PROGRESSIVE DESIGN-BUILD

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The traditional project delivery method, which customarily involves three sequential project phases: Design, Procurement, and Construction.

### Advantages/Disadvantages

#### Design Bid Build (Hard Bid)

#### Advantages
- Competitive bidding, based on Low Resp. Price
- More Owner Control
- Familiar & Established
- A/E of Record Services as Owner Liaison

#### Disadvantages
- Quality/Qualifications
- Change Orders/Delays
- Adversarial
- Lump-Sum/Closed Book, No Early Involvement
An important variation of Design-Bid-Build is **multiple prime contracting**, in which the Owner holds separate contracts with contractors of various construction work disciplines, such as general construction, earthwork, structural, mechanical, and electrical. In this system, the Owner, or its CM, manages the overall schedule and budget.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Competitive Prime Trades, Early involvement from CM for cost and schedule controls</td>
<td>Administrative difficulty; Direct trade and A / E conflicts</td>
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<tr>
<td>Eliminates GC premiums</td>
<td>Lack of single risk bonded price, higher risk with subs.</td>
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<tr>
<td>CM is on owners side</td>
<td>Lump Sum / Closed book, potential overlap or gaps in scope of work.</td>
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**ADVANTAGES/DISADVANTAGES**

**CM AT RISK (CMAR)**
A project delivery method in which the Construction Manager acts as a consultant to the Owner in the development and design phases, but assumes the risk for construction performance as the equivalent of a constructor.

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<tr>
<td>Qualifications Based</td>
<td>Lack of Subcontractor Transparency since Based on Lump Sum</td>
</tr>
<tr>
<td>Risk is on CM, Subs Assigned to CM</td>
<td>Legal Authorization for Delivery Method</td>
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<tr>
<td>Pre-Construction Work, Early Involvement with Procurement, Schedule, Budget, etc.</td>
<td>No Common Standards for Methodology</td>
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## ADVANTAGES/ DISADVANTAGES

### DESIGN BUILD

A project delivery method that combines architectural and engineering design services with construction performance under one contract.

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<td>Qualifications Based</td>
<td>Newer Form of Delivery</td>
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<tr>
<td>Risk with Design/Builder</td>
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<tr>
<td>Team/Integrated Approach/ Creative Solutions</td>
<td>Potential Lack of Design Control</td>
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<tr>
<td>Minimal Change Orders, Early Budget and Design Estimates, Scope Controls</td>
<td>Higher Learning Curve for Delivery Method</td>
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<td>Best Value Award</td>
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Construction Manager’s Traditional Role

- Can be Involved in all Types of Delivery Methods
- Extension of Owner’s Staff
- CM Works Throughout the Various Phases of the Project
- Should be Involved in Design Management
- Creates the Project Budget
- Can Manage Various Consultants
DESIGN-BUILD CONTRACTUAL ALIGNMENT
Why a New Way?

Introduction

- A Commitment to Develop World Class Facilities
- Deliver Exceptional Project Outcomes (EPO)
- Develop Programs that meet all Stakeholder Requirements
- Become an Agency of Choice for Designers & Builders
- Create an Environment of Collaboration
- Develop a Partnered Approach
- Resolution & Problem Solving
- Promote Creativity & Innovation
- HAVE FUN!!!
Why Design-Build?

Introduction

- Single Point of Accountability
- Enhanced Risk Allocation
- Quicker, More Cost Effective Project
- Different Variations Can Be tailored to the unique project and client needs
Design-Build Variations

“Prescriptive DB”

- Includes some degree of design completion (usually 10-30%) as part of procurement
- Typically more price-based procurement
- Owner’s preferences are clearly defined in procurement documents
- Selection is based on some combination of qualifications schedule & cost (GMP)
- During procurement owner has little input into this preliminary design
- Changes to any element of the project at a later date, after contract negotiations, can lead to change orders
Design-Build Variations

“Performance DB”

- Measureable performance criteria or objectives for operation, rather than on specific design approaches
- Utilized when an owner has specific performance goals
- Includes standard construction specifications while allowing proposers greater flexibility in the design & approach
- Often requires some level of design completion much like the prescriptive approach (can be as much as 10-30%)
- Design is completed with no input from the owner with the exception of performance objectives detailed in procurement docs
- Can also lead to future change orders
Progressive Design-Build
A New Way

- Allows for enhanced owner control of scope, quality, price, & schedule decisions
- Allows for enhanced owner input throughout the project
- Decisions are based on more than construction cost
- Practically eliminates change orders & surprises
- Simple & less costly procurement
- Single Point of Accountability
- Enhanced Risk Allocation
- Quicker, More Cost Effective Project
**FIXED PRICE DESIGN-BUILD**

