Issues Involving Surety for Public Transportation Projects

DETAILS

108 pages | 8.5 x 11 | PAPERBACK
ISBN 978-0-309-25832-6 | DOI 10.17226/22738

AUTHORS

Loulakis, Michael C.; Briglia, Shannon J.; and McLaughlin, Lauren P.

July 2012

TRANSIT COOPERATIVE RESEARCH PROGRAM
Sponsored by the Federal Transit Administration

Responsible Senior Program Officer: Gwen Chisholm Smith

Legal Research Digest 40

LEGAL ISSUES INVOLVING SURETY FOR PUBLIC TRANSPORTATION PROJECTS

This report was prepared under TCRP Project J-5, "Legal Aspects of Transit and Intermodal Transportation Programs," for which the Transportation Research Board is the agency coordinating the research. The report was prepared by Michael C. Loulakis, Esq., Capital Project Strategies, LLC; Shannon J. Briglia, Esq., BrigliaMcLaughlin, PLLC; and Lauren P. McLaughlin, Esq., BrigliaMcLaughlin, PLLC. James B. McDaniel, TRB Counsel for Legal Research Projects, was the principal investigator and content editor.

The Problem and Its Solution

The nation's 6,000 plus transit agencies need to have access to a program that can provide authoritatively researched, specific, limited-scope studies of legal issues and problems having national significance and application to their business. Some transit programs involve legal problems and issues that are not shared with other modes; as, for example, compliance with transit-equipment and operations guidelines, FTA financing initiatives, private-sector programs, and labor or environmental standards relating to transit operations. Also, much of the information that is needed by transit attorneys to address legal concerns is scattered and fragmented. Consequently, it would be helpful to the transit lawyer to have well-resourced and well-documented reports on specific legal topics available to the transit legal community.

The *Legal Research Digests* (LRDs) are developed to assist transit attorneys in dealing with the myriad of initiatives and problems associated with transit start-up and operations, as well as with day-to-day legal work. The LRDs address such issues as eminent domain, civil rights, constitutional rights, contracting, environmental concerns, labor, procurement, risk management, security, tort liability, and zoning. The transit legal research, when conducted through the TRB's legal studies process, either collects primary data that generally are not available elsewhere or performs analysis of existing literature.

Applications

Basically, a surety bond is where one has agreed to be liable for another's debt, default, or other obligation. Various types of surety bonds are used on transit projects, each of which fulfills a specified purpose. They typically fall under one of four common categories: bid bonds, performance bonds, payment bonds, or warranty or maintenance bonds. Transit owners, like other owners of capital projects, use these bonds as a means of mitigating the risk of contractor default. Most often owners of large capital projects encounter unique problems when seeking surety bonds.

Federal, state, and local laws require bonding at varying levels for construction and other types of capital projects. In situations where bonding is not required, a transit agency must decide whether, on its own authority, to require bonding or other surety in some form. More recently, problems have arisen regarding the costs of obtaining surety, whether value is being received for the surety required, difficulties obtaining surety for large or unusual projects, and making claims against sureties should problems arise with performance.

This digest includes a review of applicable federal law, examples of state and local laws, and industry practices. The digest also examines surety issues and industry practices in various types of construction and other public transportation projects. The types of surety available, including performance, payment, and warranty bonds; letters of credit; and other instruments, are discussed.

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

CONTENTS

LEGAL ISSUES INVOLVING SURETY FOR PUBLIC TRANSPORTATION PROJECTS

By Michael C. Loulakis, Esq., Capital Project Strategies, LLC; Shannon J. Briglia, Esq., BrigliaMcLaughlin, PLLC; and Lauren P. McLaughlin, Esq., BrigliaMcLaughlin, PLLC

I. INTRODUCTION

Fifteen years ago, the issue of surety bonds on transportation projects would not have engendered any significant discussion or controversy. Surety bonds have been a staple of the U.S. public-sector construction industry for over a century, and both legislation and practice called for construction contractors to provide transit agencies and state departments of transportation (DOTs) with 100 percent performance and payment bonds as a condition of contracting. While transit agencies and DOTs had to decide whether to require bonds for the procurement of nonconstruction goods and services, these purchases were not bundled with the construction work. As a result, vendors seeking to do business with a particular agency needed to understand the bonding requirements of that agency and make a strategic decision as to whether and how to meet those requirements.

Because of some major changes that have occurred in recent years in both the transportation and surety industries, the issues associated with surety bonding are now much more complex. Pent-up demand to replace and expand existing assets and develop new, greenfield projects has occasionally strained the financial and management resources of both contractors and agencies. This demand has coincided with agencies having a much broader menu of project delivery options to choose from as a result of changes to state legislation and the willingness of the Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) to support new delivery approaches. The number of large-dollar construction contracts has grown in part because owners have seen benefits in "bundling" projects and eliminating interfaces. Complicating all of this is the fact that most states face huge economic challenges and are as reliant as ever on financing their projects from third-party sources—either federal grants and loans or private sector investment.

From the construction contractor's viewpoint, in recent years there has been an influx of international contractors and concessionaires to the U.S. marketplace to take advantage of the robust environment for large infrastructure projects. Skanska, Dragados, and Hochtief (to name a few) either entered the marketplace or significantly expanded their U.S. construction presence. ACS, Macquarie, and Transurban, among others, entered into the public-private partnership (PPP) marketplace, particularly on highway projects, to provide financing and long-term operations and maintenance. In today's world, it is common to see multinational teams and consortia of contractors and financers assembled to pursue large-dollar transportation projects.

The surety industry has not been immune from massive changes either. Indeed, the surety industry went through what some consider a complete transformation between 1994 and 2007. This is evident by the fact that through consolidation and dissolution, only five of the top 15 surety underwriters in 1994 were still in the surety business as of 2007. As a result, the market share of the largest sureties increased and long-term relationships ended between some national contractors and their sureties. The surety market also had severe losses (almost $9.4 billion) from 2001 to 2004, which affected the surety market's view of risk. Just a few years ago, the global credit crisis resulted in a tightening of access to surety bonds, which occured at the same time as large-dollar infrastructure projects were being procured.

This flux in terms of project delivery, size of projects, bundling of services, and surety capacity has led to some confusion in the marketplace. As discussed in more detail later in this digest, some have questioned the surety industry's capacity to provide 100 percent performance bonds on large construction projects. On PPP projects, some public agencies have questioned the benefits of requiring surety bonds from the concessionaire and have looked to other instruments, such as letters of credit (LOCs) or performance guarantees, to secure the concessionaire's performance. Moreover, because the cost of a surety bond is ultimately borne by the owner (whether directly or in bid prices), some have questioned whether the use of a surety bond is the most cost-effective way to underwrite the risk of contractor default.

All of these factors create a need for transit agencies to have a complete, evaluative, and analytical guide for understanding the legal issues affecting surety that arise on any project, irrespective of size. This digest is intended to do that by examining all aspects of the surety relationship—legal, contractual, and practical—in an effort to provide public owners with unique insight on the surety's perspective in drafting and negotiating contracts and bonds and in obtaining other forms of security. The following is an overview of the contents of each section:

- Section II provides an overview of construction project delivery systems that are available to a transit agency, with some examples of transit projects using

alternatives such as design-build (DB) and design-build-operate-maintain processes (DBOMP).

- Sections III and IV give a thorough review of surety bonds and alternatives to surety bonds respectively.
- Section V explains how to make a performance bond claim against a surety when there is a contractor default, and the remedies available to the agency.
- Section VI reviews the major commercial and contract issues affecting the surety, particularly on large projects. This section also provides a lengthy discussion of how some transit owners have responded to the challenges of obtaining 100 percent surety bonds on large projects.
- Sections VII and VIII provide the results of surveys and interviews with transit agencies and sureties relative to project delivery and bonding issues. These sections also address the perspectives of transit agencies and sureties on nonconstruction contracts, including rolling stock and operations and maintenance.
- Section IX contains case studies on how surety issues were handled on five recent large projects that used alternative forms of project delivery.
- Section X is a case study of the failure of Modern Continental and how the surety responded.
- Section XI is a case study of the so-called Brazilian Oil Platform project, which is reported to be the largest performance bond loss ever suffered by a surety on a single project.
- Section XII contains some practical guidelines on how transit agencies can effectively address surety issues.

Note that support for the contents for this digest was derived in part from extensive interviews conducted by the authors of leading surety companies and surety brokers, as well as knowledgeable interviews with individuals from FTA and major transit agencies and contractors.

II. DELIVERY SYSTEMS FOR TRANSIT CONSTRUCTION PROJECTS

Those entities that develop and construct capital projects have always been driven by the need for shorter durations, enhanced quality, and lower costs. Prior to the mid-1990s, public-sector owners had little opportunity to use project-delivery systems to influence these three factors (time, quality, and price). Procurement statutes and, in some states, licensing laws mandated that all construction projects be delivered through design-bid-build (DBB) processes. While public owners could use construction management and program management to improve the time, quality, and price of their DBB projects, they were unable to use any of the innovative delivery techniques available to and used by the private sector, such as DB and construction management at-risk (CMAR).

This is particularly true relative to how U.S. transit agencies delivered their capital projects prior to the mid-1990s. Transit agencies around the country have long used the DBB process, with the one major challenge being how to package elements of the project to allow the project to proceed quickly and competitively. In developing contract packages, transit agencies rarely considered bundling major new construction with operations and maintenance (O&M) services or rolling stock procurement. This is particularly true for those agencies where O&M was a core competency.

As the result of legislative changes that started occurring in the mid-1990s, most public-sector owners now have some flexibility in terms of what delivery systems they can use on their projects. Many state and local statutes allow public owners to use DB, CMAR, and other alternatives to DBB on both large and small construction projects. Once they have the legislative authority, agencies have been relatively quick to try alternatives to DBB, and the positive results have been well-chronicled. Over 50 percent of the states currently have legislation allowing public owners to consider concession contracts and other project financing options offered by the private sector—broadly classified as PPPs—that drastically change the DBB paradigm that the industry has been operating on for decades.[1]

The intent of this digest is not to conduct an exhaustive review of the alternative project-delivery options available to transit and transportation agencies. However, because project-delivery systems directly impact how surety bonds will be used on a given project, particularly on large-dollar and complicated projects, it is important to have a working knowledge of these systems. This section will provide a brief overview of the characteristics of the delivery systems most commonly used on transit and transportation projects in the United States, as well as offer a historical perspective on how DB came to be used in the public sector.

A. Project Delivery Systems Defined

The Associated General Contractors of America (AGC) defines project delivery as "the comprehensive process of assigning the contractual responsibilities for designing and constructing a project." Some of the factors that distinguish one system from another include 1) how the project is financed, 2) who develops the design, 3) how major activities are sequenced, 4) whether the project responsibilities are combined into a single source or contractually delegated to multiple parties, and 5) what role, if any, program managers, construction managers, or general engineering consultants will have. These factors are by no means exhaustive, but provide a consistent framework for evaluating each project delivery system used by transit owners.[2]

---

[1] *See generally* ALI TOURAN ET AL., TRANSPORTATION RESEARCH BOARD, A GUIDEBOOK FOR THE EVALUATION OF PROJECT DELIVERY METHODS (2008), http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_131.pdf.

