

SUMMARY OF THE DESIGN-BUILD CONSTRUCTION METHOD AND PUBLIC-PRIVATE PARTNERSHIP CONSTRUCTION METHOD

This memorandum explains the design-build method of construction and the public-private partnership method of construction.

DESIGN-BUILD CONSTRUCTION

According to the Design-Build Institute of America, the design-build form of project delivery is a system of contracting whereby one entity performs both architectural/engineering and construction under one single contract. Under this arrangement, the design builder warrants to the contracting agency that it will produce design documents that are complete and free from error (design builder takes the risk). The selection process under design-build contracting can be in the form of a negotiated process involving one or more contracts, or a competitive process based on some combination of price, duration, and proposer qualifications. Portions of the overall design or construction work can be performed by the design-build entity or subcontracted to other companies that may or may not be part of the design-build team.

The United States Department of Transportation has identified the following advantages and disadvantages of the design-build method of delivery.

Potential Advantages

- Time savings through:
 - Early contractor involvement that enables construction engineering considerations to be incorporated into the design phase and enhances the constructability of the engineered project plans;
 - Fast-tracking of the design and construction portions of the project, with overlapping (concurrency) of design and construction phases for different segments of the project; and
 - Elimination of a separate construction contractor bid phase following completion of the design phase.
- Cost savings from:
 - Communication efficiencies and integration between design, construction engineering, and construction team members throughout project schedule;
 - Reduced construction engineering and inspection costs to the contracting agency when these quality control activities and risks are transferred to the design builder;
 - Fewer change and extra work orders resulting from more complete field data and earlier identification and elimination of design errors or omissions that might otherwise arise during the construction phase;
 - Reduced potential for claims and litigation after project completion as issues are resolved by the members of the design-build team; and
 - Shortened project timeline that reduces the level of staff commitment by the design team and motorist inconvenience due to reduced lane closures.
- Improved quality through:
 - Greater focus on quality control and quality assurance through continuous involvement by the design team throughout project development; and
 - Project innovations uniquely fashioned by project needs and contractor capabilities.

Potential Disadvantages

- Reduces competition for construction services by excluding smaller firms unable to lead the larger projects most amenable to the design-build approach;
- Favors large national engineering and construction firms in competing for larger design-build contracts that are too big for smaller local or regional firms to pursue;
- Provides an opportunity for favoritism to enter into the contract award process by including nonprice factors in the basis for selection;
- Undermines the inherent checks and balances between design and construction teams in the traditional delivery systems, with the design team no longer independent of the construction contractor;

- Affects the traditional quality assurance/quality control roles through the combination of engineering and construction; and
- Increases project costs due to the elimination of the low-bid contractor selection criteria.

The 2009 Legislative Assembly authorized the Department of Transportation to utilize the design-build method in Senate Bill No. 2147. The authorization was limited to the construction of one signal light project and one box culvert structure project. The authorization expired on January 1, 2014.

PUBLIC-PRIVATE PARTNERSHIPS

Public-private partnerships are agreements that allow private companies to take on traditionally public roles in infrastructure projects, while keeping the public sector ultimately accountable for a project and the overall service to the public. In public-private partnerships, a government agency typically contracts with a private company to renovate, build, operate, maintain, manage, or finance a facility. Public-private partnerships include many types of innovative contracting, project delivery, and financing arrangements between public and private sector partners. Though public-private partnerships are not optimal for many transportation projects, they have been shown to reduce upfront public costs through accelerated or more efficient project delivery. Public-private partnerships do not create new money, but instead leverage private sector financial and other resources to develop infrastructure. In the end, a source of revenue, such as tolls or other public revenue still is required to repay the private investment.