DESIGN-BUILD PROCEDURES MANUAL

APPENDIX C

SAMPLE

ORIENTATION - TRAINING PRESENTATION
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Design-Build

Orientation on Design-Build in Transportation and NYSDOT Design-Build Process

Updated July, 2005

NYSDOT Design-Build Training

Three Sessions

First: Orientation on NYSDOT DB Process
- Part I: Overview of Design-Build
- Part II: NYSDOT Design-Build Process

Second: Technical – Procurement

Third: Technical – Award to Contract Closeout

NYSDOT Design-Build Training

Three Sessions

*First: Orientation on NYSDOT DB Process
- Part I: Overview of Design-Build
- Part II: NYSDOT Design-Build Process

Second: Technical – Procurement

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* Current Orientation Training
Part I
Overview of Design-Build

Design-Build through the Ages

- The Great Pyramids
- The Parthenon
- The Great Wall of China
- The Cathedrals of Europe
- The Brooklyn Bridge

Robert McManamy, Editor-in-Chief, Design-Build

The Owner's Approach

- The Design-Build Decision
- Procurement Strategy Development
- Procurement Process Development
- Evaluation & Selection
- Contract Administration
The Owner's Approach

- The Design-Build Decision
- Procurement Strategy Development
- Procurement Process Development
- Evaluation & Selection
- Contract Administration

The Design-Build Decision

Traditional
- Big Projects Split ...“Spread the Work”
- Separate Designer and Contractor
- Designer ... “Mini-Brooks Bill” (QBS)
- Full Design Review
- Owner Owns Design
- Contractor ... “Low Bid”
- Owner Manages Interfaces
- Owner QC / QA
- Changes & Claims & Litigation

The Design-Build Decision

Future Industry Trends

- Alternate Delivery Techniques
- Prequalification
- Source Selection (Best Value) & QBS
- Packaging
- Financing
- Warranties & Long-Term Maintenance
- Design-Build & CM at Risk
- Contractor QC / QA
- Incentives ... Award Fees
- Trust ... Partnering
The Design-Build Decision

Alternative Delivery Methods

- Design-Bid-Build
  - A+B
  - Warranties
  - Incentive
  - Lane Rental
  - Lump Sum
  - Time Value
- CM at Risk
  - CM / GC
- Design-Build
  - DBOM
  - Low Bid Design-Build
  - Best Value Design-Build
  - QBS Design-Build

The Design-Build Decision

Reasons for Design-Build

- Early Completion
- Lower Cost & Certainty of Final Cost
- Increased Quality
- Innovation
- Available Owner Staffing
- Less Management Effort
- Less Conflict

The Design-Build Decision

Benefits of Design-Build

- Single Source Responsibility / Accountability
- Less Management / Coordination by Owner
- Avoid Adversarial Interface / Disputes between Design & Construction
  - Change Orders Reduced
  - Claims Reduced
- Improved Risk Management
- Time Savings
- Cost: Savings / Known Early / Certainty
- Increase in Quality
  - Innovation / Creativity
  - Maximize Strength of Contractor
The Design-Build Decision
Contractor Concerns

- “Design-Build only works on ‘big’ projects.”
- “The ‘big’ contractors will take all the work.”
- “Won’t be able to get a fair subcontract price ... I’ll be squeezed”
- “Don’t want to be responsible for design or MPT or quality.”

The Design-Build Decision
Contractor Concerns (continued) ... but

- “If I could have designed this ...”
- “I do quality work ... I’m offended by the implication, that I can’t be trusted!”
- “We take ‘pride’ in our construction.”
- “I welcome the responsibility to plan, design, construct and control this project.”

The Design-Build Decision
Owner Concerns

- #1: “Quality.”
- “I can’t trust a contractor.”
- “My job is to protect the public trust and safety.”
- “We are the only ones that can assure the project is done right.”
- “We’ll lose control.”
The Design-Build Decision
Trends (Owners)

- Faster, Better, Less Cost
- Less Conflict
- Efficient Management
- Seeking More Innovation
- Prequalifying & Shortlisting
- Selecting on “Best Value”
- Sharing Risks & Releasing Control
- Going to “Design-Build”

The Design-Build Decision
Recent Study

- 21 Highway Projects
  - $83M – $1.3B
- Findings:
  - 76% completed ahead of schedule
  - 100% ahead of DBB
  - 1 – 4% growth (5 – 10% DBB)
  - 38% paid stipends
  - 100% owner satisfaction

The Owner’s Approach

- The Design-Build Decision
- Procurement Strategy Development
- Procurement Process Development
- Evaluation & Selection
- Contract Administration
Design-Build Procurement

Getting Started ... The Process of Developing a DB Procurement Strategy

You can't do enough training ... including designers and contractors ... it's new to them too!
Getting Started ... The Process of Developing a DB Procurement Strategy

Involvement in the Process Builds "Ownership"

Examples:
- FHWA
- Coast Guard
- RPO
- Wildlife; Fish
- Cities
- Businesses
- Counties
- Land Owners
- COE / EPA
- State DEP
- Neighborhood Communities

Getting Started ... The Process of Developing a DB Procurement Strategy

Key to the Strategy!
"Guides Every Decision"

