

Specifying for Design-Build Projects

By Ronald L. Geren, AIA, CSI, CCS, CCCA, SCIP

Many articles have been written about the design-build delivery method and the ways in which design requirements are conveyed from the owner to the design-build entity (DBE). Typically, the contract documents for design-build projects include a project description in the form of performance-based requirements. Performance requirements describe the results desired and the means that will be used to verify compliance. Thus, an owner needs to be very clear about what is required of the DBE, and those requirements need to be incorporated into the documents that will become the contract between the owner and the design-builder.

As mentioned, many sources provide guidance about the preparation of owner/design-builder contract documents, but very little attention has been given to the preparation of specifications within the DBE—between the design professional and the constructor¹, who essentially are on the same team.

Design-Build Entity Organization

Unlike the traditional tripartite relationship of owner, design professional, and contractor in a standard construction contract (See Figure 1), a design-build contract

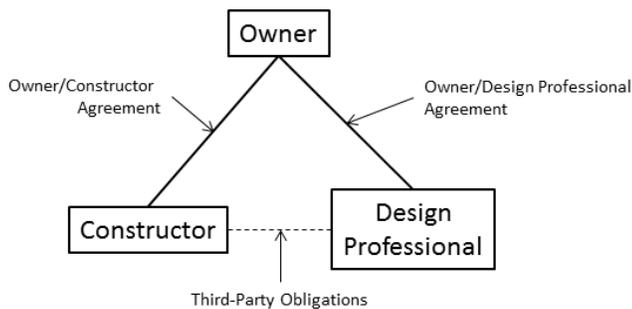


Figure 1 - Tripartite Relationship.

is a single contract between the owner and the design-builder, which may consist of a single company or mul-

iple companies that form the DBE. The organizational structure of a DBE can take many forms:

- Pure Design-Build: This is a single company specifically structured to provide design-build services, which include design and construction activities (See Figure 2).

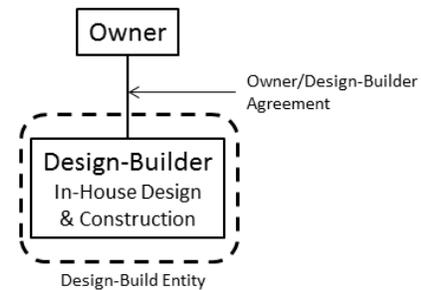


Figure 2 - Pure Design-Build.

- Constructor-Based: Also called *contractor-led*, this is when a constructor is the prime and hires a design professional to provide the design services (See Figure 3).

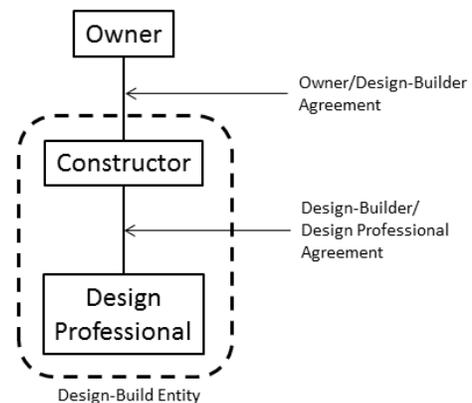


Figure 3 - Constructor-Based.

- Designer-Based: Also called *designer-led*, this is when a design professional is the prime and hires a constructor to provide construction services (See Figure 4).
- Developer-Based: Also called *developer-led*, this is when a developer is the prime in the owner-DBE contract and hires separately a design professional and a constructor to provide design and construction services, respectively (See Figure 5).

¹ This article uses “constructor” to represent construction firms that are either contractors or construction managers.

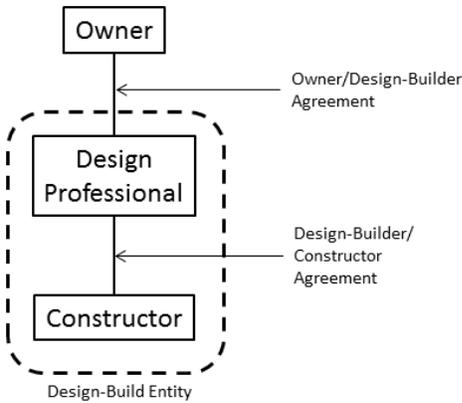


Figure 4 - Designer-Based.

