PROVING OUR PROFESSIONALISM

49TH ANNUAL CONFERENCE
MAY 22-25, 2016
ORLANDO, FLORIDA

Design-Build Best Practices
Joanne Flick, CPPO, CPPB
AGENDA

- Know Your Subject
- Design Criteria Package
- Evaluation Criteria
- Contract Structure
- Risk Management
DESIGN-BUILD
WHAT IS IT?

- Rediscovered approach to project delivery
- Team of qualified design and construction professionals
- Operating under a single contract
- Single source accountability
PROJECT DELIVERY SYSTEMS

Design-Bid-Build

- A/E prepared plans and specifications
- Low dollar bid from general contractor
- Separate contracts from owner for design and construction

OWNER

ARCHITECT/ENGINEER

DESIGN SUBS

BUILDER/GC

TRADES & SUPPLIERS
PROJECT DELIVERY SYSTEMS

Construction Management at Risk (CM@R)

- Select Designer
- Select CM Based on Qualifications
- Two separate Companies under Contract
- CM Responsible for Delivery of Construction Services
PROJECT DELIVERY SYSTEMS

Design Build

- Design and construction under a single contract
- Construction may begin before design is complete
WHAT’S DIFFERENT

- Singular vs. multiple responsibility
- Quality
- Cost savings
- Time savings
- Early knowledge of firm costs
- Risk allocation/management
STATE STATUTES

- CCNA FS 287.055
  - Competitive Proposals
  - Qualification-Based Selection

- Defines: design-build firm
  - design-build contract
  - design criteria package
  - design criteria professional
  - design-build

- Design Criteria Package
- Short listing based on qualifications
- Evaluation Criteria published (Competitive Proposals)
DESIGN-BUILD DEFINED

Design-Build is a method of project delivery in which one entity (design-builder) forges a single contract with the owner to provide for architectural/engineering design services and construction services.
WHO IS A DESIGN-BUILDER?

- One firm provides design and construction
- Statutory definition of Design-Builder 287.055
  “…Partnership, corporation or other legal entity that:
  1. Is certified … to engage in contracting…or”
  2. Is certified … to practice engineering … architecture …
     landscape architecture
Types of Design-Build Firms

- Engineer/Architect led teams
- General Contractor led teams
- Joint Venture: Engineer/GC
- Integrated firms
ENGINEER/ARCHITECT LED TEAM

- Contract held by engineer/architect
- Can obtain professional liability
- Advantage: Contracting with firm bound by ethics
- Disadvantage: Does not have largest financial stake in contract
- 13% of DB Contracts Awarded to E/A Led Team
GENERAL CONTRACTOR LED TEAM

- Contract held by GC (or CM)
- Can obtain bond
- Advantages: Largest financial stake in project
- Disadvantages:
  - Decisions could be based more on cost
  - May not be able to obtain professional liability (Contractor’s or DB Professional Liability)
- 54% of DB Contracts Awarded to Contractor Led Team
JOINT VENTURE: ENGINEER/GC

- Legally recognized firm
- Insurance in name of joint venture
- Bond in name of joint venture
- Advantages: Firms team for specific experience
- Disadvantages: “Newlyweds”
- 5% of DB Contracts Awarded to Joint Venture Teams
INTEGRATED FIRMS

- One firm holds both engineering registration and general contractors license
- Insurance and bonds from integrated firm
- Advantage: All expertise in one firm
- Disadvantage: May be experienced in design-build delivery, may not have project specific experience
- 28% of DB Contracts Awarded to Integrated Firms
DESIGN CRITERIA PACKAGE

- Concise
- Performance-oriented drawings or specifications
- Sufficient to prepare a response
- Or to permit an agency to enter into a negotiated design-build contract. ...

