

Opening Communication Lines: Evolving Project Delivery Methods to Promote Collaboration

By Justin L. Weisberg and Raymond M. Krauze



Justin L. Weisberg



Raymond M. Krauze

While construction projects generally followed a standard form of delivery for decades involving a traditional process that separated design from construction, over the past two decades alternative delivery projects that cross the line between design and construction have become more popular.

The Traditional Form of Project Delivery

Under the traditional design bid build (DBB) construction procurement process, an owner hired a designer to provide a complete set of drawings and specifications that could be competitively bid upon by contractors to provide the lowest price. The contractors' bids were often based solely upon the bidding documents received from the owner and the contractors' observation of the site conditions. The competitive environment resulted in a design that was developed without any input from the contractor ultimately responsible for constructing the project. The contractors' bids were based upon the bidders' interpretation of hundreds of pages of specifications and drawings without any meaningful collaboration with the designer.

The DBB process put the contractor and the designer in adverse positions.¹ Problems encountered during construction including, for example, delays, impacts, differing site conditions, discrepancies in the design or construction coordination issues would normally result in additional costs incurred by one or more parties involved in the design and construction of the project.

Justin L. Weisberg is a partner at Schuyler, Roche & Crisham, P.C. in Chicago. Raymond M. Krauze is counsel at K&L Gates in Chicago.

Under the DBB process, the assessment of additional cost is based solely upon the determination of fault, placing the parties in a path towards disputes from the inception of the project.

Consequently, the prevalent claims process associated with DBB projects introduced a significant amount of uncertainty into the construction process which was already an industry that by its very nature had a significant amount of inherent risk. Non-governmental owners began to see the advantage of negotiated agreements instead of contracts awarded to the lowest qualified bidder as a path to curb unanticipated claims and litigation. Negotiated construction contracts were generally based upon a different compensation model. Instead of a fixed price provided by lowest bidder, the contractor would initially be paid its actual costs plus an agreed upon fee. In many cases, after a contractor had the opportunity to review the contract documents, it would develop a value engineering report and propose a guaranteed maximum price (GMP), which included one or more contingencies for risks that could not be easily quantified (known but unquantifiable risks). Negotiated contracts were generally known as open book contracts which provided the Owner with open access to the financial records to verify the contractor's costs.

Design Build Contracts

Design build contracts (DB) combined the responsibilities of design and construction with one contracting party, theoretically mitigating problems due the adverse relationship between the architect/engineer and the contractor. In many cases a contractor would enter into a design build agreement with an owner and retain a lead designer as a subcontractor, although there were design build firms with both design and construction capabilities. In many cases a design builder during the design phase is compensated by the payment of an hourly rate for design related services with construction to be compensated based upon a cost plus contract with the negotiation of a final schedule and GMP when the design hits a certain stage, for example, 30 percent completion.

While a design build contract is understood to incorporate a greater of collaboration from the parties to the design build agreement, it is also understood that the claim and notice requirements for state construction projects were still applicable.²

Construction Management Contracts

More recently, the use of construction managers—whether at risk (CMAR) or in the role of advisor (CM advisor)—has increased on both public projects and private projects. The construction expertise provided by construction managers during the design phase of the project, including cost estimation, constructability reviews and scheduling, provides the owner with critical information to assist in minimizing claims and approximating cost and schedule.

A CMAR is different than a contractor in that a CMAR provides consulting services during the design phase of the project and is hired on a negotiated cost plus fee with a guaranteed maximum price basis rather than in a closed lowest price bid. For example, a CMAR has been defined by one state as: “A project delivery method in which the purchasing officer enters into a single contract with an offeror that assumes the risk for construction at a contracted guaranteed maximum price as a general contractor, and provides consultation and collaboration regarding the construction during and after design of a capital project.”³

Unlike a CMAR, a CM advisor does not directly contract with subcontractors. Instead the first tier trade contractors either contract directly with the owner or a general contractor that has been hired by the owner. Consequently, the CM advisor has no direct contract with the trade contractors and therefore has no contractual responsibility directly to the trade contractors. The CM advisor may have authority under various trade contracts or a general contract, although the authority is derived from the CM advisor’s agency relationship with the owner limiting the direct liability the CM advisor would have with trade contractors or a general contractor if one is retained.