Risk Analysis

DBPM, App C - Sample Orientation
Training Presentation 8
Getting Started ... The Process of Developing a DB Procurement Strategy

There are many ways to contract for Design-Build
... some better than others

Understanding Contracting Options

- Private Sector vs. Public Sector
- State and Federal Law ... and Rules and Regs
- Options ... Some Examples
  1. Competitive Bids (low price)
  2. Competitive Bids with High Responsibility Standards
  3. Competitive Bids with Alternative Proposals
  4. Price & Other Factors (without discussions or BAFO)
  5. Price after Discussions and BAFO
  6. Price & Other Factors after Discussions & BAFO ... i.e., Best Value
  7. OBS (lowest rated proposer) ... Two Phases
  8. Sole Source Negotiating
- Project Goals & Owner Objectives

Getting Started ... The Process of Developing a DB Procurement Strategy

Challenges
- Tradition & Culture
  ... Managing Change
  ... Traditional Rules & Regulations
- Building Trust
- Instilling Teamwork
- Transfer of Control
  ... Fear of Loss of Control
- Education & Training
- Stakeholder Concerns
  ... and Involvement
- Allocating Risks
- Timely Decisions ... Resolve Issues
- Communicate & Communicate
Deciding on a Design-Build Approach

- Every Design-Build Project is Unique

- Variations in Approach to DB:
  - Bidding to Proposing to Negotiating
  - Low Price to Best Value to QBS to Sole Source
  - Significant to Little to No Preliminary Design
  - Traditional to Shared to No Owner's Risk
  - Prescriptive or Performance Specifications
Percentage of Design (As Included in Design-Build RFP)

- Usually Qualifications Based Selection or Best Value Procurement
- Typically Low Bid Based Procurement

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<thead>
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<th>Percentage of Design</th>
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Bridging

Cost Influence Curve

- QBS Procurement Strategy
- High Procurement
- High Design
- High Project Expenditures
- Low Ability to Influence Cost
- Low Construction
- Low Start-up

Specifications for Design-Build

- Prescriptive vs. Performance
  - Prescriptive (traditional)
    - “How to” do it
  - Performance
    - Define “required results”
Performance Box

Performance Specifications ... examples

Getting Started ... The Process of Developing a DB Procurement Strategy

Other Approaches
- Owner’s Role (conversely, Design-Builder’s role) in:
  - QC and QA
  - Design Review
  - Public Relations
  - Permits
- Partnering
- Incentives (Award Fees)
- Fast-Track ... Early Construction
- Alternate Proposals
Getting Started ... The Process of Developing a DB Procurement Strategy

- Design-Build Orientation
- Identify Stakeholders
- Develop Project Goals
- Assess & Allocate Risk
- Understand Contract Options & Challenges
- Decide on Design-Build Approach
- Procurement Process Outline
- RFQ & RFP Evaluation Criteria

Other Approaches ... continued
- Financing
- Warranties/Maintenance
- Utility Agreements
  - Relocation by DB
- Concurrent ROW
  - Executed by DB
- RR Coordination
- Community Gateways
- Wrap-up Insurance
- Stipends
- Price Centers

Getting Started ... The Process of Developing a DB Procurement Strategy

- Additional Approaches ... and challenges
  - Organization to Procure
    - It's Different
  - RFP is the Product
  - Change in Traditions/Culture
    - Managing vs. Engineering
    - Defining vs. Problem Solving
  - Continuous Creativity

Organization Procurement Process ... Typical

- Senior DOT Official
- DOT Project Manager
- Management Team
- Program Manager
- DB Advisors
- Public Relations
- Engineering
- Procurement Management
- Project Support Management
- Environmental Management
- Performance Specifications
- Prelim. Engr.
- RFQ & RFP
- Contract
- Est. & Sel.
- Utilities
- ROW
- Railroad
Getting Started ... The Process of Developing a DB Procurement Strategy

Typical Steps
- Request for Letters of Interest (RLOI)
- Request for Qualifications (RFQ)
- Informational Meeting
- Short Listing
- Review Draft Request for Proposals (RFP)
- Issue RFP
- Technical / Alternate Concepts Review
- Proposal Evaluation (incl. Alt. Proposals)
- Selection
- Award / Post Award Negotiations
- Contract Execution / Notice to Proceed

Getting Started ... The Process of Developing a DB Procurement Strategy

Starts Preparation of:
- Evaluation & Selection Plans
- Request for Letters of Interest (RLOI)
- Informational Meeting
- Request for Qualifications (RFQ)
- Request for Proposals (RFP)
### Getting Started ... The Process of Developing a DB Procurement Strategy

