Management Methods Manual

Design-Assist

AN INTRODUCTION TO THE LATEST EVOLUTION OF PROJECT DELIVERY

Traditional methods of design and construction established well-defined roles among the many participants in a construction project, and the law has applied those roles to resolve disputes and apportion liability among those participants. In a traditional, design-bid-build (DBB) framework, architects and engineers are responsible for creating a detailed and complete design for a building and all of its components. Contractors are responsible for constructing the project to meet that design. On a DBB project, impacts to construction or problems caused by design issues result in liability on the part of design professionals if the contractors built the project in strict-accordance with that design. Recent trends in the construction industry, however, have blurred those lines and created some ambiguity as to the contractor's role and its potential liability for problems with a building or one of its systems.

Design-Assist is an emerging method of project delivery. When utilized properly, it can increase efficiencies in the construction process by allowing for direct participation of specialized contractors in a project's design phase. Upfront participation in the design process allows contractors to provide input that maximizes the efficiencies of their systems, reduces costs, and potentially limits design errors or omissions that disrupt construction projects. Identifying concerns prior to the construction phase can reduce redesigns during construction, which can limit costly project delays and related impacts can be avoided.

While Design-Assist has admirable goals, contractors must be wary of what obligations they are agreeing to take on and how their role in the design can increase their risk of liability. There is no clear industry-wide, standard definition of Design-Assist[1]. The inherent ambiguity in the term Design-Assist creates difficulties for a contractor—or a court or arbitration

TIP

Use Design-Assist to increase efficiencies.

MCAA
Mechanical Contractors Association of America

panel reviewing that contractor's performance—to determine whether the contractor met its Design-Assist obligations.

Additionally, the advent of Design-Assist blurs the line between the roles of the design professionals and contractors. This ambiguity increases the potential liability for contractors in numerous aspects of a project, including the risks of being held responsible for:

- The cost of additional or changed scope of work (i.e., change order entitlement);
- Errors or omissions in the design;
- Failures in the performance of systems; and
- Practicing engineering or architecture without a license (and without proper insurance coverage)

Does, for example, a contractor's suggestion about ways to improve efficiencies in a system create liability for that contractor if that suggestion is adopted by the architects and engineers, but fails due to its inability to work with some other aspect of the project design unrelated to the contractor's work? Where does a contractor's liability for design end and the architect/engineer's begin? Without a clear industry standard or governing case law, the courts will focus on the specific contract terms themselves to answer these questions.

DEFINING DESIGN-ASSIST

IMPORTANT

Design -Assist allows contractors to work directly with design professionals.

On a Design-Assist project, specialty contractors collaborate directly with design professionals during the design phase to optimize the particular scope of design relevant to the contractor's work. This process goes beyond informal involvement of a contractor in design, such as discussions between an architect and contractor that may take place on a typical DBB project, but does not result in the full delegation of the responsibility to design a system to the contractor. The simplified figure below illustrates that Design-Assist fits in a gray area on the continuum of a contractor's design-obligations:

[1] See American Institute of Architects and American Institute of Steel Construction, Design Collaboration on Construction Projects at pg. 6 ("Over the last decade, the term Design Assist has become a buzz-word in the design and construction industry, yet there is no universally accepted definition of the term"); See also Bruner and O'Connor on Construction Law § 619 (July 2022 Update) ("Whereas a designer's services through the design process, procurement, and contract administration are relatively well-developed in the industry, such is not the case with design-assist services").

Generally, the contractor's role on a Design-Assist project is to provide insight and recommendations based on its expertise with a particular system so that the design professional can create a functional yet cost and time effective design without susceptibility to major design changes in the future. Design-Assist has become a popular option for project participants because specialty contractors possess useful expertise about the increasingly complex technologies that are integrated into a particular project, which the designer might not have.

IMPORTANT

Contractors provide insight and recommendations so the design professionals can design without major changes later on.

Ideally in a Design-Assist arrangement, the design professionals would not be bound to incorporate any recommendations made by contractors (i.e., the design professionals would maintain ultimate responsibility and professional liability for the design).[2] However, contract terms and developing industry standards may result in the assessment of some collateral liability to the contractor for the design recommendations provided. It is, therefore, critical to formalize the specific obligations and liabilities of the contractor and designer in connection with their collaboration efforts in each party's contract with the project owner.[3]

THE ROLE OF A DESIGN-ASSIST CONTRACTOR: A DEVELOPING INDUSTRY STANDARD

On a Design-Assist project, the contractor is required to consult with the design team to contribute to planning, scheduling, estimating, logistics, production, and project management. Specifically, a Design-Assist contractor's responsibilities may include:

- assisting with the development of the design from a conceptual design to a detailed final design for the systems at issue;
- scrutinizing design documents and identifying any errors, omissions, or inconsistencies observed in the design of the relevant systems;
- evaluating cost-effective alternative design solutions or ways to modify the design;
- suggesting improvements to design elements;
- suggesting modifications to the project specifications;
- preparing cost estimates and schedule requirement guide design; and
- validating the feasibility of proposed designs.

