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Two Steps Forward, and One Step Back: How The Moving Ahead For Progress in the 21st Century Act Encourages Design-Build, But Roadblocks Remain

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TWO STEPS FORWARD, AND ONE STEP BACK: HOW THE MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY ACT ENCOURAGES DESIGN-BUILD, BUT ROADBLOCKS REMAIN

Thomas Ahmadifar*

INTRODUCTION.............................................................................................................. 140

I. TRANSPORTATION PROCUREMENT: TWO STAGES VERSUS ONE, AND WHAT CONGRESS HAS TO SAY ABOUT IT ................................................................. 142
   A. THE TRADITIONAL PROCUREMENT METHOD: DESIGN-BID-BUILD ........................................................................................................................ 143
   B. DESIGN-BUILD IS AN ALTERNATIVE METHOD THAT SIMPLIFIES PROCUREMENT INTO ONE BIDDING PHASE ............................. 146
      1. DESIGN-BUILD UNITES THE DESIGN AND CONSTRUCTION PHASES OF THE PROJECT INTO ONE COMPREHENSIVE CONTRACT .................................................................................. 146
      2. DESIGN-BUILD HAS TWO PROMINENT FORMULATIONS THAT BOTH STREAMLINE DESIGN AND CONSTRUCTION .......... 147
      3. THE STREAMLINING OF DESIGN-BUILD CREATES ADVANTAGES OVER DESIGN-BID-BUILD ........................................... 149
      4. DESIGN-BUILD HAS POTENTIAL DRAWBACKS ........................................................................................................................ 150
   C. THE MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY ACT INCENTIVIZES DESIGN-BUILD ............................................................................. 151
   D. STATE STATUTORY FRAMEWORKS FALL INTO THREE CATEGORIES OF DESIGN-BUILD AUTHORIZATION: BROAD, MODERATE, AND MINIMAL ............................................................ 152
      1. SOME STATES HAVE BROAD DESIGN-BUILD AUTHORIZATION STATUTES FOR TRANSPORTATION CONSTRUCTION PROJECTS .................................................................................. 153
      2. SOME STATES HAVE MODERATE DESIGN-BUILD AUTHORIZATION STATUTES FOR TRANSPORTATION CONSTRUCTION PROJECTS .................................................................................. 154
      3. SOME STATES HAVE MINIMAL DESIGN-BUILD AUTHORIZATION STATUTES FOR TRANSPORTATION CONSTRUCTION PROJECTS .................................................................................. 155
   E. A HYPOTHETICAL LETTING ILLUSTRATING DESIGN-BUILD PROJECT THAT IS ELIGIBLE FOR SECTION 1304 FUNDING .......... 157

II. THE STATES’ QUALIFICATION FOR SECTION 1304 FUNDING RANGE IF USING DESIGN-BUILD ............................................................................................................. 158
   A. THE VIRGINIA CASE STUDY: BROAD DESIGN-BUILD STATUTES CAN QUALIFY FOR SECTION 1304 FUNDING AND REALIZE THE INHERENT BENEFITS OF DESIGN-BUILD .................. 159
Two Steps Forward, and One Step Back

Introduction

“If we can prevent the government from wasting the labors of the people, under the pretence [sic] of taking care of them, they must become happy.” In 1802, Thomas Jefferson was fixated on an issue that still preoccupies the United States 210 years later: government waste. One prominent area of government spending, particularly since the passage

1. Taking Advantage of Section 1304 Funding by Using Design-Build ............................................................ 159
2. Realizing the Inherent Benefits of Design-Build ............................................................ 161
B. The Florida Case Study: Moderate Design-Build Statutes Risk Losing it all Due to Automatic Limitations ................................................................................ 162
1. Circumstantially Taking Advantage of Section 1304 Funding by Using Design-Build ........................................ 163
2. Realizing the Inherent Benefits of Design-Build Depends on the Statutory Limitation ......................................... 164
C. The Illinois Case Study: Limited Design-Build Statutes are Precluded from Taking Advantage of Section 1304 Funding and from Realizing Any Inherent Benefits ................................................................................ 166
1. Failing to Qualify for Section 1304 Funding Through the Design-Build Provision .............................................. 167
2. Forfeiting the Opportunity to Realize the Inherent Benefits of Design-Build ......................................................... 168
III. Even for the Wary, Design-Build is Possible with Creative Structuring ................................................................... 169
A. Oversight of Design-Build Within the State ........................................................................................................ 169
B. Removing Financial Restrictions on Design-Build Projects .................................................................................. 171
Conclusion .................................................................................................................. 171

INTRODUCTION

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of the American Recovery and Reinvestment Act of 2009, is highway financing. Large projects, like interstate highway construction, feature many moving pieces. Consequently, these projects contain many opportunities for inefficiencies that lead to waste.

One potential area for waste within transportation construction projects is in the initial procurement. The traditional method of procurement for transportation projects, known as “Design-Bid-Build,” requires two separate phases: an award for design and an award for construction. As the inefficiencies of the Design-Bid-Build process have come to light, alternative processes have emerged. One such alternative method is “Design-Build.” Design-Build, unlike Design-Bid-Build, combines the bidding processes for the design and construction phases and packages the entire project into one contract that is let once. In doing so, Design-Build removes many of the inefficiencies of the traditional Design-Bid-Build process.

Recognizing the inefficiencies of the predominant Design-Bid-Build process, Congress endorsed “innovative project delivery methods” such as Design-Build when it passed the Moving Ahead for Progress in the 21st Century Act (MAP-21 Act) in 2012. However, states have not

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4 Cf. 23 C.F.R. pt. 635 (2012) (laying out a variety of procedures related to the contracting process such as “Tied bids,” “Advertising for Bids and Proposals,” and “Changes and extra work”).
6 See 23 C.F.R. § 636.103 (“Design-bid-build means the traditional project delivery method where design and construction are sequential steps in the project development process.”).
9 See McAlpine, supra note 7, at 552–54 (reiterating how the owner bids out both the design and construction phases of the project as one piece to one Design-Build contractor).
uniformly embraced the method, and others have not incorporated it into their procurement statutes at all. As a result, there are differing approaches throughout the United States for how to use project delivery methods to reduce procurement waste in highway projects.

This article will evaluate the current status of Design-Build in America by examining the effectiveness of section 1304 of the MAP-21 Act when applied to the existing statutory framework of states. In doing so, this article seeks to establish Design-Build as an effective solution to the problems of Design-Bid-Build, and will offer possible solutions for how states can take advantage of Design-Build and in the process, reduce government waste.

Part II compares Design-Build as a method of procurement to Design-Bid-Build, as well as provides background on section 1304 of the MAP-21 Act, and explains the current status of Design-Build in the states. Part III analyzes the effectiveness of section 1304 by applying a hypothetical request for bids on a contract (i.e. a letting) to the Design-Build statutes of three different states. This Part analyzes the economic benefits each state realizes or forfeits based on its ability to use Design-Build for the hypothetical letting. Part IV provides two recommendations for how to solve the issues raised by the results in Part III. Finally, in conclusion, it is suggested that the waste associated with highway projects is avoidable through a combination of creativity and the willingness of a state to statutorily sanction alternative methods, such as Design-Build.

I. Transportation Procurement: Two Stages Versus One, and What Congress Has to Say About it

In June 2012, Congress passed the MAP-21 Act, which includes a provision that incentivizes states to use innovative bidding processes,
such as Design-Build, for highway projects.\textsuperscript{16} MAP-21 Act not only incentivizes the use of Design-Build, but also articulates what states must do to qualify for federal funding.\textsuperscript{17} Despite this federal statute promoting Design-Build, states have different statutory requirements, incentives, and allowances for highway construction projects.\textsuperscript{18} This is due in part to the relative advantages and disadvantages of both Design-Bid-Build and Design-Build. State Design-Build statutes are better examined by separating states into three authorization categories: broad, moderate, and minimal, which are exemplified by Virginia, Florida, and Illinois, respectively.\textsuperscript{19} Using a hypothetical letting for a highway construction project, it is possible to study the effects of the states’ dissimilar Design-Build laws.

\section*{A. The Traditional Procurement Method: Design-Bid-Build}

The process of building a transportation construction project generally consists of two main phases: (1) the “design” phase in which the project is planned; and (2) the “construction” phase in which the project is built.\textsuperscript{20} “Design-Bid-Build,” the “more common” method of contracting for transportation construction projects,\textsuperscript{21} separates the design portion of the project and the construction portion of the project into two distinct contracts and bidding phases.\textsuperscript{22} First, the owner of the project (e.g., a government agency) contracts with a design professional, typically an architect or engineer, to design the project based on general specifications and the goals of the owner.\textsuperscript{23} Second, after the design

\begin{thebibliography}{99}
\bibitem{footnote16} See MAP-21 Act, § 1304(b), 126 Stat. at 532–33 (offering one hundred percent federal funding for transportation projects using innovative methods, including Design-Build).
\bibitem{footnote17} See id.
\bibitem{footnote18} Compare Alaska Stat. Ann. § 36.30.200(c) (granting the commissioner of transportation with the discretion to use Design-Build when she determines it would be advantageous), with N.D. Cent. Code Ann. § 24-02-47(1) (West Supp. 2011) (authorizing the North Dakota Department of Transportation (“NDDOT”) to use Design-Build on one signal light and one box culvert project).
\bibitem{footnote20} See Jay A. Felli, Comment, \textit{The Elements of Ohio’s Liability Provisions for Contemporary Design-Build Architects – An Unwillingness to Expand the Plan}, 17 U. Dayton L. Rev. 109, 115 (1991) (explaining how the design phase consists of an architect creating a plan for the project and how the construction phase is comprised of a contractor building the architect’s plan); \textit{cf.} Fluor Enters., Inc. v. United States, 64 Fed. Cl. 461, 482 (2005) (describing how the design and construction phases can be two distinct phases, such as under Design-Bid-Build).
\bibitem{footnote22} Fluor Enters., Inc., 64 Fed. Cl. at 482 (quoting John B. Miller, \textit{Principles of Public and Private Infrastructure Delivery} xxix (2000)).
\bibitem{footnote23} See \textit{Design-Build Contracting Handbook} 4 (Robert F. Cushman & Kathy Sperling Taub eds., 1992) [hereinafter \textit{Handbook} 1st ed.] (elaborating that the owner waits for the design to be near completion before retaining a construction contractor).
\end{thebibliography}
phase is essentially complete, the owner contracts with a construction contractor to build the architect’s design.\textsuperscript{24} Under Design-Bid-Build, the owner contracts separately with both the design professional and the builder for their respective tasks.\textsuperscript{25}

