridging?

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This DSV Special Newsletter series focuses on the legal issues and marketing trends raised by the use of the bridging method in conjunction with the design-build project delivery system. This newsletter is being furnished to you in three parts. In Part I, we will answer the question – what is bridging? Part II of this Newsletter Series will discuss the liability considerations arising out the use of the bridging method. Finally, Part III will speak to the hot topics developing from the use of the bridging method in the design-build project delivery system.

Design-Build Delivery Review

The most important decision in the early stages of planning a construction project is the determination of the delivery method for a construction project. In today's construction environment there are many different delivery methods for a construction project and the type of delivery method an Owner may wish to utilize depends on the nature and particular circumstances of each project. One of the options available to an Owner is the design-build project delivery method, which increasingly has become more popular during the past decade. In fact, according to the Design-Build Institute of America ("DBIA"), as of 2005, approximately 40% of all nonresidential construction projects in both the public and private sector use this project delivery method as opposed to the fewer than 10% two decades ago.ⁱ In fact, DBIA predicts design-build will overtake design-bid-build as the preferred project delivery method for nonresidential construction projects by 2015.ⁱⁱ The popularity of this process is due in large part to the fact the design-build method is estimated to save 6% on construction costs and delivers the project 33% faster than the traditional design-bid-build process.ⁱⁱⁱ

In this contracting method the Owner contracts with one entity to design and construct the project. The Owner has one entity to look to for responsibility for the successful completion of the entire project. The Design-Builder agrees to take all of the risk for design and construction of the project. Often the Design-Builder is a traditional general contractor who usually contracts with an Architect or Engineer to perform the design related services for the project. However, the Design-Build Team may also be a project-specific joint venture between an architecture firm

and a contracting company, a single company with both designers and builders on staff, or an individual developer or architect who subcontracts the other necessary expertise and skills for a project.

The Owner initially selects the Design-Build team and sets the project parameters such as performance criteria, time constraints and budgets. Typically, the Owner will request proposals from various Design-Build teams, and will provide to them basic performance information communicating the desired product. The Design-Builder will perform some preliminary design and cost estimating for the proposal. The proposal is submitted to the Owner with some design drawings, performance criteria, and a lump sum cost proposal. The Owner then chooses to award the contract to the entity they deem best.

What is "Bridging"?

In utilizing design-build the Owner gives up some direct control over the design process in exchange for a collaborative role. The Design-Builder either contracts with a designer or has a professional architect or engineer on staff to perform the design work. Regardless, the designer answers to the Design-Builder and contractually acts in its interest. This approach can lead to a concern the designer may not necessarily act in the interest of the Owner. This arrangement usually imparts the potential for some adversarial aspect in the Design-Builder and Owner relationship. If the Owner desires a certain aspect of the project be designed or constructed in a certain way, the Design-Builder may refuse or request additional compensation,

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ⁱ Nancy B. Solomon, *The Hopes and Fears of Design Build*, Architectural Record, Nov. 2005.

ⁱⁱ Joanna Masterson, *Innovation Action*, Construction Executive, at p. 26 (Nov. 2007).

ⁱⁱⁱ Hubble Smith, *Design-Build Lauded as Better Approach*, available at <http://www.builderonline.com> (March 31, 2007).

assuming the matter was not addressed in the contract. As a result, the use of bridging, as discussed below, has developed as a way for the Owner to include specific or detailed requirements in a Request For Proposal (“RFP”). Project criteria can range in types from performance to prescriptive. True performance requirements define functionality and expectations without restrictions on the solution. Prescriptive requirements call out products, model numbers, or are detailed in plans and specifications, thereby delineating and necessarily limiting the solution options. The Owner exerts more design control the more prescriptive the RFP criteria become. In doing so, the Owner concomitantly assumes more of the design risk. As a result, the bridging documents must be carefully prepared to balance these design elements and the risk the Owner desires.

One of the Design-Builder’s goals is to provide the Owner with construction that meets the performance requirements of the contract for as little cost as possible. Because of the potential relationship difficulties described above, it is important to have a detailed set of performance criteria defining the Owner’s perspective included in both the RFP and the contract with the Design-Builder, and to contract with a Design-Builder who is reputable and trustworthy.