The CM advisor has greater protection from third party claims in tort than a CMAR or general contractor. A party that entrusts work to an independent contractor generally is not liable for that independent contractor’s acts of negligence.⁴ An exception to the general independent contractor rule is known as “retained control exception” and it allows a general contractor or construction manager who has entrusted work to an independent contractor to be liable for acts of negligence when such a contractor retains sufficient control over any part of the work that causes an injury.⁵

The “retained control exception” allows for both vicarious and direct liability, depending on the degree of control the CM advisor exercised over the subcontractors. For a CM advisor to be deemed vicariously liable there must be evidence to show the CM advisor had a right of supervision over the subcontractor such that the subcontractor was not entirely free to do the work in the subcontractor’s own way. For a CM advisor to be deemed directly liable there must be evidence to show the CM advisor knew or should have known that a subcontractor carelessly performed its work in such a way as to create

a dangerous condition, and failed to exercise reasonable care either to remedy the condition itself or by the exercise of its control over that subcontractor.”⁶

In *Rivers v. Cent. Ill. Arena Mgmt., Inc.*, an arena professional football player was injured when he went through a gate that was built into the dasher board system that surrounded the indoor football field.⁷ Johnston, the CM advisor, had a contract with the Owner of the stadium, which had the following relevant contractual provisions:

2.1.6 SUBCONTRACTORS AND SUPPLIES The Construction Manager shall seek to develop subcontractor interest in the Project and shall furnish to the Owner and Architect for their information a list of possible subcontractors . . .

2.3.2 ADMINISTRATION The Construction Manager shall obtain bids from sub-contractors and from suppliers of materials or equipment fabricated to special design for the work and after analyzing such bids shall deliver such bids to the Owner and Architect. The Owner shall then determine, with the advice of the Construction Manager, and subject to the reasonable objection of the Architect, which bids will be accepted. The Owner will enter into contracts with the subcontractors with contracts acceptable to the Construction Manager.

2.3.2.8 The Owner shall designate Construction Manager as owner’s representative on all subcontracts for construction work to be performed by third parties (subcontractors).

Johnston sought summary judgment based upon its argument that it was not responsible for designing or constructing the dasher board system. The *Rivers* court found that the plaintiff did not present enough evidence on the issue of retained control to survive Johnston’s motion for summary judgment. The court recognized that in Illinois, the general rule is that a party that entrusts work to an independent contractor is not liable for that independent contractor’s acts of negligence, and generally, a construction manager/general contractor owes no duty to third parties harmed by the negligence of independent subcontractors. However, the court also recognized the “retained control exception,” which imposes liability upon a general contractor or construction manager who has entrusted work to an independent contractor for acts of negligence when such a contractor retains sufficient control over any part of the work that causes an injury.⁸

As stated by the *Rivers* court, the Restatement⁹ has been adopted by Illinois courts, and provides for both vicarious and direct liability, depending on the degree of control the allegedly negligent defendant retained over the subcontractors. The court determined that for the retained control

exception to apply such that Johnston, the CM, would be deemed vicariously liable there must be evidence to show Johnston retained a right of supervision over the subcontractors, CIMCO and Sport Systems, such that they were not entirely free to do the work in their own way.