Under Design-Bid-Build, the design professional and the contractor have several key duties and responsibilities. The design professional must design the project to fit the project owner’s specifications and then ensure full compliance by the construction contractor.\textsuperscript{26} In doing so, the design professional’s standard of liability is only one of professional negligence.\textsuperscript{27} The design professional, along with the project owner, must also oversee the actual construction and monitor that the contractor is working in compliance with the plans.\textsuperscript{28} The contractor is required to build the design in accordance with the design professional’s approved plans.\textsuperscript{29} The contractor also must oversee the worksite and choose the strategy for construction.\textsuperscript{30} However, the contractor does not have a duty to second guess the design or find any mistakes.\textsuperscript{31}

In the United States, Design-Bid-Build is considered the traditional process for procuring government construction projects at both the federal and state levels.\textsuperscript{32} While prior federal acts have required that

\textsuperscript{24} See id. (characterizing that the contractor must comply with the design professional’s specifications when building).


\textsuperscript{26} See Handbook 1st ed., supra note 23, at 4 (stating also that the contractor is not then obligated to find errors in the design).

\textsuperscript{27} See Carl J. Circo, When Specialty Designs Cause Building Disasters: Responsibility for Shared Architectural and Engineering Services, 84 Neb. L. Rev. 162, 175 (2005) (concluding that the design professional does not need to guarantee a satisfactory result); see also Felli, supra note 20, at 134 (affirming how there is no implied warranty that the design will fit a particular purpose); Audland Lumber & Builders Supply, Inc. v. D.E. Britts Assocs., Inc., 168 So. 2d 333, 335 (Fla. Dist. Ct. App. 1964) (holding that the architect breaches their standard of care only if they are negligent), cert. denied, 173 So. 2d 146 (Fla. 1965).

\textsuperscript{28} Felli, supra note 20, at 115; see also Handbook 1st ed., supra note 23, at 4-5 (explaining how changes to the project must go through a review process by the engineering firm and the government agency).

\textsuperscript{29} See Felli, supra note 20, at 115 (“[T]he contractor’s responsibilities include building the project in accordance with the architect’s contract documents, directing the work at the construction site, and selecting the methods and techniques of construction.”).

\textsuperscript{30} See id.

\textsuperscript{31} See Handbook 1st ed., supra note 23, at 4–5 (explaining that after fulfilling their minimal obligations, construction contractors are focused on completing the project quickly and cost effectively).

the construction phase be procured through competitive bidding, the Brooks Act of 1972\(^{33}\) left Design-Bid-Build as the only available method of federal government project delivery, because it required federal agencies to procure the design phase through negotiation rather than bidding.\(^{34}\) The divergent procurement requirements for the two key phases of the construction process made the joint procurement of design and construction, such as under Design-Build, untenable.\(^{35}\) In 1996, the Federal Acquisition and Reform Act\(^{36}\) started to break down the statutory barrier to a joint design and construction process by allowing federal agencies to evaluate whether Design-Build would be appropriate for a construction project, thus opening the door for alternative bidding processes.\(^{37}\)

Design-Bid-Build presents a number of potential advantages for a government project owner.\(^{38}\) One such advantage is that there is a built-in price competition between builders to have the lowest bid in order to win the contract, which allows the government owner an improved opportunity to build the project at its lowest market price.\(^{39}\) A correlated potential advantage to a lowest-bid system is that objectively awarding based on the lowest bid “reduces the likelihood of collusion or favoritism.”\(^{40}\) A second potential advantage is that by the time builders are bidding over the contract to build the project, the government agency, which owns the project and controls the bidding process, has had the opportunity to fully approve the design.\(^{41}\) Finally, a third potential advantage for public construction projects is that since the contract only encompasses construction (i.e. no design element), the respective bidding is opened up for the contracts to firms of all

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35 Fluor Enters., Inc., 64 Fed. Cl. at 483 (explaining that the Brooks Act prohibited Design-Build because it required that the design phase be procured through negotiation and the construction phase be procured through competition).
37 Id. § 4105, 110 Stat. at 645–49.
39 Id.
41 Handbook 2d ed., supra note 25, at 8; see also Handbook 1st ed., supra note 23, at 4 (describing that under Design-Bid-Build, the project owner waits to contract with the contractor builder until when the design is nearly or fully complete). One of the drawbacks of Design-Build is excessive owner involvement therefore for Design-Build to be effective, a project owner must take a backseat after contracting out the project, as opposed to Design-Bid-Build where the owner must approve the project prior when builders can bid on the construction contract. See Handbook 2d ed., supra note 25, at 13.
sizes, rather than limiting the bidding pool to only those firms that can perform both functions.42

B. DESIGN-BUILD IS AN ALTERNATIVE METHOD THAT SIMPLIFIES PROCUREMENT INTO ONE BIDDING PHASE

While Design-Bid-Build is still considered the traditional method of procurement,43 alternative methods of contract procurement have developed.44 One alternative that has gained the interest of the federal government and has become available in many states is Design-Build.45 Where Design-Bid-Build separately bids out the design and construction portions of a project, Design-Build combines both phases into one contract that is offered once.46 Several methods of Design-Build have emerged, including single and two phase Design-Build. In addition, the differences between Design-Build and Design-Bid-Build have presented numerous advantages and disadvantages.

1. DESIGN-BUILD UNITES THE DESIGN AND CONSTRUCTION PHASES OF THE PROJECT INTO ONE COMPREHENSIVE CONTRACT

Design-Build is an alternative method of contracting for construction projects in which the design and construction elements of the project are combined into one comprehensive contract.47 Where Design-Bid-Build automatically separates the two phases and requires the owner to bid them separately to designers and contractors, respectfully,48 Design-Build requires the owner of the project to bid out one contract at one time.49 This is an advantage from the project owner’s perspective,

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42 Peterson, supra note 40, at 913.
44 See generally Dibner, supra note 7 (articulating Construction Management and Design-Build as alternative methods of procurement).
47 See Valley Cnty. Pres. Comm’n v. Mineta, 231 F. Supp. 2d 23, 27 (D.D.C. 2002) (presenting that the design and construction phases of a construction project are integrated into one contract under Design-Build); see also id. at n.5 (adding that Design-Build only has two phases: “(1) preliminary design and (2) final design and construction”).
49 See Felli, supra note 20, at 117 (“[I]n the design-build model, the only contract is between the owner and the design-builder.”).
because it need only work with one contracting entity (i.e. the design-builder) for the entire project instead of two.\textsuperscript{50}

Additionally, because there is only one encompassing contract, the design-builder relationship can be formulated one of many ways.\textsuperscript{51} Frequently, the design-builder is a large firm capable of providing both architectural and construction services, or at least capable of easily arranging to provide both.\textsuperscript{52} Another option is for the design-builder to be an architect and then hire a contractor to perform the building element of the contract.\textsuperscript{53} However, it is also possible for the design-builder to be the contractor who then hires an architect to design the plan.\textsuperscript{54} Regardless of the relationship between the builder and the designer, the consolidation of two contractual steps into one step has the possibility of making the process more efficient for the project owner. On the other hand, this could also be a detriment to smaller firms that specialize in only construction or only design. That being said, under Design-Build, the project-owner retains the efficiency of only working with one contracting entity regardless of how the design-builder is formulated.

\section*{2. DESIGN-BUILD HAS TWO PROMINENT FORMULATIONS THAT BOTH STREAMLINE DESIGN AND CONSTRUCTION}

Design-Build combines the design phase and construction phase of a transportation construction project into one unified contract.\textsuperscript{55} Procedurally, Design-Build emphasizes selecting the proposal with the “best-value” even if such a proposal is not the cheapest; on the other hand, Design-Bid-Build stresses picking the proposal that is the “lowest bid” by price despite the possibility of not being the best value.\textsuperscript{56} Specifically, within Design-Build, all of the different methods utilize the same core potential benefits of the over-arching model:

\begin{itemize}
\item \textsuperscript{50} Handbook 1st ed, supra note 23, at 5 (explaining that the “overall effect of design-build” is that the owner must only deal with a “single entity”).
\item \textsuperscript{51} See generally Felli, supra note 20, at 117–18 (listing the various American Institute of Architects (“AIA”) contractual arrangements available to design-builders in Design-Build contracts).
\item \textsuperscript{52} See Peterson, supra note 40, at 912 (listing that under Design-Bid-Build, unlike Design-Build, bidding capability is not limited to large firms).
\item \textsuperscript{53} Id. (citing an AIA standard agreement between a design-builder and a contractor for when a design-builder is an architect and then hires a contractor to build the design).
\item \textsuperscript{54} Id.
\item \textsuperscript{55} See P3 Defined: Design Build, supra note 46 (explaining how the emphasis on unity is what differentiates Design-Build from Design-Bid-Build).
\item \textsuperscript{56} See Sayer v. Minn. Dep’t of Transp., 790 N.W.2d 151, 156 (Minn. 2010) (comparing “design-build best-value” with Design-Bid-Build “lowest responsible bidder”); see also Minn. Stat. Ann. § 383B.158(1)(b) (West 2004) (“‘Best Value’ describes a result intended in acquiring design-build services.”).
\end{itemize}
saving cost and time.\textsuperscript{57} Two of the more prominent methods of Design-Build are a single-phase selection process and a two-phase selection process.\textsuperscript{58} In the single-phase selection process, a government agency posts a Request for Procurement (RFP), and Design-Build contractor/designers submit proposals in response.\textsuperscript{59} The agency does not narrow the field of bidders prior to the RFP.\textsuperscript{60}