<table>
<thead>
<tr>
<th>Design-Build Orientation</th>
<th>Products of the Procurement Strategy Workshop:</th>
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<tbody>
<tr>
<td>Identify Stakeholders</td>
<td>• List of Stakeholders (with significance)</td>
</tr>
<tr>
<td>Develop Project Goals</td>
<td>• Project Goals</td>
</tr>
<tr>
<td>Assess &amp; Allocate Risk</td>
<td>• Risk Identification, Assessment, Mitigation &amp; Allocation</td>
</tr>
<tr>
<td>Understand Contract Options &amp; Challenges</td>
<td>• Specific Project Approaches (including specific performance specs)</td>
</tr>
<tr>
<td>Decide on Design-Build Approach</td>
<td>• Scope of Work for DB Contract</td>
</tr>
<tr>
<td>Procurement Process Outline</td>
<td>• RFQ and RFP Evaluation Factors</td>
</tr>
<tr>
<td>RFQ &amp; RFP Evaluation Criteria</td>
<td>• Future Tasks</td>
</tr>
</tbody>
</table>

### The Owner's Approach

- The Design-Build Decision
- Procurement Strategy Development
- **Procurement Process Development**
- Evaluation & Selection
- Contract Administration

### FHWA and Design-Build

**FHWA Design-Build Regulations allow:****

- Two-Phase Process: I: Short-Listing; II: Proposals (quality & price)
- Best Value (any combination of quality & price)
- Performance Specs and Minimum PD / PE
- Draft RFP Review; Alternate Proposals; Stipends
- Adjudicial Evaluation; Tradeoffs; Discussions; Revised Proposals
- Negotiations after Selection and Prior to Contract Execution
- ROW (by Agency or DB’er) after Award; Utility Relocations by DB’er
- QC / Partial QA by Design-Builder (design & construction)
- QA Oversight by Owner
- Long and Short Term Warranties
- Flexibility in DBE Procedures
**FHWA Practices**

**FHWA Design-Build Regulations**

- Projects > $50 Million; SEP-14 Below or Outside
- Final NEPA Decision Prior to Issuing RFP
- Approval of RFP Document by FHWA Division Administrator... Project Authorization
- Verification and IA Testing by STD

**anticipate under TEA-21 Reauthorization:**
- No Limitation on Size of Project
- QBS Design-Build as Experimental Procurement (House)
- Relaxation of NEPA Restriction (Senate)

**Transit Design-Build**

**FTA Circular 4220.1E and BPPM allow:**

- Circular 4220.1E (very broad and flexible)
  - Design-Build Delivery Method
  - Best Value Selection
  - Competitive Proposal / Request for Proposals Procurement
  - QBS Design-Build (restricted)
  - Options
  - Basically, NO Restrictions on Procurement Details
- Best Practices Procurement Manual (BPPM)
  - Discourages Point Scoring and Equations
  - Encourages Adjectival Grading and Tradeoff Analysis
  - Discussions and Best and Final Offers
  - Factually Based Selection Decision

**Design-Build Procurement**

- Diagram showing the process of design-build procurement.
Steps in the Procurement Process ... Recommended

- Request for Letters of Interest (RLOI)
- Request for Qualifications (RFQ)
- Informational Meeting
- Short Listing
- Review Draft Request for Proposals (RFP)
- Issue RFP
- Technical and/or Alternate Concepts Review
- Proposal Evaluation (incl. Alternate Proposals)
- Selection / Award / Post Award Negotiation
- Contract Execution / Notice to Proceed

The DB Procurement Process ... What's Different:
What's Needed or Required?

- Processes and Procedures that:
  - Are Consistent with:
    - FHWA Regulations
    - State Law & Regulations
  - Incorporate “Best Practices” of Design-Build Procurement

The DB Procurement Process ... What's Different?

- Basic Documents are:
  - Request for Letters of Interest (RLOI)
  - Request for Qualifications (RFQ)
  - Request for Proposals (RFP)
Request for Letters of Interest (RLOI) ... Elements

- Contents
  - Brief Project Description and Scope of Work
  - Brief Description of Procurement Process
  - "Teamwork" Statement: "... seeking Design-Builders ... committed to quality, have proven experience in design and construction of ... will bring innovative design-build approaches to ensure timely completion ... willing to partner with Department for the mutual success of the Project"

- Purpose
  - Announces Project
  - Defines Project
  - Stimulates Interest
  - Initiate Communication & Info Exchange

Request for Qualifications (RFQ) ... Elements

- Brief Project Description
- Outline of Overall Procurement Process
  - Anticipated E&S Criteria for Proposals
- "Rules of the Game"
- Evaluation and Short List Criteria
- Information to Submit with Statement of Qualifications (SOQ)
  - Forms

The DB Procurement Process ... What's Different?

- RFQ Evaluation Factors:
  - (Pass/Fail) Legal
  - (Pass/Fail) Financial
  - (Pass/Fail) Responsiveness
  - Organization and Key Managers
    - Experience
    - Past Performance
  - Backlog / Capacity
  - Project Understanding / Plan
The Request for Proposals (RFP) ... Elements

- Instructions to Proposers
- Contract Documents
  - Agreement
  - Project Scope
  - Federal Provisions
  - DB Standard Specifications (DB Section 100)
  - DB Special Provisions (project)
  - DB Standard Specifications (Construction & Materials)
  - Performance Specifications & Design Criteria
  - Requirements (i.e., utilities; environmental)
  - Preliminary Engineering & Design
- Reference Documents (Project Data & Info.)