The court identified a two-part test under the Retained Control exception that applied regardless of whether the plaintiff sought to impose either direct or vicarious liability. First, the negligent party must have entrusted the work to an independent contractor, and second, the negligent party must have retained sufficient control over part of the work. For the retained control exception to apply such that Johnston would be deemed directly liable there must have been evidence to show Johnston knew or should have known that CIMCO and/or Sport Systems carelessly performed their work in such a way as to create a dangerous condition, and failed to exercise reasonable care either to remedy the condition itself or by the exercise of its control over CIMCO and Sport Systems to do so. “In order for the “retained control” exception to apply, it is not enough that the party against whom liability is sought merely to have retained “a general right to order the work stopped or resumed, to inspect its progress or to receive reports, to make suggestions or recommendations which need not necessarily be followed, or to prescribe alterations and deviations.”¹⁰

Integrated Form of Agreement (IFOA) is a multi-party form of contract, to include the owner, design team, and contractor, and potentially certain trade contractors.

In *Rivers*, the plaintiff demonstrated that in Johnston’s role as construction manager of the Coliseum, it received drawings of the dasher boards from Sport Systems, the party that fabricated and installed the dash board system. Plaintiff also produced a communication from CIMCO, the party responsible for operating and managing the stadium and which contracted with Sport Systems, in which CIMCO sought Johnston’s approval for what it perceived to be a deviation by Sports System in utilizing a fastening dasher board system instead of a welded system. Lastly, the plaintiff produced a communication from a Johnston employee to CIMCO directing them not to fabricate any dasher board materials until Sport Systems’ use of the fastening system over the welding system was resolved. The clear implication of this is that Sport Systems and CIMCO viewed Johnston as having a role in deciding the

propriety of the dasher board system’s design and installation. The court determined that none of the points raised by the plaintiff demonstrated that Johnston exercised a right to direct Sport Systems or CIMCO in their work. The court applied a test recognized under Illinois law of determining whether Johnston merely retained general oversight of work progress and safety or actually engaged in detailed supervision and/or control of subcontractors’ methods and means of performing work. The court found that the plaintiff presented no evidence that Johnston actually engaged in a detailed supervision or control of how Sport Systems or CIMCO performed their work.¹¹

The *Rivers* court determined the fact that Sport Systems provided drawings to Johnston and CIMCO sought Johnston’s approval did not establish Johnston was in the decision maker over how these entities performed their work. The court determined Sport Systems’ and CIMCO’s subjective views of Johnston’s role did not establish that Johnston had any control over how they performed the work they were hired to perform. With respect to Johnston’s direction to CIMCO to delay fabrication of the dasher board materials called for by Sport System’s design, the court noted that such action was entirely consistent with Johnston’s contractual obligation to analyze and deliver to the owner and architect for decision the bids of subcontractors and suppliers of materials or equipment fabricated to special design for the work. The court stated, “it is the sort of general supervisory oversight that expressly will not garner a general contractor liability under [the retained control exception, Restatement (Second of Torts) § 414.”¹²

Building Information Modeling and the Integrated Form of Agreement

In an effort to leverage “Lean Construction Practices” and the use of BIM, the use of Integrated Project Delivery (IPD) has been implemented. IPD is based upon on Integrated Form of Agreement (IFOA). An IFOA is a multi-party form of contract, to include the owner, design team, and contractor, and potentially certain trade contractors. The AIA and ConsensusDocs both publish standard form IFOA contracts. An IFOA contract provides for the expertise of the general contractor and selected trade contractors during the design phase of the project. The parties to the contract develop a target value for the project. For example, under the ConsensusDocs IFOA¹³, decisions are made by a Core Group that includes members from the architect, owner and contractor. As the design progresses, the parties continue to work toward a budget and schedule. An Expected Maximum Price (EMP) is developed through Target Value Design (TVD) and a risk pool account is established to hold the profits of the construction and design team risk pool members. If the construction costs exceed the EMP, the risk pool account is used to fund the amounts in which the construction costs exceed the EMP. Once the risk

pool is exhausted, the remaining construction costs are funded by the owner. Because an IFOA includes the architect and contractor in the same contract with the owner, there is privity between the architect and contractor which requires the parties to agree upon a mutual waiver of liability. To mitigate the right of the contractor and architect to sue each other directly, various form agreements have conditional waivers which waive liability unless the claim is covered by insurance. However, whether or not there is coverage for an insured that is not subject to liability in the first place creates a significant question regarding the enforceability of the current waiver used in some form documents.