The two-phased selection process is more common and is comprised of two steps.\textsuperscript{61} In the first phase, a government agency posts a Request for Qualification (RFQ) consisting of the qualifications the agency seeks in bidding firms.\textsuperscript{62} The project owner, likely an agency, uses these responses to create a short list of generally three to five pre-qualified firms.\textsuperscript{63} In the second phase, the project owner issues an RFP to the pre-qualified firms, the firms submit design proposals, and the agency evaluates the proposals on previously announced criteria.\textsuperscript{64} Ultimately the project owner awards the project to the bidder that scores the highest against the listed criteria.\textsuperscript{65} Regardless of which method of Design-Build a project owner uses, the project delivery method presents a range of benefits.\textsuperscript{66}

\textsuperscript{57} See, e.g., 23 C.F.R. § 636.201 (2012) (instructing how to decide between three variations of Design-Build: “Two-phase selection procedures,” “single phase,” and “Modified Design-Build”); \textit{see also} Dibner, \textit{supra} note 7, at 143 (presenting cost and time savings as the advantages of using Design-Build procurement).


\textsuperscript{59} See Fed. Highway Admin., supra note 58, at 21 (noting that the two-phase selection process produces the basis for the final proposals . . . ).

\textsuperscript{60} \textit{See} id. (“Single-phase selection process . . . Short listing is not used.”); \textit{see also} id. (defining “Short listing” as the means of the narrowing of the field of offerors); id. (defining a “Request for Qualification” (“RFQ”) as the document in Phase I that describes the project for potential offerors to use when deciding whether to bid).

\textsuperscript{61} \textit{See} Fed. Highway Admin., supra note 58, at 21 (noting that a majority of agencies use the two-phase selection process); \textit{see also} 23 C.F.R. § 636.202 (suggesting two-phase should be used when there are three or more offers, emphasizing the presence of a degree of competition in the bidding process).

\textsuperscript{62} \textit{See} 10 U.S.C. § 2305a(c)(2) (2006 & Supp. V 2011) (listing the factors to be included in the phase one RFQ, including “technical approach” and “technical qualifications”); \textit{see also Fed. Highway Admin., supra note 58, at 21 (explaining that the first phase requires the pre-qualification of firms based on certain qualifications).

\textsuperscript{63} \textit{See Fed. Highway Admin., supra note 58, at 21 (reasoning that phase one lowers the agency’s cost from reviewing the bids).

\textsuperscript{64} \textit{Id.; see also} Sayer v. Minn. Dep’t of Transp., 790 N.W.2d 151, 154 (Minn. 2010) (detailing how under two-phase design-build, each bid is scored based on specified categories).

\textsuperscript{65} \textit{See, e.g., Sayer, 790 N.W.2d at 154 (describing how the goal is to use an objective method of gauging the quality of the bid to award the contract to the highest valued bid).}

\textsuperscript{66} \textit{See generally} Handbook 2d ed., \textit{supra} note 25, at 11–12.
3. The Streamlining of Design-Build Creates Advantages Over Design-Bid-Build

By streamlining the design and construction phases, Design-Build unites the two major stages of the transportation construction process. In the process, Design-Build creates a number of advantages over Design-Bid-Build for both a project owner, such as a government agency, and the contractors. For a government agency project owner, the potential advantages of Design-Build include faster delivery, cost savings, better quality, singular responsibility, decreased administrative burden, reduced risk, and a possible reduction in litigation claims. In particular, Design-Build can speed up the completion of large-scale projects.

Design-Build presents advantages for construction and design firms. In particular, Design-Build provides firms with the opportunity to obtain higher gross margins than through traditional Design-Bid-Build contracting. The creation of a single point of responsibility helps to avoid negligence and contract-based lawsuits. Finally, as cited by the U.S. Senate Committee on Appropriations, a study by the Construction Industry Institute that found Design-Build to be six

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67 See What is Design-Build?, DESIGN-BUILD INST. OF AM., http://www.dbia.org/about/designbuild/ (last visited Mar. 26, 2013) (maintaining that the purpose of Design-Build is to unite the design and construction phases).
68 See HANDBOOK 1st ed., supra note 23, at 3 (explaining that the advantages for firms include higher gross margins than traditional contracting and access to projects with less competition).
69 Hearing on the U.S. Department of Veterans Affairs Budget, supra note 10, at 2–4 (statement of Tom Hardiman, Executive Director, Modular Building Institute) (listing advantages of Design-Build for the Department of Veterans Affairs including a reduced risk because the Design-Build team assumes additional risk and a reduction in litigation because Design-Build closes warranty gaps); see also Hearing on Improving and Reforming the Nation’s Surface Transportation Programs Before the Subcomm. on Highways and Transit of the H. Comm. On Transp. and Infrastructure, 112th Cong, 395–96 (2011) [hereinafter Hearing on Improving and Reforming the Nation’s Surface Transportation Programs] (statement of Kathy J. Caldwell, President, American Soc’y of Civil Eng’rs) (stating that the advantages of Design-Build include a reduction of the owner’s administrative burden because there is only one contract as well as shorter delivery time and less costs and finally simplicity for changing anything during construction).
70 Hearing on Improving and Reforming the Nation’s Surface Transportation Programs, supra note 69, at 358 (testimony of John R. Njord, Executive Director, Utah Dep’t of Transp.).
71 See HANDBOOK 1st ed., supra note 23, at 3 (presenting that the benefits for firms include minimizing the potential for cost overruns from disputes among teams).
72 See id. (stating that Design-Build also provides firms access to unique projects with less competition, and smaller potential for cost overruns due to disputes among the construction team); see also Jeffrey B. Mullan, Design-Build Delivery for Massachusetts Public Construction Projects, Bos. B.J., Nov.-Dec. 2001, at 10, 23 (advancing that Design-Build involves the construction team earlier, which in turn improves coordination between the design and construction teams); What is Design-Build?, DESIGN-BUILD INST. OF AM., http://www.dbia.org/about/designbuild/ (last visited Nov. 2, 2012) (lauding how Design-Build decreases administrative costs during contracting for higher gross profit margins).
73 See Mullan, supra note 72, at 23 (hypothesizing that Design-Build decreases lawsuits because it places responsibility on the party best suited to assume the risk of ensuring delivery).
percent lower in cost, twelve percent faster in construction time, and thirty-three percent faster in project completion time.\textsuperscript{74} Construction and design firms benefit from Design-Build contracting because it affords these businesses increased opportunities, through time and resources, to undertake additional projects.

\section*{4. Design-Build has Potential Drawbacks}

Despite its potential advantages, Design-Build is not without its disadvantages.\textsuperscript{75} One disadvantage is the conflicting interests over information between practitioners and government project owners.\textsuperscript{76} Construction practitioners must create detailed designs in the proposal stage, often at great cost to themselves if the design is not selected.\textsuperscript{77} Likewise, government agencies are hesitant to provide details of how they would like the project designed beyond a certain conceptual point; otherwise the agencies spend additional resources on compiling the preliminary information and cost estimates of the project themselves.\textsuperscript{78} Thus, despite both the project owner and Design-Build firms having a disincentive to compile initial estimates and information due to the high cost of determining such information, each must be as detailed as possible in their respective communications for the method to work efficiently.\textsuperscript{79}

For the design-builders, a disadvantage of Design-Build is an exposure to a possible higher standard of care.\textsuperscript{80} The general standard

\textsuperscript{74} S. Rep. No. 112-79, at 82 (2011); see also Mullan, supra note 72, at 45 (hypothesizing that Design-Builder contractors reduce the project schedule because they can begin construction while still designing).

\textsuperscript{75} See, e.g., McAlpine, supra note 7, at 554–56 (naming licensing conflicts and the high cost of formulating proposals as disadvantages); Mullan, supra note 72, at 24 (noting that the owner relinquishes some control).

\textsuperscript{76} See McAlpine, supra note 7, at 555 (explaining how project owners have a disincentive to provide a lot of details of the concept to potential bidders because determining that information is costly and can potentially be a cost born by the designer through their plan); Mullan, supra note 72, at 24 (saying that bidding designers require fairly complete preliminary concepts to ensure accurate quantities for cost estimating).

\textsuperscript{77} See Mullan, supra note 72, at 24 (lamenting the initial high expenses necessary to put forward an adequate proposal with accurate estimates of costs and scheduling).

\textsuperscript{78} See McAlpine, supra note 7, at 555 (explaining how producing a Design-Build proposal is costly for agencies because the agency must include detailed information to concoct accurate designs); Mullan, supra note 72, at 24 (“[O]wners must take time to articulate their needs precisely, identifying all design and program requirements and standards . . . .”).

\textsuperscript{79} See, e.g., Mullan, supra note 72, at 24 (saying that proposals must have fairly complete preliminary designs to ensure accurate quantities for cost estimating); McAlpine, supra note 7, at 555 (asserting that the design must be at least thirty-five percent complete to give an accurate estimate of the cost).