Instructions to Proposers

- Factors to be Evaluated
- What to Submit (and when)
- Forms
- Criteria Guiding Evaluation
  - "What's Important to Owner"
- Ratings Guidelines
- How Selection will be Made
- Stipend

The Owner's Approach

- The Design-Build Decision
- Procurement Strategy Development
- Procurement Process Development
- Evaluation & Selection
- Contract Administration
The Evaluation & Selection Process ... What's Different?

- Selection Committees:
  - Unique to Project
  - Legal & Financial (comprehensive)
  - Use of Evaluation Teams (subject matter experts ... could include Department, PM consultant, stakeholder, and/or other outside DB experts)

The Evaluation & Selection Process ... What's Different?

- The Evaluation Process uses:
  - Clarifications & Communications
  - Adjectival Rating Method
  - Recommendations by Evaluation Teams
  - Consensus of Committees for:
    - Quality Ratings for Each Technical Evaluation Factor
    - Overall Technical Quality Rating for Each Proposal
  - Discussions / Final Proposal Revision (i.e., BAFO)
  - Best Value Selection

EXCEPTIONAL – The Proposer has demonstrated an approach that is considered to significantly exceed stated criteria in a way that is beneficial to the Department. This rating indicates a consistently outstanding level of quality, with very little risk that this Proposer would fail to meet the requirements of the solicitation. There are essentially no weaknesses.

GOOD – The Proposer has demonstrated an approach that is considered to exceed stated criteria. The rating indicates a generally better than acceptable level of quality, with very little risk that this Proposer would fail to meet the requirements of the solicitation. There are few weaknesses.

ACCEPTABLE – The Proposer has demonstrated an approach that is considered to meet the stated criteria. This rating indicates an acceptable level of quality. The Proposal demonstrates a reasonable probability of success. Weaknesses are minor and can be readily corrected.

POTENTIAL TO BECOME ACCEPTABLE – The Proposer has demonstrated an approach that fails to meet stated criteria as there are weaknesses and/or deficiencies, but they are susceptible to correction through discussion. The response is considered marginal in terms of the basic content and/or amount of information provided for evaluation but overall the Proposer is capable of providing an acceptable or better Proposal.

UNACCEPTABLE – The Proposer has demonstrated an approach that indicates significant weaknesses and/or unacceptable quality. The Proposal fails to meet the stated criteria and lacks essential information and is conflicting and/or unproductive. There is no reasonable likelihood of success; weaknesses are so major and/or extensive that a major revision to the Proposal would be necessary.

In assigning ratings the Department may assign “+” or “–” (such as “Exceptional –”, “Good +”, “Acceptable –”) to the rating to more clearly differentiate between the proposals.
The Evaluation & Selection Process ... What’s Different?

- Evaluation Process Guided by:
  - Evaluation & Short-List Plan (RFQ)
  - Evaluation & Selection Plan (RFP)
- A Procurement Management Team to Manage Actual Evaluation Process

“RFP Evaluation & Selection Plans”

- Critical to the Discipline, Confidentiality, Fairness, Credibility & Dependability of the Process
- Modeled after: Federal “Source Selection Plan”
- Contains all the Functions, Procedures & Guidelines for Everyone in the Process

E&S Plans ... Examples
The Owner's Approach

- The Design-Build Decision
- Procurement Strategy Development
- Procurement Process Development
- Evaluation & Selection
- Contract Administration

Keys to Successful Administration

- Organize to Do What You've Said
  - Staff (consistent with QA responsibility)
- Be Consistent with the Concepts
  - Partnering
  - Fast Track
  - DB QC - NYS DOT QA [Oversight] (design & construction)
- People Continuity
Keys to Successful Administration (Continued)

- Preserve the Trust
- Foster Teamwork
- Be Fair & Firm
- Resolve Issues
- Don’t Slip Back to Traditional
- More Specifics on NYSDOT Administration Under Part II

Case Studies

Utah’s I-15
Salt Lake City
A Design-Build Project
UDOT’s Program Objectives

- Transform UDOT
- Resolve Issues ... “No Litigation”
- Meet UDOT Staffing Goals
- Reduce Project Management by UDOT
- Address Public Desires

The public would prefer a greater level of impact in exchange for a shorter construction duration.

I-15 Project Goals

- TIME
  - Replace Structures Before Failure
  - Public Opinion ... “Faster”
  - 2002 Winter Olympics ... “An End Date”
- QUALITY
  - High...Seismic
  - Safe...Maintainable
- COST
  - Reasonable
**TIME** (I-15)

- 4 1/2 Years! (Demanding public & 2002 Olympics & Safety)
- Must provide FLEXIBILITY for Design-Builder to “Plan, Design, Construct, and Control” project
- FLEXIBILITY Incorporated by:
  - One contractor
  - Contractor quality control/quality assurance
  - Early construction
    - design oversight
    - ”over the shoulder”

**QUALITY** (I-15)

- Traditional Techniques not consistent with D-B
- Quality Incorporated by: “Quality Hooks”
  - Design-Build with Performance Specs (Up front value engineering)
  - Best Value (price and other factors)
  - Long Term Maintenance/Warranty
  - ISO 9001
  - Award Fee ($50 M)
  - Stipends ($950 K)