Lean Construction Practices involve the use of concepts developed in manufacturing to improve the construction process. Some of these “Lean” concepts include the “Last Planner System,” “Pull Planning,” and others including continuous improvement and the elimination of waste. Some practices used by Lean savvy contractors include requiring materials to be delivered when they are needed rather than allowing large amounts of materials on site and maximizing the use of prefabrication and modular construction. On a Lean Project, a schedule is developed through Pull Planning sessions as the design is developed. Using methods such as Pull Planning, activities are not initiated until the specific time that the particular activity is scheduled. The incorporation of the construction expertise of the major trade contractors into the design and development process increases the expectation of a constructible design with a relatively accurate construction schedule. The participation of all parties from design through construction spread the responsibility of both design and construction between the ownership, design, and construction teams. The collaboration throughout the process is targeted to result in less uncertainty than a project based upon a typical schedule developed from milestone dates created by an owner with the advice of an A/E in a vacuum without input of the parties responsible for constructing the project.

While the IFOA is developed to minimize the possibility of disputes between the parties, the possibility of litigation can never be completely eliminated. For example, while IFOAs are relatively new forms, there has been litigation in California regarding whether an IFOA agreement required the owner to pay unearned overhead and profit in the event of termination for convenience.¹⁴

The alternative construction procurement methods including CM, DB, and IPD provided a process for the construction, design and ownership parties to collaborate before the design was completed and decisions were set in stone. The introduction of construction expertise into the design process provided for more efficient and cost-effective projects allowing for issues that traditionally could not be solved until the submittal process to be resolved during the design process.

Building Information Modeling

The implementation of building information modeling (BIM) provided for collaboration with computer generated models enhancing the design assist process and allowing for certain activities such as clash detection at an earlier stage in a project. A BIM model can be characterized as a 3D, 4D, or 5D model. A 3D model is a three-dimensional model of the proposed design. A 4D model generally adds the variable of scheduling and time to the model. A 5D Model can provide information regarding quantities and cost. In addition, models going forward in various xD variations can include a number of benefits, such as code review, environmental analysis or clash detection. The identification of little BIM versus big BIM has been used to denote the use of BIM technology without collaboration for the former and the use BIM technology with collaboration for the latter.

The “retained control exception” allows for both vicarious and direct liability, depending on the degree of control the CM advisor exercised over the subcontractors.

If the parties will be using BIM, it is important for all of the parties involved in the BIM process to have agreement regarding the terms and responsibilities relative to the use of BIM. As a first step to insure a mutual understanding between the parties regarding the BIM process, a plan should be developed identifying the purposes and expectations regarding the use of BIM for a given project. The plan should determine the BIM models that will be developed and the parties to be involved in the development of the BIM models. The parties should also agree upon the uses and limitations of the BIM models that are developed and the obligations of the various parties relative to the development, administration, operation, modification and maintenance of the BIM models. Additional provisions to be agreed upon include the party to be responsible for administrating the BIM process, key contact people from each of the parties, and the software to be used. Specifications relative to the use of the BIM models would include a determination of the model dimensions and the granularity of the model, the software to be utilized, the types of models to be developed including the design and construction models to be developed, and the key contributors to the various models. The 2D documents needed to supplement the model would be determined along with the specific uses

of the models. The parties would further agree upon standards of care, intellectual property rights and allocate liability relative to individuals that contribute to or use the BIM models. Currently, while the BIM models provide significant assistance in the design and construction of projects where they are utilized and even serve as contract documents in a number of circumstances, there is currently very limited opportunity to use BIM models instead of 2D documentation for the purposes of obtaining building permits.

Failure to clearly set the expectations of the BIM process can result in later disputes between the parties. For example, in one case a misunderstanding of the format and the ability to modify a BIM model provided under the parties' contract led to litigation concerning whether a party hired to perform laser scanning and BIM modeling had complied with the terms of its contract.¹⁵

Failure to clearly set the expectations of the building information modeling (BIM) process can result in later disputes between the parties.

