ALTERNATIVE PROJECT DELIVERY DIVISION
PROGRESSIVE DESIGN-BUILD

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Progressive Design-Build (PDB)

A procurement tool that provides the following benefits on high risk, complex projects:

• Early Contractor Involvement
• Collaboration with the Design-Builder on key scope and risk issues
• Owner’s involvement in the selection of subconsultants, subcontractors, vendors and suppliers (including DBE & SWaM)
• Transparency in cost development using open-book pricing

CTB Policy Change Approved in February 2019
PDB Advantages

- Design-Builder becomes a strategic partner in planning and project definition
- Allows involvement of public and private stakeholders throughout design development
- Single point responsibility avoids Spearin liability (errors and omissions) as there is no design “handoff”
- Potential cost & schedule savings
  - Preliminary Engineering - No duplication of effort as bridging documents are not required
  - Use of early work packages (R/W acquisition and utility relocation)
- Expedited procurement
PDB Advantages for Design-Builder

- Collaborate with the Department early in project development
- Low cost to pursue
  - Primary focus is on qualifications of team
- Expedited procurement
- Reduction in risk compared to traditional D-B
- Resources are aligned with project development
- First right to price the job once selected
- Payment for developing preliminary design prior to bid
Fundamental Procurement Objective of PDB

• Keep the process as streamlined and simple as possible to pick the right team

• The right team is the one that:
  • Offers the best chance to meet the Department’s project goals and required outcomes
  • Is collaborative, transparent, innovative and reasonable
  • Has a proven track record of safely and successfully delivering similar projects on-time and on-budget
  • Is able to efficiently and effectively manage risks
Progressive Design-Build Process

1. RFQ Advertisement
2. RFQ
3. RFP
4. Phase 1A - Proof of Concept
5. Phase 1B – Project Development
6. Phase 2 – Final Design and Construction

GMP

Decision Point #1
Proof of Concept within GMP or Off Ramp

Decision Point #2
Lump Sum Price Established at 40-60% Design or Off Ramp
RFQ Process

Similar to Traditional D-B RFQ

Qualifications of Key Personnel
• Project Manager (Contractor Employee)
• Design Manager
• Project Specific Key Personnel (1 or 2)
• Lead Estimator (Contractor Employee)

Organizational Structure and Narrative
• High level – Key Personnel and pertinent disciplines only
• Team shall remain intact
• More comprehensive org chart required at RFP

Past Performance and Experience
• Design and Construction Experience on Similar Projects
• CMGC, CMAR and/or PDB Experience

Narratives on Risk or Challenges (Broad discussion. Not 3 project specific risks)
RFQ Process

• **Other Potential Evaluation Factors**
  • Safety
  • Understanding and Approach to PDB Process
  • Manpower and Equipment Resources
  • History of attaining DBE goals
  • Financial Capability/Stability
  • Self-Performance Plan
RFP Process

• **Technical Proposal Evaluation Factors**
  • **Expanded Organization Chart**
    • Members not short-listed can join short-listed teams
    • Subconsultants and subcontractors (including DBE and SWaM)
  • **Phase 1A and Phase 1B Execution Plan**
    • Management Plan
    • Design Development Plan
    • Approach to Subcontracting and Self-Performance Plan
  • **Cost Modeling and Negotiations Approach**
    • Sample Estimate
    • Open Book Pricing
RFP Process

• Technical Proposal Evaluation Factors (cont.)

  • **Schedule**
    • Phase 1A schedule
    • Early Work Packages
    • Broad Picture of the overall schedule

  • **Technical Presentation/ Interviews**
    • After Submission of Technical Proposals
    • Tests collaboration and creativity
    • Opportunity to see teams function
    • Presentation of Qualifications, Project Approach, etc.
    • Questions & Answers
Final Selection & CTB Award Example

- **Final Selection & Recommendation for Award**
  - Based on a combined score for SOQ (5%), Technical Proposal & Presentation (85%) and Phase 1A Price Proposal (10%)
  - Disproportionate price for Phase 1A efforts can be grounds for disqualification
    - Provide rational and sufficient details (man hours and cost) to support proposed compensation to match Phase 1A scope
  - **Department intends to negotiate reasonable overhead and profit (Design-Builder’s Fee) for Phase 1B and Phase 2**
    - If an agreement cannot be reached, the Department may elect to move to second highest ranked Offeror
PDB Execution - Phase 1A Proof of Concept

