The Alternative of Alternative Delivery: Progressive Design Build

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Agenda

• Traditional Project Delivery Model
• Alternative Delivery Models
• Progress Design Build Delivery Model
• Legislation
• Discussion
Traditional Project Delivery Model

Traditional Delivery
- Design-Bid-Build

Alternative Delivery
- Construction Management at-Risk
- Fixed-Price Design-Build
- Progressive Design-Build

Roles:
- OWNER
- DESIGNER
- BUILDER
- CM
- DESIGN-BUILDER
Design-Bid-Build

Owner

Designer  
Builder

Qualifications > Designer  
Low Bid Price > Builder

Contract
Communication
Design-Bid-Build

Advantages
• Familiar delivery method
• Regulations well understood
• Project is competitively bid

Disadvantages
• Low-bid contractor selection
  – Increases risk of change orders, disputes, and claims
• Multiple contracts for owner to manage
• Owner bears majority of risk
• No collaboration between designer & builder during design

The high cost of low bid
Shift Towards Alternative Delivery

- Why are Owners looking for other options?
  - Single point of responsibility
    - Reduce change orders
    - Avoid Claims
  - Reduce project schedule
  - Selection not only based on price
  - Early collaboration between Designer and Builder
  - New legislation that allows other delivery methods
Market Trends

Source: ENR, June 2012
Alternative Project Delivery Methods

<table>
<thead>
<tr>
<th>Traditional Delivery</th>
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<tbody>
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<tr>
<td>OWNER</td>
<td>CM/CMAR</td>
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<tr>
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<td>DBO</td>
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<td>PPP</td>
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<td>LUMP</td>
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Construction Management at-Risk
Fixed-Price Design-Build
Progressive Design-Build
Construction Management at Risk

Involves the Contractor Early in the Progress
GC/CM, CM/GC, CMAR

Contract
Communication

Owner

Designer

"Design-Assist" collaboration

CMAR

Trade Subcontractors

Equipment Suppliers
CMAR, CM/GC, GC/CM

Advantages
• Utilize some non-cost factors for contractor selection
• Increased collaboration
• Maintain traditional relationship with designer

Disadvantages
• No single-point accountability
• Multiple contracts for owner to manage
• Cost for construction is not known at the time of initial contract signing
# Lump Sum Design Build

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Includes Price in Selection with Little Project Definition
Lump Sum Design Build

- Owner
- Design-Build
- Risk
- Control

Contract
Communication
Lump Sum Design Build Approach

2. Define Project Concepts & Perf. Criteria
3. Produce Contract Docs at 10% - 30% Design
4. Prepare & Submit Proposal
5. Review & Recommend Selection
6. Select Design-Builder

- Review Submittals
- Conduct Field QA
- Pay Estimates
- RFIs

Final Design, Construction & QC

Accept Project

Legend:
- Owner
- Owner’s Rep
- Design-Builder
Identify the best Design-Builder partner for the Owner

**Step 1**
- Request for Qualifications (RFQ)
  - Statements of Qualifications
    - Evaluate
    - Shortlist

**Step 2**
- Request for Proposals (RFP)
  - Proposal & Interview
    - Evaluate
    - Select Design-Builder
      - Award Contract
Lump Sum Design Build

Advantages
• Lump sum price is known at contract signing
• Schedule and scope are fixed at contract signing
• Public acceptance tends to be high

Disadvantages
• Lump sum price may not reflect final project cost
• Owner involvement is limited once price is established
• Increased potential for change orders or claims if owner wants changes after contract signing
• Lengthy and costly process to develop thorough D-B procurement documents
Progressive Design Build

Traditional Delivery

- Design-Bid-Build

Alternative Delivery

- Construction Management at-Risk
- Fixed-Price Design-Build

Primarily Qualifications Based Selection
Progressive Design Build Approach

Select Design-Builder

Establish Budget

Design to 30%

Set Target Price (TP)

Design to 60%

Compare to TP

Design to 90%

Compare to TP

Design to 100%

Cost Estimates

Value Engineering

Constructability Review

Competitively Bid & Submit GMP

Approve GMP

Accept Project

Construction by Design-Builder

Owner

Design-Builder (DB)

Owner and DB
D-B bids out work packages

Work Packages P-1,2,3,4...

Equipment Packages

Work Package S-1
Structural / Mechanical

Work Package S-2
Pipelines

Work Package S-3
Civil / Site Work

Work Package S-4
Buildings

Work Package S-5
Landscaping

Work Package S-6
Electrical & I&C

Designed to meet specific project needs
Components of a Guaranteed Maximum Price (GMP)

GMP is an open book process and transparent to Owner.
Progress Design Build

Advantages

• Simple and inexpensive procurement process can be completed in a short timeframe
• Project can be implemented in phases or task orders to save time or keep the project moving
• Maximizes owner flexibility, involvement and control of the project
Progress Design Build

Disadvantages

• Cost for construction is not known at the time of initial contract signing
• Cost is determined through combination of negotiated and competitive processes
• An effective owner education program may be needed to overcome concerns with final construction cost determination
Legislation

- Design Build is permitted by ID, OR, and WA state agencies
Design Build Procurement Laws

- **Idaho**
  - DB may be used for construction, repair, or improvement of public works, buildings, places or other work

- **Oregon**
  - DB is approved for public projects.