The failure to include terms relating to the BIM model in the agreement—for example, allocating the liability between the parties for BIM related claims—can result in the loss of the right to recover for errors and omissions in a BIM model that can result in additional costs, or the loss of the ability to rely on the model to plan and budget work. In another example, it was determined that a party could not rely upon the work planned in the BIM model even though the mechanical contractor was required to perform extra work because other parties failed to accurately indicate the actual conditions of construction in the BIM model.¹⁶

In *N. Am. Mech., Inc.*, a mechanical contractor that contributed to the BIM process as part of its contract scope was unsuccessful at trial in pursuing its claim for additional compensation, (the “BIM Claim”), because the BIM model was not a contract document. The BIM Claim was based upon conflicts and space constraints caused by other trades that did not participate in the BIM process and mistakes by the architect, including the failure to use the correct wall thickness, the failure to indicate rolling doors and the failure to indicate existing conduit in the BIM model. These conflicts and omissions

resulted in additional mechanical work beyond the work indicated in the final BIM model. However, in denying the claim, the court noted that the plaintiff needed to establish that the work was in addition to the work included in its original bid, rather than in addition to the work shown on the BIM model.¹⁷

While alternative project delivery systems have resulted in time and cost savings, the evolution in building delivery methods have led to concerns regarding the allocation of risk among the parties. Historically, the party that created the design would bear responsibility for any design defects. But what happens when the design is created in a more collaborative manner? Legal commentators have warned that more collaboration and information-sharing between the designer and the contractor could and would blur the bright line between design and construction and alter traditional allocations of risk. Similarly, when BIM technology first began receiving widespread use, many legal commentators warned of new legal risks posed by the information sharing and collaboration essential to the process. The potential impact of alternative delivery methods and BIM on the implied warranty of design accuracy drew particular attention.

The *Spearin* Doctrine

A basic principle of construction law is that an owner who provides plans and specifications for a construction project impliedly warrants that those plans and specifications are free from defect and that a contractor that adheres to the project's design specifications cannot be held liable for defects arising from those specifications. This implied warranty of design accuracy is more commonly known as the *Spearin* Doctrine.

The *Spearin* Doctrine is named after the 1918 United States Supreme Court decision in *United States v. Spearin*.¹⁸ In *Spearin*, a contractor agreed to construct a dry dock at the Brooklyn Navy Yard under a contract with the United States. The government's detailed plans and specifications required the contractor to excavate the site and then relocate and reconstruct a six-foot brick sewer line that intersected the site. The contractor completed the relocation as specified. About a year later, after the sewer was relocated and reconstructed, heavy rains caused it to back up which, in turn, created internal water pressures that broke the line in several places and flooded the dry dock excavation. After an investigation, it was determined that the flooding was caused by an existing internal dam that had diverted water into a portion of the sewer that overflowed into the dry dock. The internal dam was an existing feature but was not shown on the plan and specifications the government gave to the contractor. The government insisted that the contractor was responsible for the damage, and demanded that the contractor clean up the site and reconstruct the damaged line at the contractor's own expense. The contractor claimed the government was responsible. Ultimately, the government canceled the

contractor's contract and had a replacement contractor complete the work. The contractor brought suit to recover the balance due under its contract with the government.

