Project Delivery Process

Year

1 2 3 4 5 6 7 8

Public Input
Concept Development
Engineering Design
Construction
Conclusion of Past Research (1995)

The public would prefer a greater level of impact in exchange for a shorter construction duration
TRADITIONAL VS. DESIGN/BUILD SCHEDULE

Traditional
Initial Design & EIS

Design/Build
Initial Design & EIS
BID
ROW
CONSTRUCTION
TIME
SAVINGS
Typical Section

EXISTING

shldr / three general purpose lanes
median three general / shldr purpose lanes

FUTURE

shldr/aux/ four general /HOV* purpose lanes
HOV*/ four general /aux/shldr purpose lanes

*High Occupancy Vehicle/Carpool lane
Aesthetics
Request for Qualifications (RFQ)
Rating Guidelines

- Very Highly Qualified
- Highly Qualified
- Qualified
- Marginally Qualified
- Not Qualified
Request for Qualifications (RFQ)

Evaluation Criteria

- Legal and Financial
  - Legal Structure
  - Financial Profile
- Organization and Experience
  - Organizational Structure
  - Organization Charts
  - Proposer Experience
  - Key Staff Background and Experience
- Project Approach
  - Project Risk
  - Project Management
  - Project Administration
  - Planning and Execution
- Record of Performance
  - Cost and Schedule Performance
  - Penalties and Termination's
  - Record of Meeting Regulatory Requirements
  - Ratios of Change Orders and Claims to Total Project Costs
  - Experience with Award Fee Contracts
- Certification
Selection Schedule

- D/B decision - Jan 1996
- Three teams selected — July 26, 1996
- RFP issued — Oct. 1, 1996
- Proposals received — Jan. 15, 1997
- BAFOs received — March 7, 1997
- Selection announced March 26, 1997
- Notice To Proceed - April 15, 1997
Evaluation Process

♦ Most rigorous review ever.
♦ Proposals reviewed for completeness.
♦ Oral presentations made.
♦ Technical Evaluation Board (TEB) reviews 15 different aspects.
Price & Proposal Evaluation

- Blinded review by Price Evaluation Team (PET)
- TEB and PET make recommendations to Proposal Evaluation Board (PEB)
- PEB makes final recommendation to Selection Official
- Final selection announced March 26
The Selection Process: A Review
Price Evaluation

Based on:
- Realism
- Accuracy
Performance Specifications

- Drainage
- Roadway Geometrics
- Geotechnical
- Water Quality
- Lighting
- Pavements
- Signing
- Traffic Signals
- Structures
- Management of Traffic
- Maintenance During Construction
- Maintenance After Construction
- ATMS
- Concrete Barriers
- Landscape & Aesthetics
Rating Guidelines

- Organization Qualifications
- Management
- Work Plan / Schedule
- Maintenance of Traffic
- Geotechnical
- Pavement
- Structures
- Maintainability
TEB Rating Guidelines

♦ Exceptional (E)
♦ Good (G)
♦ Acceptable (A)
♦ Susceptible to becoming acceptable (S)
♦ Unacceptable (U)
♦ Pluses (+) and minuses (-) added if needed
### Technical Factors

**Descending order of importance**

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### Technical Subfactors

**Equal weight**

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### Other Technical Subfactors

**High significance**

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Overall Rating

- Lake Bonneville: A+
- Salt Lake: G-
- Wasatch: E-
Technical Evaluation Board Results

- RFP Completion Date

October 15, 2001

Wasatch "Value Added"

July 15, 2001
Best Value Selection

"Best Value"
Wasatch
Stipends

- $950,000
- Ownership of concepts
- Recognition of Contractor Investment
Other Concepts

♦ Partnering
♦ OCIP (Owner Controlled Insurance Program)
  ➡ (Savings: $ 10 - 15 M)
♦ Expedited Payment
  ➡ (Savings: $ 30 M)
♦ Public Information Program
♦ 4 CD-ROMS
♦ Subcontracting
OCIP- Wrap Up

- Workers Compensation
- General Liability
- Errors & Omissions
- Builders Risk
- Environmental Risk
Traditional UDOT Role vs. Design/Build
Traditional Role

UDOT

- Design Review
- Issue Resolution
- Construction Management
- Inspection
- Material Testing
Design/Build Role

UDOT

- Oversight

Wasatch

- Design Review
- Issue Resolution
- Construction Management
- Inspection
- Material Testing
<table>
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<tr>
<th>Risk/Responsibility Category</th>
<th>&quot;Traditional&quot; Design-Bid-Build</th>
<th>Typical Design-Build</th>
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<td>Owner</td>
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<tr>
<td>Final Alignment Geometry</td>
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<td>Constructibility of Design</td>
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<tr>
<td>Obtaining ROW</td>
<td>X</td>
<td></td>
<td>X</td>
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<tr>
<td>Coordinating with Utilities &amp; Railroads</td>
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<tr>
<td>Quality Control and Quality Assurance</td>
<td>Significant inspection and testing</td>
<td>Quality of Workmanship</td>
<td>Oversight only</td>
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<tr>
<td>Coordination with other work</td>
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Award Fee