\textsuperscript{80} See Hal G. Block, As the Walls Came Tumbling Down: Architects’ Expanded Liability Under Design-Build/Construction Contracting, 17 J. Marshall L. Rev. 1, 9 (1984) (voicing that Design-Build, by requiring a higher duty of care, exposes architects to increased liability than under Design-Bid-Build).
of care for an architect or engineer on a design contract is one of reasonableness.\textsuperscript{81} However, under Design-Build contracts, the standard of care for the builder-contractor is often one in which the contractor must “furnish a design fit for the intended purpose.”\textsuperscript{82} Thus, where the design professional is considered the Design-Builder, the design professional is potentially subject to a higher standard of liability for things such as “a breach of an express warranty, an implied warranty, and even strict liability in tort,” whereas under Design-Bid-Build the designer is only liable if they are negligent in creating their design.\textsuperscript{83}

For government agencies, a significant disadvantage of Design-Build is that they must relinquish control over many aspects of a project.\textsuperscript{84} After bidding out a project, the agency must take a backseat to the contractor during the design stage, the construction inspection, and any testing.\textsuperscript{85}

C. The Moving Ahead for Progress in the 21st Century Act Incentivizes Design-Build

On July 6, 2012, President Barack Obama signed the MAP-21 Act into law.\textsuperscript{86} This appropriations bill makes significant changes to the structure of federal transportation programs and to many aspects of project delivery.\textsuperscript{87} In particular, the MAP-21 Act includes monetary incentives for states to use “innovative project delivery methods.”\textsuperscript{88}

Section 1304 of the MAP-21 Act amends section 120 of title 23 of the

\textsuperscript{81} See Felli, supra note 20, at 134 (explaining how there is no implied warranty that the design will fit a particular purpose); see also Audlane Lumber & Builders Supply, Inc. v. D.E. Britt Assocs., Inc., 168 So. 2d 333, 335 (Fla. Dist. Ct. App. 1964) (holding that the architect breaches their standard of care only if they are negligent), cert. denied, 173 So. 2d 146 (Fla. 1965).

\textsuperscript{82} See Robertson Lumber Co. v. Stephen Farmers Coop. Elevator Co., 143 N.W.2d 622, 626 (Minn. 1966) (holding that a Design-Build contractor warrants the design for the intended purposes).

\textsuperscript{83} Block, supra note 80, at 10–11.

\textsuperscript{84} See Peterson, supra note 40, at 916 (suggesting that the owner control under Design-Build makes the method inappropriate for large and evolving projects).

\textsuperscript{85} See Mullan, supra note 72, at 10, 24 (stating that owners under Design-Build play a smaller role than what they otherwise would under Design-Bid-Build).


\textsuperscript{87} See MAP-21 Act, Pub. L. No. 112-141, § 1101(a), 126 Stat. 405, 414 (appropriating $105 Billion in funding for transportation through Fiscal Year 2014); §§ 1104–23, 126 Stat. at 422–500 (eliminating or consolidating transit programs into 6 core funding programs).

\textsuperscript{88} See § 1304(b), 126 Stat. at 532–33 (presenting qualifying projects with a one hundred percent federal share of funding).
United States Code by adding a new subsection.\footnote{Id. See generally 23 U.S.C. § 120 (2006 & Supp. V 2011) (laying out the restrictions and conditions of the federal share payable on interstate highway projects).} Section 1304 adds an “Innovative Project Delivery” exception to the current ninety percent limit on the federal share of funding.\footnote{§ 1304(b), 126 Stat. at 532–33; see also 23 U.S.C. § 120(a)(1) (providing that the upper limit of the federal share for any interstate highway system project is ninety percent); Sec. 1304: Innovative Project Delivery Methods Questions & Answers, Fed. Highway Admin., http://www.fhwa.dot.gov/map21/qandas/qapid.cfm (last visited Apr. 11, 2013) (answering that the incentive imbedded in section 1304 is that it increases the “share” of a construction project that the federal government will pay for if the terms of the project meet the section’s criteria).} Under section 1304, a highway project that is funded out of the National Highway Performance Program (NHPP), the Surface Transportation Program (STP), or the National Freight Program (NFP) can have the percentage of the federal share increased to one hundred percent if the project meets the section’s qualifying criteria.\footnote{See § 1304(b), 126 Stat. at 532–33; see also § 1106, 126 Stat. at 432–37 (creating the NHPP for construction on the National Highway System); § 1108, 126 Stat. at 440–44 (creating the STP for construction on qualifying surface transportation systems); § 1116, 126 Stat. at 472 (creating the NFP to prioritize projects that improve freight movement); but see § 1304(b), 126 Stat. 405, 532–33 (delineating two limits on the amount of available federal funding: states can only use section 1304 for up to ten percent of their appropriations from the NHPP, TMP, and the NFP; and the federal share can on a given project can only be increased up to five percent of the total project cost).} Through this provision, Congress intended to use a monetary incentive to foster innovation in highway transportation project procurement.

The qualifying criteria are geared towards improving efficiency and safety related to project delivery.\footnote{See § 1304(a)(1), 126 Stat. at 532 (declaring it in the national interest to increase the efficiency and safety of construction projects).} Qualifying projects must use innovative methods that target elements of the process such as improving work zone safety, innovative technologies, innovative financing, innovative contracting methods, accelerated project delivery, or reduced congestion during construction.\footnote{Id. at 532–33.} In its list of examples for sufficient innovative financing or contracting methods, section 1304 explicitly provides Design-Build as one such method.\footnote{Id.}

\section*{D. STATE STATUTORY FRAMEWORKS FALL INTO THREE CATEGORIES OF DESIGN-BUILD AUTHORIZATION: BROAD, MODERATE, AND MINIMAL}

Many states now have statutes authorizing the use of Design-Build for construction projects. However, not all states authorize Design-Build for highway projects to the same degree. This creates the necessary consequence that some states are able to authorize a particular project for Design-Build while other states may not, which is an issue that becomes more pronounced because additional federal funding is available.

1. Some States Have Broad Design-Build Authorization Statutes for Transportation Construction Projects

Some states have amended their procurement statutes to allow for broad utilization of Design-Build. Virginia, Alaska, and Wyoming, for example, have broad authorizing Design-Build statutes that allow for their transportation departments to use Design-Build on highway projects. Such broad authority creates procurement flexibility on projects and a greater chance of benefiting from additional federal funding. In Virginia, for example, the Commonwealth Transportation Board (CTB) created a set of objective criteria that all potential Design-Build projects must meet in some way if they are to move forward as a Design-Build project, and the Virginia Department of Transportation (VDOT) oversees the selection process. By having such a broad
authorization statute, the Virginia Commonwealth is now more qualified for federal funding.

The Alternative Project Delivery Office (APD) of VDOT identifies potential Design-Build projects using eight categories of projects that might be suitable for designation as a Design-Build project.\(^{103}\) In addition, projects must have funding for design, right-of-way, and construction identified prior to the start of the contract.\(^{104}\) Once the APD designates a project, VDOT management reviews the merits and then submits it to the Commissioner of VDOT for final approval.\(^{105}\) Thus, the Virginia process for designating and approving a project for Design-Build is relatively straightforward.

### 2. Some States Have Moderate Design-Build Authorization Statutes for Transportation Construction Projects

As Design-Build has grown, some states have embraced it as a method of procurement, but not wholeheartedly.\(^{106}\) For example, Florida has an annual cap on the amount the Florida Department of Transportation (FDOT) can allocate to highway Design-Build projects.\(^{107}\) Massachusetts limits the use of Design-Build to contracts over $5,000,000.\(^{108}\) Louisiana allows the Louisiana Department of Transportation and Development (LDOTD) to identify projects for Design-Build, but requires final legislative approval.\(^{109}\) Limitations, such as the foregoing examples, can create potential repercussions in qualifying for federal funding as well as for efficient project delivery.\(^{110}\)

FDOT’s Design-Build authorization is an example of a transportation agency with limited Design-Build authorization.\(^{111}\) FDOT can enter

\(^{103}\) See id. at 6 (including among the eight categories, projects impacting public safety and projects maximizing available funding).

\(^{104}\) See id.

\(^{105}\) See id. at 6–7 (summarizing that a highway project is a candidate for Design-Build if it (1) meets at least one “Objective Criteria,” (2) its details are essentially finalized, and (3) it fits in one of the categories of projects suitable for Design-Build).


\(^{111}\) See MAP-21 Act, Pub. L. No. 112-141, § 1304(b), 126 Stat. 405, 532 (2012) (mandating that qualification requires meeting specific qualifications such as the use of innovative technologies or innovative contracting methods, or a focus on accelerating project delivery).

\(^{111}\) See Fla. Stat. Ann. § 337.025(1) (imposing an annual cap of $120 million on Design-Build
into Design-Build contracts for projects on buildings, major bridges, and other projects.\footnote{See id. § 337.11(7)(a) (requiring only that FDOT determine the public’s best interests are served by using Design-Build for a particular non-highway project).} For highway projects, FDOT is authorized to use “innovative bidding and financing techniques” that “control[] time and cost increases on construction projects.”\footnote{Fla. Stat. Ann. § 337.025(1).} However, FDOT has an annual cap of $120 million on the amount of money it can devote to highway Design-Build contracts.\footnote{Id.}

The FDOT process of designating a project for Design-Build is straightforward.\footnote{Id.} The District and Central Office Management decide whether contracting through Design-Build “would benefit [FDOT] and [FDOT]’s customers.”\footnote{See Fla. Dep’t of Transp., Topic No. 625-020-010-k, Design-Build Procurement and Administration, 11 (2011), http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625020010.pdf (centralizing the authority to designate a project for Design-Build within the FDOT District and Central Office Management and basing the selection standard on the clear standard that the project must benefit the state).} Once a project is approved for Design-Build, a Project Manager and the Contracting Unit determine the pre-qualification requirements that bidders must meet.\footnote{Id.} Finally, FDOT finalizes the design and construction criteria and the agency bids the project out to potential contractors.\footnote{Id.} Thus, Florida can authorize any project for Design-Build that meets FDOT’s criteria, but cannot use any more than $120 million per year on such projects.\footnote{See id. (requiring pre-qualification before the due date for responses to the Request for Qualification).} This allows Florida to freely approve highway projects for Design-Build, but creates an inflexible ceiling on funding that limits the capability of FDOT to widely use the contracting method.

