

Project Delivery Methods

Project Delivery Methods:

Project delivery methods refer to the approaches used to execute construction projects. These methods outline how a project will be designed, constructed, and managed from start to finish. Different project delivery methods offer varying levels of control, risk, and collaboration among project stakeholders.

Design-Bid-Build (DBB):

Design-Bid-Build (DBB) is a traditional project delivery method where the owner contracts separately with a designer (architect or engineer) and a builder (general contractor) in sequential order. The designer first creates the project design, which is then put out for bid to contractors. Once a contractor is selected, construction begins. DBB provides the owner with a high level of control but may lead to longer project durations.

Design-Build (DB):

Design-Build (DB) is a project delivery method where the owner contracts with a single entity, known as the design-builder, to provide both design and construction services. This integrated approach promotes collaboration between the design and construction teams, leading to faster project delivery and potentially lower costs. DB is often preferred for its streamlined communication and reduced project risks.

Construction Management at Risk (CMAR):

Construction Management at Risk (CMAR) is a project delivery method where the owner contracts with a construction manager (CM) during the early design phase of the project. The CM provides input on constructability, cost estimating, and scheduling, acting as a consultant to the owner. Once the design is complete, the CM assumes the role of the general contractor and completes the construction phase. CMAR allows for early contractor involvement and shared project risks.

Integrated Project Delivery (IPD):

Integrated Project Delivery (IPD) is a collaborative project delivery method where the owner, designer, and builder form a single team to work together from project inception to completion. IPD emphasizes shared goals, responsibilities, and risks among all project stakeholders. This method promotes early decision-making, open communication, and a focus on project outcomes rather than individual interests. IPD is known for fostering innovation and efficiency in project execution.

Public-Private Partnership (PPP):

Public-Private Partnership (PPP) is a project delivery method where the government collaborates with private sector entities to finance, design, construct, operate, and maintain public infrastructure projects. PPPs allocate risks and responsibilities between the public and private partners based on their expertise and resources. This method allows for the efficient delivery of large-scale projects while leveraging private sector innovation and funding.

Job Order Contracting (JOC):

Job Order Contracting (JOC) is a project delivery method commonly used for small to medium-sized construction projects with repetitive work orders. Under JOC, the owner establishes a long-term contract with a contractor based on pre-negotiated unit prices for various construction tasks. When a project arises, the owner issues a work order to the contractor, who then completes the work within a set timeframe. JOC provides flexibility, cost control, and expedited project delivery for routine maintenance and renovation projects.

Turnkey Contract:

A Turnkey Contract is a project delivery method where the contractor is responsible for the design, construction, and commissioning of the project, delivering it to the owner as a fully operational facility. The owner only needs to "turn the key" to start using the completed project. Turnkey contracts transfer most of the project risks to the contractor, who guarantees the project's performance and quality. This method is commonly used for fast-track projects where speed and simplicity are essential.

Fast-Track Construction:

Fast-Track Construction is a project delivery method that accelerates project schedules by overlapping design and construction phases. Instead of waiting for the entire design to be completed before construction begins, fast-track projects allow construction to start based on partial or preliminary designs. This approach can reduce project timelines but requires close coordination between the design and construction teams to prevent conflicts and changes.

Guaranteed Maximum Price (GMP):

A Guaranteed Maximum Price (GMP) is a contract provision in which the contractor agrees to complete the project for a set price, with any additional costs incurred beyond the GMP covered by the contractor. GMP contracts provide cost certainty to the owner while incentivizing the contractor to control costs and manage risks effectively. This method is commonly used in Construction Management at Risk (CMAR) and Design-Build (DB) project delivery methods.

Owner's Representative:

An Owner's Representative is a project management role assigned by the owner to oversee the construction project on their behalf. The Owner's Representative acts as the owner's agent and ensures that the project is completed according to the owner's requirements, budget, and schedule. This role involves coordinating with design and construction teams, managing project documentation, and resolving issues on behalf of the owner. Owner's Representatives play a crucial role in ensuring project success and protecting the owner's interests.