“...performance-based criteria
- legal description of the site
- survey information
- interior space requirements
- material quality standards
- schematic layouts
- conceptual design criteria
- cost or budget estimates
- Schedules
- site development requirements
- utilities,
- stormwater
- parking
DESIGN CRITERIA PACKAGE

- Signed and sealed
- A/E who develops cannot be on DB team
- Physical characteristics of proposed facility
- Desired outcome of proposed facility
- Standards, Substantiation
- NOT the Scope of Services
  - Scope = How
  - Design-Criteria = What
Design Criteria vs. Scope of Work

**Design Criteria**
- Descriptive
- Owner thru DCP
- Quantity (maybe)
- Appearance (maybe)
- Function
- Requirements
- Goal / Vision

**Scope of Work & General Conditions**
- Reviews
- Submittals
- Inspections
- Substantiation / Warranty
- Changes to the Work
- Defining Contract Documents
- Document Order of Precedence
- Establishing GMP
- Differing Site Conditions
- Insurance Requirements
- Dispute Resolution
DESIGN CRITERIA VS. SPECIFICATIONS

**Design Criteria**
- From Owner
- Required
- Descriptive
- General
- Challenge

**Specifications**
- By Design Builder
- Optional
- Prescriptive
- Specific
- Solution
DESIGN CRITERIA – 3 WAR STORIES

- South Water Reclamation Facility
- Temporary Jail Housing
- Temporary Jail Housing Change Orders
EVALUATION CRITERIA
EVERY PROJECT IS UNIQUE!

- Identify challenges in Design Criteria Package
- Reflect challenges in Evaluation Criteria
  - Permitting
  - Schedule
  - Occupied Buildings
  - Ongoing Operations
  - Function
  - Appearance
- Include Owner’s goals
  - Local contractor participation
  - Apprenticeships
  - Public Participation
Evaluating the Proposals

- Publish Evaluation Criteria in Solicitation Documents
- Explain Scoring & Selection Method
  - Numeric
  - Expectations
  - Balancing Price & Technical Proposal
  - Adjectives as Scores
  - Subjective vs. Objective methods/criteria
- Assign relative importance to each criteria
- Apply consistently
REQUEST FOR QUALIFICATIONS

- Qualifications/Attributes
- Similar Projects
- The Team, the Organization Chart
- The Approach
- Project Manager’s experience with Design-Build
- Experience and attributes of a superior Design Builder/Team
- Project challenges/goals
- Socio-economic goals
TECHNICAL PROPOSAL

- What are you trying to accomplish?
- How will the Proposer accomplish it?
- Specific to each project
- Examples:
  - Ensuring indoor air quality
  - Schedule
  - Innovative design and/or construction methods
  - Constrained workspace/occupied building
  - QA/QC
PRICE PROPOSAL

- Separate Envelope suggested
- Lump sum
- GMP
- Unit Price

Evaluating:
- Lowest to Highest Price
- “Low Bid” Design-Build
- % over Lowest Price
- Factoring in Technical Proposal Score
SCORING PRICE PROPOSAL
% OVER LOWEST $

- Lowest priced proposal received maximum weighted score for price
- Other proposals receive % of weighted score based on % difference between lowest proposal and the other proposals.
- Example:
  - Vendor A submits lowest proposal $400,000
  - Vendor B proposes $500,000
  - Vendor C proposes $475,000
## SCORING PRICE PROPOSAL

### % OVER LOWEST $

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Score</th>
<th>Lowest Price Proposal</th>
<th>Proposal Price</th>
<th>Maximum Score X (Lowest Price Proposal / Proposal Price)</th>
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<tr>
<td>A</td>
<td>500</td>
<td>$400,000</td>
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<tr>
<td>C</td>
<td>500</td>
<td>$475,000</td>
<td>$400,000</td>
<td>421</td>
</tr>
</tbody>
</table>

- Vendor A: $500 \times \left( \frac{$400,000}{\$400,000} \right) = 500 \times 1 = 500$
- Vendor B: $500 \times \left( \frac{$400,000}{\$500,000} \right) = 500 \times 0.8 = 400$
- Vendor C: $500 \times \left( \frac{$400,000}{\$475,000} \right) = 500 \times 0.84 = 421$
SCORING PRICE PROPOSAL
% OVER LOWEST $

- Challenges:
  - Less qualified proposer awarded
  - Low ball put all others at a disadvantage
  - Ok if prices are close
    - Don’t know!
  - Compares prices to each other, not a standard/estimate
BEST VALUE

- Price proposal factored by technical proposal score
- Price relative to technical proposal
- Not just compared to other price proposals
- May also factor qualifications score
BEST VALUE FORMULA

\[
\frac{\text{Technical Proposal Score}}{\text{Technical Proposal Weight}} = \text{Best Value Ratio (BVR)}
\]

\[
\text{Best Value Ratio} \times \text{Price Weight} = \text{Best Value Factor (BVF)}
\]

\[
\text{Best Value Factor} \times \frac{\text{Lowest Price}}{\text{Proposal Price}} = \text{Best Value Price Score}
\]
BEST VALUE EXAMPLE

