STATE OF WASHINGTON | JOINT TRANSPORTATION COMMITTEE

Review of WSDOT's Implementation of Design-Build Project Delivery

Best Practices in DB Delivery
February 1, 2016| PRESENTATION

Sid Scott, Project Manager

Introductions

Study Overview

Task 2: Best Practice Review

Next Steps (Step 3)

Closing and Questions

- Study start date: September 28, 2015

- Final report due: December 1, 2016

- Study budget: $439,999

- Examine WSDOT implementation of DB delivery to date

- Evaluate whether WSDOT's use of DB can be improved (maximizing effectiveness and efficiency)

- Examine whether WSDOT's current project selection criteria determines optimal delivery method

- Educate legislators and other stakeholders on appropriate use of DB

- Develop strategies for WSDOT and industry to adopt study recommendations

Eight Tasks to Complete in Study

1. Prepare basic overview of design-build vs. design-bid-build
2. Identify best practices in design-build project delivery
3. Evaluate WSDOT's current use of design-build project delivery
4. Propose improvements to maximize cost and schedule efficiencies, and ensure project risk is borne by the appropriate party
5. Propose next steps for the public and private sectors to adopt the report's recommendations
6. Work with review panel, legislators and staff workgroup
7. Presentations
8. Draft and final reports

Research approach

- Interview DOTs and industry representatives to determine current best practice trends in DB project delivery
  - Agency culture
  - Project selection
  - Project development
  - Procurement
  - Risk management and allocation
  - Contract administration (design & construction)
- Compare with national DBIA best practices

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Overview of interview participants

Owners

• 11 transportation agencies in the United States, selected based on:
 	
   - Maturity of DB program
 	
   - Geographic location
 	
   - Differences in legislation and design-build implementation strategies

Industry
• DB Contractors (subcontractors) • Design firms

Interviewed agencies classified by total number of DB projects

Legend:
- more than 100
- between 50 and 100
- Between 20 and 50
- less than 20
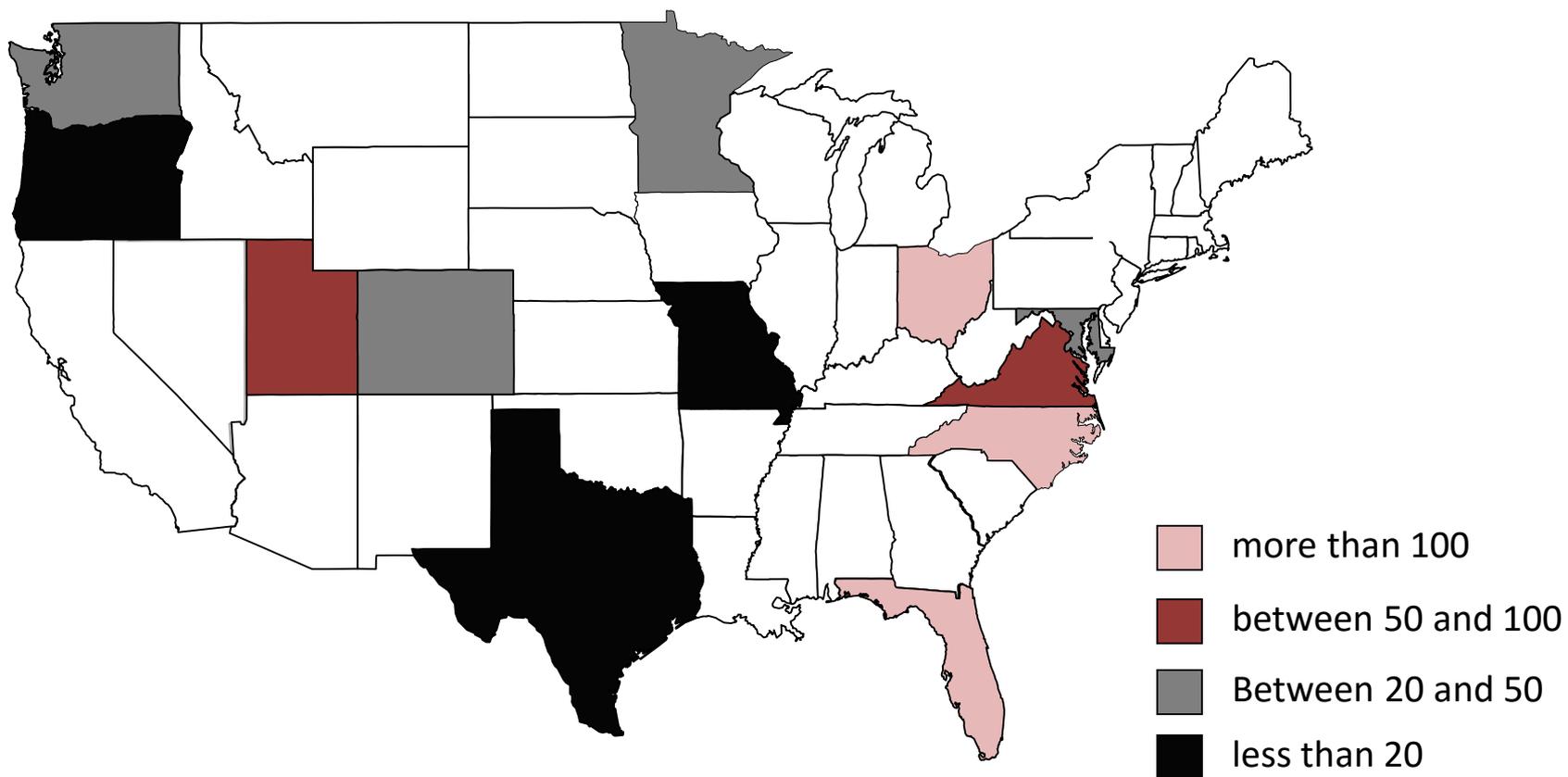
Interviewed agencies classified by Size Range of DB projects