3. Some States Have Minimal Design-Build Authorization Statutes for Transportation Construction Projects

Despite the increased use of Design-Build in highway projects, not all states have embraced it.\footnote{See id. at 14 (allowing at least sixty days to answer the advertisement).} Some states, like Illinois, require that the bidding for highway contracts be done through competitive sealed bidding (i.e. Design-Bid-Build).\footnote{See Fla. Stat. Ann. § 337.025(1).} Other states such as Iowa and North
Dakota have authorized Design-Build for specific projects, but have not granted general Design-Build authorization for highway construction projects.122

Illinois is another state that has not authorized Design-Build for highway projects.123 Despite recent efforts to provide general Design-Build authorization, Illinois is still rooted to the more traditional form of “competitive sealed bidding.”124 There have been certain exemptions to this limitation on the use of Design-Build, such as the Illiana Expressway project.125 However, in general, Illinois state agencies are required to use Design-Bid-Build.126

Because state law requires the Illinois Department of Transportation (IDOT) to use competitive sealed bidding for highway construction projects, the agency must follow Design-Bid-Build in awarding contracts.127 IDOT must first issue an invitation for bids that includes a “purchase description and the material . . . conditions applicable to the
Each invitation must provide the evaluation criteria for bidding. Ultimately, IDOT must award the contract to the “lowest responsible and responsive bidder” unless an Illinois purchasing officer can prove otherwise. This requirement prevents IDOT from utilizing Design-Build on highway projects.

E. A Hypothetical Letting Illustrating Design-Build Project That is Eligible for Section 1304 Funding

Applying a hypothetical letting to the various state transportation Design-Build statutes can expose strengths and flaws, both inherent and in the states’ ability to qualify for section 1304. The following hypothetical letting is based on an actual letting by FDOT. To qualify for assistance under section 1304, the funding for the project must come from one of three programs, including the NHPP. Accordingly, for the NHPP, the project must be on a roadway, like an interstate highway, to qualify for the National Highway System (NHS). For the NHPP, a project must also improve the infrastructure and safety of the NHS. A project that satisfies these requirements is eligible for section 1304 federal funding.

For illustrative purposes, the hypothetical is a letting that calls for roadwork on an interstate highway. The project is for the construction of a new interchange at an exit on an interstate highway and for the construction of two auxiliary lanes surrounding the interchange. The

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128 30 ILL. COMP. STAT. ANN. 500 / 20-10(b).
129 See 30 ILL. COMP. STAT. ANN. 500 / 20-10(e) (including criteria such as quality, delivery, and suitability for a particular purpose).
130 30 ILL. COMP. STAT. ANN. 500 / 20-10(g).
133 MAP-21 Act, Pub. L. No. 112-141, § 1304(b), 126 Stat. 405, 532 (2012); see also § 1106, 126 Stat. at 432–37 (declaring that to qualify for the NHPP, the transportation construction project must be part of the NHS); 23 U.S.C. § 103(b)(2)(A) (2006) (specifying that the interstate highway system is part of the NHS).
134 See 23 U.S.C. § 103(c) (defining the “Interstate System” as a system of highways serving the purposes of connecting major areas and serving the national defense).
136 See MAP-21 Act, § 1304(b), 126 Stat. at 532–33 (allowing it to receive up to one hundred percent federal share of funding).
137 See Current Design/Build and Special Advertisements, supra note 132 (requesting bids to build a new interchange on an interstate highway in Florida).
estimated total cost of the project is $70,000,000. Thus, this hypothetical letting satisfies the requirements of the NHPP because it is for work on an interstate highway that improves the infrastructure and safety of the NHS. 139

II. The States’ Qualification for Section 1304 Funding Range if Using Design-Build

MAP-21 Act section 1304 provides an incentive for states to utilize Design-Build and other innovative project delivery methods. 140 However, using Design-Build to qualify for section 1304 funding is dependent on a state’s level of Design-Build authorization. 141 As previously discussed, regardless of section 1304 funding, there are inherent benefits to using Design-Build for highway construction projects. 142 Applying this hypothetical letting for a highway construction project to states’ laws illustrates that the degree of Design-Build authorization can affect a state’s ability to qualify for section 1304, and can affect the overall costs of the project delivery. 143 States with broad statutes, like Virginia for example, are enabled to take advantage of both section 1304 and the inherent benefits of using Design-Build. 144 States, such as Florida, with moderate authorization statutes can take advantage of section 1304 and realize the inherent gains from Design-Build, but only within the limited degree of the statute. 145 Whereas, states with minimal authorization statutes, such as Illinois, lose out on section 1304 funding for Design-Build and any inherent benefits. 146

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139 See § 1106(a), 126 Stat. at 432–37 (listing the NHS and quality and safety as two key components of the NHPP); § 1304(b), 126 Stat. at 532–33 (announcing that eligible projects under section 1304 be funded from one of three programs, including the NHPP).

140 See § 1304(b), 126 Stat. at 532–33 (granting additional federal funding for qualifying projects).


142 See S. Rep. No. 112-79, at 82 (2011) (reporting that using Design-Build for a construction project saves six percent on costs, twelve percent on the time of construction, and thirty-three percent on the total time of completion of the project).

143 See 23 U.S.C. § 112(a) (defining a letting as a request for submission of bids through an advertisement).


A. THE VIRGINIA CASE STUDY: BROAD DESIGN-BUILD STATUTES CAN QUALIFY FOR SECTION 1304 FUNDING AND REALIZE THE INHERENT BENEFITS OF DESIGN-BUILD

The states with broad Design-Build authorization present the greatest opportunity for taking advantage of section 1304 funding, as well as reducing the waste associated with contracting for highway construction projects.\textsuperscript{147} Virginia, Alaska, and Wyoming stand as examples of states with broad authorizing Design-Build statutes that allow each state to use the Design-Build method for transportation projects.\textsuperscript{148} Such broad authority for state agencies provides procurement flexibility for a given project, and a greater chance of taking advantage of opportunities like additional federal funding.\textsuperscript{149}

1. TAKING ADVANTAGE OF SECTION 1304 FUNDING BY USING DESIGN-BUILD

As stated above, this hypothetical letting is for a new interchange at an exit on an interstate highway along with two new auxiliary lanes around the exit. To qualify as a Design-Build project in Virginia the project must satisfy three overall requirements for VDOT: (1) it meets at least one of the “Objective Criteria,” (2) its details are essentially finalized, and (3) it fits in one of the categories of the types of projects suitable for Design-Build.\textsuperscript{150}

The hypothetical letting, as articulated above, meets at least three of the Design-Build “Objective Criteria” set forth by the CBT.\textsuperscript{151} Because it

\textsuperscript{147} See MAP-21 Act, Pub. L. No. 112-141, § 1304, 126 Stat. 405, 532–33 (2012); see, e.g., Alaska Stat. Ann.§ 36.30.200(c) (West 2010) (providing the commissioner of transportation with the discretion to use Design-Build when she determines it would be advantageous to the state); Va. Code Ann. §§ 2.2-4306, 33.1-12(2)(b) (authorizing broad use of Design-Build for transportation projects); Wyo. Stat. Ann. § 16-6-702(b) (2011) (authorizing all city, county, and local governments to use design and construction management delivery methods on public works projects); see also S. Rep. No. 112-79, at 82 (explaining that the efficiency benefits include cost and time savings).

\textsuperscript{148} See, e.g., Alaska Stat. Ann. § 36.30.200(c) (providing the commissioner of transportation with the discretion to use Design-Build when he or she determines it would be advantageous); Va. Code Ann. §§ 2.2-4306, 33.1-12(2)(b) (authorizing VDOT to use Design-Build for highway projects); Wyo. Stat. Ann. § 16-6-702(b) (authorizing Wyoming state and local governments to use alternative delivery methods); see also Wyo. Stat. Ann. § 16-6-701(a)(v) (elaborating that alternative delivery methods include design-build).

\textsuperscript{149} See § 1304, 126 Stat. at 532–33 (offering additional federal funding for using Design-Build or other “innovative methods”); see, e.g., Alt. Project Delivery Office Procurement Manual, supra note 102, at 2 (showing how VDOT’s flexibility in selecting procurement methods allows for the most appropriate procurement method to be used for a given project).

\textsuperscript{150} Alt. Project Delivery Office Procurement Manual, supra note 102, at 6.

\textsuperscript{151} See id. at 23–24 (presenting the “Objective Criteria” of the CBT: “Established Budget,” “Well-defined scope,” “Risk Analysis,” “Prequalification of Design-Build Firms,” and “Competitive Bidding Processes”).
has a projected cost total, the letting has an “Established Budget.” In addition, the letting has a “well-defined scope” because it has two related components: the new interchange, and the accompanying auxiliary lanes. Finally, the hypothetical letting “affords an opportunity for competition in its procurement” because it is not so large or difficult that a number of firms could not bid. Thus, the letting satisfies the criteria for “Competitive Bidding Process.” For the purposes of the second major component for Design-Build selection in Virginia, the hypothetical letting will be identified and included in VDOT’s Six-Year Improvement Plan. The state has also identified adequate funding for “design, right-of-way and construction of the entire project.”

Finally, the hypothetical letting satisfies at least two of the types of projects that VDOT considers for Design-Build. First, the hypothetical letting is a project that directly impacts public safety. The construction of the interchange and the auxiliary lanes has the potential to help create a more organized flow of traffic and reduce the risk of accidents as vehicles enter or exit the interstate highway. Second, the hypothetical letting is a project that serves to maximize the use of available federal funding because it satisfies the qualifying criteria of section 1304.