**I-15 Performance Specifications**

- Drainage
- Roadway Geometrics
- Geotechnical
- Water Quality
- Lighting
- Pavements
- Signing
- Traffic Signals
- Structures
- Maintenance of Traffic (i.e., MPT)
- Maintenance During Construction
- Maintenance After Construction
- ATMS
- Concrete Barriers
- Landscape & Aesthetics
Lighting... Performance Specification

- General Criteria
  - Design & Construct a Durable Lighting System
  - Provide Appropriate Illumination
  - Avoid Light Pollution Outside Corridor
  - Avoids Disability and Discomfort Glare to Users
  - Provide for Ease of Maintenance

- Specific Criteria
  - AASHTO Guides; National Electric Code
  - Incorporate ATMS & Aesthetic Requirements
  - Minimize Lane Closures During Maintenance
  - Uniformity Ratio of 3:1
  - Average Lux of 6.5 to 8.6 (maximum 1.85)
  - Lamp Types as Outlined in FEIS
  - Use Sylvania, Phillips or GE Lamps!!

Award Fee

- Philosophy & Benefits:
  - Motivates Desired Performance in:
    - Schedule/Completion
    - Quality of Work
    - Management
    - Community Relations & MPT
  - Positive Means for Achieving Results
    - Financial Incentive to Contractor
    - Consistent with Partnering
  - Incentivize Performance Throughout Schedule (not just at end)
  - Proven and Successful

Stipends

- $950,000 to Unsuccessful Proposers
- Recognition of Proposer’s Investment
- Facilitates Quality in the Proposal
- Ownership of Concepts
- Encourages Participation in Next DB Project
COST (I-15)

- Increased Efficiency (design & construction)
- Economies of Scale
- Less Uncertainties/Contingencies
- Standardization
- Time is Money
- Premium for Compressed Schedule

More Strategy (I-15)

- Utah Laws
  - Rules
- Federal 23CFR & FHWA
  - Special Experimental Project 14 (SEP-14)
  - MOU
- Risk Analysis/Risk Allocation

- Up front efforts (jump start D-B)
  - 100% Designs for Early Construction
  - Refinements to Roadway Geometry
  - Geotechnical Investigations
  - Utilities
  - Drainage
  - Railroads
  - ROW (Right of Way)
  - Maintenance of Traffic (i.e., MPT)
  - Aesthetics
  - Environmental Permits

Risk Allocation (I-15)

<table>
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<tr>
<th>Risk-Responsibility Category</th>
<th>“Traditional” Design-Bid-Build</th>
<th>Typical Design-Build</th>
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DBPM, App C - Sample Orientation
Training Presentation 27
Utilities

- 1500 Crossings
- 600 Potential Conflicts/Relocations
- 40 Utility Owners
- Agreements in Place

Utilities (continued)

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<th>Design and Construction of Utility Work</th>
<th>Design/Build</th>
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ROW

Traditional

- Appraisals begin only AFTER all funding available
- Acquisition STARTS at 100% design
- IFB AFTER all land is acquired
- 3 years (162 parcels)

Design/Build

- Began appraisals in anticipation of funding
- Acquisition started during RFP development ... obtained rights of entry & Options
- Acquired land through first year of design & construction
- 18-20 (concurrent) months
**Other Concepts (I-15)**
- Partnering ... “Issue Resolution”
- OCIP (Owner Controlled Insurance Program)
  - (Cost Avoidance: $20 - $25M)
- Expedited Payment
  - (Cost Avoidance: $30M)
- Public Information Program
- 4 CD-ROMS
- Subcontracting

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**More Challenges (I-15)**
- Procurement Organization
- Concrete vs. Asphalt
- MPT
- Aesthetics & Landscaping
- Cost Estimate
- Long-Term Maintenance & Warranty
- Continuous Creativity

---

**Organization**

*Procurement Process ... Utah I-15*

Diagram showing the organizational structure of the procurement process for Utah I-15.
Continuous Creativity

Steps in the Procurement Process (I-15)
- Request for Letters of Interest (RLOI)   Mar 96
- Informational Meeting                 15 May 96
- Request for Qualifications (RFQ)      30 May 96
- Selection of Prequalified             18 Jul 96
- Develop Request for Proposals (RFP)   Feb-Sep 96
- Review Draft RFP                      Aug-Sep 96
- Issue RFP                             1 Oct 96
- Technical Concepts Review             23 Oct-1 Dec 96
- Receive Proposals                     15 Jan 97
- Evaluation of Proposals (initial)     Jan-Feb 97
- Discussion & BAFO (if required)       Feb-Mar 97
- Best Value Selection                  Apr 97
- Award/Notice to Proceed (NTP)         15 Apr 97

Evaluation Factors
- Technical Solutions
  - Maintenance of Traffic (i.e., MPT)
  - Geotechnical
  - Structures
  - Pavement
  - Maintainability
- Work Plan/Schedule
- Management
- Organizational Qualifications
- Price
### A.3.4 EVALUATION FACTORS

The technical and price proposals are approximately equal in weight.