Agency	First Design-Build Project	Total Approximate Number of Design-Build Projects	Size Range of Projects
Colorado	1995	20	$3M to $300M
Florida	1987	500+	$<0.5M to $200M
Maryland	1998	35	$20M to $500M
Minnesota	1996	33	$1M to $200M
Missouri	2005	<10	$18M to $535M
North Carolina	1999	111	$2M to $460M
Ohio	1995	247	<$0.5M to $430M
Oregon	1999	16	$2M to $130M
Texas	2003	15	$80M to $1B+
Utah	1999	50	$30M to $1B+
Virginia	2001	78	$0.5M to $100M+

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Culture, Organization, Staff Development

- Dedicated DB staff with technical support

  – Range from 1-15 full-time staff

- Consultant outsourcing - correlated to size of program

- Trend is towards internalizing DB expertise (building core DB staff)

- Most use standard DB templates and forms for consistency

- Most have formal training/workshops or mentoring

- Monitoring of lessons learned and performance measures

> Design-Build Institute of America (DBIA): Create an organization and culture that supports successful implementation of DB through committed leadership, dedicated staff, and training

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Project Selection

- DB not appropriate for all projects

- Decision to use based on project objectives, risks, and constraints

- Most common reasons are project delivery and opportunities for innovation

- Tools for decision-making (transparency & consistency)

    – Screening criteria

    – Risk analysis/allocation

    – Project delivery decision tool (matrix)

DBIA: Conduct a proactive and objective assessment of program or project before deciding to use DB

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Project Development

- Scope needs to address what DOT wants and does <u>not</u> want

- Limit scope development to core group of DB staff

- Project goals should inform level of design and whether to use performance specifications

  – Innovation: lower level of design and performance specifications

  – Expedited delivery: higher level of design and prescription may result in better pricing

- Advance design to level needed to obtain environmental clearance

DBIA: Performance specifications should be used to the extent possible to provide the greatest opportunity for flexibility and innovation.

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Procurement Flexibility

	Low Bid	Best Value
Description	Selection of design-builder based on lowest price	Selection of the design-builder based on price and other factors (i.e. qualifications, experience, and technical ability)
Rationale	• Streamline procurement • Time-savings	• Select most qualified team • Industry innovation to get better designs, constructability, or enhancements resulting in cost or time savings
Applicability	Smaller projects, with less flexibility or room for innovation	Larger, more complex projects with more flexibility or opportunity for innovation

> DBIA: Implement a procurement plan that enhances the collaborative and other benefits of DB and aligns with the reasons DB was selected. Focus on the qualifications of the design-builder

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Procurement Best Practices

- Clear Request For Proposal (RFP) requirements

- Use of Alternate Technical Concepts for innovation and cost savings

- Stipends (trend is to increase stipends for better proposals)

- Confidential one-on-one meetings

- Releasing the draft RFP document with the Request For Qualifications (RFQ) in the shortlisting phase

- Thorough debriefings with unsuccessful proposers

DBIA: Ensure the procurement process is fair, open and transparent, establishes clear evaluation and selection processes, and values both technical concepts and price in the selection process

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Current DB Delivery Strategies used by DOTs

Strategy	Characteristics
DB Fixed Price, Best Design	Best design for defined budget
DB w/ options (or fixed price/max scope)	Most scope for defined budget
On-call (Pushbutton) DB	Expedited work w/ preset pricing
Progressive DB	Negotiated Guaranteed Maximum Price (GMP) w/ progressive work packages
Bundled DB	Multiple small projects with similar features and requirements

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Risk Allocation in Contracting

Risk Area	Responsibility
Unanticipated site conditions	More risk shifted to design-builder
Permitting (environmental and resource agencies)	Owner should retain primary risk, but design-builder may assist with permitting process
Utilities and 3rd Parties	Shared responsibility
Right-of-way	Owner should retain most risk with some delegation of responsibility to design-builder

DBIA: Identify project risks and allocate risks to the party that is best able to address and mitigate the risk. Consider incorporating incentives that will align the design-builder's performance with the owner's project goals

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Contract Administration

- Streamlined design review process with clear understanding of owner's role

- Co-location of key project staff (owner, designer, contractor)

- Formal partnering and communication

- Design-builder responsibility for quality with owner auditing for compliance with requirements

- Expedited responses to request for clarifications and change orders, and resolution of non-conformance notices

> DBIA: Establish project logistics and infrastructure to support DB. Co-locate owners and design-builders when justified by project characteristics. Ensure administrative processes (e.g., owner's design reviews) are appropriate and well-understood

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Task 3 – Evaluate WSDOT's Current Use of DB Delivery

1. Review a diverse sample of WSDOT's DB projects
   – Administering Region
   – Project type
   – Project size
   – Prime contractor

2. Compare WSDOT performance to DBIA best practices and DOT current practices

- Staffing
- Training
- Organization
- Project selection
- Project development

- Project risk, scope
- Project budget, schedule
- Level of design
- Change orders
- Project management

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Best Practices in DB Delivery

Thank you

Questions?

Sid Scott