- Known Cost at time of selection,
- Involvement of Design Builder during development of design
- Benefit of multiple design solution and innovation through competition
- Owner must define program and design criteria to minimal level
- Cost significant factor in selection
- Significant investment by DB Teams in selection process

**PROGRESSIVE DESIGN-BUILD**

- Final Cost after selection of DB Team, Open book on cost estimating
- Involvement of Design Builder during the development of design
- Owner involved in the design solution options during concept stage
- Design-Builder is engaged at the preliminary planning level
- Cost is not as significant of a factor in selection
- Lower cost of procurement (Specifically A&E)
Progressive Design-Build

A New Way

1. Owner
2. O & M Team
3. Designer
4. Contractor

“Progressive Design-Build”

- Growing in popularity amongst owners & practitioners
- Design to budget
- Distinction begins during procurement (owner will often select based on design-builder’s qualifications)
- Qualification based selection allows owner to invest in project vs. lengthy and costly procurement approach. (One-Step Approach)
- Approach leverages benefits of DB and Construction Management at Risk (CMAR)
- Preconstruction services allow construction input into design effort
- Fosters maximum collaborative relationship between owner, engineer & builder
- Results in a more cost effective design from the construction Point of View
Qualification Based Selection

- Shortlist Based on Written Technical & Qualifications Submission Only
- Oral Interview occurs after Short List
- Qualifications evaluation scored based on:
  - Written Technical & Qualifications
  - Team Qualifications
  - Key Personnel Experience
  - Previous Similar Project Experience
  - Design Management Approach
  - Project Management Approach
  - Oral Interviews (Scenario based interview)
- Cost evaluation scored based on:
  - Programming Services (Lump Sum)
  - Design Builder Management Cost (Lump Sum)
  - Overhead and Profit Fee (Percentage of Trade Packages Bid)
Optimization of Time & Cost

- Program
  - Team In Place
    - Basis of Design
    - Pricing/Buyout
    - GMP
    - Permit
  - Owner Collaboration/Scope Decisions
  - Integrated Agency Review
- Design
  - BOD
    - 30%
  - MEP
    - 60%
  - Site
  - Structural
- Construction Administration
  - Architectural
  - Structural
  - MEP
  - Pricing/Buyout
  - Permit
Pricing In A Progressive Design-Build

• Guaranteed Maximum Price (GMP) is provided at design completion milestones (30%-60%-90% final)
• Final GMP for continuation is developed between 60-100% design completion
• Competitive trade contractor bids
• Transparent open-book approach
• Lump sum is option if desired
• In the event owner finds the design-builder's (LS or GMP) unacceptable, the owner can opt to proceed in a traditional manner
• Complete flexibility
International Gates (Traditional D-B)
International Gates (Traditional D-B)
Parking Plaza (Progressive D-B)
Parking Plaza (Progressive D-B)
What Should be the Role of Owner Representative (Program Manager) in a P–D-B Delivery Methods?

• How familiar is the Owner With D-B Delivery Methods?
• How Should an Owner Determine the Need for the Program Management Services?
• How is the Internal Alignment Between Policies, Procedures, and the Culture of the Owner’s Organization?
• How the Interest of the Program is Best Represented by the Program Management Team?
  • Alignment of Intent and Ethos With Owner and GC
  • Well Defined Intent, Expectations, Roles and Responsibility
  • The Owner’s Role and Responsibility is to Promote and Build a Successful Team

“One Team-One Goal”
• Strong Emotional Intelligence (EQ), Trust, and Empathy
• Timely Flow of Information Among Stakeholders and the General Contractor
• Timely Validation of Design
• Timely Response to Request For Information (RFI)
• Clear and Concise Communication (“Communication is the Key to Success”)
• Providing Streamlined Program Control and Reporting System
• Efficient and Timely Administration of the Contract
  – Processing Invoices, etc.
Progressive DB - “A Refreshing Approach”

- Timely & cost effective delivery
- Greater control of the design decisions impacting scope, quality, cost & schedule
- Enhanced risk allocation
- Ability to select preferred equipment, trade contractors and vendors
- Guaranteed price either using the GMP or LS approach
- Guaranteed schedule
- Guaranteed performance
- Quicker & more cost effective procurement
“SIMPLICITY IS THE ULTIMATE FORM OF SOPHISTICATION.”

- Leonardo Da Vinci
QUESTIONS?