This same dynamic is at play with the Design-Builder and its design-build subcontractors, such as the MEP trades and the structural steel and fireproofing trades. For those subcontracts, the Design-Builder requires certain portions of the design to be developed by those trades in their specialty. The design professionals that they utilize will have the same loyalties and contractual commitments *vis-à-vis* the Design-Builder that the Design-Builder’s Architect will have towards the Owner. For this reason it is important for both the Owner’s qualification evaluation process of the Design-Builders under consideration and that of the Design-Builder in putting together its own team to include a thorough review of each member of the design-build team’s experience and capability.

In addition, the Design-Builder’s Architect contractually is just one among many subcontractors. This is a new role for the design professional, who is used to being in direct contract with the Owner. Moreover, to the extent that there are design components that the Design-Build team is providing but which are being designed by the specialty design-build subcontract trades such as those mentioned above, the Design-Builder’s Architect will not have these trades under its design umbrella, as may otherwise be the case with traditional design where the Architect would be contracting with engineering consultants.

Because on design-build projects the Design Professional is directly under contract with the Design-Builder; the Owner does not have an “independent” design professional acting as its agent. Additionally, the cost of preparing designs sufficient to submit cost proposals in a design-build competition may limit the field of interested design-build teams. One approach to address these issues, and to help ease the Owner into the design-build process, is for the Owner to retain an independent Architect or Engineer to prepare preliminary designs, and stay on board during the construction phase to review pay applications, review the work, and certify the completion date. This process is known as “bridging”.^{iv}

Bridging is a hybrid of traditional design-bid-build and design-build. The Owner hires a design consultant who will be in direct contractual privity with the Owner. The role of that consultant in bridging is to do more than just prepare performance criteria. An Owner selects an Architect or Engineer to develop a project design through design development (approximately 30% - 50% of the design work) and to prepare scope of work documents which form the basis for competitive selection of the project delivery team. This design consultant is referred to as the design criteria consultant (“DCC”). The DCC specifies the projects’ functional and aesthetic requirements but leaves the details of construction technology up to the Contractor. Construction technology is specified with performance specifications. The project delivery team then has single-point responsibility for final design in constructing the project.^v While the level of design done by a DCC varies, in the best uses of bridging, there is a great amount of design left to the discretion of the Design-Builder who can be creative in developing the design.

The Bridging Method: Six Steps to Bridging^{vi}

- 1. Schematic Design.** The Owner engages a DCC to carry out the schematic design after the program of requirements and budget are set and the site is identified. Consultation between the DCC and engineers will occur. However, few engineering drawings typically will be made a part of the DCC’s drawings at this stage of the design process.
- 2. Design Development + RFP.** The DCC carries out the preparation of the bridging contract documents which form the basis for the agreement between the Owner and Design-Builder. This requires an effort by the DCC at least as extensive as an architect’s traditional design development services, however, the resulting docu-

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^{iv} The bridging concept was conceived by George Heery, FAIA, RIBA, a principal of the Brookwood Group in Atlanta, Georgia. The Brookwood Group has carried out several hundred bridging method projects over the last dozen years, and out of those projects, there have been fewer than ten contractor initiated changed orders and no successful claims against the owner. Moreover, there have been no costs to owners for correction of post-construction problems that were the result of design or construction faults.

^v AIA/AGC *Recommended Guidelines for Procurement of Design-Build Projects in the Public Sector*, at p. 5 (Jan. 1995).

^{vi} As outlined by George Heery at the February 2002 AIA design-build conference. G. William Quatman, *Design-Build for the Design-Professional* §6.06 (2004).



ments are very different as there will be much more architectural design completed. The DCC and its consulting engineers will prepare a combination of performance and design specifications. The DCC's drawings and specifications together with other legal documents make up the bridging contract documents, which also serve as the Request for Proposal. The guiding criteria is that everything should be fully designed and/or specified by the DCC and incorporated into the DCC's design documents in order to protect the Owner, the design, and the quality of the construction. On the flip side, nothing should be fully designed and/or specified that can be adequately covered by code and/or performance specifications (i.e. foundation and structural system, expansion joints, etc.).

- 3. Bid/Negotiation Phase.** Firm bids are received from the Design-Builder or a firm price is negotiated with a selected Design-Builder. The Design-Builder will use the services of an approved, separate design professional as a Subcontractor or the Design-Builder may be a design-build company. Once satisfactory prices are obtained, the notice to proceed is given for the Design-Builder's design professional to prepare final detailed Construction Documents.

Note: From the Design-Builder's perspective, an alternative to this process is to have the Design-Builder give an early estimate of the cost but reserve establishing the final cost, or GMP, until after the design is more fully developed. Then, the contract price is locked in through a change order, to be either a lump sum or a Guaranteed Maximum Price ("GMP") is established, with sufficient scope detail so that all parties have a full understanding of what is being built and included in the GMP.