TIP

Contractors should work with the design team to go over all elements of a project.

[2]Contrast from a "delegated design" method where a specialty contractor is fully responsible for preparing the design for an identified component of the overall project design, within certain parameters or performance specifications provided by the design professionals.

[3]If a subcontractor is engaged to perform design-assist work, the obligations for the specialty subcontractor may be "flowed down" from the prime contract.

These duties are dictated by the specific contractual obligations, not a generally accepted industry standard. Any particular Design-Assist project may include requirements to perform some or all of these tasks. Some of these items, such as cost estimating, are tasks that a contractor can perform without taking on liability or ownership of the design, but others are tasks that a contractor should delegate to a licensed and insured design professional.

WHY IS A DESIGN-ASSIST PROJECT POTENTIALLY RISKIER THAN A DBB PROJECT?

In a traditional DBB project, the law is protective of contractors where the owner has supplied erroneous, incomplete, or ambiguous plans and specifications. That is because the design is made available to contractors for pricing after the design is complete (i.e., the contractor has no involvement with the design in a DBB project).

The concept originated from a well-known, 1918 U.S. Supreme Court case called United States v. Spearin. In Spearin, the Court held, "if the contractor is bound to build according to plans and specifications prepared by the owner, the contractor will not be responsible for the consequences of defects in the plans and specifications." United States v. Spearin, 248 U.S. 132, 136 (1918). The holding gave rise to what is commonly referred to as the Spearin Doctrine: the party providing plans and specifications for a contractor to follow has represented (i.e., provided an implied warranty) that the plans and specifications are adequate and sufficient to build the project.

In other words, if a faulty design causes a project (or portion of a project) to fail, a contractor who followed the plans and specifications should be absolved of liability for the failure. By extension, if a faulty set of plans and specifications gives rise to additional or changed scope, the contractor should be entitled to a change order to recoup the time and cost impact of the faulty design.

HOW DOES DESIGN ASSIST AFFECT THE SPEARIN DOCTRINE?

TIP

Keep in mind, when a contractor is involved in the design phase they may influence the final plans.

Design Assist complicates the Spearin Doctrine. If the contractor becomes involved during the project's design phase, the contractor may influence the project's final plans and specifications. In this case, the contractor would have the opportunity when negotiating its contract to consider the risk of incurring additional costs.

While few courts have addressed how liability should be apportioned for a faulty design, one case—Coghlin Electrical Contractors, Inc. v. Gilbane Build-

ing Company—provides a helpful framework for how courts may analyze the issues and allocate the risks. In Coghlin, a public owner hired an architect to design a psychiatric hospital. With a partially completed design, the owner hired a construction manager (CM) to provide preconstruction services and to build the facility.

The CM entered into contracts with various trade subcontractors, including an electrician (Coghlin), who filed the underlying lawsuit against the CM. Coghlin sought to recoup increased costs that allegedly arose from scheduling, coordination, management, and design errors. The CM, in turn, filed suit against the project owner, asserting that if Coghlin could prove its claims against the CM, then the project owner should be liable to the CM based on the Spearin Doctrine.

As noted above, the Spearin Doctrine—i.e., the owner's implied warranty that the project's plans and specifications are adequate and sufficient to build the project—applies naturally to DBB projects, but what happens when, as here, the contractor was involved in the design process?

From a design standpoint, the CM in Coghlin was required in its contract with the owner to:

- Carefully study and compare all design-related documents;
- Report to the design professional any questions, errors, inconsistencies, or omissions;
- Review the designs on a continuous basis with a group of architects or engineers to discover inconsistencies, errors, and omissions; and
- Review the design documents for clarity, consistency, constructability, maintainability/operability and coordination among the trades.

While the Coghlin Court considered that the CM had undertaken significant design-related obligations, it also accounted for other important contract language that gave the owner and its design professional the ultimate decision-making authority regarding project design:

- Recommendations and advice of [the CM] concerning design modifications and alternatives shall be subject to the review and approval of [Owner].
- [Designer] shall decide all questions which may arise as to the interpretation of the [designs] and as to the fulfillment of this Contract on the part of [the CM].