The United States Supreme Court found that by providing the plans and specifications which provided where the sewer should be relocated, the government warranted the accuracy of the specifications.¹⁹ Because the internal dam which caused the flooding was not shown on the plans provided to the contractor, the contractor was not responsible for the flooding. Therefore, the contractor was entitled to recover its contract costs notwithstanding boilerplate disclaimers that were in the parties' contract.²⁰

However, the *Spearin* Doctrine was applied in the context of a traditional design-bid-build (DBB) project delivery method for construction projects. In a traditional DBB construction project, the owner hires a design professional to provide a complete set of drawings and specifications for the project. Once the plans and specifications are complete, the owner puts them out for bid. Thereafter, the owner typically hires the contractor submitting the lowest bid to complete the project. But does the *Spearin* Doctrine apply outside of the traditional DBB context in more integrated project delivery methods where contractors assist with the project's design and have more involvement in the development of the project's design and specifications? Some have feared that more integrated project delivery methods would lead to the retrenchment of the *Spearin* Doctrine. Although, as of the time of this writing, there are no recorded cases that specifically discuss how the *Spearin* Doctrine might be applied in the IPD context or how BIM collaboration may affect the *Spearin* warranties, we have recently gotten some indication as to how courts might apply the doctrine to more collaborative project delivery methods.

In a case of first impression, the highest court in Massachusetts, the Massachusetts Supreme Judicial Court, in a much anticipated ruling, addressed the application of the *Spearin* Doctrine in a non-traditional and more integrated CMAR. In *Coughlin Electrical Contractors, Inc. v. Gilbane Building Co.*,²¹ the owner, the Massachusetts Division of Capital Asset Management and Maintenance (the "owner" or "MDCAMM"), hired an architect to prepare the designs for the construction of a new psychiatric hospital facility. Thereafter, the Owner hired Gilbane Building Company (Gilbane) as the CMAR for the project. Gilbane's preconstruction services included a review of the design documents prepared by the architect. However, Gilbane's contract with the Owner specifically provided that Gilbane did not assume responsibility for the design. In connection with the project, Gilbane entered into a contract with a subcontractor to perform the electrical work on the project.

During the project, the electrical subcontractor submitted design related change orders that were the result of various errors, omissions, and changes to the project's plans and specifications which resulted in increased

costs to the electrical subcontractor. When the electrical subcontractor was denied an equitable adjustment following completion of the project, the electrical subcontractor brought suit against Gilbane to recover its costs due to the design errors. Gilbane then brought a third-party complaint against MDCAMM seeking indemnity for the electrical contractor's claim. The trial court dismissed Gilbane's indemnity claim finding that an owner's implied warranty of design accuracy only applied to traditional design-bid-build projects, and Gilbane appealed and sought direct appellate review from the Massachusetts Supreme Judicial Court.

Gilbane is one of the first reported cases that address the applicability of the *Spearin* Doctrine to alternative project delivery systems such as construction manager at risk.

In reversing the trial court, the Massachusetts Supreme Judicial Court held that, although the role of the parties in a construction manager at risk project differed from those in a design-bid-build project, the differences were not so great that the owner's implied warranty of design should not apply at all absent an express disclaimer to the contrary.²² The Court found that while the CMAR may have consulted in the design of the project, the owner, through its designer, ultimately controlled the design of the project.²³ The Court did, however, find that the scope of the implied warranty in a construction manager at risk project will depend on whether the construction manager at risk "acted in good faith reliance on the design and acted reasonably in light of the [construction manager at risk's] own design responsibilities" thus limiting the application of the *Spearin* Doctrine in construction manager at risk projects.²⁴

While the *Gilbane* decision is fact-specific to Massachusetts public projects, there is little reason to believe that it would not be applicable to private projects. Moreover, it is one of the first reported cases that address the applicability of the *Spearin* Doctrine to alternative project delivery systems such as construction manager at risk. No doubt other states that allow for the construction manager at risk delivery system will look to the *Gilbane* decision for guidance in applying the *Spearin* Doctrine to alternative delivery methods.

It remains to be seen what the potential impact of more collaborative project delivery systems will have

on the *Spearin* Doctrine moving forward. Pundits have long warned that the collaboration and information-sharing characteristics of these new project delivery systems will render the *Spearin* Doctrine meaningless and inapplicable. Certainly, the line between owner and contractor liability for design defects is likely to become more muddled as an increasing number of projects use the more collaborative project delivery systems, but that is not to say that the *Spearin* Doctrine will cease to exist. The broad implication of the *Gilbane* decision is that contractors may still avail themselves of the protections of the *Spearin* Doctrine provided that the contractual responsibilities pertaining to the project design are carefully negotiated and narrowly written in the parties' contract so that control of the design remains firmly with the owner and that the contractor is not serving as the designer and assumes no liability for the design.

