



Pilot Design-Build Program Evaluation

Research Objectives

- Evaluate WisDOT pilot program for design-build project delivery
- Determine best practices for alternative delivery of projects

Research Benefits

- Allows WisDOT to develop and refine policies and processes based on other states' experiences
- Can inform future alternative delivery efforts on WisDOT projects

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Background

Historically, apart from a very limited number of specifically authorized exceptions, WisDOT has been required to utilize the design-bid-build method of project delivery. Over the years, several studies have been undertaken, and proposals made, to expand the department's authority to utilize alternative methods of project delivery, including design-build.

Rather than separate design and construction contracts, which is typical under traditional design-bid-build delivery, design-build delivery generally requires just one contract with a design-build team to provide both design and construction services. The goal of alternative methods of project delivery is to improve the cost-effectiveness, efficiency, quality and schedule of highway and bridge projects.

Under legislation adopted in 2019, WisDOT was authorized to award up to six highway or bridge projects under one of three delivery methods: low-bid, best-value, and fixed-price design build. WisDOT is required to administer at least one of each of the three subtypes, with maximum costs of \$75 million for best-value and fixed price, and \$25 million for low-bid.

Methodology

To achieve the project objectives, the University of Wisconsin – Milwaukee's Institute for Physical Infrastructure and Transportation (IPIT) team acquired data from WisDOT documentation, conducted a review of available literature, peer-state interviews, and interviews with design-build teams that submitted statements of qualification or proposals for the first three pilot projects.

WisDOT selected the three projects and assigned their delivery methods based on schedule, programmed cost, environmental constraints, and their potential for innovation as determined in their risk analysis. The three projects are identified below:

- US 45 – Construction/replacement of eight miles of pavement (low-bid design-build)
- WIS 125 – Removal of multi-cell box culvert and replacement with slab span structure (best-value design-build)
- WIS 130 – Bridge replacement (best-value design-build)

A review was conducted of each of the pilot projects. Each review consisted of a project overview and summary of the qualification and proposal phases of the procurement. This included a review of documents related to these processes, as well as summaries of the

“The Pilot Design-Build Program Evaluation Report has enabled WisDOT to take a critical look at the procurement processes for our first three design-build projects. The report gives WisDOT important feedback and recommendations for improvements to the design-build process as procurement for future projects.”
***– Ben Thompson,
WisDOT***

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[WisDOT Research website](#)**

interviews with the proposing teams. Interviews were conducted with successful and unsuccessful proposing teams, and with WisDOT project staff.

Results

Based on a review of the available data, the IPIT researchers concluded that the procurement process for the three projects conformed to the requirements of state statutes, federal regulations, and the draft WisDOT Design-Build Manual for alternative delivery. However, they found that while US 45 was an appropriate choice for the low-bid design-build, it failed to generate enough competitive interest. And being a low-cost project with limited opportunity for innovations, WIS 125 may have been too small and non-complex to fully benefit from best-value design-build.

Recommendations

The IPIT research team provided a total of 17 recommendations for possible improvement divided into four categories: program organization and administration, project selection, qualification and proposal phase, and miscellaneous recommendations. A cross section of the recommendations is provided below:

- Strengthen staffing and internal training
- Increase minimum cost to consider project for design-build
- Consider one-step procurement for simple non-complex, low-bid design-build projects (would require legislative approval)
- Increase the minimum number of qualified teams solicited to submit proposals
- Adapt the public information process to fit the different characteristics of design-build.

This brief summarizes Project 0092-22-68,
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Policy Research Program