[4] The Coghlin case generally addresses preconstruction services that closely mirror design assist.

IMPORTANT

During a Design-Assist project, contractors have less protections than in a DBB where liability falls on the owner.

Taking all of these contract provisions into consideration, the Court decided that the more design responsibility a contractor takes on, the less protection the contractor will enjoy under the owner's implied warranty. The Court based its decision primarily on the following:

- A contractor who provides design assist services has an opportunity when negotiating its contract (that it otherwise would not have on a DBB project) to consider the risk of incurring additional costs.
- A contractor who provides pre-construction, design-assist services should be held to a higher standard because of that opportunity.
- The higher standard should be based on certain factors, including:
  - The contractor's level of participation in the design phase
  - The extent to which the underlying contract delegated design responsibility to the contractor

TAKEAWAYS FROM COGHLIN AND RISK MANAGEMENT RECOMMENDATIONS FOR CONTRACTORS

The key takeaways from Coghlin—from a contractor's perspective—are to make sure a design assist contract: (1) clearly delineates the contractor's role(s) in the design process; (2) clearly distinguishes the contractor's role(s) from the design professional's role(s); and (3) clarifies that the owner or its design professional maintain authority and control over the project's design. The Contract Forms discussed in the next section below can help contractors achieve these goals.

Contractors who provide design assist services should carefully review their insurance programs with their brokers and consider adding or increasing professional liability coverages to account for the risks of: (1) being held responsible for errors or omissions in a project design; and (2) inadvertently engaging in the practice of architecture or engineering.

Contractors should consider including a design assist memorandum as a contract document to help remove ambiguity that identifies:

- The design assist team
- Who is working for whom
- Who is responsible for what
- The workflow process (e.g., schedule for design development, methods of communication and documentation, and who leads the team)

Contractors may also consider using separate and distinct contracts for design-assist services and construction services. In other words, the specialty contractor who provides design assist services to a project may not necessarily perform the construction work. That specialty contractor may be invited

to bid once the design is complete, which will reduce the likelihood that a contractor is locked into a price before the design is sufficiently complete to price the project accurately.

CONTRACT FORMS ADDRESSING DESIGN-ASSIST OBLIGATIONS

Contracting parties can look to a variety of form contract documents to understand the scope of services that encompass Design-Assist. These contract forms include the ConsensusDocs 541 Addendum, American Institute of Architects (AIA) Document A133, and AIA Document C403. These contract forms can help to define the expectations of a contractor on a Design-Assist project. Because this role will vary depending on the project, Design-Assist contractors should carefully consider the resources required to perform each possible service before entering into the contract, and ensure that each specific obligation taken on is explicitly stated in contract. Doing so should eliminate surprises on a particular project and minimize a Design-Assist contractor's exposure to liability for failing to complete services that it considers outside of its scope.

TIP

Contract forms can help define the expectations of a contractor on a Design-Assist project.

Consensus Docs 541

The ConsensusDocs 541 Addendum is a contract document that requires performance of Design-Assist services. This contract form describes the Design-Assist services required on a given project, including:

- Program review and preliminary evaluation of Owner's program requirements;
- Review of design documents for errors and omissions, and code review;
- Constructability review of design documents;
- Review of drawings to resolve conflicts between trades;
- Value engineering; and
- Identifying portions of the project that should be design-build, giving the contractor full responsibility for the design.[5]

The ConsensusDocs 541 contract form attempts to delineate where liability for the design professional stops and where the contractor's liability begins. It states that the design professional is ultimately responsible for "integrating and coordinating" the designs prepared by other participants in the design, including the Design-Assist contractor and its consultants.[6] But the design professional—other than the assembly, integration, and coordination of delegated designs—is not responsible for any portions of the design that were performed by others.[7] Importantly, this agreement states that the contractor

[5]ConsensusDocs 541 Article 4.1-4.8.

[6]ConsensusDocs Article 4.8.2-4.8.3

[7]ConsensusDocs Article 4.8.4

is performing its Design-Assist obligations "in its capacity as a contractor" and not as a design professional (other than those portions of the work for which the design is explicitly delegated to contractor).