Change Order:

A Change Order is a written document that modifies the scope, schedule, or price of a construction contract. Change orders are issued when there are changes to the project's design, specifications, or conditions that require adjustments to the original contract terms. Contractors may submit change orders for additional work, unforeseen conditions, or design revisions, while owners may request changes to project requirements. Change orders help formalize and manage project changes to avoid disputes and ensure project clarity.

Value Engineering (VE):

Value Engineering (VE) is a systematic process that seeks to improve the value of a project by optimizing its functions, performance, and costs. VE involves analyzing project components to identify opportunities for cost savings, quality improvements, and schedule efficiencies without compromising project objectives. By applying VE principles, project teams can enhance project value, reduce waste, and increase stakeholder satisfaction. VE is commonly used during the design phase to maximize project benefits within budget constraints.

Lean Construction:

Lean Construction is a project management philosophy that aims to maximize project value and minimize waste through continuous improvement and collaboration. Inspired by lean manufacturing principles, Lean Construction focuses on reducing inefficiencies, streamlining processes, and delivering projects more efficiently. Key aspects of Lean Construction include eliminating non-value-added activities, optimizing workflow, and fostering a culture of teamwork and innovation. By adopting Lean Construction practices, project teams can enhance project outcomes and deliver greater value to stakeholders.

Constructability Review:

A Constructability Review is a formal process that evaluates a project design for its constructability, feasibility, and potential risks during construction. The review assesses the design's clarity, coordination, and practicality to identify any issues that may impact construction efficiency or quality. Constructability reviews involve input from construction experts, including contractors, to provide valuable insights that can improve the design's buildability and reduce construction challenges. By conducting constructability reviews early in the design phase, project teams can enhance project outcomes and minimize costly changes during construction.

Substantial Completion:

Substantial Completion is a project milestone indicating that the construction work is sufficiently complete for the owner to occupy or utilize the facility for its intended purpose. While minor items or finishes may still need to be completed, substantial completion signifies that the project is functional and meets the contractual requirements. Once substantial completion is achieved, the owner may take possession of the project and begin using the facility, although final completion and closeout activities may still be ongoing.

Retention (Holdback):

Retention, also known as Holdback, is a common practice in construction contracts where a percentage of the contract sum is withheld by the owner until the project is completed and all obligations are fulfilled. Retention serves as a form of security to ensure that the contractor completes the work satisfactorily, addresses any defects, and meets contractual requirements. Once the project reaches substantial completion, the retained funds are typically released to the contractor, subject to any outstanding issues or defects.

Performance Bond:

A Performance Bond is a financial guarantee provided by a surety company to the owner, ensuring that the contractor will complete the project according to the contract terms and specifications. If the contractor fails to fulfill their obligations, the surety company is responsible for compensating the owner for any

financial losses incurred. Performance bonds protect owners against contractor default and provide assurance that the project will be completed as agreed. Contractors typically obtain performance bonds as part of the contract requirements.

Design Professional:

A Design Professional, also known as an Architect or Engineer, is a licensed professional responsible for creating the project design, specifications, and drawings. Design professionals work closely with the owner to understand project requirements, develop design concepts, and produce construction documents that meet regulatory standards and industry best practices. Design professionals play a crucial role in translating the owner's vision into a buildable design that meets aesthetic, functional, and performance goals. Their expertise ensures that the project is well-designed and compliant with applicable codes and regulations.

Subcontractor:

A Subcontractor is a construction company or tradesperson hired by the general contractor to perform specific tasks or provide services as part of a construction project. Subcontractors specialize in various trades, such as electrical, plumbing, concrete work, and HVAC, and are responsible for completing their scope of work according to the contract requirements. General contractors rely on subcontractors to execute specialized work efficiently, coordinate with other trades, and contribute to the overall project success. Subcontractors play a vital role in delivering complex projects with diverse construction requirements.