Because the hypothetical letting satisfies the three overall eligibility requirements of VDOT, the letting can qualify as a Design-Build project under VDOT rules and Virginia law. In addition, the letting satisfies
the federal qualifications under section 1304, making it eligible for the economical benefits of the section. Thus, by fulfilling the Design-Build criteria in Virginia and the requirements of section 1304, the hypothetical letting in Virginia can receive up to one hundred percent federal funding share on the project.

2. Realizing the Inherent Benefits of Design-Build

In addition to qualifying for the financial benefits of section 1304, Virginia and other broad Design-Build states can realize real gains from freely designating projects for Design-Build. Design-Build projects have been found to cost six percent less than Design-Bid-Build projects, can be constructed in twelve percent less time, and completed thirty-three percent faster from initiation to completion. Thus, states that are statutorily able to authorize projects for Design-Build can take advantage of significant time and monetary advantages.

As shown through the hypothetical letting, broad Design-Build states are able to significantly benefit from using Design-Build over Design-Bid-Build. The hypothetical letting is for the construction of a new interchange on an interstate highway and for two new auxiliary lanes at an estimated cost of $70 million. VDOT estimates that the average construction time on a highway project is about thirteen months. VDOT also estimates that the average time for total completion of an interstate construction project is about 37 months. Thus, the project components of meeting at least one of the objective criteria, having essentially finalized details, and fitting into a category of project suitable for Design-Build).

163 See MAP-21 Act, § 1304(b), 126 Stat. at 532–33 (granting full federal funding to projects that are funded by the NHPP and use innovative contracting methods such as Design-Build).
164 See id. (allowing for additional funding if a project is funded from particular funds and satisfies one of four conditions such using innovative contracting methods like Design-Build). See generally ALT. PROJECT DELIVERY OFFICE, PROCUREMENT MANUAL, supra note 102 (putting forth VDOT’s Design-Build policy and process).
165 See Va. Code Ann. § 33.1-12(2)(b) (authorizing VDOT to use Design-Build when in accordance with objective criteria put forth by the CTB); see also Alaska Stat. Ann. § 36.30.200(c) (West 2010) (providing the commissioner of transportation with the discretion to use Design-Build when she determines it would be advantageous to the state); S. Rep. No. 112-79, at 82 (2011) (explaining the core benefits of Design-Build include cost savings of about six percent).
166 S. Rep. No. 112-79, at 82.
167 See, e.g., Va. Code Ann. § 33.1-12(2)(b) (authorizing VDOT to use Design-Build when VDOT determines a project is in accordance with certain criteria and without automatic limitations on Design-Build project qualifications or components).
168 See, e.g., id. (authorizing broad use of Design-Build for highway projects); see also S. Rep. No. 112-79, at 82 (presenting that Design-Build has cost savings of six percent and faster completion time by thirty-three percent).
170 Id. at 35–36; accord Highway Construction, Ill. DEP’T OF TRANSP., http://www.dot.state.il.us/const/constbrochure/constbrochure.html (last visited Apr. 11, 2013) (estimating interstate construction
in the letting costs $70 million, takes thirteen months to construct and a total of thirty-seven months to complete in its traditional form, using Design-Bid-Build.\footnote{See 23 C.F.R. § 636.103 (2012) (defining Design-Bid-Build as the traditional method of procurement, and thus the control method for comparison).}

The results would differ significantly if Virginia uses Design-Build for the same project. Design-Build projects can save six percent on costs.\footnote{See S. Rep. No. 112-79, at 82 (referencing the findings of a Construction Industry Institute (“CII”) report); see also Design-Build Research Team, Constr. Indus. Inst., Research Summary No. 133-1, Project Delivery Systems: CM at Risk, Design-Build, Design-Bid-Build 6 (1997) [hereinafter Constr. Indus. Inst. Research Summary No. 133-1] (concluding that Design-Build projects had a lower median cost growth of 2.66% than Design-Bid-Build).} If the cost of the hypothetical letting is $70 million, using Design-Build would save $4.2 million. The U.S. Senate committee report also cited that Design-Build reduces construction time by twelve percent.\footnote{See id. (referencing the same 1997 CII Design-Build report); see also Constr. Indus. Inst. Research Summary No. 133-1, supra note 172, at 8 (concluding that Design-Bid-Build had a median total completion growth of 4.4% while Design-Build had a median amount of 0% growth).} Hence, if Virginia uses Design-Build for the letting, the project could be constructed in eleven months and about three weeks as opposed to thirteen months.\footnote{See S. Rep. No. 112-79, at 82 (multiplying thirteen months by twelve percent decreases construction time by 1.68 months).} Finally, Design-Build is estimated to save thirty-three percent on the total completion time.\footnote{See id. (referencing the same 1997 CII Design-Build report); see also Constr. Indus. Inst. Research Summary No. 133-1, supra note 172, at 10 (depicting that Design-Bid-Build had a median construction speed that was 43.52% slower than Design-Build).} Using Design-Build, Virginia can save thirteen months and one and a half weeks on completing the hypothetical letting and the project could take twenty-three months and a little over three weeks instead of thirty-seven months.\footnote{See S. Rep. No. 112-79, at 82 (multiplying thirty-seven months by thirty-three percent decreases total completion time by 13.2 months).} Thus, by using Design-Build, Virginia could potentially access additional federal funding under section 1304, and inherently save millions of dollars and more than a year on the lifetime of the project.

\section*{B. The Florida Case Study: Moderate Design-Build Statutes Risk Losing it all Due to Automatic Limitations}

annual cap on the amount FDOT can allocate to “innovative highway projects” such as Design-Build projects. Some other states require final legislative authorization. The limitations can have potential repercussions when such states are attempting to qualify for federal funding or in the efficiency of a state’s project delivery.

1. Circumstantially Taking Advantage of Section 1304 Funding by Using Design-Build

The hypothetical Act has the potential to qualify for federal funding under MAP-21 Act section 1304 in Florida for a highway project administered by FDOT. Under FDOT protocol, District and Central Office Management decide if contracting through Design-Build “would benefit [FDOT] and [FDOT]’s customers.” Once the two offices have decided to designate a project as Design-Build, FDOT begins the procurement process. Because FDOT maintains and operates the interstate highway system in Florida, the hypothetical letting qualifies for FDOT’s authority since it is work on an interstate highway. Thus, the hypothetical letting can be authorized for Design-Build if it meets the satisfaction of FDOT management.

If FDOT did designate the hypothetical letting as a Design-Build project, it could qualify for federal funding under section 1304. The letting satisfies the qualifications of section 1304, as long as the project

ch. 149A, § 14 (West 2008) (authorizing state agencies to use Design-Build for the construction or repair of any public works project in excess of $5,000,000).
180 See, e.g., MAP-21 Act, Pub. L. No. 112-141, § 1304(b), 126 Stat. 405, 532 (2012) (providing additional federal funding if certain innovative methods are used, such as Design-Build).
181 See, e.g., Fla. Stat. Ann. § 337.025(1) (authorizing innovating bidding techniques for highway projects up to $120 million annually); see also MAP-21 Act, § 1304(b), 126 Stat. at 532–33 (designating that qualifying projects must use innovative methods including alternative methods of contracting).
182 See Fla. Dep’t of Transp., Topic No. 625-020-010-k, Design-Build Procurement and Administration, 11 (2011) http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625020010.pdf (stating that designation authority is centralized and based on the standard of benefiting FDOT and its customers).
183 See id. at 11–13 (explaining that upon approval by management, the Design-Build project will be identified and placed in the work program).
184 See Fla. Stat. Ann. § 334.044(25) (stating that the authority for working with the federal government on highway matters is in the hands of the executive branch of the Florida government).
185 See Fla. Dep’t of Transp., supra note 182, at 11 (requiring FDOT management to designate projects based on the standard of whether the projects are beneficial for FDOT and its customers).
186 See MAP-21 Act, § 1304(b), 126 Stat. at 532–33 (listing Design-Build as a qualifying method); see also Fla. Stat. Ann. § 337.025(1) (allowing FDOT to use innovative bidding methods on highway projects).
in some way meets the “innovative project delivery” designation. \(^{187}\) Section 1304 explicitly mentions Design-Build as one of the qualifying innovative contracting methods. \(^{188}\) Thus, if FDOT uses Design-Build on the hypothetical letting, it could qualify for section 1304. \(^{189}\)

However, the Florida’s annual funding cap on Design-Build highway projects remains. \(^{190}\) Under chapter 337 of the Florida code, FDOT is only authorized to spend up to $120 million on Design-Build contracts for highway projects and the hypothetical letting is projected to cost $70 million. \(^{191}\) Thus, if Florida has already authorized even one Design-Build contract for more than $50 million, Florida is precluded from using Design-Build to qualify for section 1304 because it will not have any additional funding available in the event the federal government does not select a particular project for section 1304 funding. \(^{192}\) Hence, states like Florida that authorize Design-Build for transportation projects can potentially access MAP-21 Act funding, but there are considerations that might force such states to forfeit the federal funding. \(^{193}\)

2. **Realizing the Inherent Benefits of Design-Build Depends on the Statutory Limitation**

The implications of Florida’s and other states’ limitations on Design-Build go beyond potentially losing additional federal funding. \(^{194}\) As discussed in the Virginia case study, Design-Build provides both cost and time savings in the highway construction process for government agencies. \(^{195}\) States like Florida with some limitations on Design-Build

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187 See § 1304(b), 126 Stat. at 532–33 (including Design-Build among the possible innovative techniques that can qualify and requiring that a project be funded from one of several funds including the NHPP); see also § 1106(a), 126 Stat. at 432–37 (requiring that projects funded by the NHPP improve infrastructure safety on the highway system).

188 § 1304(b), 126 Stat. at 532–33.

189 See id. (providing additional federal funding if projects use techniques like Design-Build).


191 Id.

192 See § 1304(b), 126 Stat. at 532–33 (listing Design-Build as one of the qualifying innovative methods); Fla. Stat. Ann. § 337.025(1) (limiting annual highway Design-Build spending to $120 million).