AIA A133

The AIA A133 is a standard form agreement between an Owner and Construction Manager as constructor. The form identifies core Design-Assist services that are generally rendered during the preconstruction phase. Services required during this phase that relate to project design include:

- advising on site use and improvements;
- selection of materials, building systems and equipment;
- providing recommendations on constructability;
- providing recommendations with respect to pre-fabrication;
- providing recommendations on the cost of alternative designs or materials; and
- assisting the establishment of building information modeling.[9]

The services required in this agreement are typical of a construction manager involved in preconstruction services, while a design is being developed. Design-Assist takes a similar scope of preconstruction services, and applies it to a specialized trade contractor who has responsibility for a portion of the project rather than a project as a whole. However, the contractor's direct involvement in design development required under a Design-Assist framework often goes far beyond typical preconstruction services.

AIA C403-2021

The potential scope of services under a Design-Assist contract, however, is not necessarily limited to typical "preconstruction" consulting; as demonstrated by a new AIA form, the C403-2021. The AIA C403 contract form is a standard form agreement between a "client" and "consultant" for Design-Assist services. The term "client" is intentionally broad, because it is intended to be used by multiple parties, including a contractor who has taken on responsibility for Design-Assist services. A contractor can use this form to engage a design professional "consultant" to perform the Design-Assist services required of it. Due to the lack of a precise definition of "Design-Assist" in the industry, the AIA C403 is more open-ended in its terms and allows for variation to define the types of services expected by the consultant.

Per the AIA C403, the consultant takes on obligations to prepare "deliverables," defined as information and design documents in support of the overall project design.[10] Additionally, the consultant takes on responsibility to:

[9]AIA A133 at §§ 3.1.3.2, 3.1.3.3, 3.1.5, 3.1.7, 3.1.8, and 3.1.12.

[10]AIA C403 at § 2.7.

- review the project design documents and information that relate to the relevant scope of work and provide notice of any errors, omissions, or inconsistencies between such documents and information and the proposed scope of work;
- review laws, codes, and regulations applicable to the portion of the project design at issue;
- review the changes to the design to determine if they impact the proposed scope of work and accommodate such changes; and providing recommendations with respect to pre-fabrication;
- recommend to appropriate investigations, surveys, tests, analyses, reports, and services of other consultants that should be obtained.[11]

These terms attempt to establish a limit on the Design-Assist responsibilities, focusing them on the effect of the design on the scope and specialty of the Design-Assist contractor, and disclaiming responsibility for ascertaining or correcting errors or omissions in the design documents as a whole.

However, Article 3 of the AIA C403, which is intended to establish with specificity the "Scope of Consultant's Services" and precisely what deliverables are required, is completely blank and must be filled in with the details of what the specific project requires. Article 3 further demonstrates that there is no industry-standard form for the scope of Design-Assist services, and they can move dramatically along the continuum between "informal involvement" and full "delegated design." Contracting parties are free to negotiate and include a wide range of Design-Assist services. Accordingly, the AIA C403 underscores the flexible role of a Design-Assist contractor and the importance of careful negotiation, understanding the specific services required of the Design-Assist contractor, and articulating them clearly in the contract documents.

SUMMARY AND RECOMMENDATIONS TO MANAGE THE RISK OF DESIGN-ASSIST AGREEMENTS

Although Design-Assist services (including those required of a Construction Manager performing preconstruction activities) may be performed before pricing of a scope of work, there are circumstances where Design-Assist services are required to be performed after submission of a lump-sum price based on a developing design. In that instance, contractors should take extra caution to ensure that the contract allows the contractor to modify its price based on the developing design. Otherwise, contractors might become stuck with a fixed price based on an incomplete design and no recourse to recoup the cost of design-driven extra work.

[11] AIA C403 at § 2.5 to § 2.9.

A contractor should approach Design-Assist projects in four steps:

1. Identify the specific Design-Assist services that are to be rendered under the Design-Assist agreement, and when those services are to be performed (pre-construction or through project completion);
2. Confirm that it possesses or has access to all of the resources necessary to complete the Design-Assist work
3. Calculate the cost to perform those Design-Assist services in relation to the overall project; and
4. Ensure that the Design-Assist agreement expressly sets forth each specific aspect of the parties' agreement. By completing these four steps, contractors should be able to avoid unnecessary risk of additional costs and disputes during the performance of their Design-Assist obligations.

Design Assist can present good opportunities for contractors to procure more work by becoming more involved with owners and general contractors/ construction managers at earlier stages in a project's life cycle. These opportunities come with new risks as the line separating design professionals from contractors becomes more blurry. With clear and careful negotiating and drafting at the contract formation stage and regular communication with an experienced insurance broker, contractors can manage these risks while expanding their businesses with more design assist work.