Change Directive:

A Change Directive is a written order issued by the owner or architect instructing the contractor to proceed with a change to the contract scope, schedule, or price before a formal change order is executed. Change directives are used when immediate action is necessary to avoid project delays or disputes, allowing work to proceed while the details of the change are finalized. Contractors are required to comply with change directives and may submit a proposal for equitable adjustment once the change order is processed. Change directives help maintain project progress and address urgent project modifications promptly.

Liquidated Damages:

Liquidated Damages are pre-determined monetary penalties specified in a construction contract to compensate the owner for delays in project completion. Liquidated damages are typically calculated based on a daily or weekly rate and are applied when the contractor fails to meet the project deadline or other contractual milestones. By including liquidated damages provisions in the contract, owners can ensure that contractors have a financial incentive to complete the project on time and mitigate the impact of delays on project schedules and costs. Liquidated damages help protect the owner's interests and provide a mechanism for enforcing project timelines.

Value Proposition:

A Value Proposition is a statement that articulates the unique benefits and value that a project or service offers to its stakeholders. The value proposition highlights the project's key features, advantages, and outcomes that differentiate it from competing options and address stakeholder needs and preferences. By clearly defining the value proposition, project teams can communicate the project's value, attract stakeholders' interest and support, and align project objectives with stakeholder expectations. A compelling

value proposition can enhance project success, generate buy-in from stakeholders, and drive project performance.

Request for Proposal (RFP):

A Request for Proposal (RFP) is a document used by owners to solicit bids from potential contractors or service providers for a construction project. The RFP outlines project requirements, scope of work, evaluation criteria, and contractual terms, allowing bidders to submit proposals detailing how they will meet the project needs. Owners use RFPs to select the most qualified and competitive contractor for the project based on factors such as experience, pricing, schedule, and technical approach. RFPs help owners obtain comprehensive bids and make informed decisions when awarding contracts.

Best Value Procurement:

Best Value Procurement is a procurement method that focuses on selecting the contractor who offers the best overall value to the owner based on a combination of price, quality, performance, and other evaluation criteria. Unlike traditional low-bid procurement methods, Best Value Procurement emphasizes the contractor's qualifications, expertise, and ability to deliver superior results rather than solely focusing on the lowest price. By considering both cost and quality factors, Best Value Procurement aims to maximize project value, promote innovation, and achieve project success through collaborative relationships with contractors.

Design Intent:

Design Intent refers to the original vision, goals, and concepts established by the design team during the early stages of a project. Design Intent outlines the project's aesthetic, functional, and performance objectives, guiding the development of the project design and specifications. Throughout the design process, the design team works to translate the design intent into detailed drawings, documents, and specifications that reflect the project's original vision. Design intent documents serve as a reference point for project stakeholders and help ensure that the final project aligns with the initial design goals and requirements.

General Conditions:

General Conditions are a set of contract provisions that establish the rights, responsibilities, and obligations of the parties involved in a construction project. General conditions cover administrative requirements, project management procedures, legal terms, and other standard provisions that apply to the entire project. These provisions address issues such as project scheduling, payments, changes, disputes, insurance, and safety, providing a framework for project execution and risk management. General conditions are typically included in construction contracts to ensure clarity, consistency, and compliance with industry standards and best practices.

Notice to Proceed:

A Notice to Proceed is a formal written notice issued by the owner to the contractor authorizing them to commence work on the construction project. The Notice to Proceed specifies the project start date, contractual obligations, and any conditions or requirements that must be met before work can begin. Contractors are required to adhere to the terms outlined in the Notice to Proceed and initiate project activities in accordance with the project schedule and contract documents. The Notice to Proceed marks the official commencement of the construction project and triggers the contractor's obligations and

responsibilities.

Design Development:

Design Development is a phase in the project design process where the initial concept design is further developed and refined to create detailed drawings, specifications, and plans. During design development, the design team collaborates with the owner to translate the project requirements into a comprehensive design that meets functional, aesthetic, and performance goals. Design development involves refining the project layout, material selections, building systems, and other design elements to prepare the design for construction documentation. Design development ensures that the project design is well-coordinated, feasible, and aligned with the owner's vision and objectives.

