



# A GUIDE TO CONSTRUCTION DELIVERY METHODS

UNDERSTANDING THE MOST COMMON OPTIONS

HOURIGAN

# DELIVERING A SUCCESSFUL PROJECT

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The design and construction industries are constantly evolving as they continue to research and adopt new methods to streamline projects. As projects become more complex in nature, understanding potential delivery options is a key component to success.

While a construction manager that understands the industry's latest trends can provide guidance during this early decision-making phase, project teams should consider the following factors:



## BUDGET

Cost for overall project development and pro-forma life-cycle



## SCHEDULE

Outline of project time frames and milestones for activities from pre-planning through completion



## DESIGN

Program requirements, functionality of systems, and vision



## OWNER EXPERIENCE

Prior project delivery experience and dynamic of contractual relationships



## RISK EXPOSURE

Safety, brand compliance, financial & liability evaluation, increased costs

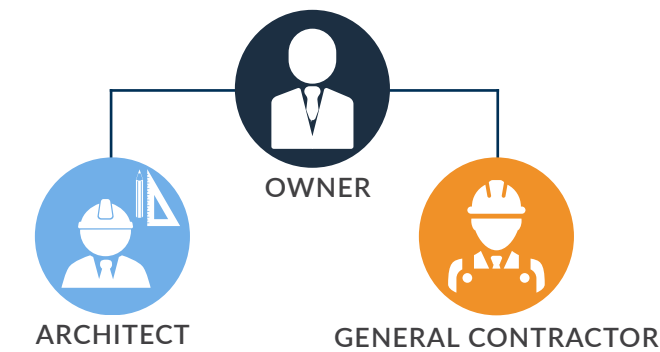
Depending on the specific project needs, certain goals can outweigh others and lead the decision-making process to determine the appropriate delivery method. Although there are a wide variety of delivery methods available, these are the three most common:

1. Design-Bid-Build
2. Construction Manager at Risk
3. Design-Build

# DESIGN-BID-BUILD

Design-Bid-Build (DBB) is the most traditional method of delivery. This approach separates the design responsibility from the building process, putting the owner at the center of the model. First, the owner hires an architect and a team of consultants to complete the project design and specifications, as well as a construction plan. Afterward, the owner solicits construction managers through a bid process, which is typically awarded to the lowest responsive bid.

## Communication



ADVANTAGES	CONSIDERATIONS
<ul style="list-style-type: none"><li>• Low bid cost for both the contractor and design team, driving maximum competition</li><li>• Clarity of scope identified before construction begins</li><li>• Construction cost is fixed at contract award</li><li>• Design team produces a single set of bid documents versus a phased bid package arrangement</li></ul>	<ul style="list-style-type: none"><li>• Construction costs, including local market input, unknown until design completion</li><li>• No contractor input throughout the design, planning, or value management phases</li><li>• Owner is exposed to potential change orders if the scope is not complete</li><li>• Increased project duration compared to construction manager at risk and design-build</li><li>• Potential schedule delays if the project comes in over budget, requiring a redesign, resubmission of bids, and potential resubmission for permits</li><li>• Requires significant owner expertise and resources with shared responsibility for project delivery</li><li>• Adversarial relationship between low-bid contractor, designers, and owner</li></ul>



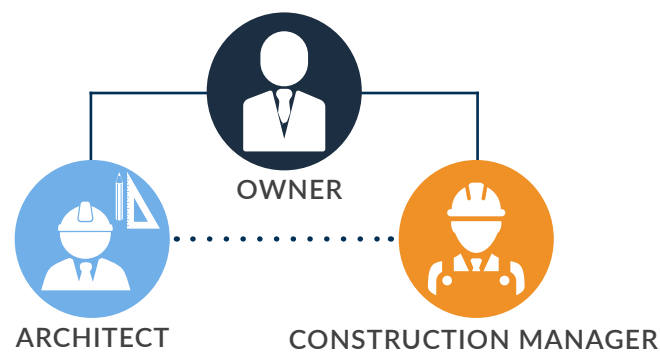
In an effort to drive more quality and schedule certainty into this traditional delivery method, consider the use of a two-phased selection process. This will ensure that the organizations pursuing the project are on a level playing field when considering cost, quality, and the overall experience. This allows for a competitive bid environment, while injecting flexibility into the decision making strategy.