193 See, e.g., Fla. Stat. Ann. § 337.025(1) (granting $120 million of annual Design-Build funding); see also § 1304, 126 Stat. at 532–33 (providing federal funding to states for using “innovative methods” like Design-Build).

194 See supra Part III.A.2 (finding that Virginia could save $4.2 million and over thirteen months of total time on constructing the hypothetical letting); see also S. Rep. No. 112-79, at 82 (presenting that Design-Build saves six percent on costs, and twelve and thirty-three percent time for construction.
are potentially forgoing these inherent savings on highway projects.\textsuperscript{196} Thus, if a project is designated for Design-Bid-Build due to state statutory limitations on Design-Build, the state is wasting significant amounts of money and time.\textsuperscript{197}

States with limitations on Design-Build can take advantage of its inherent gains, much like broad authorization states.\textsuperscript{198} For instance, if Florida has not and will not surpass its $120 million cap on annual Design-Build funding for highway projects, then Florida can realize the same inherent gains from Design-Build as Virginia for a particular project.\textsuperscript{199} Thus, if Florida is able to use Design-Build on the hypothetical letting, it could save $4.2 million, one and a quarter months of construction time, and almost thirteen and a half months in total completion time.\textsuperscript{200}

Thus, similar to the states with broad Design-Build authorization statutes, the advantages of using Design-Build for the hypothetical letting are two-fold for moderate states like Florida.\textsuperscript{201} First, Florida can take advantage of additional federal funding.\textsuperscript{202} Second, Florida could realize six percent cost savings and substantial time savings.\textsuperscript{203} However, unlike the states with broad Design-Build statutes, the

\begin{footnotesize}
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\item \textsuperscript{196} See, e.g., FLA. STAT. ANN. § 337.025(1) (authorizing annual highway Design-Build spending of $120 million).
\item \textsuperscript{197} See, e.g., id. (capping Design-Build spending on highway projects at $120 million annually, preventing its use on some otherwise qualified projects); LA. REV. STAT. ANN. § 48:250.2(A) (Supp. 2012) (limiting the authorization of Design-Build by requiring legislative approval for projects); MASS. GEN. LAWS ANN. ch. 149A, § 14 (restricting the use of Design-Build to projects over $5 million).
\item \textsuperscript{198} See S. Rep. No. 112-79, at 82 (citing a report that found Design-Build saves six percent on costs, twelve percent on the time of construction and thirty-three percent on the total time of completion); see, e.g., FLA. STAT. ANN. § 337.025(1) (curbing Design-Build spending on highway projects at $120 million annually).
\item \textsuperscript{199} See FLA. STAT. ANN. § 337.025(1) (stopping Design-Build funding on highway projects at $120 million annually); see also supra Part III.A.2 (finding that Virginia could save $4.2 million, eleven months of construction time and almost thirteen and a half months of total completion time by using Design-Build on the hypothetical letting).
\item \textsuperscript{200} See S. Rep. No. 112-79, at 82 (presenting six percent cost savings and multiplying that by $70,000,000, resulting in $4,200,000 of savings); id. (reporting twelve percent savings on construction time and multiplying that by thirteen months, resulting in a construction time of 1.68 months and touting thirty-three percent savings on total time of completion and multiplying that by thirty-seventeen months).
\item \textsuperscript{201} See FLA. STAT. ANN. § 337.025(1) (allowing Design-Build for highway projects with an annual funding cap of $120 million); VA. CODE ANN. § 33.1-12(2)(b) (Supp. 2012) (authorizing VDOT to use Design-Build for highway projects thus enabling VDOT to potentially qualify for section 1304 funding and allowing VDOT to realize the inherent gains of Design-Build).
\item \textsuperscript{202} See MAP-21 Act, Pub. L. No. 112-141, § 1304, 126 Stat. 405, 532–33 (2012) (listing Design-Build as a qualifying method for additional federal funding); FLA. STAT. ANN. § 337.025(1) (capping funding for Design-Build highway projects at $120 million).
\item \textsuperscript{203} See S. Rep. No. 112-79, at 82 (reporting that Design-Build can save six percent on costs, twelve percent on the time of construction and thirty-three percent on the total time of completion).
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possibility for additional funding can be at risk because of the limitations Florida and other moderate states have on the use of Design-Build for highway projects. If the financial ceiling on projects using Design-Build is implicated, Florida then misses out on using Design-Build for opportunities that would have otherwise qualify for federal funding under section 1304. In addition, if precluded from using Design-Build, Florida and other moderate states might be overpaying for highway projects. When compounded, the two different missed savings opportunities underscore the potential losses of states with moderate Design-Build laws.

C. THE ILLINOIS CASE STUDY: LIMITED DESIGN-BUILD STATUTES ARE PRECLUDED FROM TAKING ADVANTAGE OF SECTION 1304 FUNDING AND FROM REALIZING ANY INHERENT BENEFITS

Not all states have embraced Design-Build as a potential option for highway construction projects. Some states require that the bidding process for transportation construction contracts be conducted through Design-Bid-Build. Other states have authorized Design-Build for specific projects, but have not granted general Design-Build authorization for transportation projects. Regardless of how the lack of authorization is structured, there are efficiency and monetary

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205 See Fla. Stat. Ann. § 337.025(1) (allowing up to $120 million for Design-Build highway projects, thus precluding any projects costing at least $70 million once $50 million has already been allocated); see also § 1304, 126 Stat. at 532–33 (providing that there is additional federal funding for projects that use “innovative methods” such as Design-Build, which in turn provides states with the opportunity to unlock state resources for other construction projects).

206 See S. Rep. No. 112-79, at 82 (reporting that Design-Build can save six percent on costs and many months of construction time).

207 See Accelerating the Project Delivery Process, supra note 45, at 16 (statement of Victor Mendez, Administrator, Federal Highway Administration) (“There are some strategies . . . that simply are not being deployed on a national basis, including Design-Build . . . that I know from my own experience really move our major projects forward very quickly.”).

208 See, e.g., 30 Ill. Comp. Stat. Ann. 500 / 20-5 (West 2009) (forcing IDOT to use competitive IDOT to use competitive bidding for highway projects); see also City of Cleveland v. Ohio, 508 F.3d 827, 841 (6th Cir. 2007) (distinguishing “competitive bidding” from alternative methods that are more cost effective such as “sole source award” or “best value” procurement); Minn. Stat. Ann. § 383B.158(1)(b) (West 2004) (“Best Value’ describes a result intended in acquiring design-build services.”); cf. S.B. 1312, 97th Gen. Assembly, Reg. Sess. (Ill. 2011) (creating Design-Build authorization for IDOT, but the Illinois General Assembly failed to pass the bill).

209 See Iowa Code Ann. § 29A.57(3)(e) (West Supp. 2012) (allowing the state armory board to use Design-Build for projects to be funded entirely by federal money and for facilities solely used by the national guard); N.D. Cent. Code Ann. § 24-02-47(2) (West Supp. 2011) (limiting the director of NDDOT to only use Design-Build for projects on a signal light and a culvert).
repercussions for such states.210

1. Failing to Qualify for Section 1304 Funding Through the Design-Build Provision

The hypothetical letting calls for the construction of a new interchange at an exit on an interstate highway and the construction of two new auxiliary lanes with an estimated cost of $70 million. Under the Illinois Procurement Code, IDOT issues an invitation for bids that includes: (a) a purchase description of the interchange and auxiliary lanes, (b) the contractual terms, and (c) the conditions applicable to the procurement.211 IDOT then specifies any particular criteria it is demanding in the areas of “inspection, testing, quality, workmanship, and delivery.”212 Ultimately, IDOT must award the bid to the “lowest responsible and responsive bidder.”213

The competitive bidding requirements of the Illinois Procurement Code preclude IDOT from taking advantage of the “innovative contracting” element of section 1304 for the hypothetical letting.214 The Illinois Procurement Code requires IDOT to use Design-Build, which demands that the construction contract be awarded to the lowest bidder.215 Thus, Illinois cannot use “innovative contracting methods” as a means for receiving additional federal funding through section 1304.216 Illinois might still be able to qualify for section 1304 if IDOT requires other innovative measures as part of building the hypothetical letting such as using “intelligent compaction equipment” or “innovative construction equipment.”217 However, Illinois and other limited statute states cannot qualify under section 1304 in one of the most explicit ways provided: using Design-Build.218

210 See S. Rep. No. 112-79, at 82 (citing a study finding six percent cost savings and up to thirty-three percent time savings when using Design-Build).
211 30 ILL. COMP. STAT. ANN. 500 / 20-10(b).
212 30 ILL. COMP. STAT. ANN. 500 / 20-10(e).
213 30 ILL. COMP. STAT. ANN.500 / 20-10(g). But cf. Sayer v. Minn. Dep’t of Transp., 790 N.W.2d 151, 156 (Minn. 2010) (explaining that Design-Build emphasizes the “best-value,” as opposed to Design-Bid-Build, which is fixated with the “lowest bid”).
215 See 30 ILL. COMP. STAT. ANN. 500 / 20-10(a), 20-10(c) (mandating both that all projects be bid using “competitive sealed bidding” and that contracts be awarded to the “lowest” bidder); but see Sayer, 790 N.W.2d at 156 (describing Design-Build as structured to award contracts to the “highest qualified” bidder).
216 See § 1304(b), 126 Stat. at 532–33 (listing “innovative contracting methods” as a means to qualify for section 1304).
217 See id. (granting additional funding for types of “innovative methods” such as worker safety or innovative technology).
218 See id. (advancing “Design-Build” among its examples of qualifying “innovative methods”); 30
2. FORFEITING THE OPPORTUNITY TO REALIZE THE INHERENT BENEFITS OF DESIGN-BUILD

In disallowing Design-Build for highway projects, minimal Design-Build states forfeit more than section 1304 funding. Unlike Florida and moderate Design-Build states that can realize gains from Design-Build under the correct conditions, Illinois and the states with minimum authorizing statutes are precluded from enjoying the inherent benefits of Design-Build. Thus, the losses to a state without Design-Build authorization for highway construction projects are again two-fold.