♦ Philosophy/Benefits:
  ➤ Motivates contractor to quality performance desired by owner
    ❖ timely performance
    ❖ quality of work
    ❖ management
    ❖ community relations/maintenance of traffic
  ➤ Positive means of achieving desired results
  ➤ Incentivize performance throughout project (not just an end)
  ➤ Financial incentive to contractor
  ➤ Consistent with partnering

♦ Proven and Successful
Lessons Learned

- Level of Design
- Utility Agreements
- Cost Estimate
- Statutory Requirements
- Design Review

- Public Information
- Industry Acceptance
- Award Fee
- Audits
What’s the Public Thinking?
... and if we close this lane here and this exit here, they’ll never get off!!

my turn!! my turn!!

Department of Transportation
Steps in the Procurement Process

- Request for letters of Interest
- Informational Meeting
- Request for Qualifications (RFQ)
- Selection of Prequalified
- Develop Request for Proposals (RFP)
- Review Draft RFP
- Issue RFP
- Technical Concepts Review
- Receive Proposals
- Evaluation of Proposals (initial)
- Discussion and BAFO (if required)
- Best Value Selection
- Award/Notice to Proceed (NTP)

- MAR 96
- 15 MAY 96
- 30 MAY 96
- 18 JUL 96
- FEB-SEP 96
- AUG-SEP 96
- 1 OCT 96
- 23 OCT - 1 DEC 96
- 15 JAN 97
- JAN-FEB 97
- FEB-MAR 97
- APR 97
- 14 APR 97
Project Statistics
Construction Scope of Work

- 6.9 Million cubic meters embankment
- 2.1 million square meters concrete pavement
- 390,000 square meters of bridge
  - 143 bridges total
- 128,000 square meters of retaining walls
- 70,000 meters of drainage facilities
Construction Project Stats
(42 weeks from NTP)

- 2.5 million meters of wick drain
  - 1,553 Miles of wick drain
    - Enough to go to on a round trip from Salt Lake to San Diego, California
    - Enough to go from Salt Lake to Houston, Texas
Construction Project Stats
(42 weeks from NTP)

- 3.1 million cubic meters of fill
  ➔ 4.05 million cubic yards
  ✗ 7.5 million tons
    ✔ 178,400 belly dump truck and pup loads

- 1.3 million cubic meters of excavation
  ➔ 1.7 million cubic yards
  ✗ 3.15 million tons moved on site
Construction Project Stats
(42 weeks from NTP)

♦ 21,200 square meters of Mechanically Stabilized Earth (MSE) wall
→ 25,400 square yards of single stage, two stage, and three stage retaining wall

♦ 42 bridges demolished
Construction Project Stats
(42 weeks from NTP)

- 36,600 meters of pile driven
  ➔ 120,100 feet of piling
  ❖ 22.75 miles

- 770,000 hours labor
  ➔ 370 years of time invested
Design Project Stats
(42 weeks from NTP)

- 2,146 Quality Audits have been performed
- 436 packages have been approved for construction
- Over 5,455 plan sheets have been released for construction
- 2,587 of 12,000 final plans
Design Project Stats
(42 weeks from NTP)

- Design Services during construction
  - 295 shop drawing submittals
  - 96 major field design changes
Design Project Stats
(42 weeks from NTP)

- 15 Design Subcontractors
- 420 Design Professionals
- 1,060,000 hours labor
  ➔ 510 years of time invested
ATMS Project Stats
(42 weeks from NTP)

- 5 Field Crews
- 15 Design Professionals
- 56,000 hours labor
  ➞ 27 years of time invested
ATMS Project Stats
(42 weeks from NTP)

- 65 Traffic Controllers and Cabinets replaced
- 4 large VMS signs placed and operational on freeway system
- 7 Communication hub buildings installed
ATMS Project Stats
(42 weeks from NTP)

- 109 km of communication conduit placed
  ➔ 68 miles
- 17 km of fiber optic cable pulled into conduit
  ➔ 11 miles
- 300 Vehicle Detector Loops installed on I-215 West
Project Stats

UDOT and Wasatch Management
(42 weeks from NTP)

- 85 Managers and administrative personnel
- 178,500 hours labor
  ➔ 86 years of time invested
Quality Control/Quality Assurance

(42 weeks from NTP)

- 105 QA/QC inspectors in the field
- Began inspections in June 1997
- 175,500 hours labor
- 86 years of time invested
Project Stats
(42 weeks from NTP)

- Construction 770,000 Hours
- Design 1,060,000 Hours
- ATMS 56,000 Hours
- Management 178,500 Hours
- QA/QC 178,500 Hours

Total 2,243,000 Hours

⇒ 1,078 years of time invested