# CONSTRUCTION MANAGER AT RISK

The Construction Manager at Risk (CMR) delivery method supports the owner not only during construction, but also during pre-development, fostering collaboration throughout the preconstruction phase. This method requires partnering with a construction manager that brings the technical capabilities appropriate for the project. By integrating the construction team and engaging the designers and contractor early on, the project benefits from better constructability insights and more effective decision-making. This process reduces the overall schedule and cost of a project compared to the traditional design-bid-build (DBB) delivery method.

## Communication



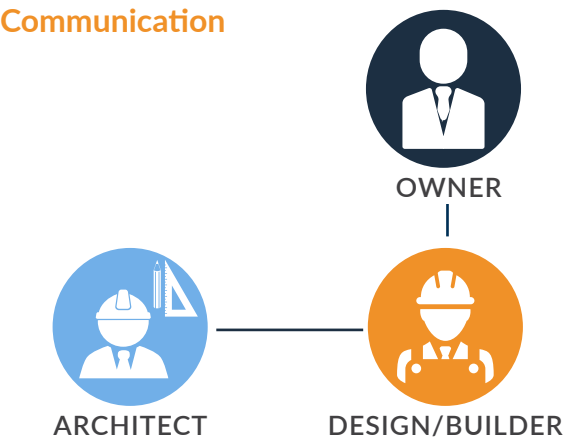
ADVANTAGES	CONSIDERATIONS
<ul style="list-style-type: none"><li>• Cost and schedule are determined early in the process and guaranteed before start of construction</li><li>• Cost estimating is accurate with existing market conditions during the early stages of the project</li><li>• Collaborative environment where the contractor, design team, and owner work together</li><li>• Contingencies for budget protection</li><li>• Majority of the contract value is competitively bid to the trade partner and supplier market. The owner can participate in trade partner selections</li><li>• Contractor involvement and support through the AHJ review, approval, and inspection process</li><li>• Ability to fast-track early components of construction prior to design completion</li><li>• Higher quality outcome as the selection process evaluates qualifications and experience prior to price</li><li>• Open book transparency with potential cost savings</li></ul>	<ul style="list-style-type: none"><li>• Construction begins before final bids with trade partners are complete, often resulting in multiple bid packages from the design team</li><li>• Initial construction bids may not be as competitive as the DBB method</li><li>• Trust level must be high with the firm selected to ensure transparency</li><li>• Project success is highly dependent on the construction manager</li></ul>



CMR offers the opportunity to fast-track and pre-purchase materials and equipment by utilizing a phased design and bid packaging system. This is a tangible benefit of collaboration and early engagement of the construction manager.

# DESIGN-BUILD

Design-Build is one of the fastest growing and evolving delivery methods, embraced by 48 states and constituting 44% of America’s construction dollars. This procurement simplifies the process for the owner by sourcing a contract with a single point of responsibility, the design-builder. While the schedule and budget are determined during the pre-development phases, increased collaboration amongst the design and construction team members results in saved time and money. According to the Design Build Institute of America (DBIA), design-build is 102% faster than traditional DBB projects and owners report higher satisfaction rates than all other delivery methods.



ADVANTAGES	CONSIDERATIONS
<ul style="list-style-type: none"> <li>Team is selected on qualifications and prior experience, versus lowest cost. Preconstruction efforts ensure maximizing the program within the budget.</li> <li>Streamlined decision-making process results in cost efficiencies</li> <li>Increased collaboration results in fewer change orders and innovative, quality builds</li> <li>Construction may begin before design completion, making DB the fastest delivery method</li> <li>Single-source responsibility for design, construction, and warranty period</li> <li>Better quality as there is constructability input throughout the design process</li> <li>Reduced owner risk and claims</li> </ul>	<ul style="list-style-type: none"> <li>Owner required to provide internal programming resources and design feedback early in the process</li> <li>Owner required to be highly responsive to ensure fast-track delivery is met</li> <li>Fewer qualified team selections during the solicitation process</li> </ul>

**DOMINION ENERGY, 600 CANAL PLACE**  
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**CLIENT GOALS**  
 In an effort to produce an exemplary facility on a tight schedule, design-build was selected to procure a high-performing and cohesive team throughout the design and construction to reduce gaps in communication and quality.