[2] For other discussions of project delivery systems, *see generally* William Russell Allensworth, Ross J. Altman, Allen L. Overcash & Carol J. Patterson, Construction Law, Project De-

In recent years, as the options for project-delivery systems available to an agency have increased, it has become quite common to conduct a formal, analytical, project-delivery assessment to establish the process that best meets the goals for the agency. If the delivery method chosen is not the best fit for a project, it can result in years of financial stress, administrative burdens, potential litigation, and performance issues for the project.

B. Attributes of Design-Bid-Build

DBB is the "benchmark" procurement approach against which all other methods are measured and is often referred to as the "traditional" delivery method.[3] This is largely due to the fact that by the early 20th century, based on a variety of societal, professional, and statutory reasons, DBB became the delivery method of choice in the United States for both public and private owners.[4] For federal construction projects, the Brooks Act required design services to be procured by federal agencies (as well as those state and local agencies using federal funds on the project) on the basis of qualifications), while construction services were to be procured on the basis of sealed, fixed prices to the "lowest responsible bidder" (i.e., low bid).[5]

In addition to its historical and legislative underpinnings, the DBB method is also "traditional" compared to other systems in that it is a linear type of process.[6] An owner using the DBB method maintains two separate contracts, one with the design team and another with the contractor for the actual construction of a project. As discussed below, construction does not commence until the design is completed.

livery Systems, American Bar Association, Forum on the Construction Industry (2009); Barry B. Bramble, Design-Build and Other Project Delivery Methods, Design-Build Contracting Claims, Aspen Law & Business (1999).

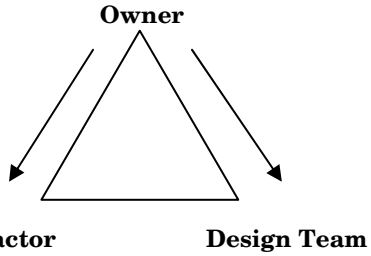
[3] *See* TOURAN ET AL., *supra* note 1, at 10.

[4] *See* Allensworth et al., *supra* note 2 § 4.02.

[5] *See* TOURAN ET AL., *supra* note 1, at 11–12.

[6] *See* Allensworth et al., *supra* note 2 § 4.04, at 67.

Figure 1. Design-Bid-Build Method



Under DBB, the owner selects its designer early in the life of the project. The designer produces a complete set of design documents before the contractor is selected. Estimated construction costs are developed by either the designer or a cost consultant, without contractor input. This process has the benefit of allowing the owner to define its project goals and objectives. It also permits the owner and designer to work as a team to obtain required permits and conduct necessary site investigations. Of course, it has the detriment of first introducing the construction contractor to the project during the competitive bidding process. The award is made to the responsible contractor that has the lowest price. The benefits and weaknesses of DBB have been widely discussed in numerous industry publications.[7] Simply stated, the advantages to an owner using DBB are that DBB:

- Is a well-understood and time-tested process, with substantial case law that has defined the duties of the parties to the process.
- Allows the owner to separate the selection of the designer from the selection of the contractor and have a direct contract with each entity, which is particularly helpful in terms of having the designer acting solely in the owner's best interests.
- Is the legal "default" in most states.
- Gives the owner the ability to control the design development, and to have direct and final input into the design process.
- Results in the lowest initial construction costs, as the construction contractor is selected on a competitive, low-bid basis.

DBB's two biggest shortcomings are that it is a linear process (which does not allow for construction, either procurement or execution, to start until the design is 100 percent completed) and that the construction contractor is not able to provide any feedback to the project until the bidding process starts. Other shortcomings include the fact that DBB:

- Allows little collaboration between the designer and contractor, and frequently places them in an adversarial relationship.
- Relies upon the designer's estimates for program funding until late in project development.
- Offers little opportunity for the owner to use qualifications-based selection of the construction contractor.
- Makes the owner responsible for the gaps in performance between the designer and contractor.

This last point is particularly noteworthy. Because the contractor is not responsible for the design under DBB, a legal doctrine known as the *Spearin* doctrine arose under U.S. case law that holds the owner liable for any defects or inadequacies of the plans and specifications it furnishes the contractor and upon which the contractor has reasonably relied.[8] Under the *Spearin* doctrine, should the plans not meet or achieve their intended purpose, the contractor can sue the owner based upon the "implied warranty" concept of the owner's design.

As noted earlier in this section, most U.S. transit agencies have delivered their projects through the DBB method. Both the Bay Area Rapid Transit District (BART) and the Washington Metropolitan Area Transit Authority (WMATA) used DBB as they were developing their rail systems in the 1970s and 1980s. New York City Metropolitan Transit Authority (New York City MTA) has continued to use DBB in the expansion of its system, including for the three megaprojects it is currently executing: the #7 Line Extension, East Side Access, and the Second Avenue Subway.[9]

C. The Move to Design-Build in the Public Sector

While the private sector has used DB on major projects for decades, public owners have been constrained from using it because of various procurement legislation (e.g., Brooks Act and low bid-statutes), as well as a gen-

[7] *See, e.g.*, TOURAN, *supra* note 1, at 19.

[8] United States v. Spearin, 248 U.S. 132, 39 S. Ct. 59, 63 L. Ed. 166 (1918).

[9] As will be discussed more in ch. VI, the size of these projects required MTA to reconsider how to structure the DBB packages to meet both competition and surety challenges.

eral lack of familiarity and comfort with the process.[10] Although transit agencies were using DB to a limited degree prior thereto, the atmosphere changed dramatically in the mid-1990s as a result of two major federal legislative initiatives.

One piece of legislation was the 1996 Federal Acquisition Reform Act (also known as the Clinger-Cohen Act), which allows federal and federally funded agencies to use the DB delivery method if the agency head determines it is appropriate on a particular project.[11] Once an agency makes this determination, the Act requires a two-phase selection procedure for procuring a DB contract.[12] The two-phase approach is intended to alleviate concerns that the DB procurement will be based entirely on price and will not adequately factor in a contractor's technical qualifications.

Phase 1 involves the submission of statements of qualifications demonstrating each proposer's specialized experience and technical competence. After creating a shortlist of between three and five proposers, the agency moves to Phase 2, which seeks technical and price proposals.[13] This two-phase process envisions that the agency will ultimately select the design-builder on the basis of which proposer offers the agency the best value. The Federal Acquisition Reform Act does not identify how the government is to conduct evaluations of Phase 2 proposals, but this is specified in Part 15 of the Federal Acquisition Regulations (FAR), which address the processes for competitive negotiation.

At the same time Congress was evaluating acquisition reform, it was also in the process of rewriting FAR Part 15. This rewrite, which was completed in 1997, substantially modified, among other things, the protocol for the Federal Government's source selection and process of soliciting and evaluating proposals. It makes the process of evaluating DB proposals much simpler, and mandates that both price and quality "be evaluated in every source selection."[14] The "quality" component considers such noncost factors as "past performance, compliance with solicitation requirements, technical excellence, management capability, personnel qualifications and prior experience."[15]

These legislative activities helped spur federal agencies to start using DB. At present, the reliance on DB continues to grow at an ever-increasing rate, as federal agencies—including the Army Corps of Engineers, the Defense Department, and the State Department—have turned to this delivery method for some of their most important projects.

These statutes also spurred strong interest in the transportation arena. Legislation specific to federal highway and transportation projects was enacted, and the FHWA became the leader among federal agencies in using innovative project delivery systems such as DB. The birth of FHWA's use of the DB delivery method was implemented through FHWA's Special Experimental Project Number 14 (SEP-14) program, which was established in 1990 to evaluate innovative contracting practices. Design-build was covered by SEP-14. By 2002, transportation agencies in 32 states had proposed approximately $14 billion for DB contracting on 300 projects under SEP-14. As of 2011, there are still approximately 47 active projects in FHWA's SEP-14.

Based on the success of SEP-14, Congress enacted the Transportation Equity Act for the 21st Century (TEA-21) in 1998, allowing federal aid funding to be used for DB highway projects contracted for by state DOTs. To qualify, the DB projects were required to be larger than $50 million.[16] TEA-21 did two important things to promote the use of DB within FHWA. It mandated that FHWA implement a final rule allowing for the DB contracting method, and it required that a comprehensive, national study be conducted on DB's effectiveness. The final report, *Design-Build Effectiveness Study*, was issued in January 2006 and confirmed widely-held beliefs: 1) the ability to reduce the overall duration of the project development is enhanced by using DB; 2) greater cost efficiencies are more likely to occur on DB projects; and 3) project quality is not minimized or hampered from use of DB.[17] The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), signed into law in 2005, increased the flexibility that state DOTs have to use DB contracting by eliminating the TEA-21 requirement ($50 million floor) on the size of contracts qualifying for DB.[18]

The authority to use DB on most highway and other nontransit transportation projects is derived from the general statutory authority for the applicable state DOT. However, the use of DB on transit projects is

[10] *See generally* Michael C. Loulakis, Innovative Delivery Systems and ID/IQ Contracts, Federal Government Contracting, American Bar Association, Forum on the Construction Industry (2009).

[11] Pub. L. No. 103-355, 108 Stat. 3243 (Oct. 13, 1994); Pub. L. No. 104-106, § 4001, 110 Stat. 679 (Feb. 10, 1996).

[12] 41 U.S.C. § 253m(c) (1987 & Supp. 2002). *See generally* MICHAEL C. LOULAKIS, DESIGN-BUILD FOR THE PUBLIC SECTOR (2003); ROBERT FRANK CUSHMAN & MICHAEL C. LOULAKIS, DESIGN-BUILD CONTRACTING HANDBOOK (2d ed.); Michael C. Loulakis, *Design Build Lessons Learned*, A/E/C TRAINING TECHNOLOGIES, LLC (1995–2004).

[13] 41 U.S.C. § 235m(c)(4) (1987 & Supp. 2002).

[14] FAR 15.304(c)(1).

[15] FAR 15.304(c)(2).

[16] For projects on which Intelligent Transportation Systems (ITS) are being installed, the threshold minimum size is $5 million.

[17] Federal HIGHWAY ADMINISTRATION, DESIGN-BUILD EFFECTIVENESS STUDY, Report to Congress as required by TEA-21, Section 1307(f) (Jan. 2006), available at http://www.fhwa.dot.gov/reports/designbuild/designbuild0.htm.

[18] APTA Primer on Transit Funding, The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users, Extensions, And Other Related Laws, FY 2004 through FY 2011 (Revised June 2010), http://www.apta.com/gap/policyresearch/Documents/Primer_SAFETEA_LU_Funding_June_2010.pdf.

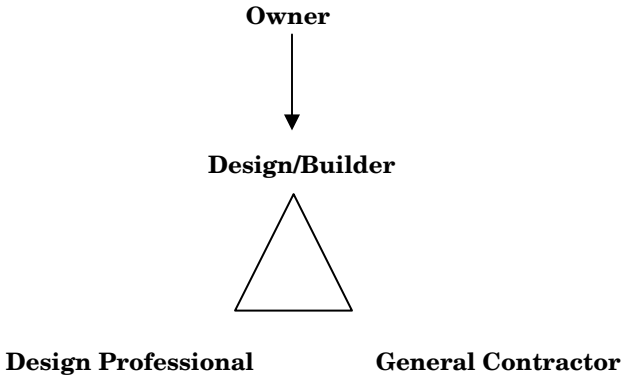
typically a function of three things: 1) the flexibility afforded to the agency through special legislation or the agency's charter to use a delivery system other than DBB; 2) the agency's philosophy on using DB; and, for projects funded by FTA, 3) the views of FTA on DB. As described in more detail in Section II below, it is clear that the use of DB on transit projects has been on an upswing in recent years.