- 4. Construction Documents.** Construction Documents are prepared by the Design-Builder's design professional with the DCC monitoring their preparation. These are the traditional type of documents identified as construction documents. The DCC reviews these documents and reports to the Owner who deals with any issues arising out of this review. However, the DCC does not approve these documents. The Construction Documents prepared by the Design-Builder's design professional will supplement but not replace the Contract Documents. If a conflict is later discovered the Contract Documents shall prevail over the Construction Documents.

Note: The AIA's standard A141 Agreement between Owner and Design-Builder (2004 ed.) has replaced the customary term "Contract Documents" with the phrase "Design-Build Documents" which consist of the contracts, exhibits, supplementary conditions, the design-builder's proposal, and other listed documents. The phrase "Contract Documents" remains in the AIA A142

Agreement between Design-Builder and Contractor (2004 ed.).

Note: The scope of the DCC's services during this phase of the Project may create a situation of potential contractual liability for the DCC, and therefore the Owner vis-à-vis the Design-Builder, akin to the liability exposure to the Architect from the shop drawing submittal process. The issue arises as to whether this liability exposure can be adequately disclaimed. It certainly requires careful contract drafting of terms to narrow, if not eliminate outright, this risk.

- 5. Second Step Award.** One option to consider from the Owner's perspective is to provide the Owner with the right to terminate the contract for convenience at the conclusion of the Construction Documents Phase by paying a previously stipulated sum for the Construction Documents (with the Owner then owning the documents). This is an important protective provision as it helps retain the Owner's leverage through this point. It also requires compliance with contract requirements by the Design-Builder and the Design-Builder's design professional.

Note: The AIA A141 Agreement provides that the Owner must proceed with the project and with the Design-Builder unless the Owner elects to terminate the contract for convenience. If such a termination precedes the start of construction, the Owner pays for design services performed, costs due to termination and overhead and profit on design services not completed. If termination occurs after construction starts, the Owner must pay for work performed, termination costs and overhead and profit on work not performed (lost profits). If the Owner makes these payments, then the Owner is permitted to use the design and documents to complete the project with another Design-Builder.

From the Design-Builder's perspective, an agreement that is terminated for convenience by the Owner before construction commences is viewed with disfavor. The Design-Builder has lost the benefit of its bargain in the form of lost anticipated profit on the bulk of the contractual work. It wants to recover something to offset the lost anticipated profit when a termination for convenience occurs. Contractually, the recovery of lost anticipated profit on unperformed work can be provided. However, this may be too steep of a price for an Owner to pay. An alternative is to agree on a lump sum fee or dollar amount for the lost anticipated profit that is less than the full anticipated profit but is of substantial enough amount to give the Design-Builder some recovery for its lost opportunity. This payment prospect also has the benefit of making the Owner think through

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any decision to exercise an early termination for convenience option.

6. Construction Phase. The Owner administers the design-build contract with the DCC or other independent inspectors or testing firms observing the work in progress and reporting to the Owner. The Design-Builder's design professional checks shop drawings and files them regularly with the Owner. Progress payments to the Contractor and retained amounts are the results of the DCC's reports to the Owner.

Note: This role is not dissimilar to that of the Architect during the construction phase of any project, except that it will be more limited because of the Design-Builder's Architect being there also. This role can be and should be carefully defined and spelled out contractually in the Contract Documents.

“Mini-Bridging” or “Design-Assist” (Within the Design-Build Team)

Key design-build subcontractors such as the MEP, structural steel and fireproofing trades, typically are required to design their own systems or components. When a trade subcontractor is hired to design-build its portion of the work for a construction project, it is often not known by the Design-Builder and Owner who will do the actual design. Will the trade contractor's portion of the work be done in-house or subcontracted out? What are the qualifications and experience of that subcontractor's designer? Are they licensed or insured?

As an alternative to having the subcontractor take on that role alone, some design firms have been utilizing “mini-bridging” or “design-assist” which is a process where the design-build lead design firm hires engineering consultants to prepare design criteria and performance specifications. These designs are given to trade subcontractors who act as design-build subcontractors for their respective portions of the project.

The benefit to this approach is that the architect can select trusted engineering consultants to prepare design criteria that the architect knows will meet the project needs. This provides comfort to an architect working with design-build trade subcontractors for the first time or those in whom the prime design-builder does not have complete confidence due to the nature of the project.