• Establish project scope
• Project limits
• Design Criteria
• Schedule
• Budget
• Alternative analysis of design concept
• Surveying, geotechnical or NEPA process may be initiated
• Decision Point No. 1
  • Proof of Concept within established GMP?
PDB Execution - Phase 1B Project Development

- Collaborative design and project decisions based on cost, schedule, operability, life cycle and other factors
- Ongoing and transparent cost estimates to meet Owner’s budget (Open Book Pricing)
- Formal commercial proposal for Phase 2 services
- Early Work Packages (survey, geotechnical, utility relocation, R/W acquisition…)
- Overall contract price often provided when design is 40-60% complete
- Decision Point No. 2
  - **Lump Sum Price below GMP?**
PDB Execution – Phase 2 Final Design and Construction

- Start when Lump Sum Price has been agreed upon
- Finalize requirements
- Design completion
- Construction
Opinion of Probable Construction Cost (OPCC)

- Process involves non-binding estimates developed by the Design-Builder during Phase 1B pricing milestones
  - Typically Occur at 30% and 60% design development
    - Milestones may vary based on level of design when Design-Builder is procured
    - Milestones may vary based on project complexity
    - DBE goal for Phase 2 established at approximately 60% design milestone
  - Utilizes Independent Cost Estimator (ICE) to validate Design-Builder’s estimate
  - Allows reconciliation of pricing disparity among estimates
- Considered a good-faith estimate of construction costs
VDOT’s OPCC Milestone Process

1) Cost Model/Document Assumptions
   • Means, methods, risks and assumptions

1A) Estimating Instructions
   • D-B responsible for developing instructions for estimating teams
   • Establish estimating practices, guidelines and estimating software

2) Design-Builder Prepares OPCC Package
   • Prepared for each pricing milestone
   • Provided to VDOT PM, ICE, Estimating Engineer & FHWA

3) Milestone OPCC Workshop led by Design-Builder
   • Allows all parties to understand work being estimated
   • Discuss assumptions on means and methods & construction sequencing
   • Allows all parties to identify errors, omissions, risks and assigned time/cost impacts
VDOT’s OPCC Milestone Process (cont.)

4) Preparation and Submission of OPCC and Estimates
   • OPCC Package updated based on design and risk workshops
   • Cost estimates independently prepared by D-B, ICE and EE
   • Should be bottom-up, production based, contractor-style estimate

5) Preparation of Variance Report by VDOT
   • Design-Builder’s OPCC compared with the ICE
   • Variance report does not show the Owner’s Estimate

6) Pricing Reconciliation Meeting
   • Scheduled at each pricing milestone
   • Goal is to reconcile pricing differences between D-B and ICE
   • Open Book process
PDB – Open Book Pricing

Throughout Phase 1B, the Design-Builder will be expected to share bidding information with the project team (open book pricing) to facilitate price discussions and ensure the Department is receiving a fair price for the work.
PDB – Open Book Pricing

- Collaborative effort between Owner and Design-Builder
- Ongoing and transparent cost estimating process
  - Goal is to stay below established GMP
- Similar to existing escrow information
  - Real time quotes from Design-Builder, subcontractors and subconsultants
    - Quantity take-offs
    - Crew size and shifts
    - Equipment
    - Direct labor
    - Indirect costs
    - Bond rates
    - Insurance costs
    - Mark-up and contingency
- Better understanding of risk
- High confidence in price throughout process
Owner’s Off-Ramp Rights

- Operates as a termination for convenience
- Commercial terms generally include:
  - Right to use work product
    - Design-Builder is paid for services rendered; VDOT owns design
  - Right to contract directly with designer to finish the design
  - Right to use any other type of delivery system
Route 15/29 Improvements at Vint Hill
Culpeper District, Chemung/Volkert
Questions and Thank You!!

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