Consider two projects built by BART. Through special legislation passed in the mid-1990s, BART obtained authority to use low-bid DB on its San Francisco International Airport Extension. It also received funding on that project given that it was one of the five projects that were part of FTA's Turnkey Demonstration Program. By the time BART was ready for its Warm Springs Extension project, California had general legislation that enabled BART to use DB for that project as well.

D. Attributes of Design-Build

DB is a project delivery method under which a project owner executes a single contract for both design and construction services. The design-builder may be a single firm, a consortium, joint venture (JV), or other organization, with the key element being that one entity assumes primary responsibility for design and construction of the project. There are myriad ways to procure a design-builder, including negotiation with a single proposer or through a competitive proposal process. Selection can be based purely on qualifications, purely on low price, or on a set of value criteria (e.g., experience, staff, or financial capability), frequently called "best value."

Figure 2. Design-Build Method



As is the case with other delivery systems, the benefits and weaknesses of DB have been widely discussed in numerous industry publications. The typical advantages to an owner using DB include the following:

- Early contractor involvement with the project, which not only increases the likelihood of a more constructable design, but also enhances the ability of the owner's overall team to work together constructively.
- Time savings on the project that result from early contractor involvement during design, which enables design and construction to work concurrently and eliminates the bidding process between the design and construction phases.
- The potential for cost savings that results from continued communication between design, engineering, and construction team members, as well as internal value engineering and creativity when the designer and contractor are teamed.
- Improved quality, which results from the involvement of the design team throughout the project development and the opportunity to incorporate project innovations and new technology based on contractor capabilities.
- The ability to evaluate and consider the qualifications of the contractor during procurement and the ability to use something other than low price as the means for selecting the contractor.
- The reduction of *Spearin* liability by creating a direct contractual interface between the designer and contractor.

While an owner derives many benefits from DB, there is little doubt that the most common reason public owners choose this process is because it enhances the

ability to implement fast-track management and achieve early project completion. Note that the November 2007 *Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects (PPP Report to Congress)* provides a thorough explanation of the benefits of DB. Reduced direct costs, lower life-cycle costs, and reduced schedule durations are all cited for these projects.[19]

From an owner's perspective, there are several perceived weaknesses to the DB process. High on the list is that the owner does not have full control over the final design process, particularly when the design-builder is procured competitively.[20] For some, this can be particularly troublesome to an owner that is comfortable in having a direct relationship with the designer, since the designer is now working directly with the contractor. It should be noted that owners who have flexible procurement rules can mitigate these two drawbacks by engaging the design-builder early in the design process. "Progressive design-build" is a process that allows for this and calls for the DB team to be selected on qualifications, to develop preliminary engineering in collaboration with the owner, and to provide a price proposal after completion of preliminary engineering. The Dulles Metrorail project, discussed in Section IX, is a good example of this procurement process.

As noted in the preceding section, DB is currently widely used in the highway sector. Many state DOTs (e.g., Virginia, Florida, and Texas) have used the process so frequently that they have well-developed procurement and contracting procedures for most projects.

With respect to the use of DB in the transit industry, the *PPP Report to Congress* noted that there were seven transit New Starts projects procured using a DB approach: 1) the Denver Regional Transportation District (RTD) Southeast Corridor Light Rail Transit (LRT); 2) South Florida Commuter Rail Upgrades; 3) Minneapolis Hiawatha LRT; 4) New Jersey Transit (NJT) Hudson-Bergen LRT Minimum Operable Segment One (MOS-1); 5) NJT Hudson-Bergen LRT MOS-2;[21] 6) WMATA Largo Metrorail Extension; and 7) BART Extension to San Francisco International Airport. The *PPP Report to Congress* also noted that two non–New Start fixed guideway projects with federal interests (Portland MAX (Metropolitan Area Express) Airport Extension and the AirTrain John F. Kennedy (JFK) International Airport) used DB.[22]

Several DB transit projects have moved forward since the *PPP Report to Congress*. Several of these are identified in Section VII (i.e., the Dulles Metrorail project, the Houston 4-Line project, and Denver RTD's Eagle project). Los Angeles MTA has used DB on several projects, including the Gold Line East Side Extension. The Santa Clara Valley Transportation Authority is in the process of using DB for its new Capitol Expressway Light Rail Project. Perhaps one of the most significant DB programs was NJT's Access to the Region's Core (ARC) program, an $8.7-billion program that would have doubled the commuter rail capacity between New York and New Jersey. The ARC program was ultimately terminated by Governor Chris Christie in October 2010.

E. Design-Build Variations

As owners have looked to optimize project delivery, they have increasingly evaluated expanding the private sector's role to include financing, operations, and maintenance. For example, if the project owner wishes to add O&M, or project financing, into the DB equation, the project is referred to as DBOM or design-build-finance-operate-maintain (DBFOM). Depending on the statutory authority behind the process, many of these expanded services are classified under the general term "public-private partnerships" or "PPP" projects.[23]

Many of the design and construction benefits derived from DBOM and DMFOM are the same as those realized under DB, since each of these variants uses DB as a baseline. However, by bundling O&M and finance, these delivery systems not only shift the risk of these functions to the private sector, but also incentivize the private sector to deliver a higher quality project.[24] These delivery systems also can minimize the challenges of startup, claims, and system integration often experienced by complex high-technology projects in their initial years of operation.

[19] *See* U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION, REPORT TO CONGRESS ON THE COSTS, BENEFITS, AND EFFICIENCIES OF PUBLIC-PRIVATE PARTNERSHIPS FOR FIXED GUIDEWAY CAPITAL PROJECTS 8–15 (2007), http://www.fta.dot.gov/documents/Costs_Benefits_Efficiencies_of_Public-Private_Partnerships.pdf (herein after noted as PPP Report to Congress).

[20] *See* Allensworth et al., *supra* note 2, § 4.06, at 81.

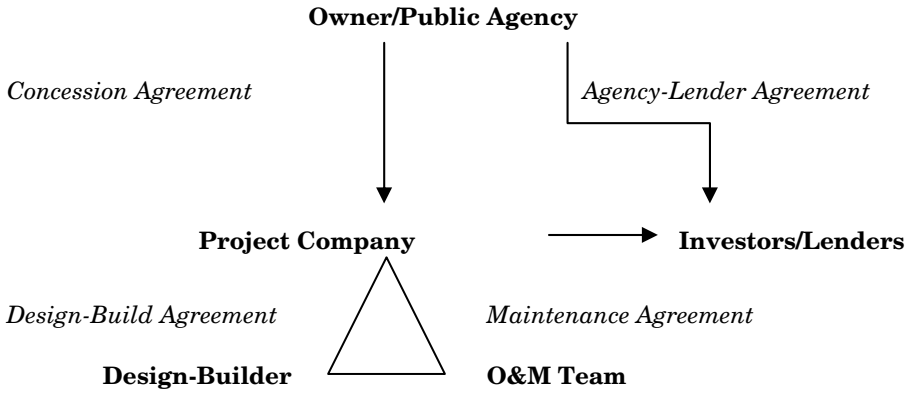
[21] Note that the two Hudson-Bergen LRT projects are identified in the PPP Report to Congress as both DB and DBOM projects.

[22] PPP Report to Congress, at 4.

[23] FHWA defines PPP as a "contractual agreement formed between a public agency and a private sector entity that allows for greater private sector participation in the delivery and financing of transportation projects." *See* www.FHWA.gov.

[24] See PPP Report to Congress, at 7.

Figure 3. DBOM Procurement Model



Recent legislation has encouraged the use of DBOM and DMFOM on transportation projects.[25] In 2004, FHWA created a program known as SEP-15 (Explore Alternative and Innovative Approaches to the Overall Project Development Process).[26] SEP-15 is a derivative of SEP-14, and allows state DOTs to use PPPs on highway projects. It specifically encourages the involvement and assistance of private-sector teams with project planning, development, environmental requirements, construction, project finance, and operations.[27]

On the transit side, FTA's Public-Private Partnership Pilot Program, known as the "Penta-P initiative," was authorized by SAFETEA-LU for certain new "fixed guideway capital projects," meaning public transit systems that use rail or a dedicated road, such as a bus rapid-transit system.[28] This pilot program is intended to allow the U.S. Department of Transportation to study whether PPP projects speed completion, allow more reliable projections of project costs and benefits, and improve project performance.[29] FTA's Penta-P initiative will specifically focus on projects that, among other things, use methods of procurement that integrate risk-sharing and streamline project development, engineering, construction, operation, and maintenance. FTA has noted that the amount and terms of private investment in such projects is a significant factor in selecting projects to participate in the program. Penta-P projects are eligible for a simplified and accelerated review process that is intended to substantially reduce the time and cost to the sponsors of New Starts reviews.[30]

While there is currently a relatively small number of U.S. transit projects using DBOM and DBFOM, the list does include some high-visibility projects. One of the current projects being developed under FTA's Penta-P initiative, the Houston METRO 4-Lines project (discussed in the case studies in Section IX), is an ongoing DBOM project.[31] Other DBOM projects that have been completed include NJT's Hudson-Bergen LRT and River Line LRT and the AirTrain JFK project. As for DBFOM, at least two rail projects have been constructed using this method. One is Denver RTD's Eagle project (an authorized Penta-P initiative project that is discussed in detail in Section IX); the other is the Las Vegas Monorail, which was financed without any public contribution.[32]

F. Construction Management at Risk

While most of the alternative project delivery in the transportation sector has involved the DB process, some agencies have used CMAR instead. CMAR is a well-known delivery system, having been introduced in the early 1980s and widely used in the private sector for the construction of buildings. As shown in Figure 4, the CMAR method looks like the DBB structure, in that the

[25] *See* Allensworth et al., *supra* note 2 § 4.07.

[26] Department of Transportation, Federal Highway Administration, New Special Experimental Project (SEP-15) to Explore Alternative and Innovative Approaches to the Overall Project Development Process; Information, 69 Fed. Reg. 59983 (Oct. 6, 2004).

[27] Kevin Sheys, *SEP-15 for Transit, Partnerships in Transit Program* (presented at Partnerships in Transit, a program of The National Council for Public-Private Partnerships) (May 30, 2008), http://www.ncppp.org/publications/TransitDenver_0806/RoundtableHandout_080612.pdf.

[28] Pub. L. No. 109-59, 119 Stat. 1144 *et seq*. (2005).

[29] The definitive terms of the Penta P initiative are set forth in Docket No: FTA–2006-23697, Public-Private Partnership Pilot Program, 72 Fed. Reg. 2583 (Jan. 19, 2007).

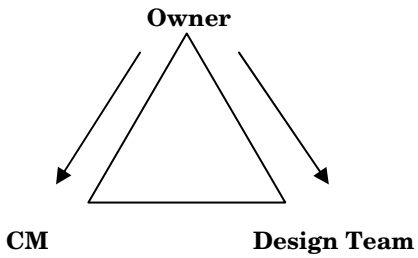
[30] *See* 49 U.S.C. § 5309, providing funding for construction of new fixed guideway systems or extensions to existing fixed guideway systems. A "fixed guideway system" refers to any transit service that uses exclusive or controlled rights-of-way or rails, entirely or in part.

[31] Note that while the Development Agreement on the Houston METRO 4-Lines project appears to be a DBOM project, in reality it is more of a DB project. As noted in the Chapter IX case studies, the O&M services that will be performed on that project will, for practical purposes, be undertaken by a party that is not the signatory to the Development Agreement.