**COMMON MYTHS OF DESIGN-BUILD**

**OWNER ELIMINATES CONTROL**  
 The owner determines their level of engagement. DB fosters a transparent process, allowing an open book platform. Active owner participation is a key factor to overall project success.

**MORE EXPENSIVE**  
 With a more collaborative team environment, this process is more cost-effective. Constructability insight early in the process produces a more efficient build, saving time and money.

**REDUCED QUALITY**  
 DB’s fast-track schedule does not compromise quality. The project team’s ability to engage and produce early site and construction packages allows construction to begin ahead of design completion, resulting in shorter timelines.

# KEY TAKEAWAYS

Projects today are more complex, bringing unique details and challenges to the table. Project teams can ensure success by understanding prospective delivery methods. Deciding which project delivery method to implement depends on the owner's expertise, type of project, desired control, timeline, and budget. More often, teams choose collaborative methods such as construction management at risk and design-build, as they save time and money without sacrificing quality and a positive customer experience.

## DISTRIBUTION OF DELIVERY METHOD UTILIZATION

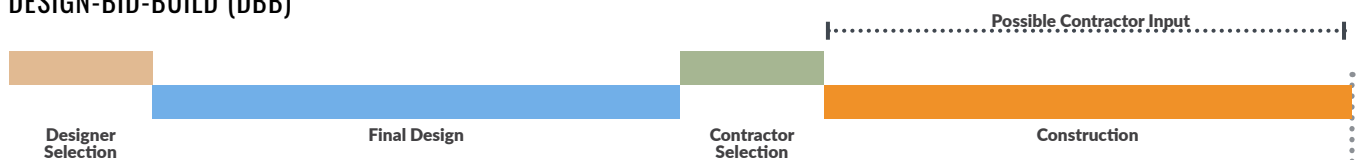
Source(s): FMI analysis of multiple sources



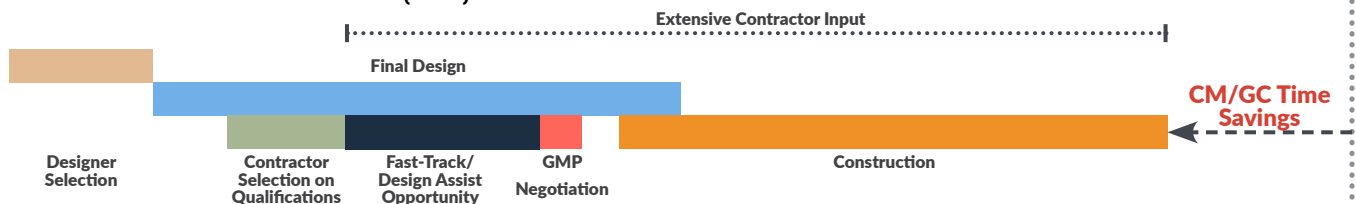
- Dissatisfaction with the adversarial nature and limitations of design-bid-build as well as increasingly challenging project characteristics and demands has resulted in greater interest in and use of design-build and other alternative delivery methods.
- Negative project owner experience and perceptions of design-bid-build are most influenced by limited opportunity for innovation, lack of a fast-track process, and higher risk profile for the project owner.

## PROJECT SEQUENCE SUMMARY

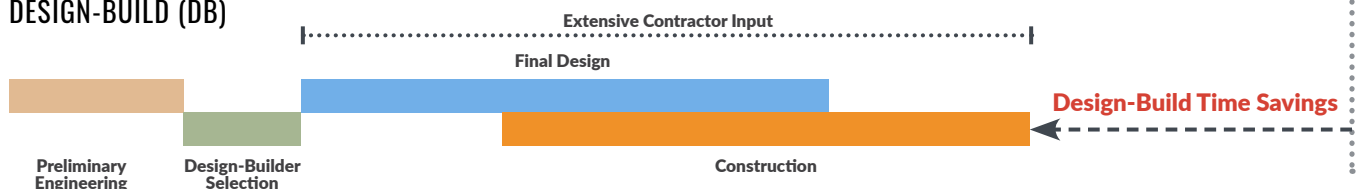
### DESIGN-BID-BUILD (DBB)



### CONSTRUCTION MANAGER AT RISK (CMR)



### DESIGN-BUILD (DB)



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