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# DESIGN-BUILD PROJECT DELIVERY METHOD

**DESIGN BUILD** is a method of construction in which the design and construction phases of a project are combined into one contract. It is an integrated approach with a single point of project responsibility that is intended to balance risks and control costs to the client. Some design-build firms employ professionals from both the design and construction sectors. In other cases, the design-builder is a team comprised of a general contractor, designer and inspection groups. The lead team member is typically the contractor. Another approach involves partnerships or joint ventures between design firms and construction firms, which can be created on a long-term basis or for single project collaboration.

**The Business Council has continued to support a clean, permanent extension of design-build authorization in New York State with no additional unnecessary conditions.**

Proponents of design-build suggest that streamlining project delivery through a single contract between the client and the design-build team results in an alliance which fosters collaboration, innovation and teamwork. Since they are united from the very beginning of a project, these integrated teams can complete a project faster, more cost effectively and with fewer change orders.

Design-build differs from traditional design-bid-build in which two contracting efforts are undertaken in sequence to procure separate architecture/engineering services and construction services. Under design-bid-build, the approach for construction projects consists of separate appointments of a designer and a contractor. Supporters of the design-bid-build method argue that the design-build approach limits the client's involvement in the design of a project, and allege that contractors often make design decisions outside their areas of expertise. They also suggest that a designer, rather than a construction professional, is a better advocate for the client or project owner and that by representing different perspectives and remaining in their separate spheres, designers and builders ultimately create better buildings.

Use of the design-build method is growing. A 2011 study by Reed Construction Data/RSMeans Market Intelligence, commissioned by the Design-Build Institute of America (DBIA), analyzed the design-build project delivery method in the United States and found that design-build was used on about 40 percent of non-residential construction projects in 2010, a ten percent increase since 2005.

At the 2010 DBIA annual conference, Mortenson Construction sponsored a survey of 70 attendees to gauge opinion on the design-build method. Participants included professionals from the architecture, engineering, construction and development sectors as well as owner organizations. In ranking the major benefits of design-build, the participants cited, in order:

1. A single point of responsibility for design and construction;
2. The ability to fast track the delivery of a project;
3. The ability to lower overall project costs; and
4. Greater focus on overall project quality.

Across the country, several design-build projects have been nationally recognized. The Mineta San Jose International Airport project was the winner of the 2011 DBIA Transportation Design-Build Excellence Award. It involved renovation and new construction of three terminals, a rental car garage with roadway and parking improvements and was completed on time achieving LEED Silver certification. It was completed a year earlier than it would have using design-bid-build.

Maryland's Intercounty Connector, an 18-mile, all-electronic toll highway north of Washington, D.C., was the winner of the 2012 National Design-Build Award for Transportation projects.

The twin-span 1,216 foot-long I-35W (St. Anthony Falls) Bridge replacement project in Minnesota was completed ahead of schedule and on budget. In 2009, it won the DBIA's Best Overall Project Award and a National Design Award.

In New York, the reconstruction of the Tappan Zee Bridge is the largest design-build project undertaken in the state. The winning design-

build proposal from Tappan Zee Constructors was approved by the New York State Thruway Authority (NYSTA) Board of Directors in December, 2012 at a price of \$3.142 billion, lower than competing proposals of \$3.99 billion and \$4.059 billion, respectively. Thruway Board Chairman Howard P. Milstein was particularly pleased with the use of the design-build project delivery method. He said: “Most importantly, the design-build process produced a savings of at least \$1.5 billion compared with the amounts estimated by the Federal Highway Administration and our own original estimates” (NYSTA, 2012).



*The New York State Thruway Authority says design-build saved \$1.5 billion in construction cost on the new Tappan Zee Bridge.*

The New York State Department of Transportation (NYSDOT) has completed the bid process on nine design-build projects across the state. These include: 32 bridge deck replacements in Zones 1, 2 & 4; Kendrick Road in Monroe County; two projects on Route 347 in Suffolk County; I-190 and NY 265 in Niagara County; Carlls Straight Path in Suffolk County; and the Kosciuszko Bridge project in Brooklyn.

**While the estimated costs of these nine DOT projects totaled \$852.7 million, the design-build bids came in at \$777.9 million, a \$74.8 million or 8.8 percent savings.**

There was also an anticipated project delivery time savings benefit of 2.2 years, on average, for the nine projects. QPK Design is a Syracuse-based architectural/engineering firm with both public and private sector design-build experience. Recent federal design-build projects include work at Fort Drum and the United States

Military Academy at West Point. QPK Design Partner Vince Nicotra speaks highly of the design-build project delivery method, stressing that project owners must be very clear on what they want in the final product. The design-build delivery method works best when the design-build team has a very detailed picture of the owner's expectations for the final result.

The Design-Build Institute reports that local governments have at least some design-build authority in 44 states. In these states, local governments are successfully using design-build on all types of projects including schools, streets, fire stations, healthcare facilities and waste-water treatment plants, with project costs ranging from \$250,000 to multi-million dollar projects. Local governments are also realizing the savings in time and money and the delivery of high quality, innovative projects.

In New York State, the design-build project delivery method was only authorized for use on public projects in late 2011 and then only for a three year period, expiring on December 9, 2014. The agencies authorized to use it were the NYSDOT, the NYSTA, the Office of Parks, Recreation and Historic Preservation, the Department of Environmental Conservation and the state Bridge Authority. The 2014-15 Executive Budget initially proposed an expansion of its use and removed the sunset provision; however, subsequent changes to the proposal were made reinstating the sunset provision and mandating the use of project labor agreements on all design-build projects.

The Business Council and others opposed these subsequent changes and urged that the original proposal be adopted. However, all language concerning design-build was ultimately removed prior to the budget's enactment. The Business Council has continued to support a clean, permanent extension of design-build authorization in New York State with no additional unnecessary conditions. ■

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