

December 15, 2016

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

In 2015, the Legislature directed the Joint Transportation Committee to study WSDOT's implementation of design-build project delivery, and to recommend improvements to maximize cost and schedule efficiencies and ensure that risk is borne by the appropriate party. A review panel of state and national experts was appointed to assist with the study.

The consulting team led by Hill International from Philadelphia began the 15-month study at the end of September, 2015, and their final report was delivered in December, 2016.

Background

Design-build (DB) is a method of project delivery in which an agency executes a single contract with one entity (the Design-Builder) for design and construction services to provide a finished product based on owner-specified performance requirements.

WSDOT has had the authority to use design-build since 1998, when the authority was limited to two pilot projects over \$10 million. That authority has been expanded over the years. Today WSDOT is strongly encouraged to use design-build on projects over \$2 million with highly specialized construction activities, where there is an opportunity for greater innovation and efficiency, or when it would significantly shorten the time it takes to deliver a project.

WSDOT has delivered or is in the process of delivering 29 projects using design-build, ranging in cost from \$3 million to \$1.09 billion.

The JTC study

The study was designed to accomplish the following:

- Examine WSDOT's implementation of design-build project delivery to-date
- Evaluate whether WSDOT's use of design-build can be improved to ensure better project delivery and more efficient expenditure of the taxpayer dollar, maximizing cost and schedule efficiencies, and ensuring that project risk is borne by the appropriate party
- Examine whether WSDOT's current design-build project selection criteria appropriately determines the optimal contractual delivery method
- Educate legislators and other stakeholders on the appropriate use of design-build to deliver high quality large, medium and/or small projects, while achieving excellent stewardship of the taxpayer dollar
- Develop strategies for WSDOT and the construction industry to successfully adapt to the changes in the scope or implementation of WSDOT design-build project delivery as recommended in the study.

A design-build review panel of experts was appointed to assist the consultants with the study. It was composed of two nationally recognized experts in the field of design-build project delivery from the consultant team: Mike Loulakis, JD and Greg Henk, PE; and four Washington-state experts: Bob Adams representing the Association of General contractors, John Ferguson representing the American Council of Engineering Companies of Washington; Vince Oliveri representing the Professional and Technical Employees Local 17, and Linea Laird, WSDOT's chief engineer and Assistant Secretary for Engineering and Regional Operations.

Analysis approach

The study included the following key components:

1. A basic overview of Design-Build. The consultants wrote a white paper identifying the benefits and challenges of DB compared to the traditional design-bid-build project delivery.
2. Peer review – industry best practices. The consultants interviewed twelve DOTs with active and effective design-build programs, as well as private sector design-build practitioners, asking about program delivery, project development, procurement/delivery approaches, project execution and performance monitoring. They also reviewed best practices as determined by the nationally-respected Design-Build Institute of America (DBIA).
3. Evaluate WSDOT's current use of DB. A representative sample of six of WSDOT's 29 DB projects were analyzed to understand WSDOT's current DB project delivery.
4. Gap analysis. The consultants identified where WSDOT practices varied from current best practice, and assessed what WSDOT currently does well, what is improving, and where they need more work to bring practices into alignment with best practice.
5. Recommendations. Based on the gap analysis, recommendations were identified along with suggested strategies to adopt the recommendations.
6. Implementation. Implementation strategies were identified for each of the recommendations, and included consideration of whether legislative action was required, time, cost, difficulty and perceived benefits. An implementation timeline was then developed.

What does WSDOT currently do well?

The study showed there are many things WSDOT does well when implementing design-build, including industry outreach, the commitment of senior leadership, risk allocation, shortlisting proposers, engaging with confidential one-on-one meetings with proposers, offering reasonable stipends to shortlisted proposers, and encouraging the use of alternative technical concepts.

How has WSDOT's delivery improved over time?

WSDOT has learned from their 16 years of experience with design-build, improving their delivery in a number of ways which include providing improved procedural guidance for all aspects of design-build delivery, working with the construction and design industry to develop design-build template documents, implementing a structured method to evaluate the appropriate delivery method for projects, using design-build on small projects, and using their growing internal design-build experience to develop a training program for other project staff within WSDOT.

What aspects of WSDOT's design-build program could be improved?

Based on a comparison of current WSDOT design-build practices with leading industry practices, and working with the review panel, the consultant team developed 27 recommendations to improve WSDOT's design-build program. The recommendations address distribution of design-build expertise across the agency, training,

standardizing design-build processes, appropriately using consultants, increasing flexibility in procurement and delivery options, performing appropriate preliminary design and project development, creating appropriate proposal evaluation criteria, providing consistent proposal evaluation and contract administration, and developing a usable database of lessons-learned.

WSDOT was an active participant throughout the study, and has already begun to implementing several of the recommendations.

Implementation timeline and strategies

As part of the study, the consultants developed strategies for WSDOT to implement each of the recommendations, along with a suggested timeline, providing WSDOT with a guidebook to use to enact the improvements. The final report also identifies the timing, cost, difficulty and benefits of implementing each of the 27 recommendations.

While many of the recommendations can be done without legislative action, the consultants determined that three are rather difficult and will involve more significant implementation costs. These include dispersing design-build skills and expertise across all the regions in the state, developing design-build credentials/experience as part of overall career development and compensation, and performance monitoring (developing and maintaining a database and lessons-learned to compare DB with other delivery methods).

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