Assumptions:

Perfect score = 500
Qualifications 30% of total score
Tech Proposal 40% of total score
Price Proposal 30% of total score
Short List 3 Proposals based on Qualifications score
Factoring Price by Technical (not qualifications)
## BEST VALUE EXAMPLE

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Qualifications</th>
<th>Technical</th>
<th>Price</th>
</tr>
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<tbody>
<tr>
<td>A</td>
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<td>B</td>
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<tr>
<td>C</td>
<td>390</td>
<td>470</td>
<td>$475,000</td>
</tr>
</tbody>
</table>
BEST VALUE EXAMPLE

Vendor A

350 Tech Score = .70 BVR
500 Tech Score Point

.70 BVR x 500 Price Weight = 350 BVF
350 BVF x ($400K lowest / $400K proposal) =
350 x 1 = 350 Price Score
BEST VALUE EXAMPLE

Vendor B

425 Tech Score = .85 BVR
500 Tech Score Point

.85 BVR x 500 Price Weight = 425 BVF
425 BVF x ($400K lowest / $500K proposal) =
425 x .8 = 340 Price Score
BEST VALUE EXAMPLE

Vendor C

470 Tech Score = .94 BVR

500 Tech Score Point

.94 BVR x 500 Price Weight = 470 BVF

470 BVF x ($400K lowest / $475K proposal) =

470 x .84 = 394.8 (rounded to 395) Price Score
# BEST VALUE EXAMPLE

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### Final Rankings

% over lowest price

<table>
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<tr>
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<th>QUALS X 30%</th>
<th>TECHNICAL</th>
<th>TECH X 40%</th>
<th>PRICE</th>
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<tbody>
<tr>
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<td>375</td>
<td>112.5</td>
<td>425</td>
<td>170</td>
<td>400</td>
<td>120</td>
<td>384.5</td>
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<td>C</td>
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<td>117</td>
<td>470</td>
<td>188</td>
<td>421</td>
<td>126.3</td>
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### Best Value Applying Technical Score

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CONTRACT STRUCTURE
**Contract Structure**

- Reporting
- Owner Direct Purchases
- Cost Savings Clauses
- Early Completion Incentives
- Liquidated Damages
- OCIP
CONTRACT STRUCTURE - PRICE

- Lump Sum
- Unit Price
- Guaranteed Maximum Price (GMP)
CONTRACT STRUCTURE

Form of Contract
Scope of Work
General Conditions
Ownership of Design Documents
Design Review
Differing Site Conditions
Warranty Issues
Dispute Resolution
Suspension & Termination
Risk Management
DESIGN/CONSTRUCTION RISKS

- Economic Loss, Poor Performance
- Personal Injury, Property Damage
- Force Majeure
- Unforeseen Site Conditions
- Design Deficiencies
- Schedule
Risk Management

- Risk assigned to party best able to control it
- Risk = $
- Shifting all risk to DB results in
  - Higher contract cost
  - Change order disputes
  - Litigation
- Misallocation of risk leading cause of disputes
RISK ALLOCATION PROFILE

1. Identify project risks
2. Which risks retained by Owner
3. Which risks transferred to DB
   Pricing impacts
4. Which risks transferred to subs/other 3rd parties
5. Development of insurance program
# Risk Assessment

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<th>Design-Build</th>
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<td>Owner</td>
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<td>D-B</td>
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**FAPPO**
## Risk Assessment

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Insurance & Bonding

- Traditionally, separate responsibility for design / construction
- Professional Liability (E & O) for design-builders
- Commercial General Liability (CGL)
- Auto Liability
- Builder’s Risk
- Performance Bond
- Payment Bond
SUMMARY
Be the SME (Know Your Stuff!)
- 3 major project delivery methods
- CCNA review
  - Types of Solicitations
  - Definitions
- Various DB firm structures

Design Criteria
- What it is
- What it ain’t
- 3 war stories
Evaluation Criteria
- Qualifications
- Technical Proposals
- Price Proposals
  - Examples

Contract Structure
- Contract Elements
- Price Structure

Risk Management
- Types of risk
- Management of risk
- Risk profile
- Bonds/Insurance
QUESTIONS?