[32] *See* PPP Report to Congress, at 7.

owner has separate contracts with a designer and a contractor. However, unlike in DBB, the contractor (i.e., construction manager or CM) is introduced to the project before the design is completed to provide value engineering, conceptual estimating and scheduling, constructability reviews, and other preconstruction services. At some point in time—most often when 50 to 60 percent of the design has been developed—the CM will "go at risk" and provide a guaranteed maximum price (GMP) and guaranteed completion date.

Figure 4. CMAR Method



The benefits of CMAR are quite similar to those of DB, in that the early involvement of the contractor yields a better design and gives the opportunity to fast-track the project's completion by, among other things, having packages of work released for construction before the full design is completed. Owners that choose CMAR over DB typically do so because they want to have a direct contract with the designer, as opposed to letting the contractor and designer have a direct contract with each other. A weakness of the system, however, is that because the owner holds the design contract, the owner also retains *Spearin* liability. In addition, while the owner under the CMAR process does enjoy the benefit of having the designer and contractor working as a team, it has the obligation to coordinate that team—which is not the case in DB, where the designer and contractor are contractually bound.

As legislatures have revisited project delivery, several have specifically added CMAR as an option for public projects. Arizona, Washington, Oregon, and Nevada are among the states that not only have added CMAR to their public project "toolbox," but have used the process extensively on public buildings and water projects.

CMAR has been used less frequently in the transportation sector, as most agencies have opted for DB.[33] Two rail projects that have used CMAR are notable. The Utah Transit Agency (UTA) successfully used CMAR for its Weber County Commuter Rail Line, a $241 million project that consisted of 43 mi of rail and nine stations.[34] The project was completed 9 months ahead of schedule and within budget.[35] UTA, which had prior positive experiences with CMAR, chose CMAR to accelerate the delivery period and obtain early contractor involvement, which would encourage innovation and constructability and facilitate value engineering. UTA also believed that CMAR would be more conducive to flexibility during construction and inherent third-party issues.[36]

The Tri-County Metropolitan Transportation District of Oregon (TriMet) used CMAR for its Portland Mall Light Rail Project. The project converted a bus transit mall into a multimodal facility that incorporates light rail, bus, auto, and dedicated bicycle lanes. The light rail project included 14 stations and bus stops, 24 new light rail vehicles, and 2 mi of in-street light rail, among many other features. The project was valued at $143 million with an anticipated project delivery period of 4 years. The final project was delivered on time and within budget. For TriMet, the single most significant

[33] *See* TRANSP. RESEARCH BOARD, NCHRP SYNTHESIS 402, CONSTRUCTION MANAGER-AT-RISK PROJECT DELIVERY FOR HIGHWAY PROGRAMS 75, Fig. 8 (2010), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_402.pdf.

[34] *See* NCHRP Synthesis 402, *Construction Manager-at-Risk Project Delivery for Highway Programs*, Transportation Research Board (2010), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_402.pdf.

[35] Operating on an existing rail right-of-way, the completed project now serves the areas of Pleasant View, Ogden, Clearfield, Layton, and Bountiful with direct access to the Salt Lake City downtown area. A total of 6,150 park-and-ride spaces were built at corridor stations to expand the transit catchment area beyond the immediate corridor; bus and light rail transit connections provide further service to other travel markets including Weber State University, Hill Air Force Base, Freeport Center, the University of Utah, the Medical Center, and to the areas of Sandy and Draper in the south.

[36] *See* TRANSPORTATION RESEARCH BOARD, *supra* note 33, at 61, Table 8.

reason it selected CMAR was the complex project requirements.[37] Other reasons included the need for flexibility during the construction phase, the desire to encourage innovation and facilitate value engineering, and the desire to obtain early contractor involvement like the UTA did.

G. Other Delivery Systems

A host of other delivery systems are used in the U.S. construction market, including 1) job order contracting; 2) indefinite delivery and indefinite quantity contracting; and 3) integrated project delivery and alliance contracts. Section VII provides a summary of a survey that was conducted in conjunction with this digest that addresses the use of alternative delivery systems among transit agencies. Because the results of this survey did not indicate that these other alternative delivery systems are widely used by transit agencies, and because these systems do not appear to create any unusual surety issues, they are not addressed in this digest.

III. PURPOSE, HISTORICAL UNDERPINNINGS, AND LEGISLATIVE FRAMEWORK OF SURETY BONDS

Parties have always desired guarantees and security for their ventures, and transit project owners are no exception. In one form or another, the surety has filled the need for performance guarantees since time immemorial. This section will provide an overview of the types of surety bonds that are available for transportation projects and the historical and legislative support for the use of these bonds. Sections that follow will provide more detail as to alternatives to bonds, as well as how surety bonds function when there is a contractor default.

A. Purpose and Function of Surety Bonds

Put simply, a "surety" is one who has agreed to be liable for another's debt, default, or other obligation. In the construction world, various types of surety bonds are used on transit projects, each of which fulfills a specified purpose. They typically fall under one of four common categories: bid bonds, performance bonds, payment bonds, or warranty or maintenance bonds. Transit owners, like other owners of capital projects, should consider using each of these bonds as a means of mitigating the risk of contractor default, particularly given the current economic climate.

1. Bid Bonds

As its name suggests, a bid bond provides security during the bidding process and is intended to guarantee that the principal will faithfully accept and enter into the contract upon which it bid if the principal is selected as the successful bidder.[38] As a general rule, if the principal is the successful bidder on a contract and then accepts the contract and provides whatever performance and payment bonds the contract may require, the bid bond is nullified or the surety is otherwise discharged. If, however, the obligee accepts the principal's bid but the principal fails to enter into a contract with the obligee, fails to provide bonds required under the contract, or otherwise reneges on the terms of its bid (such as the bid price), the principal may then be liable to the obligee for damages, which the obligee may seek from the bid bond. The measure of those damages depends on the language of the bond. In the typical case, such damages consist of the difference between the principal's bid and the next lowest bid. The damages may also include any costs associated with reprocurement. The surety's liability for such damages is generally limited to the penal sum of the bond, which tends to fall between 5 and 10 percent of the bid price.

2. Payment Bonds

The purpose of a payment bond is to provide security for suppliers of labor and material on a project so that they are guaranteed payment. Although the familiar mechanic's lien has long served this purpose and often continues to do so, public contracts almost universally prohibit mechanic's liens because the government does not want its property to be encumbered. In place of mechanic's liens, public contracts generally require contractors to procure payment bonds. Private owners, desirous of avoiding liens on their property, have also adopted the practice of requiring payment bonds for private contracts. Many states have supported the use of payment bonds in private contracts and have enacted statutes limiting parties' abilities to use mechanic's liens if a payment bond is available. Exactly who may recover on a payment bond, the extent of the available recovery, and the procedure for doing so vary by statute and by the terms of the payment bond itself.

3. Performance Bonds

The function of a performance bond is to provide a project owner with assurance that its project will be completed in the event of a contractor default. Under a performance bond, and as discussed in detail in Section V, if the contractor who is the bond's principal defaults, the surety is generally required to take one of several steps toward effecting the completion of the contract. Some performance bonds mandate that the surety step in and complete the contract itself. Other bonds require the surety to simply indemnify the project owner for the owner's costs in arranging for completion. Typically, though, the performance bond will give the surety a set of options for carrying out its bond obligations. Those options generally include taking over the contract and completing it, arranging for the defaulting contractor to

[37] *See* ALI TOURAN, ET AL., GUIDEBOOK FOR THE EVALUATION OF PROJECT DELIVERY SYSTEMS 65 (Transit Cooperative Research Program (TCRP), Transportation Research Board, TCRP Report 131, 2009), http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_131.pdf.

[38] ALLEN N. DAVID, *Bid Bonds*, THE LAW OF SURETYSHIP, 63, 63 (Edward G. Gallagher, ed., 2d ed. 2000).

cure the default and complete the contract, arranging for another contractor to step in and complete the contract, allowing the obligee to complete the contract and paying the obligee the cost to do so, or simply paying the penal sum (or a lesser settlement amount) to the obligee in exchange for the obligee discharging the surety from its bond obligations (a practice sometimes called "buying back the bond"). The surety's options will be governed by the terms of the performance bond and may also be governed by statute in some cases.

4. Warranty or Maintenance Bonds

The purpose of a warranty or maintenance bond is to provide assurance during a predetermined post-completion period that the contractor will correct or replace any work or materials that are determined to be defective or not in compliance with the project requirements. While such bonds are not normally required on commercial projects, transit owners frequently request them to provide coverage for defective workmanship or faulty materials discovered after the project has been completed. The bond typically has a financial limit, or penal sum, of approximately 10 percent of the final contract amount.

5. Comparing and Contrasting Surety Bonds

All of the above-referenced bonds have some common elements and purposes. In each case, the surety bond benefits the obligee by establishing a relatively secure source of funds with which to correct or compensate for the principal's failure to honor its obligations in performing its contract. Although the principal is primarily responsible and liable for the obligations underlying each type of bond, the principal may have insufficient resources to satisfy those obligations. From the owner's perspective, the risk that the principal's resources may be inadequate to complete the project is generally unacceptable absent a sound contingency plan. This is where the surety's guarantee of performance via a performance bond alleviates a substantial risk in construction project planning. Additionally, the underwriting and qualification process necessary to obtain a bond helps to ensure, to the extent practically possible, that the contractors bidding on the project are actually able to properly perform the project, thereby drastically reducing—though not eliminating—the possibility of a default.

While the bid bond provides an owner with a degree of assurance before the project begins, the performance bond provides assurance during the course of the project, and the warranty and maintenance bonds provide assurance for a prescribed period of time after completion that the contractor will fulfill its obligations. The payment bond is slightly different, and serves to provide a source of recovery for labor and material providers sufficient to forestall a mechanic' lien encumbrance on the owner's newly constructed property at the end of the project. Frequently on transit projects, however, the need for bonding arises not out of the project owner's desire to have the bonds, but because they are required by statute.

6. Comparing and Contrasting Surety Bonds and Insurance

Despite frequent attempts to lump them together, surety bonds and insurance are very different instruments that serve very different purposes. As noted above, surety bonds provide assurance to an obligee that if a contractor defaults in the performance of a contractual obligation, the surety will stand in the contractor's shoes and assume the duty to perform the work or to pay for labor and materials incorporated into the project. Consequently, a surety company looks at underwriting the bonding relationship very much like a banker would do in establishing a line of credit or committing to a loan. Every banker granting a loan fully expects to have the loan repaid, and it will investigate the borrower in sufficient detail to assure that such will be the case. Surety underwriters proceed in the same way—they do not plan for a certain number or dollar amount of claims. They anticipate a zero loss, and, thus, require an indemnity agreement so there is a source for reimbursement for any losses that may actually be incurred.

Insurance, on the other hand, is a risk-sharing device, and assumes that there will be losses for covered events, unless an exclusion applies. These expected losses are calculated by actuaries and, coupled with anticipated overhead and other expenses, form the basis for the insurance premium. Insurance companies use deductibles and exclusions to help mitigate some of their exposure, but they generally do not expect to get reimbursement from the insured if the insurance company is required to pay out on the policy.

Table 1 provides a summary of some of the major differences between these two concepts.