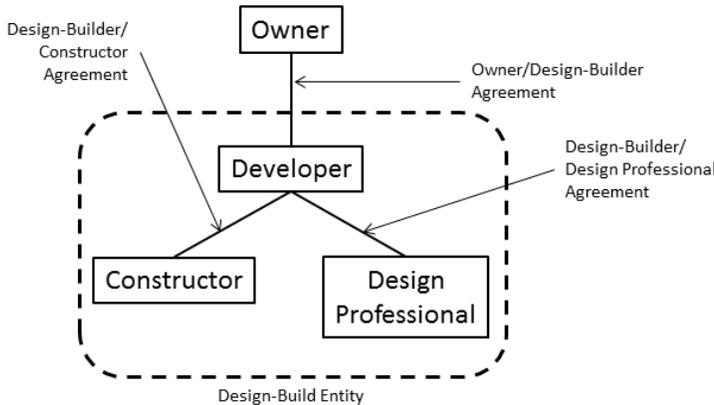


Figure 5 - Developer-Based.

- **Joint Venture (JV):** This is when a design professional and a constructor enter into a joint venture agreement to provide design-build services. The joint venture then enters into a design-build agreement with the owner (See Figure 6).

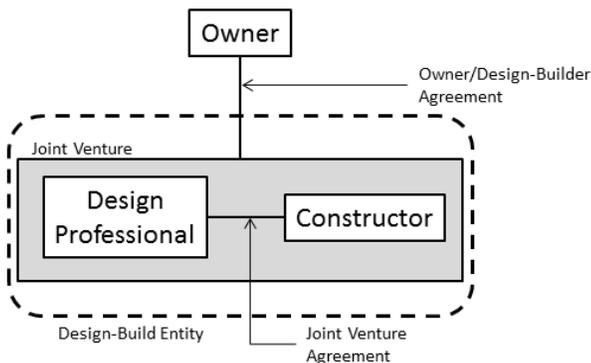


Figure 6 - Joint Venture (JV).

- **Single-Purpose Entity (SPE):** This is when a design professional and a constructor create a corporation or limited liability company (LLC) that enters into a design-build agreement with the owner (See Figure 7).

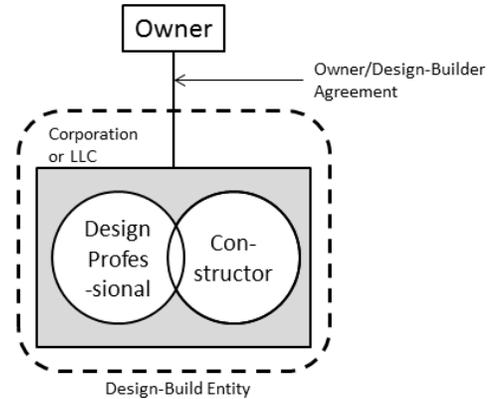


Figure 7 - Single-Purpose Entity (SPE).

Within each of these organizational structures, the design professional has a slightly different relationship to the other members of the design-build team. It is these slight differences that affect the specifying responsibility of the design professional.

The Design Professional's Specifying Responsibilities

In the design-build delivery method, the contract documents do not include drawings and specifications in the traditional sense. The drawings and specifications used for a design-build project are simply construction documents prepared by the DBE that provide essential information necessary to secure required approvals (*e.g.* building permits) and to construct the project. Additionally, the owner may require specifications be submitted as a means of verifying compliance with certain performance requirements in the contract documents.

Some design-build contracts are based on the *bridging method*, which is a hybrid between the design-bid-build and design-build delivery methods. The bridging method involves providing the DBE with a set of contract documents (commonly referred to as *bridging documents*) that include drawings and a project description completed to a level comparable to those prepared during the design development phase under a standard de-

sign contract. Some materials are specified and the remaining requirements are provided as performance requirements. This gives the owner more control over the design of the project, but also transfers some of the risk back to the owner.

Under the bridging method, the DBE then provides drawings and specifications based on the bridging documents, and the DBE's design professional becomes the architect- or engineer-of-record for those construction documents. Although the bridging documents may limit the DBE's flexibility in designing the project and selecting materials, the DBE-prepared documents are used in the same capacity as traditional design-build projects.

Even if the owner does not require specifications as a condition in the owner/design-builder agreement, the design professional should prepare specifications as a risk management tool. Specifications document the design professional's decisions in regard to material selection and quality. Any deviation from the specifications that is not approved by the design professional transfers the risk for that aspect of the work from the design professional to the entity that performed or authorized the deviation. Without specifications, the design professional would have no documentation to provide as evidence that a deviation was made.