On the other hand, sophisticated design-build subcontractors have specialized systems and products and employ in house engineering expertise that often is equal to or superior to the knowledge that the Architect may possess. The argument can be made that these subcontractors' engineers, or select outsourced engineering firms, are best equipped to design the details of the systems and components in question. This frequently is the practice with the shop drawing process. By requiring stamped shop drawings prepared by a professional engineer, the

Architect of Record can and does rely upon the particular trade's expertise. It also has an advantage to the Design-Builder by shifting more of the design risk down to those trades best equipped to address it and prevent design problems in the first place.

The trade subcontractors must prepare designs that meet the performance criteria. Architect-led design build teams often require performance bonds from these trade subcontractors. Requiring professional liability insurance from these subcontractors is recommended since the surety bond may only guarantee that the work will be completed if the subcontractor defaults, but it will not pay damages due to design errors or omissions by the subcontractor.

Advantage and Disadvantages to Bridging

In determining whether bridging makes sense to utilize on a particular project, there are both advantages and disadvantages to consider. Below are some of the more notable issues:

Advantages

1. Because the project's program and design-build selection are important to success, Owners may need help transitioning to design-build since they have more responsibility for defining and procuring than in traditional construction where a design professional firm traditionally helps with programming and Contractor selection. This poses opportunities for a new type of Owner consultant, such as program managers or new roles for traditional design or construction management firms.
2. Modest stipends, if any, can be awarded to the unsuccessful design-build teams but it does not cover the entire cost of the actual design competition. Only larger firms can afford to regularly write off uncompensated design efforts. With bridging, the design-build teams do not have to incur a costly design fee just to compete and can use the preliminary design prepared by the bridging firm. This allows for more qualified firms to participate.
3. Owners familiar with the design-bid-build process are accustomed to having a design professional with whom to discuss the project, to advise them and to oversee the Contractor. Design-build without a DCC requires the Owner to place a lot of trust with the design-build team. Owners who are not willing to do so may use bridging as a transition into design-build.
4. An Owner choosing to use a DCC, may do so for whatever purposes the Owner desires. It is creating a direct contractual privity pathway with a design professional that otherwise will be absent in the Design-Build relationship, where the Design-Builder's design profes-

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sional will be in privity with it, not the Owner.

5. The Design-Builder may wait until receipt of the Owner's criteria package before choosing the design team. For example, if the Owner wants a curtain wall building, the Design-Builder may select the Architect based on prior experience with such systems or components. The same may be true of other consultants, such as structural, mechanical or electrical. Thus, the Design-Builder's negotiation with the design team may be more realistic and efficient as the Design-Builder will know the level of development of the project criteria actually provided by the Owner.
6. With the use of bridging, a more enforceable fixed price or cost plus fee with a GMP contract can be obtained sooner and at less pre-construction cost as compared with any other method.
7. There may be net overall construction cost savings for a fully equal product over the Design-Builder furnished design because the DCC has a greater impact and role and there is less guesswork in trying to meet the Owner's expectations or criteria that are not as clearly spelled out otherwise. Likewise, to the extent that more of the design and construction details and criteria are set out by the DCC, it makes sense that tighter bidding and pricing will be achieved.
8. There may be significant reduction in exposure to claims against the Owner in terms of Contractor-initiated change orders.
9. The presence of a DCC throughout the design-build process should aid the Owner (and the Design-Builder) in addressing proposed value engineering concepts, thereby improving final project delivery costs.

Disadvantages

1. Bridging potentially limits the design-build team from significant creativity to the extent that basic solutions and concepts are determined before the design-build team begins.
2. Work performed in the DCC performance development phase determines many of the design and functional aspects of the project for which the design-build team has to take responsibility (and liability), without any real input, leading to greater potential for disputes.
3. True design-build permits fast-track construction with the ability to procure long lead time items and begin field operations well before a project is at the 30% plus point of design.
4. By utilizing the DCC to develop a more detailed set of bridging documents initially, the Owner will retain more design liability risk notwithstanding the use of the Design-Build delivery system.

Conclusion

The bridging method has its opponents due to its potential to limit the creativity of the design-build team. However, bridging does help ease the traditional Owner into the design-build project delivery system by providing an "independent" DCC and a comfortable level of scope definition. Such a method can lead the Owner into full utilization of the design-build project delivery system as it gains experience working with the dynamics of the design-build process.

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