Today, more than half of the U.S. states allow for some form of alternative project delivery on public projects.

Public Construction Contracts

While design-bid-build remains a popular option for construction projects, alternative project delivery methods such as design-build, construction manager at risk, and integrated project delivery (IPD) as well as the use of technological advances such as Building Information Modeling (BIM) are gaining wider acceptance around the country. This is true in both the private and public sectors, although the adoption of alternative project delivery in the public sector has lagged behind the private sector. The lag in public sector use of alternative project delivery systems has primarily been the result of state laws and regulations that govern the procurement process for public construction projects. Historically, these laws and regulations were put in place to protect the public interest and make the procurement process more transparent. While many of these laws and regulations work well with traditional design-bid-build projects, they are inimical to the benefits of alternative project delivery systems which allow for a more collaborative process between the owner, designer, and contractor which in turn allows for more economical and efficient project delivery. The times, though, are a-changing.

In recent years, many state legislatures have adopted new laws and regulations which expand the ability for government entities to use alternative project delivery systems. Today, more than half of the U.S. states allow for some form of alternative project delivery on public projects. This past year alone, several state legislatures passed authorizing legislation allowing for use of alternative project delivery or expanding its use. In New York, the state legislature reauthorized design-build for a number of state agencies including the New York Department of Transportation and authorized project specific use of design-build for several other entities that had not previously been authorized to use design-build. In Virginia, the state legislature expanded design-build authority to all local governments. Previously, the use of design-build had been restricted to only those local governments with populations in excess of 100,000 people. In Arkansas, the state legislature passed authorization for use of design-build on local municipal sewage systems, as well as authorization for P3s for all state entities.

What follows is a small survey of laws authorizing the use of alternative project delivery systems that have been adopted by various states.

Design-Build

The most widely accepted alternative project delivery system is design-build. As of the fall of 2017, design-build is fully permitted by all state agencies in more than half of the fifty states.

In Arizona, design-build is authorized for all state agencies and for all counties, cities, towns, as well as irrigation, power, electric, drainage, flood protection and flood control districts, tax levying public improvement districts, and county or city improvement districts. Arizona also authorizes its Department of Transportation to use design-build under separate statute.²⁵

In Florida, all state agencies are authorized to use design-build using the best value or qualification based selection to award contracts. Counties, municipalities, and other political subdivisions of the state are also authorized to use design build as permitted by local ordinance. Local government bodies may use best value or qualifications-based selection to award such contracts.²⁶

In North Carolina, governmental entities are authorized to utilize design-build contracting provided that the governmental entities establish the criteria for determining the circumstances under which the design-build method is appropriate. The North Carolina Department of Transportation is also authorized to use design-build contracting for the construction of transportation projects of any amount.²⁷

In Ohio, all state agencies, state institutions of higher education, counties, townships, municipal corporations, school districts, or other political subdivisions are authorized to use design build. The Ohio

Department of Transportation is also authorized to use design-build contracting for projects totaling \$1 billion annually.²⁸

Other states that fully permit its agencies to use design-build include: Alaska, Colorado, Hawaii, Idaho, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, North Carolina, Oregon, South Carolina, South Dakota, Tennessee, Utah, Virginia, Washington, West Virginia, and the District of Columbia.

Although design-build is not fully permitted in all fifty states, design-build is still widely permitted in various other states. For example, design-build is widely permitted in states such as California, Texas, Illinois, and Georgia although the use of design-build is not fully permitted in those states.

Construction Manager at Risk

Less widely accepted than design build is the construction manager at risk project delivery system.

