

Project Delivery Method Overview



Delivery Overview

	Design-Bid-Build (DBB)	Construction Manager/ General Contractor (CM-GC)	Design-Build (D-B)	Progressive Design-Build (PD-B)
	<pre> graph TD Owner[Owner] --- Designer[Designer] Owner --- GC[General Contractor] </pre>	<pre> graph TD Owner[Owner] --- Designer[Designer] Owner --- ICE[Independent Cost Estimator] Owner --- CM[Construction Manager *Preconstruction] CM --- GC[General Contractor *Construction] </pre>	<pre> graph TD Owner[Owner] --- DB[Design-Builder] DB --- Consultants[Consultants] DB --- Subcontractors[Subcontractors] DB --- Designer[Designer] </pre>	<pre> graph TD Owner[Owner] --- DB[Design-Builder] DB --- Consultants[Consultants] DB --- Subcontractors[Subcontractors] </pre>
Contract Structure	<ul style="list-style-type: none"> • Traditional contracting and delivery approach. • Owner contracts separately for design and construction services. 	<ul style="list-style-type: none"> • Owner contracts with a firm for design services. • Owner engages a CM-GC to act as an advisor prior to construction. • Upon agreement of a Guaranteed Maximum Price (GMP) with the owner, the CM-GC performs the construction work. 	<ul style="list-style-type: none"> • Combines design and construction services under a single contract. • Traditionally a lump sum, fixed price contract. 	<ul style="list-style-type: none"> • Combines design and construction services under a single contract. • Blends elements of DB with price and scope refinement of CM-GC. • Following development of design to an appropriate amount to allow fixed pricing, the PDB team will develop a GMP. Upon agreement of a GMP with the owner, the PDB team will complete the design and perform the construction work.
Owner Control and Risk	<ul style="list-style-type: none"> • Owner retains control over the NEPA process. • Owner retains high level of control over the scope, design requirements, and construction requirements. • Owner retains design risk. • Owner responsible for risks that are not mitigated prior to build. 	<ul style="list-style-type: none"> • Owner retains control over the NEPA process. • Owner retains control over scope, design requirements, and construction requirements. • Collaborative risk management and early contractor engagement prior to construction allows for identification and mitigation of risks prior to pricing. • Owner retains design risk. 	<ul style="list-style-type: none"> • Owner retains control over the NEPA process. • Owner retains control of NEPA and portions of preliminary design with greater emphasis on use of performance specifications for design and construction. • Design risk transferred to the Design-Builder (assuming contract provisions are drafted appropriately). • Risk allocation occurs at the early stages of design when the bid is submitted which may not facilitate optimal risk management and cost control. 	<ul style="list-style-type: none"> • Owner retains control over the NEPA process. • Owner maintains input on scope, design requirements, and construction requirements throughout the process. • Design risk is transferred to the Design-Builder • Collaborative risk management and early contractor engagement prior to construction allows for identification and mitigation of risks prior to pricing.
Level of Plan Development at Bid/Proposal	<ul style="list-style-type: none"> • Bid for construction based on complete (100%) plans and specifications. 	<ul style="list-style-type: none"> • The GMP is established, and construction is authorized based on plans and specifications that are approximately 90% complete. 	<ul style="list-style-type: none"> • Preliminary design can vary to facilitate competitive bids and manage contingency in bid prices, but 30% development is typical. 	<ul style="list-style-type: none"> • Conceptual plans provided to the Progressive Design-Build team. • NEPA must be complete prior to any construction, and Progressive Design Build team will not participate in activities that may influence the NEPA decision. • Design should be advanced to a point that allows the PDB team to develop a fixed price considerate of project risks and risk allocation as established in the risk register (typically 60-90%).
Selection Methodology	<ul style="list-style-type: none"> • Low-bid. 	<ul style="list-style-type: none"> • Selection of the CM-GC is typically made using qualifications-based selection or best-value selection. 	<ul style="list-style-type: none"> • Two -step selection process that results in the shortlist of respondents based on qualifications in the first phase and final selection based on a best -value approach in the second phase. 	<ul style="list-style-type: none"> • Selection of the PDB team is typically made using qualifications-based selection or best-value selection.