Table 1. The Differences Between Suretyship and Insurance

	Suretyship	Insurance
Number of parties to agreement?	**Three-party agreement:** Most surety bonds are three-party agreements. The surety guarantees the faithful performance of the principal to the obligee.	**Two-party agreement:** Insurance is considered a two-party agreement whereby the insurance company agrees to pay the insured directly for losses incurred. There are exceptions with additional insured coverages.
Losses expected?	**Losses not expected:** Although some losses do occur, surety premiums do not contain large provisions for loss payment. The surety takes only those risks that its underwriting experience indicates are safe.	**Losses expected:** Losses are expected. Actuaries calculate the expected losses based on a number of factors. Insurance rates are adjusted to cover losses and expenses as the law of averages fluctuates.
Losses recoverable?	**Losses recoverable:** A bond is similar to a loan; the surety is "lending" its credit to the principal. After a claim is paid, the surety expects to recoup its losses from the principal or indemnitors.	**Losses usually not recoverable:** When an insurance company pays a claim, it usually does not expect to be repaid by the insured. Waivers of subrogation are common.
How are premiums calculated?	**Underwriting the Principal:** The premium for surety bonds is priced based upon characteristics of the principal, including the history of the principal with the surety, the principal's financial condition, the portfolio of work that the principal performs (e.g., location of the projects, the type of work, and the value of the contracts). On some specific projects (e.g., long duration or highly complex work), the premium will have some "adders" to reflect the higher risk.	**Underwriting the Risk:** Premiums for insurance contracts are based on actuarial assessments that analyze historical loss ratios for the type of loss being insured, and have relatively little to do with the specifics of the project or the financial condition of the insured (except for specialty insurance, such as builder's risk, professional liability, and project policies).
Premiums cover expenses?	**Premiums cover expenses:** A large portion of the surety bond premium is a service charge for weeding out unqualified candidates and for issuing the bond.	**Premiums cover losses *and* expenses:** Insurance premiums are collected to pay for expected losses. If an insurance company can get enough average risks of one class, it will always have enough money to pay losses and the expenses of doing business.

Note, however, that the surety-versus-insurance topic is complicated by the fact that there are a number of insurance policies that do underwrite the insured (e.g., professional liability insurance) or project risk (e.g., builder's risk insurance). There is also a relatively new product called "contractor default insurance," discussed in Section IV.H, which is intended to function as a surety bond substitute. However, these exceptions do

not change the rule—surety bonds and insurance are very different concepts.

B. Operation and History of Surety Bonds

Beyond recognizing the types of bonds that a transit owner may desire for its project, owners should also understand the nature of a surety relationship and some of the considerations when deciding which bonds to require for a particular project. Suretyship involves a tripartite (three-party) relationship among the surety, principal, and obligee. The one for whose obligation the surety stands liable is called the "principal." The party to whom that obligation is owed is called the "obligee." Consequently, on transit projects, the agency is the obligee and the party with whom it contracts that is providing the bond (e.g., general contractor, design-builder, concessionaire, or vendor) is the principal. The surety bond is the agreement in which a surety pledges an amount of money, typically called a "penal sum," for which it is obligated to perform or pay to the obligee if the principal fails to satisfy its obligation. For its own protection, the principal will often require its subcontractors to obtain surety bonds to cover the subcontractors' respective portions of the project. Under a subcontractor's surety bond, the contractor (and sometimes also the project owner) is the obligee, and the subcontractor is the principal.

As consideration for issuing bonds, a surety will require its principal and others (frequently, the individual owners of the principal) to enter into an indemnity agreement by which the signatories agree to reimburse the surety for any losses incurred by the surety on any bonds issued to the principal. This is consistent with the philosophy that a surety anticipates a zero loss, and, thus, requires the indemnity agreement to ensure it is reimbursed for any losses that may actually be incurred. The creation of this underlying agreement with the responsible parties, called "indemnitors," creates another layer of rights and obligations, which can complicate matters if the principal defaults.

The unique and complicated characteristics of modern construction projects create special challenges for sureties. Construction suretyship can be complex due to the cumulative effect of, among other things, the following:

1. The surety's multiple, independent, legal obligations to act fairly and in good faith with the obligee, the contractor/principal, its indemnitors, and bond claimants, whose positions frequently conflict and routinely place the surety in the middle of a legal "cross-fire."
2. The technical nature of factual issues addressing design adequacy and construction conformance, which typically require the assistance of experts to investigate and analyze correctly.
3. The surety's interest in mitigating loss to its principal and itself by controlling the cost of completion of the bonded contract, efficiently collecting and using any remaining contract funds in the hands of the obligee, and holding third parties (such as subcontractors, suppliers, design professionals, accountants, lenders, and other sureties) accountable for loss that they caused or contributed to.
4. The difficulty of determining whether a construction contract was breached and which party breached it.
5. The uniqueness of the legal principles of construction suretyship.
6. The multiplicity of claimants who invariably seek to obtain protection from the surety.
7. The limited amount of time and facts typically available for decision-making amid the smoke of competing contentions between the obligee and contractor.
8. The multitude of options available to the surety when evaluating and responding to an alleged default by its principal.
9. The stark reality that "major construction projects generate major litigation" and the "management of either is perilous."[39]

While individuals can (and do) serve as sureties, corporate sureties are now the norm. Although suretyship in general predates recorded history, corporate suretyship in the United States has existed for more than 125 years. Over this time period, the law governing corporate sureties was developed through a series of cases decided by the U.S. Supreme Court, the U.S. Courts of Appeals, federal legislation, and the development of a compendium called the *Restatement of Suretyship*.

In the early days of suretyship, sureties were treated as "favorites of the law," and surety agreements were strictly interpreted to the benefit of the surety. [40] This approach was modified as courts recognized that corporate sureties, who were providing the guarantee for a fee, should not be treated as a "favorite" but, instead, should be subject to the same principles of contract interpretation that had been established in the context of insurance policies.[41]

In 1894, Congress enacted legislation requiring surety bonds—and implicitly preferring those from corporate sureties—to secure payment and performance obligations on federal public works projects.[42] This new requirement soon called for the U.S. Supreme Court to interpret surety bonds in the context of the federal statutory language. The Supreme Court did so, universally finding that statutory bonds securing payment to subcontractors should be construed liberally in favor of the subcontractors in keeping with the purpose of the

[39] 4A PHILIP L. BRUNER & PATRICK J. O'CONNOR, JR., BRUNER & O'CONNOR ON CONSTRUCTION LAW § 12.2 (2009) (footnotes omitted).

[40] *See*, *e.g.*, Warner v. Conn. Mut. Life Ins. Co., 109 U.S. 357, 363, 3 S. Ct. 221, 222, 27 L. Ed. 962, 964 (1883).

[41] *Id.* at 144; see also Am. Surety Co. v. Pauly, J. White dissenting, 170 U.S. 160, 181, 18 S. Ct. 563, 570, 42 L. Ed. 987, 997 (1898).

[42] This refers to the Heard Act, ch. 280, 28 Stat. 278 (1894), which is discussed *infra* at 3.3.

statute.[43] This view was reaffirmed repeatedly by the Supreme Court,[44] as the Court decreed the liberal interpretation of payment bonds and the statutes that require them.

The practice of liberally construing bonds from compensated sureties in favor of claimants has remained a consistent guiding principle in the context of bonds prescribed by statute to this day.[45] Nevertheless, courts will strictly interpret any plain words limiting a statutory bond's coverage, as well as any statutory requirements with which a claimant must comply as to notice and commencement of a suit on the bond.[46] With regard to surety bonds that are not prescribed by statute, which are referred to as "common-law bonds," interpretation of the bond is governed by traditional rules of contract interpretation, which vary by state, and will depend on the type of bond and the language used therein.

As time passed, many suretyship principles were integrated into a collection of principles called the Restatement. Now on its third edition, the *Restatement (Third) of Security, Suretyship and Guaranty* (Restatement), sets forth the following elementary legal principles applicable to all surety bonds:

1. The principal and surety are jointly and severally liable to the obligee (Restatement § 1).
2. The surety is entitled to assert all defenses to liability available to its principal except for the principal's personal lack of capacity (minority, mental incapacity) and its discharge in bankruptcy (Restatement § 34).
3. The dollar amount of the surety's liability is capped by the "penal sum" of the bond, provided the surety does not breach its own bond obligations (Restatement § 73, comment b).
4. The surety's obligation is only to indemnify the obligee for its losses due to the principal's breach of the bonded contract, unless the bond specifies other obligations (See Restatement § 32).
5. The surety is entitled to be reimbursed by the principal if the surety has to pay (Restatement §§ 18, 21–26).
6. The surety is equitably subrogated to the rights of its principal against others and to the rights of the obligee and others that it pays under the bond (Restatement §§ 27–31).
7. The surety may be discharged from its obligations under the bond if the obligee impairs the surety's rights, such as by relinquishing collateral available to the obligee as security for the bonded obligation, substantially modifying the principal's obligations under the bonded contract, or permitting someone other than the principal to perform instead of the principal (Restatement § 37–44).
8. Surety contracts are subject to the Statute of Frauds (Restatement § 11).[47]

Although the Restatement represents an attempt to compile a standard set of principles applicable to sureties, not all states have assimilated the Restatement into their case law. Thus, although the Restatement may provide some level of guidance, it is not necessarily binding on a court, which may choose to apply different principles. Nevertheless, the principles set forth in the Restatement are widely recognized.

C. Federal Legislation (Miller Act)

While transit projects may incorporate federal funding, they are typically governed by state procurement statutes that include requirements for surety bonds. These state law provisions are patterned after the bond and contain all elements for compliance with the Miller Act. In general, the Miller Act requires contractors on federal public works projects exceeding $100,000 to post a performance bond and a payment bond in an amount equivalent to 100 percent of the contract value. Federal public works projects have required bond security since 1894, when Congress passed the Heard Act. The Heard Act had certain limitations that placed an extreme burden on the subcontractors, laborers, and suppliers it was intended to protect. For example, it imposed time limits that essentially forced the claimants to wait until 6 months after final payment on the prime contract before they could make a claim on the bond, regardless of when they had completed their respective portion of the project. Such a delay placed a substantial burden upon these second-tier providers, who often could not afford to go unpaid for so long. Consequently, Congress reexamined the Heard Act and, in 1935, replaced it with the Miller Act.

Whereas the Heard Act required a single bond (whether by one surety or an aggregation of sureties) to cover both performance of the contract and payment of subcontractors, laborers, and suppliers, the Miller Act called for separate bonds for performance and payment. The Federal Government retained its exclusive right to proceed against the performance bond, but those covered by the payment bond (i.e., subcontractors, labors, and suppliers) were made free to pursue claims against the payment bond at any time. This measure preserved the Federal Government's interest in bond protection for its projects while securing prompt payments to the subcontractors, laborers, and suppliers.

The Miller Act, which has been amended several times since it was enacted in 1935, presently provides that the Federal Government cannot award any contract of more than $100,000 "for the construction, al-

[43] United States Fidelity and Guaranty Co. v. United States *ex rel*. Golden Pressed and Fire Brick Co., 191 U.S. 416, 426, 24 S. Ct. 142, 144, 48 L. Ed. 242, 247 (1903).

[44] United States *ex rel*. Hill v. Am. Surety Co., 200 U.S. 197, 26 S. Ct. 168, 50 L. Ed. 437 (1906).

[45] 4A BRUNER & O'CONNOR, JR., *supra* note 39 § 12:10.