As mentioned above, the first cost is a missed opportunity to secure additional federal funding. By not authorizing Design-Build for highway projects, states like Illinois cannot utilize simple opportunities for additional federal funding. Thus, such states are forced to spend more than what might otherwise be necessary on highway projects.

The second cost is the missed opportunity to realize the inherent benefits of using Design-Build. Using the percentages analyzed by the U.S. Senate, under Design-Build, the hypothetical letting would cost $4.2 million less, construction would be completed in eleven months and three weeks, and overall completion would occur thirteen months and one and a half weeks early. However, under Title 30 of

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219 See S. Rep. No. 112-79, at 82 (2011) (presenting that Design-Build saves six percent on costs and up to thirty-three percent on total time savings). But see, e.g., 30 ILL. COMP. STAT. ANN. 500 / 20-5 (mandating that IDOT use Design-Bid-Build for highway projects).

220 Compare FLA. STAT. ANN. § 337.025(1) (West Supp. 2012) (authorizing Design-Build for highway projects but with an annual funding cap of $120 million), with 30 ILL. COMP. STAT. ANN. 500 / 20-5 (precluding Design-Build by requiring Design-Bid-Build for transportation projects).


222 See 30 ILL. COMP. STAT. ANN.500 / 20-5 (demanding Design-Bid-Build for highway projects, thus precluding the use of Design-Build); see, e.g., § 1304, 126 Stat. at 532-33 (offering additional funding for the use of “innovative methods” such as Design-Build on transportation projects).


224 See Hearing on the U.S. Department of Veterans Affairs Budget, supra note 10, at 2–4 (2012) (statement of Tom Hardiman, Modular Building Institute) (adding that Design-Build improves consistency with an agency’s needs); see also Constr. Indus. Inst. Research Summary No. 133-1, supra note 172, at 7 (finding that of the projects in the total project sample that had more than five percent cost growth, Design-Bid-Build constituted forty-nine percent of the projects while Design-Build only comprised thirty-four percent of the projects).

225 See S. Rep. No. 112-79, at 82 (2011) (declaring that Design-Build saves six percent on costs and thirty-three percent on total completion time, thus presenting estimated savings when applied
the Illinois code, Design-Bid-Build is required for highway construction projects. Thus, Illinois would only realize the original estimates for the hypothetical letting.

Hence, Illinois and other states with limited Design-Build authorizing statutes are left with a compound loss similar to the one potentially facing the moderate Design-Build states like Florida. By using Design-Bid-Build, Illinois and other states with minimal authorizing statutes cannot take advantage of any additional funding for innovative contracting methods. They are also left fronting a bill that is potentially larger than what is otherwise necessary, and when states are not in the best financial position, missed savings can become magnified.

III. Even for the Wary, Design-Build is Possible with Creative Structuring

Depending on the respective statute, states with broad authorizing Design-Build statutes can easily designate projects for Design-Build while others with moderate or minimal Design-Build authorization statutes might be required to use Design-Bid-Build. However, there are at least two possible ways to enable all states to take advantage of Design-Build and its benefits: (1) authorizing the use of Design-Build under the oversight of a Design-Build czar located within the state agency; and (2) removing automatic statutory limitations in favor of qualifications for Design-Build projects.

A. Oversight of Design-Build Within the State

The simplest method of enabling Design-Build is to authorize all state agencies, or at least state agencies that contract heavily, to
utilize the procurement method.\footnote{See, e.g., 2012 Conn. Legis. Serv. 12-70(1)(a) (West) (authorizing the Transportation Commissioner to use design-build as an alternative to design-bid-build for highway projects).} Short of that, states can authorize agencies such as departments of transportation to use Design-Build, and place oversight over the project selection process within the respective agency.\footnote{See, e.g., Va. Code Ann. § 33.1-12(2)(b) (authorizing VDOT to use Design-Build, but placing final say on project selection in the hands of the Commissioner of VDOT).} By enabling agencies to have the authorization necessary, states simplify the use of Design-Build, and maximize the opportunity to take advantage of benefits like federal funding, while still maintaining oversight of Design-Build procurement.

The statute could either authorize an existing manager within the agency or create a new position of “Design-Build Selection Director.”\footnote{See Chief Procurement Office, Ill. Dep't of Transp., http://www2.illinois.gov/cpo/dot/Pages/default.aspx (last visited Apr. 11, 2013) (displaying how departments such as IDOT already have existing procurement offices).} This centralizes and retains responsibility over the Design-Build project selection process within the respective agency, while still maintaining the policy of requiring some oversight. Thus, responsibility for any problems will lie with one manager who is directly related to the procurement of the project, unlike a legislature that is far removed.\footnote{See, e.g., La. Rev. Stat. Ann. § 48:250.2(A) (Supp. 2012) (requiring the state legislature have say over Design-Build projects rather than leaving it to an agency like the LDOTD).}

Some states, such as Louisiana, have a current Design-Build structure where state legislatures possess final approval authority.\footnote{See id. (requiring the approval of the state House and Senate transportation committees for highway Design-Build projects).} While legislative approval might appeal to the state legislators, a state legislature is not the appropriate body to have final approval of transportation construction projects. The procurement process and the legislative process operate in different manners, different levels of expertise, and at different speeds. In addition, legislative approval creates the potential for conflicts of interest among the members, bribery, interest group lobbying, or a general lack of interest because members are from different geographical areas and different professional backgrounds.

Thus, by granting agencies with Design-Build authority under a centralized Design-Build manager, states can maximize the positive potential of using Design-Build, while still retaining oversight. Doing so centralizes responsibility for the procurement process while placing Design-Build discretion in the hands of those with the best understanding of each project. Thus, it creates the potential to increase the ability of states to take advantage of opportunities like additional
federal funding under section 1304. The possibility of additional federal funding can then have derivative effects on states’ budgets, on infrastructure in states, and in other possible areas.

B. Removing Financial Restrictions on Design-Build Projects

States can also better utilize Design-Build by removing funding caps on Design-Build projects. This is possible even if states still desire some type of a limit on Design-Build. One potential method of merging both interests is that states can premise limitations around the eligibility requirements of projects, rather than on automatic thresholds.

Annual caps on the money available for Design-Build preclude projects that might otherwise be prime for Design-Build because of numbers rather than merit. Likewise, thresholds on the project’s price tag arbitrarily limit the use of Design-Build. Projects are ineligible because they cost too much or too little, rather than because the project is not suitable for Design-Build.

Rather, any structural limits on Design-Build projects should be on the eligibility criteria used to designate projects for Design-Build. States can write such factors into statutes or can require agencies to promulgate rules. For instance, states could require that projects have factors like a minimum number of bidders to ensure competition, or that projects use environmentally friendly or efficient construction equipment, or that projects have a certain amount of funding designated before proceeding. These steps will ensure that, by focusing limitations on the validity of the project itself rather than on arbitrary caps or thresholds, projects worthy for Design-Build will at least receive consideration.

Conclusion

Section 1304 of the MAP-21 Act signals Congressional awareness that alternative methods of procurement for transportation projects are available and worthwhile at the federal level. The specific mention of Design-Build in section 1304, coupled with the possibility of one

238 See, e.g., Alt. Project Delivery Office, Procurement Manual, supra note 102, at 24 (listing six objective criteria for Design-Build projects and requiring at least one to be true for successful designation).
hundred percent federal funding for states using innovative delivery methods, is a testament that Congress recognizes that innovative techniques are available and should be utilized. The empirical evidence is growing to support the premise that Design-Build is an advantageous alternative to the traditional Design-Bid-Build. Studies have shown statistical advantages for Design-Build over Design-Bid-Build in areas such as cost and completion time. Using figures from a CII study on a hypothetical letting in Design-Build friendly states like Virginia showed considerable potential differences in the cost and time necessary for completion. In addition, leading highway and transportation officials, such as the heads of the Connecticut and Utah departments of transportation, as well as the Administrator of the Federal Highway Administration have expressed their belief in the advantages of Design-Build.240

Yet, some states have shown reluctance in fully embracing Design-Build. At a time when funding for government projects is scarce but work is still needed, a divide between the federal government and some states leaves potential cash on the table and could be contributing to waste. The results when using the same CII study and the same hypothetical letting in states were Design-Build is only partially authorized, such as Florida, or in states were it is prohibited for highway projects, like in Illinois, indicate that many states are probably costing their taxpayers additional resources by continuing to use Design-Bid-Build.

As experts have pointed out, Design-Build is not without its faults and Design-Build-Build is not without its merits. However, creative structuring of Design-Build programs, such as appointing a Design-Build czar, or establishing objective qualifications for projects, can make the method more accessible while limiting its weaknesses. Thus, the slow development of highway project delivery methods throughout the states signifies that Thomas Jefferson’s fears of government waste in 1802 remain prevalent; improvement, however, is possible through the creative structuring of Design-Build statutes.

240 See Accelerating the Project Delivery Process, supra note 45, at 16 (statement of Victor Mendez, Administrator, Federal Highway Administration) (“There are some strategies . . . that simply are not being deployed on a national basis, including Design-Build . . . that I know from my own experience really move our major projects forward very quickly.”); Hearing on Improving and Reforming the Nation’s Surface Transportation Programs, supra note 69, at 358 (testimony of John R. Njord, Executive Director, Utah Dep’t of Transp.) (testifying that Design-Build can speed up the completion of large-scale projects); Hearing on S.B. 33, supra note 223 (statement of James Redeker, Commissioner, Conn. Dep’t of Transp.) (“Frankly, if I had design-build, I could have gotten additional money to the state of Connecticut.”).