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Key Project Considerations

	Design-Bid-Build (DBB)	Construction Manager/ General Contractor (CM-GC)	Design-Build (D-B)	Progressive Design-Build (PD-B)
Affordability	<ul style="list-style-type: none"> • Project is fully funded with reliable cost estimate. 	<ul style="list-style-type: none"> • Project is fully funded in consideration of a budget, or a budget has been established which allows the owner and CM-GC to collaboratively refine the project scope to achieve an agreeable outcome within the available budget. If a GMP cannot be agreed, the owner may procure the project in another way. 	<ul style="list-style-type: none"> • Project is fully funded in consideration of a budget, or a budget has been established which allows the owner and the Design-Builder to collaboratively refine the project scope to achieve an agreeable outcome within the available budget. 	<ul style="list-style-type: none"> • Project is fully funded in consideration of a budget, or a budget has been established which allows the owner and Design-Builder to collaboratively refine the project scope to achieve an agreeable outcome within the available budget. If a GMP cannot be agreed, the owner may procure the project in another way.
Schedule	<ul style="list-style-type: none"> • Sequential, non-concurrent design processes and multiple procurements for both designer and contractor can extend overall schedule duration. 	<ul style="list-style-type: none"> • Provides opportunities to expedite schedule through early contractor engagement and use of early work packages. Additionally, collaborative environment may facilitate more efficient construction sequencing / phasing. 	<ul style="list-style-type: none"> • Changes in conceptual design could happen causing delay. Provides opportunities to implement innovative solutions using alternative technical concepts that may expedite project delivery. Additionally, concurrent design and construction processes facilitate accelerated implementation. It creates opportunity for the owner to contemplate major design decisions, get real-time feedback, and make proactive decisions. 	<ul style="list-style-type: none"> • Provides opportunities to expedite schedule through early contractor engagement and use of early work packages. Additionally, early contractor involvement and collaborative environment may facilitate more efficient construction sequencing / phasing. Coordination between the contractor and designer in a PDB may be greater than CM-GC since they formed a team as part of the pursuit of the project.
Project Complexity	<ul style="list-style-type: none"> • Projects where the owner needs to completely define the scope, or the full design is by the owner. 	<ul style="list-style-type: none"> • Projects with unique technical challenges, including challenges related to constructability or construction staging. Owners with an interest in maintaining control of design throughout the delivery process may also favor this method. 	<ul style="list-style-type: none"> • Projects where owner is willing to maximize use of performance requirements (as opposed to prescriptive requirements) to allow innovation in the development of design and construction solutions. Projects with a high sense of urgency and compressed schedules may benefit. 	<ul style="list-style-type: none"> • Projects with unique technical challenges, including challenges related to constructability or construction staging. PDB provides an opportunity to benefit from early, pre-NEPA engagement of a DB team to maximize innovation.
Third-Party Coordination	<ul style="list-style-type: none"> • Completed during development of construction plans. Minimal to no post-construction coordination required. 	<ul style="list-style-type: none"> • Early contractor engagement allows better coordination with third-parties and reduces risk related to these issues which may reduce costs or expedite delivery. 	<ul style="list-style-type: none"> • Third Party agreements should be negotiated and executed prior to issuance of the Final RFP. If the Design-Builder's design results in need for new Third Party Agreements or modification of existing Third-Party Agreements, the Design-Builder is responsible to coordinate for cost and schedule changes subject to contract provisions. 	<ul style="list-style-type: none"> • Early contractor engagement allows better coordination with third-parties and reduces risk related to these issues which may reduce costs or expedite delivery.
Selection Methodology	<ul style="list-style-type: none"> • Project can be accurately priced and will have significant industry interest. 	<ul style="list-style-type: none"> • CM-GC core concepts are not new for those involved in this delivery method. However, certain elements are different and must be learned. Cost to pursue a CM-GC project is less when compared to DB. Requirement and risk to establish a guaranteed maximum price (GMP) also may impact interest from some industry members. 	<ul style="list-style-type: none"> • Competitive bidding environment that can be structured as low-bid or best-value with price and qualitative components. 	<ul style="list-style-type: none"> • Similar to CM-GC. Ability to select a design partner may be seen as an advantage to some participants. However, design risk transfer may concern some in the industry.