[46] *Id.*

[47] *See* Griffin, D., Insurance and Bonds, Construction Law, American Bar Association, Forum on the Construction Industry (2009).

teration, or repair of any public building or public work" unless the contractor furnishes a performance bond and a payment bond.[48] In addition, the Miller Act requires alternatives to payment bonds for payment protection under such contracts that are more than $25,000 but not more than $100,000.[49] In its current state, the Miller Act states, in pertinent part:

> Bonds of contractors of public buildings or works
>
> (a) Definition. In this subchapter, the term "contractor" means a person awarded a contract described in subsection (b).
>
> (b) Type of bonds required. Before any contract of more than $100,000 is awarded for the construction, alteration, or repair of any public building or public work of the Federal Government, a person must furnish to the Government the following bonds, which become binding when the contract is awarded:
>
> (1) Performance bond**.** A performance bond with a surety satisfactory to the officer awarding the contract, and in an amount the officer considers adequate, for the protection of the Government.
>
> (2) Payment bond. A payment bond with a surety satisfactory to the officer for the protection of all persons supplying labor and material in carrying out the work provided for in the contract for the use of each person. The amount of the payment bond shall equal the total amount payable by the terms of the contract unless the officer awarding the contract determines, in a writing supported by specific findings, that a payment bond in that amount is impractical, in which case the contracting officer shall set the amount of the payment bond. The amount of the payment bond shall not be less than the amount of the performance bond.

Although the Miller Act establishes the foregoing bonding requirements, it also expressly does not limit the authority of a contracting officer to require a performance bond or other security in addition to that specified in the Act.[50]

D. Federal Acquisition Regulations

The Miller Act itself does not mandate a particular bond form to be used, nor does it set the threshold requirements for surety bonds. These are established by Part 28 of the FAR. Effective October 1, 2010, Part 28 of the FAR raised the Miller Act's $100,000 threshold for requiring performance bonds and payment bonds to $150,000. It also raised the range for requiring payment bond alternatives from $25,000 to $100,000 to a new range of $30,000 to $150,000.

In addition to amending the Miller Act's threshold amounts, Part 28 of the FAR clarifies the penal sum required under each type of bond. For contracts over $150,000, FAR requirements dictate that, unless the contracting officer determines a lesser amount adequately protects government interests, performance bonds and payment bonds must equal 100 percent of the original contract price. The requirements also direct that the bonds must continue to increase in amount to maintain that 100 percent protection throughout any subsequent increases in the contract price, such as increases through change orders. Reductions in the payment bond amount can only occur if the contracting officer makes a written determination, supported by specific findings, that a 100 percent payment bond is impractical. Furthermore, the payment bond cannot be reduced to less than the amount of the performance bond.

The FAR also permits and defines acceptable forms of "alternative payment protection," which may be different under state and local law, as including:

- An irrevocable letter of credit (LOC).
- A tripartite escrow agreement in which the prime contractor establishes an escrow account in a federally-insured financial institution, enters into an escrow agreement with that financial institution (which serves as the escrow agent) and the suppliers of labor and material, and then the Federal Government makes payments to the escrow account to be distributed according to the escrow agreement.
- Certificates of deposit from a federally insured financial institution, which are deposited with, and executable by, the contracting officer.
- Certain United States bonds or notes, together with a duly executed power of attorney and agreement authorizing the collection or sale of such bonds or notes in the event the principal defaults.
- Certified checks, cashier's checks, bank drafts, or Post Office money orders drawn to the order of the appropriate federal agency.
- Currency (i.e., a cash deposit).

The FAR reflects a preference for irrevocable LOCs as an alternate payment method to surety bonds, noting that a contracting officer should give "particular consideration to inclusion of an irrevocable letter of credit as one of the selected alternatives."

[48] 40 U.S.C. § 3131(b).

[49] 40 U.S.C. § 3132(a).

[50] 40 U.S.C. 3131(e).

E. State Legislation (Little Miller Acts)

As mentioned above, FAR does not apply to state and local projects. Transit projects are generally governed by state public procurement acts. Once the Federal Government began adopting bonding requirements for its construction projects, state governments soon followed suit. Shortly after enactment of the Heard Act in 1894, state legislatures enacted similar statutes, which came to be known as "Little Heard Acts." Upon replacement of the Heard Act with the Miller Act, the state statutes were correspondingly renicknamed,"Little Miller Acts." Despite all falling under the same nickname, however, the states' respective Little Miller Acts differ to varying degrees from each other and do not all contain the same provisions and requirements as the Miller Act.

By and large, however, state bonding requirements for public works projects tend to be similar to the federal requirements. Appendix A sets forth the bonding requirements for all 50 states as of May 31, 2011. Thirty-two states require 100 percent performance and payment bonds for public works projects exceeding certain threshold contract prices. The contract price thresholds that trigger the requirement to provide payment and performance bonds vary from requiring bonds on all contracts regardless of price (e.g., Idaho, Ohio, and Washington) to $200,000 (e.g., state public works projects in New Jersey). The bonding thresholds in 28 of the 32 states requiring 100 percent bonding fall between $50,000 and $100,000.[51]

F. State DOTs and Modified Bonding Levels

Although the Little Miller Acts establish the general bonding requirements for state and local public works projects, some state agencies, particularly DOTs, have separate bonding requirements that often differ from the general requirements. In broad terms, many states that have enacted separate statutory bonding requirements for transportation projects have given their respective DOTs greater flexibility in fashioning appropriate project security, such as permitting higher thresholds for mandatory bonding or discretion as to whether, and to what extent, to require bonds. Some states, however, have imposed bonding requirements that are more stringent for transportation projects than for general public works projects. Appendix A gives a state-by-state description of applicable bonding requirements. Some representative examples are listed below:

- *Arkansas:* Reduces the payment bond threshold, which is $20,000 for general public works projects,[52] to $1,000 for transportation projects.[53]
- *Georgia:* Allows the state transportation agency to obtain reduced bonding levels for projects in excess of $300 million; however, the reduction in bonding requirements must be made up by additional, alternative security.[54]
- *Louisiana:* General public works projects require only a 50 percent performance bond,[55] but the performance bond must be a 100 percent bond for transportation projects.[56]
- *Michigan:* Requires only a 25 percent payment bond for general public works projects,[57] but construction and maintenance projects under the department of transportation require a payment bond sufficient to cover payment of all subcontractors and for payment of all labor, materials, and supplies.[58]
- *Missouri:* Does not require performance bonds for general public works projects,[59] but construction projects on the state highway system require performance bonds equal to the contract price.[60]
- *Nevada:* While general public works projects require only 50 percent performance and payment bonds, with a $100,000 bond threshold,[61] all transportation projects, regardless of cost, require 100 percent payment and performance bonds.[62]
- *North Dakota:* Reduces the general payment and performance bond threshold from $100,000 to $20,000 for transportation projects.[63]
- *Vermont:* The *only* projects that require performance and payment bonds are transportation projects.[64]
- *Washington:* Washington DOT statutory authority also allows a reduction in bonds for projects of $250 million or more. Although the pertinent statute requires the state DOT to ensure that the reduced bond adequately protects 100 percent of the state's exposure to loss, the statute does not set forth any requirements or guidance as to the manner such protection is to be obtained.[65] The state has developed a framework for evaluating any such reduced levels, called "Surety Bond Risk Assessment Guidelines."[66] An example of how this was used on an actual project is set forth in the case studies in Section IX.

As noted above, several states permit deviations from the state-imposed surety bond requirements. For

[51] Note that some states, such as Connecticut, Massachusetts, and Missouri, differ from the federal model in that they do not require performance bonds on public works projects, including transit projects.

[52] ARK. CODE ANN. § 18-44-503.

[53] ARK. CODE ANN. § 27-65-131(b).

[54] GA. CODE ANN. § 32-2-60(e).

[55] LA. REV. STAT. ANN. § 38:2216(A).

[56] LA. REV. STAT. ANN. § 48:255(D).

[57] MICH. COMP. LAWS § 129.203.

[58] MICH. COMP. LAWS § 570.101.

[59] MO. REV. STAT. § 107.170(2).

[60] MO. REV. STAT. § 227.100.

[61] NEV. REV. STAT. § 339.025.

[62] NEV. REV. STAT. § 408-357.

[63] N.D. CENT. CODE § 22-02-23.

[64] VT. STAT. ANN. tit. 19, § 10.

[65] WASH. REV. CODE § 39.08.030.3.

[66] *See* Surety Bond Risk Assessment Guidelines issued by WSDOT.

example, LOCs are permitted in states such as Colorado, Florida, Illinois, Maine, Minnesota, Oklahoma, Pennsylvania, South Carolina, Tennessee, and Virginia. Other states have specially carved-out modifications concerning state DOTs, which allow modified bonding where public transit projects are concerned, such as Georgia, Rhode Island, and Washington.[67]

Occasionally, states will enact special legislation modifying bonding requirements for a particular project. An example of this is Missouri's Safe and Sound Bridge project. Though not a transit project, the framework is useful by analogy. Missouri published a request for proposal (RFP) for a $400 million to $600 million contract to replace, rehabilitate, and finance a large number of bridges statewide. The requirements included a 30-year performance bond. Proposers were not able to obtain this type of bonding, largely because the bond was securing not only the performance of design and construction, but also the financing component of the obligation. This prompted the legislature to enact a special bill permitting the State DOT to obtain bonding levels at 25 percent of the contract value or $250 million.[68]

G. Federal Transit Administration

For construction or facility-improvement projects in excess of $100,000, wholly or partially funded with FTA grants, FTA, through FTA Guidance Circular C 4220.1E(11), prescribes the following bonding requirements:

> a. A bid guarantee from each bidder equivalent to five (5) percent of the bid price. The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified;
>
> b. A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract; and
>
> c. A payment bond on the part of the contractor. A payment bond is one executed in connection with a contract to assure payment, as required by law, of all persons supplying labor and material in the execution of the work provided for in the contract. Payment bond amounts determined to adequately protect the federal interest are as follows:
>
> (1) Fifty percent of the contract price if the contract price is not more than $1 million;
>
> (2) Forty percent of the contract price if the contract price is more than $1 million but not more than $5 million; or
>
> (3) Two and a half million dollars if the contract price is more than $5 million.[69]

FTA may also approve alternative bonding requirements, provided that FTA determines that they will adequately protect the federal interest.[70] Note that FTA does not require bonding in any amount for nonconstruction contracts, including rolling stock. FTA leaves the decision to require bonds on nonconstruction contracts to its grantees.[71]

For FTA grantees, the issue concerning modified or reduced bonding levels is important, particularly on very large DB and DBOM projects. The challenges of bonding large projects are discussed in detail in Sections V and VIII, as well as in the Section IX case studies. However, it should be noted that FTA's position on reduced bonding is as follows:

> *Reduced Bonding*. FTA recognizes that bonding costs can be expensive. FTA will accept a local bonding policy that conforms to the minimums described in this subparagraph 2.h (1) of this Chapter. FTA reserves the right to approve bonding amounts that do not conform to these minimums if the local bonding policy adequately protects the Federal interest. A recipient that wishes to adopt less stringent bonding requirements, for a specific class of projects, or for a particular project should submit its policy and rationale to the Regional Administrator for the region administering the project.[72]

FTA grantees have obtained approval for reduced bonding levels in the form of a "Dear Colleague" letter from FTA or the Regional Administrator. It should be noted that those requesting a reduction in bonding levels must consult FTA's *Best Procurement Practices Manual*, which suggests risk-mitigation factors that a grantee would adopt through a best value process. The following are excerpts from the Manual:[73]

> *Consider More Stringent Prequalification Responsibility Criteria*. If performance bonding is a problem because the

[67] *See* App. A.