Contract Documents:

Contract Documents are the set of written, graphic, and other information that form the legal agreement between the owner and the contractor for a construction project. Contract documents include the project plans, specifications, general conditions, special conditions, addenda, and any other contract-related information that defines the rights, obligations, and scope of work for both parties. Contractors use contract documents to bid on the project, execute the work, and comply with the contract terms, while owners rely on the documents to communicate project requirements, standards, and expectations. Contract documents serve as the basis for project execution, quality assurance, and dispute resolution.

Project Closeout:

Project Closeout is the final phase of a construction project where all work is completed, and the project is turned over to the owner for beneficial use. During project closeout, final inspections, testing, and commissioning activities are conducted to ensure that the project meets the contract requirements and quality standards. Closeout activities also include final documentation, record-keeping, training, and warranty turnover to the owner. Once all project deliverables are verified, and any outstanding issues are resolved, the project is formally closed, and the contractor's obligations are fulfilled.

Force Majeure:

Force Majeure refers to unforeseeable circumstances or events beyond the control of the parties involved in a construction contract that prevent or delay the performance of contractual obligations. Force majeure events may include natural disasters, acts of God, wars, strikes, or other events that make it impossible or impracticable for one or both parties to fulfill their contractual duties. When a force majeure event occurs, the affected party may be excused from performance or entitled to seek relief under the contract terms, such as an extension of time or suspension of work. Force majeure clauses in contracts define the rights and responsibilities of the parties in such circumstances.

Substantial Completion Certificate:

A Substantial Completion Certificate is a document issued by the architect or engineer certifying that the construction work has reached substantial completion according to the contract requirements. The certificate indicates that the project is ready for occupancy or beneficial use by the owner, even though minor items or finishes may still need to be completed. Once the substantial completion certificate is issued, the project is considered functionally complete, and the owner may take possession of the facility, subject to any outstanding punch list items or final completion activities.

Change Management:

Change Management is a structured process that manages and controls changes to a construction project's scope, schedule, and budget. Change management involves identifying, evaluating, and implementing changes to project requirements, designs, or conditions while minimizing disruptions and maintaining project objectives. Effective change management practices include documenting changes, assessing their impact, obtaining approvals, and communicating changes to project stakeholders. By proactively managing changes, project teams can mitigate risks, control costs, and ensure project success while accommodating evolving project needs and priorities.

Owner-Architect Agreement:

An Owner-Architect Agreement is a legal contract between the owner and the architect that outlines the terms, scope of work, fees, and responsibilities related to the design services for a construction project. The agreement defines the architect's obligations, deliverables, and compensation, as well as the owner's rights, expectations, and project requirements. Owner-Architect Agreements typically include provisions related to project scope, schedule, changes, fees, insurance, and dispute resolution to establish a clear understanding of the design services and deliverables. These agreements help formalize the architect's role, protect the owner's interests, and ensure the successful delivery of the project design.

Project Milestone:

A Project Milestone is a significant event, achievement, or deliverable that marks a key point in a construction project's timeline and progress. Milestones represent important project phases, goals, or deadlines that must be reached to advance the project toward completion. Examples of project milestones include design completion, permit approvals, groundbreaking, substantial completion, and project closeout. By setting and tracking project milestones, project teams can monitor progress, identify critical path activities, and ensure that the project stays on schedule and within budget. Milestones help prioritize project tasks, measure performance, and celebrate project achievements.

Value Engineering Change Proposal (VECP):

A Value Engineering Change Proposal (VECP) is a formal proposal submitted by a contractor to the owner suggesting changes to the project design, materials, or methods that improve project value, reduce costs, or enhance performance. VECPs are based on value engineering principles and aim to provide innovative solutions that optimize project outcomes while meeting project objectives. Owners evaluate VECPs to determine their feasibility, impact on project quality, and cost savings potential before approving or incorporating the proposed changes into the project scope. VECPs enable contractors to contribute value-added ideas and collaborate with owners to achieve project success.

Risk Allocation:

Risk Allocation refers to the process of assigning and managing risks among project participants, such as owners, contractors, designers, and subcontractors, based on their expertise, capabilities, and