The Technical Proposal is composed of the following four technical factors listed in descending order of importance:

- Technical Solutions
- Work Plan/Schedule
- Management
- Organizational Qualifications

Technical Solutions are broken down further into the following six technical subfactors:

- Maintenance of Traffic
- Geotechnical
- Structures
- Pavement
- Maintainability
- Others, in three levels of significance:
  - High: ATM, Drains and Water Quality, Roadway Geometrics
  - Intermediate: Aesthetics, Lighting, Traffic Signals, Signing (evaluated together)
  - Low: Concrete Barriers, Harmful/Hazardous Materials Remediation

#### Technical Proposal Ratings Guidelines

**EXCEPTIONAL**: The proposer has demonstrated an approach which is considered to significantly exceed stated requirements/objectives in a beneficial way and provide a consistently outstanding level of quality. There is very little or no risk that the proposal would fail to meet the requirements of the solicitation. There are essentially no weaknesses.

**GOOD**: The proposer has demonstrated an approach which is considered to exceed stated requirements/objectives and offers a generally better than acceptable quality. There is little risk that the proposal would fail to meet the requirements of the solicitation. Weaknesses, if any, are very minor.

**ACCEPTABLE**: The proposer has demonstrated an approach which is considered to meet the stated requirements/objectives and has an acceptable level of quality. The proposal demonstrates a reasonable probability of success. Weaknesses are minor and can be readily corrected.

**SUSCEPTIBLE TO BECOMING ACCEPTABLE**: The proposer has demonstrated an approach which fails to meet stated requirements/objectives as there are weaknesses and/or deficiencies, but they are susceptible to correction through discussion. The response is considered marginal in terms of the basic content and amount of information provided for evaluation. Overall the proposer is considered capable of providing an acceptable or better proposal.

**UNACCEPTABLE**: The proposer has demonstrated an approach which contains significant weaknesses/deficiencies and/or unacceptable quality. The proposal fails to meet the stated requirements/objectives and lacks essential information and/or conflicting and/or ambiguous. There is no reasonable likelihood of success. Weaknesses/deficiencies are so major and/or extensive that a major revision to the proposal would be necessary.

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#### Evaluation Matrix

<table>
<thead>
<tr>
<th>Technical Factors</th>
<th>Key</th>
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#### Technical Subfactors

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<th>Intermediate</th>
<th>Low</th>
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<td>ATM</td>
<td>Drains &amp; Water Quality</td>
<td>Roadway Geometrics</td>
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<td>Concrete Barriers, Harmful/Hazardous Materials Remediation</td>
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<th>Salt Lake</th>
<th>Wasatch</th>
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</tbody>
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*Initial rating shown in parenthesis if rating was adjusted during BAFO evaluation.*
I-15 MPT Plan  
(Wasatch Proposal)

Re-striping of I-215 (West)

Best Value (graphically)

DBPM, App C - Sample Orientation  
Training Presentation
Utah’s I-15 ... Design-Build Approach 

Summary

- FLEXIBILITY for Design-Builder to “Plan, Design, Construct, and Control” Project
- One Contractor
- Performance Specifications
- Proposals & Best Value Selection
- Little Overall Preliminary Design / Engineering
- Shared Risk
- Contractor Quality Control / Quality Assurance
- Provisions for Early Construction

I-15 Reconstruction

... Salt Lake City, Utah

May 14, 2001

Open for Traffic!

- 5 Months Ahead of Schedule
- $ 30 Million under Budget
- No Claims

- $1.325 Billion ... 4 ½ Years
- 16 Miles ... 142 Bridge Structures
  - 3 Interstate Junctions
  - 9 SPUI Interchanges
  - Valley-wide ATMS
- Innovative Procurement
- Best Value Selection
  - Highest Quality
  - Second Lowest Price
  - Adjectival Ratings
- Critical Project Goals:
  - Complete Before Olympics
  - High Quality ... Seismic
  - Safe ... Maintainable

US 70 Widening

... Hondo Valley, New Mexico

- $130 Million
- 38 Miles ... 5 Bridges
  - 14 Stakeholders
  - Environmentally Sensitive
- Best Value Selection
  - To Other Than Low Price
  - Adjectival Ratings
- Critical Project Goals:
  - Award by June 2002
  - Completion NLT Sept 2004
  - High Quality
  - Under Budget
Admiral Clarey Bridge
... Ford Island, Hawaii

- $80 Million Max. (sale of property)
- Effectively a “Design Competition”
- "Creative Stipend & Geotech"
- Best Value Selection
  - $68.5 Million (lowest price)
  - Highest Quality
  - Adjectival Ratings
- Added Additional Lane for $10 M
- Critical Project Goals:
  - Design and Cost

Cooper River Bridge
... Replacement Project, Charleston, SC

- $531 Million
  - $219M less than DBB Estimate
- Main Span:
  - 1,546 Ft Long – 186 Ft High
  - 1,000 Ft Navigational Channel
  - Longest Cable-Stayed Span in North America
- Fast-Track 5-Year Completion
- Critical Project Goals:
  - Quality (signature design), Cost and Time