The Role of Specifications

For a design professional working as part of a DBE, the role that specifications play will vary depending on the type of DBE organization in which they are used.

- **Pure, JV, and SPE:** Since the design professional and the constructor are essentially equal partners within these DBE organization types, the specifications are considered internal construction documents—not contract documents—used to convey the design intent, obtain required approvals, and to manage the design professional's risk. The constructor is not contractually bound to the requirements in the specifications.
- **Designer-Based:** This DBE organization type places the design professional in a superior position to the constructor. Thus, the specifications fulfill a role as contract documents similar to those used in the traditional tripartite relationship. Much of the content in Divisions 02 through 49 can remain as normally

prepared; however, since the owner is not a part of the agreement between the design professional and the constructor, Division 01 sections will need extensive modifications. For example, Section 01 26 00 "Contract Modification Procedures" will need to delete content addressing the owner's approval of change orders.

- **Constructor-Based:** Although the constructor is in a superior position, specifications used within this DBE organization type serve a purpose similar to that for Pure, JV, and SPE organization types—they convey design intent, obtain required approvals, and manage the design professional's risk.
- **Developer-Based:** This DBE organization type is virtually identical to the tripartite contractual arrangement, except that the developer assumes the owner's traditional role and responsibilities. In this arrangement, the construction documents prepared by the design professional will likely form the basis of contract documents between the developer and the constructor. Therefore, the specifications will assume their familiar role as part of the contract documents. However, references to "Owner" in the specifications (primarily in Division 01) will need to be replaced with either "Developer" or "Design-Builder." Whichever one is used should be used consistently throughout the specifications.

Editing Specifications

Beside the design-build organizational effects, the noncompetitive nature of a design-build project will also have an effect on the preparation of specifications. Unlike most bid projects that require nonproprietary or semi-proprietary specifications to increase competition, a design-build project is procured (*i.e.* cost of the work is established) prior to the final selection of products and materials. This allows the DBE to select the specific products and materials they want, provided they satisfy the owner's performance requirements in the project description.

With this in mind, the design professional should place foremost in their specifying priorities the protection of the public's health, safety, and welfare. Additionally, if aesthetics is a significant concern for the design professional, the physical characteristics should be

specified. When specifying products and materials, any of the four specifying methods may be used: descriptive, performance, reference standard, or proprietary.

Within each specification section, the content can be tailored to suit the various DBE organization types as follows:

- **PART 1 GENERAL:** With the exception of Designer-Based and Developer-Based organization types, the specification content in PART 1 could be minimized—it is unnecessary to dictate requirements to your partners or to those who hired you. Since the design professional is not obligated to look out for the owner's interests, only those requirements that affect the design professional's responsibility for the health, safety, and welfare of the owner and the public should remain. For the Designer-Based and Developer-Based types, requirements may be more specific, since the design professional will be in a position of ensuring constructor performance.
- **PART 2 PRODUCTS:** For all DBE organization types, PART 2 would be edited in much the same way that specifications are edited for other project delivery methods, such as Design-Bid-Build. Designer-Based and Developer-Based organization types would include detailed requirements for tighter control of product and material selection; whereas the other organization types could be less restrictive, allowing the design-builder some flexibility in selecting materials or options.
- **PART 3 EXECUTION:** As with PART 1, PART 3 sections could include minimal content for all DBE organization types except for Designer-Based and Developer-Based types. The design professional will likely want more detail in the latter two types to provide greater assurance of a quality installation.

For all DBE organization types, if the specifications become a contract document between the constructor and subcontractors, then detailed PART 1 and PART 3 requirements may be desired. If this will be a fundamental purpose of the specifications, then Division 01 (e.g. Section 01 42 00 "References") should ensure that terms such as "Contractor" are defined to mean the subcontractor that is assigned to perform the work within the section.

Conclusion

Although the previous points provide a good foundation for preparing specifications for different types of DBE organization types, a design firm should analyze its specific role in the design-build arrangement (*i.e.* review its agreement). Once the design firm understands its role and responsibilities within the DBE, it can make the necessary modifications to the specifications.

About the Author: Ronald L. Geren, AIA, CSI, CCS, CCCA, SCIP, is a Certified Construction Specifier and a Certified Construction Contract Administrator, and is the principal of RLGA Technical Services located in Scottsdale, Arizona, which provides specifications and code consulting services to architects, engineers, owners, and product manufacturers. A 1984 graduate of the University of Arizona, Ron has over 28 years of experience with military, public, and private agencies.



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