- **Washington**
  - DB is approved for projects larger than $10M.
  - **Project Review Committee**
    - Established by Capitol Project Advisory Review Board
    - Certifies entities that wish to use DC
    - Reviews and approves projects for DB

Engage Your Legal Counsel Early in the Process
Discussion

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Subcontract & Equipment Packages

• Typically 2/3 to 3/4 of GMP
• Actual cost of competitive bids
• Minimum 3 bids per package
Design & Design Services During Construction

- All engineering and design services
- Plans & specifications
- Design services during construction
- Record drawings
Project Management & Supervision

- Project management
- Inspection
- Supervision of subs and vendors
General Conditions

- Bonds
- Insurance
- Warranty
- Field office, vehicles, chemical toilets, expendables
- Surveying & materials testing services
- Project-related Health & Safety costs
Design-Builder Contingency

• For scope gaps & omissions
• Derived from risk register and trend log
• Can include allowances
• Unspent contingency returned to Owner or shared with D-B
Fee on Cost of Work

- Design-Builder’s overhead and profit
- Negotiated or proposed prior to D-B selection
- Generally expressed as a % of “Cost of Work”
# Legislation (ID and OR)

<table>
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<th>Design-Build and Public Procurement Laws</th>
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| ID    | • The director of the department of administration, or his designee, is authorized and empowered, subject to the approval of the permanent building fund council, to employ the use of the design-build method of construction in the letting of any and all contracts for the construction, alteration, equipping, furnishing and repair of any and all buildings, improvements, or other public works of the state of Idaho. (Idaho Code §67-5711A)  
• No more than twenty percent (20%) of the DOT's annual highway construction budget for the state transportation improvement program shall be used for design-build and construction manager/general contractor contracts combined. No less than thirty percent (30%) of any design-build contract awarded shall be self-performed by the design-build firm awarded such contract. (Idaho Code § 40-904)  
• The design-build method of construction may be employed by public officials in contracts for the construction, repair, or improvement of public works, public buildings, public places or other work. (Idaho Code § 67-2309) | Contractors must be licensed with the Public Works Contractors State License Board to perform work on public projects.  
Idaho Code § 54-1902 – 1904  
Architects and civil engineers are required to have a license to perform design services.  
Idaho Code § 54-1903(h). |
| OR    | • Design-build is authorized on public projects; transportation and buildings.  
DOT toll way projects. (ORS. §§ 383.005-383.017)  
• Procurement of bridges, highways and other transportation facilities are subject to DOT authority. (OR Rev. Stat. § 279A.060(3)(b)) | DOT Procurement Process:  
Award of toll contract either by competitive process or by "private negotiation with one or more entities" or by a combination of competition and negotiation.  
Amount of the tolls and classification of the traffic using the toll way must be approved by the DOT.  
DOT contracts may be exempted from low bid requirements if the DOT finds that an exemption will not diminish competition and will result in substantial cost savings. |
### Legislation (WA)

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| WA    | - WA allows design-build for projects in excess of $10 million. RCW 39.10.300. Public entities who want to use design-build must be certified either by the Capitol Project Advisory Review Board or by the Project Review Committee as capable of self-determining the appropriate delivery method, or if the public entity is not certified, the PRC must approve the project. RCW 39.10.270-280. For pre-engineered metal buildings and parking garages, the public entity may utilize design-build regardless of the cost of the project. In addition, public entities may use design-build for projects between two and ten million dollars, subject to review by the PRC. RCW 39.10.300. The Alternative Procurement Statutes sunset on June 30, 2013.  
- The state’s general preference for competitive bids has several exceptions including emergencies and small works. In addition, general contractor/construction management contracts on projects in excess of $10 million may be awarded to "general contractors/construction manager" and two pilot projects for correctional facilities under $10 million have been authorized (RCW § 39.04.220).  
- WSDOT may use design-build for projects in excess of $10 million and for 5 pilot projects between $2 million and $5 million. RCW 47.20.780-785. | The Capitol Projects Advisory Review Board (CPARB) has established the Project Review Committee (PRC) to review and evaluate alternative procurement projects and public entities that are qualified to administer these projects. Appropriate design-build projects must meet the criteria established by the statute, and the public entity must either have in house or outside expertise in the appropriate alternative delivery method. |  

RCW § 18.08.410 — the registration requirements for architects do not affect or prevent design-build construction by registered general contractors if the structural design services are performed by a registered engineer.  

**DOT Procurement Process:** Requires DOT to develop a process for awarding design-build contracts for projects over $10 million; this process must, at a minimum, include the scope of services, prequalification requirements, criteria for evaluating technical information and project costs, contractor selection criteria and issue resolution procedures. |