In Connecticut, the Commissioner of Transportation is authorized to designate specific projects to be completed using construction manager at risk with a guaranteed maximum price as an alternative to using design-bid-build contracting.²⁹

In addition to authorizing the use of design-build, the District of Columbia has also authorized the use of construction manager at risk.³⁰

In Kentucky, all state agencies and political subdivisions are authorized to use the construction manager at risk project delivery methods for all capital projects.³¹

Arizona, Kansas, Nevada, Tennessee, and Vermont are among the other states that authorize the use of the construction manager at risk project delivery method.

Integrated Project Delivery (IPD)

One of the more recent developments in project delivery is integrated project delivery. Integrated project delivery, although championed by many within the construction industry, has not been as readily adopted as other alternative project delivery methods such as design build and construction manager at risk. There are several reasons for the slow adoption of integrated project delivery among them being that owners do not fully understand its benefits, a concern about the degree of risk associated with collaborate delivery methods, as well as a concern about the time and cost associated with adopting new methodologies associated with implementing the project delivery system. Notwithstanding its slow adoption nationally, some states have seen the inherent benefits of integrated project delivery and have authorized its use. In Colorado, all state agencies are authorized to use integrated project delivery for a public project if it is determined by such agency to be a timely and cost-effective delivery method.

Section 24-93-104 of the Colorado Revised Statutes specifically provides: “Notwithstanding any other

provision of law, any agency may award an IPD contract for a public project in accordance with the provisions of this article upon the determination by such agency that integrated project delivery represents a timely or cost-effective alternative for a public project.”³²

Conclusion

Recognizing that alternative project delivery methods have had demonstrated success and are continuing to increase in popularity, as these project delivery methods evolve, there are still questions to be answered regarding the allocation of risk and responsibility between the parties participating in alternative delivery projects, especially when new technology such as BIM is utilized. 🏗️

Endnotes

1. See *Balfour Beatty Infrastructure, Inc. v. Rummel Klepper & Kahl, LLP*, 226 Md.App.420, 428 (Md.App. 2016).
2. *David A. Bramble, Inc. v. Md. State Highway Admin.* (Md. App., 2015).
3. *Louisville Arena Auth., Inc. v. Ram Eng'g & Constr., Inc.*, 415 S.W.3d 671 (Ky. App., 2013)[quoting KRS 45A.030(6)]
4. *Rivers v. Cent. Ill. Arena Mgmt., Inc.*, 129 F.Supp.3d 643 (C.D. Ill., 2015)
5. *Id.* See also Restatement (Second) of Torts § 414 (1965).
6. *Id.*
7. *Rivers v. Central Arena Mgmt., Inc.*, 129 F.Supp.3d 643 (C.D.Ill. 2015).
8. *Rivers*, 129 F.Supp.3d at 649.
9. Restatement (Second) of Torts § 414 (1965),
10. *Rivers*, 129 F.Supp.3d at 649-650.
11. *Rivers*, 129 F.Supp.3d at 651.
12. *Rivers*, 129 F.Supp.3d at 650.
13. ConsensusDocs 300 R 2016.
14. *DPR Construction v. Shirte Regenerative Medicine Inc.*, 204 F.Supp.3d 1118 (S.D.Cal., 2016).
15. *3D Imaging Servs., LLC v. McLaren, Inc.* (Mich. App., 2017)
16. *N. Am. Mech., Inc. v. Walsh Constr. Co.*, 132 F.Supp.3d 1064, 1075 (E.D. Wis., 2015).
17. *Id.*
18. 248 U.S. 132 (1918).
19. *Id.* at 136-37.
20. *Id.* at 137-38.
21. 427 Mass. 549 (2015).
22. *Id.* at 558.
23. *Id.* at 559.
24. *Id.* at 560-61.
25. 2017 DBIA State Statute Report, p. 4.
26. *Id.* at p. 8.
27. *Id.* at p. 17.
28. *Id.* at p. 20.
29. *Id.* at p. 7.
30. *Id.*
31. *Id.* at p. 12.
32. CRS § 24-93-104.