[68] *See* Missouri Senate Press Release, *Governor Signs Legislation to Upgrade Hundreds of Missouri Bridges* (Sept. 3, 2007), http://www.senate.mo.gov/07info/members/newsrel/d28/090307.pdf.

[69] FTA Guidance Circular 4220.1E (11).

[70] *Id*.

[71] FED. TRANSIT ADMIN., BEST PRACTICES PROCUREMENT MANUAL, § 8, at 19, available at http://www.fta.dot.gov/grants/13054_6037.html.

[72] FTA's Guidance Circular 4220.1 F, Third Party Contracting Guidance, http://www.fta.dot.gov/documents/FTA_Circular_4220.1F.pdf.

[73] Note that FTA's *Best Practices Procurement Manual* does not mention using unallocated contingency as a means of mitigating the risks that come from an agency accepting a reduced performance bond for a given contract. While it is theoretically possible to use this mitigation strategy, two issues should be considered. First, the policy behind using reduced bonding is to have the bond bear a reasonable relationship to the maximum probable loss (as discussed further in this digest). As a result, the agency should expect that the contractor's own assets and the reduced bond will fully cover any default losses, and it should not be going into the project believing that it is undersecured with the bond. Second, in the unlikely event that the default losses are so substantial as to be unsecured by the contractor's assets and the bond, then the amount of losses will likely be so large that it will dwarf the amount remaining in the unallocated contingency.

project is so large that few bidders can be fully bonded, or because of its effect on competition, you can consider other ways of reducing your agency's risk. You may (through prequalifying only strong bidders, or requiring a high standard of responsibility) be able to reduce your risk in a way that allows more competition than would result from a full performance bond requirement.

Design-Build Projects. For design-build projects and large transit capital projects (those over $200M) it would be advisable to talk to prospective sureties before the solicitation is issued to see if the Design-Build contractors will have problems securing bonds because of the size of the project. There are two problems to be aware of: (1) the lack of bonding capacity in the industry at the current time, and (2) the fact that surety practice has historically been based on the conventional Design-Bid-Build method, where design and construction are performed by separate companies and where sureties have detailed designs completed for which they can assess the performance risks. On a Design-Build project, the lack of detailed designs desired by sureties to evaluate project risk may make it difficult to obtain performance bonds for the full value of the contract. When this is the case, the grantee will want to involve their FTA regional office and request a waiver from the standard bonding requirements. It should also be noted that consultation with FTA would be advisable in any design-build project to create a reasonable bonding strategy. In any case, if a 100% bond were required by your agency, it would apply only to the value of the construction work within the design-build contract.[74]

Insofar as state-imposed bonding requirements are greater than those imposed by FTA, either in terms of a lower threshold contract price or higher bond coverage, the state requirements will apply to the same extent they would otherwise apply, notwithstanding FTA involvement in the project. Nevertheless, FTA discourages "unnecessary bonding" because of the resulting increase to the overall contract cost and the restriction in competition, particularly by disadvantaged businesses.[75]

H. Costs to the Transit Owner of Requiring Surety Bonds

Sureties are compensated for the risks they assume by charging a premium for each bond they issue to a principal. The percentage is applied against the contract value, and will vary from surety to surety and from state to state. Importantly, because the surety looks at its underwriting process similar to the way a bank would approach a loan, the premium is also a direct function of the risk of loss that the surety could bear. As a result, the size of the project contract, the type of bond, the construction period, and the creditworthiness of the bond principal (as well as the fees or commission of the broker) will also affect the cost of the bond. Generally speaking, bond premiums range from 0.5 to 2 percent of the contract price. The commission is a predetermined percentage of the base premium established in the underlying agreement between the surety and agent. Surety bond premiums are not regulated, so their price is completely market driven.

Because the cost of the bond premium will be passed through to the owner in the contractor's price for the work, some owners think that they can reduce their cost exposure by finding ways to reduce the requirement for 100 percent bonds to some lesser percentage. This thinking is based on the belief that the amount of the bond premium is a percentage of the penal sum of the bond, and not the contract price. As discussed more fully in Section VIII, surety underwriters at the national level describe that each bond issued represents a 100 percent loss scenario, such that a "reduced bonding level" has no measureable utility—since the bond is underwritten to assume default at 100 percent of the contract value. The surety is underwriting to the full value of the contract, and assesses the premium against the full value of the contract, regardless of the actual penal sum. Consequently, while there are other benefits to an owner in asking for a reduced bond amount, such as greater competition, reducing the "pass-through" surety costs is not one of them.

IV. ALTERNATIVE FORMS OF PERFORMANCE SECURITY

As noted in Section III, most owners desire some form of independent contract security for their projects. While surety bonds are one of the most common vehicles for construction projects, other forms of security are used. This section reviews the three most common alternatives to surety bonds—LOCs, parent company guarantees, and contractor default insurance.

A. Letters of Credit Contrasted with Surety Bonds

In the construction context, an LOC is an irrevocable guarantee by a bank, on behalf of a contractor, that the bank will meet an owner's demand for payment. The owner may call on the LOC on demand and generally without proof of any default by the contractor—documentation merely indicating a default is typically sufficient. Once the owner calls on the LOC, the LOC becomes a cash payment to the owner and an interest-bearing loan to the contractor.

Unlike surety bonds, banks require that LOCs be secured by collateral, and liquid assets are the preferred form. LOCs therefore reduce a contractor's available line of credit and constitute a contingent liability on the contractor's financial statement. Additionally, the requirement that the LOC be secured by the contractor's liquid assets has the effect of limiting the extent of coverage. Although an LOC can conceivably be written for any percentage of the underlying contract amount, the typical range is from 5 to 10 percent of the total contract price. A bank generally charges a contractor 1 percent of the face value of the LOC for each year of duration as a fee for providing the credit. The contractor traditionally includes the cost of the LOC in the bid price.

[74] FED. TRANSIT ADMIN., *supra* note 71 § 8.

[75] FED. TRANSIT ADMIN., *supra* note 71 § 8.2.1.

Because an LOC is secured by collateral, the bank issuing it has no need for an investigation of the contractor's experience and capabilities. The bank only needs to know the extent of the contractor's liquid assets and to have the contractor agree to turn over those assets to the bank upon default. In contrast to the surety, who has performed (or should have performed) a thorough examination of the contractor in the underwriting process and has determined that the contractor is qualified to properly perform the contract before issuing a bond, the bank issuing an LOC provides an owner with no prequalification vetting of contractors. The bank only represents that the contractor has sufficient creditworthiness to allow the bank to extend, on behalf of the contractor, a fixed amount of credit for a fixed amount of time.

Whereas a surety bond will remain in force for the duration of the underlying contract, along with an additional warranty or maintenance period, an LOC is good only for a fixed duration. The typical LOC has a 1-year duration, but some LOCs may, for a fee, contain an automatic renewal provision. An owner's demand on the LOC must be made during the LOC's specified duration, regardless of when the contractor's liability is incurred.

There is no differentiation in the claims or costs that an LOC may be used to satisfy—the owner simply makes a demand on the LOC, and the bank pays the demand (up to the LOC's face value). The bank does not usually make any determination as to the validity of the claim. Instead, the bank only requires that the owner provide the appropriate, specified documentation on or before the expiration date of the LOC. While a performance bond surety will work to assure completion of the underlying contract in one manner or another, and a payment bond surety will investigate the subcontractors and suppliers' payment claims, a bank honoring an LOC fully discharges its duty to the owner by handing over a sum of money. The owner is then left to arrange for completion of the contract and to determine the validity of payment claims itself. While public works projects are generally immune from liens, subcontractors and suppliers may place liens on the owner's property on private construction projects if the LOC is insufficient to satisfy their payment claims.

Overall, as a source of *payment protection* for a construction contract, LOCs generally provide greater benefits than a surety bond. Alternatively, as a source of *performance protection* for a contract, surety bonds are considered to be more reliable. The principal benefit that an LOC provides to an owner is that the funds from the LOC are available on demand, almost immediately, and do not (generally) require proof of the contractor's default or a lengthy claim investigation. However, an LOC typically only covers a small percentage of the total contract amount, and does not reflect any prequalification of the covered contractor. In addition, the owner may be able to draw upon an LOC for payment, but then is left responsible to complete the remaining work in the event of a contractor's default. An LOC will also not assist the owner in resolving any subcontractor or supplier payment claims. Although an LOC's utility increases as the percentage of the contract covered increases, encumbering the additional collateral necessary to secure the increased credit can have a negative impact on the contractor's cash flow—the contractor cannot spend money used to secure the LOC—and therefore impairs the contractor's ability to perform the contract. Thus, an LOC often may not be a practical substitute for a surety bond for construction projects.

In Table 2, the Surety Information Office has outlined the key distinctions between surety bonds and LOCs in terms of prequalification, borrowing capacity, duration, obtaining process, cost, coverage, and claims.

Table 2. Surety Bonds vs. Bank Letters of Credit[76]

	Surety Bonds	Bank Letters of Credit
Definitions	A three-party agreement among the surety, the *obligee* (the project owner), and the *principal* (the contractor). A performance bond protects the owner from nonperformance and financial exposures should the contractor default. A payment bond, also known as a labor and material bond, protects certain subcontractors, laborers, and material suppliers against nonpayment by the contractor.	A bank LOC is a cash guarantee to the owner, who can call on the LOC on demand. The LOC converts to a payment to the owner and an interest-bearing loan for the contractor. The performance of the contract has no bearing on the bank's obligation to pay on the LOC.
Prequalification	A surety company and producer assess the contractor's business operations, financial resources, experience, organization, existing workload and its profitability, and management capability to verify the contractor is capable of performing the contract. The purpose is to avoid default.	The banker examines the quality and liquidity of the collateral in case there is a demand on the LOC. If the banker is satisfied that the contractor can reimburse the bank if demand is made upon the LOC, there is no further prequalification.
Borrowing Capacity	Performance and payment bonds are usually issued on an unsecured basis and are usually provided on the construction company's financial strength, experience, and corporate and personal indemnity. The issuance of bonds does not diminish the contractor's borrowing capacity and may be viewed as a credit enhancement.	Specific liquid assets are pledged to secure bank LOCs. Bank LOCs diminish the contractor's line of credit and appear on the contractor's financial statement as a contingent liability. The contractor's cash flow in funding initial stages of construction and retention amounts throughout a contract term can be adversely affected.
Duration	Surety bonds remain in force for the duration of the contract plus a maintenance period, subject to the terms and conditions of the bond, the contract documents, and underlying statutes.	An LOC is usually date specific, generally for one year. LOCs may contain "evergreen" clauses for automatic renewal, with related fees.
How to Obtain	The contractor obtains the bond through a surety bond producer. A list of surety bond producers is available through the National Association of Surety Bond Producers at www.nasbp.org.	The contractor obtains the LOC through a banking or lending institution.

[76] Chart prepared by the Surety Information Office, www.sio.org/html/SBvsLOC.html (last accessed June 30, 2010), reprinted with permission.