I-285 Bridge Structures
... RW and TW Expansion at Atlanta Airport

- $159 Million
  - $84M less than DBB Estimate
  - $20M below Next Lowest
- Best Value Selection
  - Lowest Price
  - Innovative Design Solutions for Ventilation, Abutments and RW-TW Surfaces/Bridge Decks
- Fast-Track 3-Year Completion
- Critical Project Goals:
  - Time and Cost
Bath-Woolwich Bridge  
... New Bridge Replacement, Bath, ME

- $62 Million
- Best Value Selection
  - High Quality and Low Price
- Critical Project Goals:
  - Speed of Procurement ...
    Early Price Saved $38M in Discretionary Bridge Funds
  - Saved 2 Years Off Traditional Delivery
  - Pier and Segmental Girder Design Innovation ... a Bonus

Toll Roads (Transportation Corridor Agencies)  
... Orange County, California

- San Joaquin Hills
  - $812 Million
  - 15 Miles; 58 Bridges; 10 Interchanges
  - Completed 3 Months Early
- Eastern
  - $750 Million
  - 28.5 Miles; 63 Bridges; 9 Interchanges
  - $114 Million below Budget
  - Completed 12 Months Early
- Foot Hill-South
  - $600 Million (estimate)
  - 16 Miles; 16 Bridges; 5 Interchanges
  - Quality Based Selection

Alameda Corridor  
... Long Beach, California

- $770 Million ... 5 years (2006)
- Midcorridor Trench (10 miles)
  - Two Rail Tracks & Access Road
  - Track for Entire Corridor
  - 2/3 of Program ($)
  - First ACTA Design-Build
  - 19 other D-B-B Contracts
- Best Value Selection
  - 2nd Highest Quality / Lowest Price
- Critical Project Goals:
  - Time
  - Min. Impact to Community, Public
  - Quality Project within Budget
**T-REX**

...Denver, Colorado

- $1.186 Billion ... 5 years (2006)
- Highway & Light Rail
  - 17 Miles I-25 / I-225
  - 19 Miles Double Track
  - First Major CDOT Design-Build
- Best Value Selection
  - 2nd Highest Quality / Lowest Price
  - Adjective Ratings
- Critical Project Goals:
  - Fully Operational (June 2008)
  - Min. Impact to Community, Public
  - Quality Project within Budget

**T-REX**

Plan View

**State Highway 130**

...Austin, Texas

- $1.36 Billion ... Toll Road
- 90 Miles
  - 4-Lanes (expandable to 6)
  - 15-Year Provision for Maintenance
  - First TxDOT Design-Build
- Best Value Selection
  - Best Long-Term Value (concrete)
- Critical Project Goals:
  - Time (compressed time from 25 years to less than 5 years)
  - Environmentally Sensitive
  - Transfer Responsibility / Liability
Carolina Bays Parkway
...Myrtle Beach, South Carolina

- $240 Million
  - 20 Miles
  - 6 Lanes
  - 36 Bridges

- Best Value Selection
  - Max. Stipulated Sum
  - Scope Adds
  - "Added Value" Options

- Environmentally Sensitive
- Completed in 27 Months
  - 7 Months Early
  - 7 Years Ahead of DBB

---

I-15 North Widening
...Las Vegas, Nevada

- $290 Million
  - 15 Miles
  - 9 Interchanges
  - 26 Bridge Structures

- Best Value Selection
- Consultant PM
  - Alternate Analysis
  - NEPA
  - DB Procurement
  - Oversight

---

DBPM, App C - Sample Orientation
Training Presentation
Hiawatha LRT
... Minneapolis, MN
- $291 Million
  - Negotiations after Selection
- Best Value Selection
  - Stipulated Sum
  - Scope Adds & Deducts
  - Adjectival Ratings
- Critical Project Goals:
  - Maximum Scope within Budget
  - Sensitive to Stakeholders
  - Minimum Disruption
  - Full Service Late 2004

University & Medical Center LRT
... Salt Lake City, UT
- $208 Million
  - Negotiations after Selection
  - Used Provisional Sums
- Best Value Selection
  - Option to add Medical Center
  - Adjectival Ratings
- Critical Project Goals:
  - University: Before Olympics
  - University: Obtain Funding
  - MC: Low Cost / Get Funding

AirTrain LRT
... Elevated Transit to JFK Airport
- $930 Million
  - 8-Mile Elevated Track
  - DBOOM Contract
- Best Value Selection
  - Two Short Lists
  - Negotiations after Selection
  - High Quality / Lowest Price
- Critical Project Goals:
  - Service Proven Technology
  - Within Budget
Successful Design-Build
The Successful Owner's Approach
- Develop a Procurement Strategy “First”
  - Project Goals are the “Key”
  - Decide on a Design-Build Approach
- Embrace “Teamwork & Trust”
- Encourage Creativity
- Manage Cultural Change
- Administer Consistent with Strategy

Successful Design-Build
The Contractor's Perspective
- Well Planned Procurement Strategy and Process
  - Communicated Well; Understood; Fair
  - Performance Specs; Flexibility
  - Opportunity for Innovation & Creativity
  - Best Value Selection
- Be Serious about “Teamwork & Trust”
- Provide Positive Incentives
- Recognize “Different Way of Doing Business” When Administering Contract

Design-Build Orientation
Part II
NYSDOT Design-Build Process
Development of NYSDOT’s Design-Build Process

- Review of Existing NYSDOT Policies & Procedures
- Industry Research of Design-Build Practices: Design-Build Practice Report
- Recommended Process for Design-Build: Design-Build Process Report
- Supporting and Related Documents for Design-Build Procurement Process and Revised NYSDOT Manuals and Procedures: Design-Build Procedures Manual (includes guidance, templates, forms and Design-Build Standard Specifications)
- Training

Design-Build Procedures Manual – Volume I...Contents

Guidance to Department Staff in Procuring Design-Build
- The Design-Build Decision
- Project Procurement Strategy
- Environmental Documents & Preliminary Engineering
- Request for Letters of Interest (RLOI)
- Informational Meeting
- Request for Qualifications (RFQ) & Short Listing
- Request for Proposals (RFP) ... (review and issuance)
- Proposal Evaluation
- Best Value Selection
- Design-Build Project Execution

Design-Build Procedures Manual – Exhibits ...Contents

- Sample of RLOI
- Sample of RFQ
- Sample of RFP
  - Instructions to Proposers (including forms)
  - Design-Build Agreement (template)
  - Design-Build Standard Specifications (Section 100)
  - Sample Design Requirements
  - Sample Performance Specifications
  - Sample Design-Build Specifications
  - Sample Design-Build Utility Requirements
- Sample Evaluation and Selection Plans
  - Statement of Qualification (SOQ)
  - Proposal
- Sample Forms for Department Use
**Project Procurement Strategy**

- DBPM Provides Basic Strategy
- Each Project Unique
  - Project Stakeholders
  - Project Goals
  - Project Risks & Challenges
  - Project Specific Approaches
    - Preliminary Engineering
    - Utilities / Right-of-Way
    - Incentives / Warranties
    - Insurance / Public Relations
    - Alternate Proposals / (others)
  - Project Evaluation Criteria

**Relation to Current Procedures**

**Contract Administration**

- Design-Builder... responsible for:
  - Planning, scheduling, designing, constructing, managing and controlling the work;
  - QC (new definition)
- Department ... responsible for:
  - Oversight Management
  - QA (new definition)
Contract Administration

... QA / QC

- Quality Control (QC)
  - Responsibility of Design-Builder
  - Includes traditional QC plus some traditional QA
  - Design: "... procedures for design quality; checking; design review ... and approval of Working Plans."
  - Construction: "... procedures for Materials handling and construction quality; Inspection, sampling and testing of Materials, plants, production and construction; Material certifications; calibration and maintenance of Equipment; and monitoring of environmental compliance."
  - Documentation of All QC Design and Construction

- Quality Assurance (QA)
  - Responsibility of Department
  - Oversight to Provide Confidence that Design-Builder is Performing to Quality Plan
  - Design: "... monitoring and verification ... through auditing, spot-checking, and participation in the review of the design."
  - Construction: "... monitoring and verification ... through auditing, spot inspections, and Verification Sampling and Testing ..."
  - Independent Assurance & Documentation of QA
  - Final Inspection and Acceptance

Contract Administration

... Design Review

- Fully Defined in DB Section 111
- Design-Builder Responsible for:
  - Design Quality Control Plan
  - Conducting Design Review of:
    - Preliminary Design
    - Readiness for Construction or Interim Design
    - Final Design
    - Working Plans
  - Signing and Stamping of Drawings
Contract Administration
... Design Review (continued)

- Department Responsible for:
  - Participating in Design Review
  - Providing “Consultation and Written Comment” ... Department does not Approve Design Prior to As-Built Plans.
  - Non-Conformance Reports
  - Conducting Design Review and Approval of As-Built Plans

Contract Administration
... Construction Oversight

- Fully Defined in DB Section 112
- Responsibility of Department
- More Efficient use of Staff
- Elements:
  - Facilitates Design-Builder’s Success
  - Empowered to Resolve Issues
  - Use of Verification, Auditing & Checking Techniques
  - Verification & IA Sampling & Testing
  - QA Documentation
  - Final Inspection and Acceptance

Contract Administration
... Changes and Orders on Contract

- Mechanics the Same; Justifications Different
- Most Changes are Derived Based on Incorrect or Erroneous Information Provided in Contract:
  - EX: Faulty Warranted Geotechnical Investigation Data
  - Significant Changes in Character of the Work
  - Necessary Basic Project Configuration Change
  - Changes in Environmental Mitigation
  - Accuracy of Existing Utility Relocations
  - Significant Variation in Harmful/Hazardous Materials
  - Inaccuracies in Preliminary Design
- Site Conditions Different from Those that could be Reasonably Discerned from an Inspection of the Site
Contract Administration

... Department’s Typical Project Organization

NYSDOT Design-Build Training

Three Sessions

First: Orientation on NYSDOT DB Process

- Part I: Overview of Design-Build
- Part II: NYSDOT Design-Build Process

Second: Technical – Procurement

Third: Technical – Award to Contract Closeout

Future Detailed Training

Design-Build Orientation

QUESTIONS?