Table 2 continued

	Surety Bonds	Bank Letters of Credit
Cost	Generally 0.5% to 2% of contract price. The bond is project-specific, covering the duration of the contract. Included in contractor's bid price.	Cost is generally 1% of the contract amount covered by an LOC—e.g., if the LOC covers 10% of contract, Cost = 1% x (10% x Contract Amount) x years of contract. Included in contractor's bid price.
Coverage	Performance bond—100% of the contract amount for project completion. Payment bond—100% of contract amount protects certain subcontractors, laborers, and materials suppliers and protects owner against liens. At least 10% coverage for maintenance of defects the first year after completion.	The LOC may be obtained for any percentage of the contract, but 5% to 10% is typical. No protection/guarantee that subcontractors, laborers, and materials suppliers will be paid in the event of contractor default. They may file liens on the project.
Claims	If the owner declares the contractor in default, the surety investigates. If the contractor defaults, the surety's options are to: • Finance the original contractor or provide support; • Take over responsibility for completion (up to penal sum of bond); • Tender a new contractor; or • Pay the penal sum of the bond. With payment bonds, the surety pays the rightful claims of certain subcontractors, laborers, and suppliers up to the penal sum of the bond.	The bank will pay on an LOC upon demand of the holder if made prior to the expiration date. There is no completion clause in an LOC. The task of administering completion of the contract is left to the owner. The owner must determine the validity of claims by subcontractors, laborers, and materials suppliers. If there is not enough money from the LOC to pay all of the claims, then the owner has to decide which claims will be paid and which will be rejected.

B. State Legislation Permitting Letters of Credit as an Alternative to Surety Bonds

Public agencies considering LOCs in lieu of surety bonds are well-advised to consider the manner in which either instrument will be better suited to support the project's goals. Some states (11 of them) expressly allow contractors to provide an LOC as an alternative to posting a statutory performance or payment bond on public works projects. The statutes allowing for such a substitution, however, generally restrict the extent to which an LOC is an available option:

• *Florida:* Allows an LOC as a substitute for a surety bond, but the required value of the LOC is subject to the determination of the appropriate state, county, city, or other political subdivision.[77]

• *Illinois:* For public works projects under $100,000 that do not involve use of motor tax funds, federal-aid funds, or other funds received from the state, political subdivisions—but not the state—may accept LOCs in lieu of surety bonds.[78]

• *Indiana:* For public works projects under $250,000, other than those involving highways, roads, streets, alleys, bridges, and appurtenant structures situated on streets, alleys, and dedicated highway rights-of-way (ROWs), a political subdivision—but not the state—may accept LOCs from an Indiana financial institution approved by the department of financial institutions in

[77] FLA. STAT. § 255.05(7).

[78] 30 ILL. COMP. STAT. 550/1.

lieu of performance bonds.[79] Upon determining, after notice and public hearing, that an otherwise responsive and responsible bidder on a capital improvement project is unable to provide a payment or performance bond, and the cost or coverage of such bond is not in the best interest of the project, the Indiana stadium and convention building authority may substitute an LOC for a payment or performance bond.[80]

- *Maine:* Allows for an LOC as an alternative to surety bonds, at the discretion of the state or other contracting authority, if the LOC is equal to the full amount of the contract, is in a form satisfactory to the state or other contracting authority, and is issued by a federally insured financial institution that meets certain statutory requirements regarding financial stability.[81]
- *Minnesota:* Allows for an LOC as an alternative to performance bonds on public works projects under $50,000 at the public body's discretion and as long as the LOC is in the same amount as the bond.[82]
- *Montana:* Allows for an LOC as an alternative to surety bonds at the government's discretion if the LOC is at least equal to the contract sum and is issued by a federally insured bank or savings and loan association or by a credit union insured by the national credit union share insurance fund.[83]
- *Oklahoma:* Allows for an LOC, containing terms the Department of Central Services proscribes, issued by a federally insured financial institution and in an amount no less than the total contract amount, to substitute for surety bonds.[84]
- *Pennsylvania:* Local governments—but not the Commonwealth[85]—may accept an LOC equal to the full amount of the contract in lieu of surety bonds.[86]
- *South Carolina:* Letters of credit in an amount appropriate to cover the cost to the governmental body of preventing infrastructure service interruptions for a period up to 12 months may be required, at the government's discretion, to secure timely, faithful, and uninterrupted provision of operations and maintenance services associated with public works projects.[87]
- *Tennessee:* Allows for an LOC, issued by a federally insured bank or savings and loan association that maintains its principal office or a branch office in Tennessee, as an alternative to surety bonds, subject to terms approved by the contracting official. All letters of credit shall be accompanied by an authorization of the contractor to deliver retained funds to the bank issuing the letter.[88]
- *Virginia:* Allows for an LOC as an alternative to bonds only upon approval of the Attorney General (or the attorney for the political subdivision, in the case of political subdivisions), only if it is equal in amount to the bonds it is substituting, and only upon a determination that it affords protection to the public body equivalent to a corporate surety bond.[89]

In addition, several other states more generally authorize "other security" or "alternative security" in lieu of surety bonds on public works projects. Such "other security" or "alternative security" is subject to the caveat that it must be acceptable to the state or other governmental entity overseeing the project. Although LOCs are not specifically mentioned, they are conceivably a potential substitute for surety bonds so long as they are acceptable to the government contracting entity with the discretion to decide such matters.

C. Recent Projects Using Letters of Credit

Though a transportation project, it is useful to highlight one major project in Texas that used LOCs in lieu of surety bonds. The North Tarrant Expressway project is a major capacity enhancement on the IH-820 (Segment 1) and SH-183 (Segment 2W) corridors in the Dallas-Fort Worth Metropolitan Area. Construction work includes two managed lanes and one general-purpose lane in each direction on Segment 1 and three managed lanes in each direction on Segment 2W. The concession agreement provides for a 52-year use agreement, including construction per the Comprehensive Development Agreement signed by the consortium and the Texas DOT (TxDOT). The DB contract includes typical protections such as 50 percent parent guarantee and liquidated damages scheduled to cover fixed obligations for up to 12 months in the event of developer delay. However, TxDOT also determined that requesting LOCs from the developer, *and each tier*, in lieu of a performance and payment bond, was consistent with the intent of the Texas statutory framework. As such, the North Tarrant Express Contract provides an elaborate framework for the use of LOCs and a Collateral Agent to manage the draws, if any.[90]

Using LOCs as an alternative to bonding is considered more of a European model, but the method comes with risks. As discussed above, if a contractor were to default, the owner potentially has the liquidity to fund completion of the work, but has no ready third-party expertise on how best to complete the project.

[79] IND. CODE § 36-1-12-14(h).

[80] IND. CODE § 36-1-12-13.1(e); IND. CODE § 36-1-12-14(i).

[81] ME. REV. STAT. ANN. tit. 14, § 871(3-A).

[82] MINN. STAT. § 574.261(1a).

[83] MONT. CODE ANN. § 18-2-201(2)(b).

[84] OKLA. STAT. tit. 61, § 1(A)(2).

[85] 62 PA. CONS. STAT. § 903.

[86] 8 PA. CONS. STAT. § 193.1.

[87] S.C. CODE ANN. § 11-35-3037.

[88] TENN. CODE ANN. § 12-4-201(c)(4).

[89] VA. CODE ANN. § 2.2-4338(B).

[90] *See* June 23, 2009, Comprehensive Development Agreement for a Concession North Tarrant Express Facility Between Texas Department of Transportation and NTE Mobility Partners, LLC, see http://www.txdot.gov/project_information/projects/fort_worth/north_tarrant_express/cda.htm.

D. Cost Considerations for Owners—LOCs Versus Surety Bonds

The factors affecting the price of obtaining LOCs are not as variable or subjective as the pricing for bond premiums and are typically set by respective bank rates and policies. The general pricing structure is 1 percent of the LOC amount, the LOC amount typically being 10 percent of the contract value. On a $500 million project, the LOC is likely to be set at $50 million value, with the cost of the LOC being approximately $500,000.

Just as the underwriting process is dependent on a multitude of factors involving the principal's credit, capacity, and character, the costs of obtaining a bond—the bond premium set by the surety—is also determined by a number of issues. As noted earlier, average bond premiums range from 0.5 percent to 2 percent of the contract value, including those on large transit projects. On the same hypothetical $500 million project, the bond premium could be $2.5 million at the lower end of the pricing structure. Such issues affecting bond premiums will be the contract value, the bond amount, the contract type, the state, the surety company's filed rate, the principal's credit and financial standing, past job history, current work on hand,[91] and administrative or other processing costs incurred by the surety, in addition to any fees charged by a surety agent or broker.[92]

Perhaps the biggest variable, and the biggest avenue for cost savings and negotiation with the surety on bond premiums, is the size of the principal seeking the bond. Relating to the "work on hand" issue referred to above, the "national account clients" as termed by sureties, is a small group of contractors representing the biggest and best surety clients with the most substantial portfolio of projects. These highly qualified contractors are able to obtain lower bond rates as compared to midsized contractors with credit issues, financial deficiencies, or less of a national presence.

Another factor that may affect bond premiums and thus the cost to the owner relates to whether sales tax is included in the contract price. If the contract value includes sales tax, then the owner is arguably paying for a surety bond amount that includes sales tax. If the contract value excludes sales tax, then the bond amount would also exclude sales tax. FTA, for example, is willing to consider requests by transit owners to propose a bond amount that is lesser than the value of the contract.

Whether the owner is willing to accept an electronic bond is purportedly another factor affecting the cost of obtaining a surety bond. The National Association of Surety Bond Producers (NASBP) and the Surety & Fidelity Association of America (SFAA) Committee for Joint Automation have advised that the electronic execution and filing of surety bonds "reduces processing costs and increases efficiency for everyone involved in the bonding process: government agencies and other obligees, contractors and other bond principals, surety bond producers, and surety companies."[93]

According to the NASBP/SFAA Joint Automation Committee, state DOTs have been the leaders in adopting electronic bonding in conjunction with their use of electronic bidding systems that fully automate the bid submission process for construction projects. At least 31 DOTs have implemented electronic bidding/bonding technology and the Pennsylvania DOT (PennDOT) has implemented an electronic solution for the final bonds.[94] Electronic bidding systems allow the contractor to enter its bid data, such as name of contractor, contractor license number, project number, and line item prices directly into the DOT's system Web site, and the bond authentication systems work in the same vein. Bond data that are entered in the bond authentication system include the name of the surety, obligee, description of project, bond amount, execution date, description of bond form used, etc. Even though owners do not receive an actual paper bond or image of a bond, the understanding is that the surety is bound to the terms of the bond with such a transmission because the bond authentication number verifies the bond's existence.[95] On bid bonds for example, one of the data elements that the contractor enters into the bidding system is the bid bond authentication number. With the authentication number, the bidding system is able to access the bid bond data.

E. Parent/Corporate Guarantees

Another potential alternative to a surety bond is a parent or corporate guarantee. In the construction context, a "parent company guarantee" (PCG) generally refers to an agreement by a contractor's parent company or holding company to be held jointly responsible for completion of the contractor's construction contract. Despite the name "*parent* company guarantee," the guarantor does not have to be the parent company of the contractor. For example, in cases of multitiered organizations containing several layers of parent–subsidiary relationships, the direct parent of a contractor may have little more, or sometimes fewer, assets than the contractor. In dealing with such an organizational structure, one may find that the ultimate parent company or an affiliate will have the appropriate level

[91] Referred to as "national accounts" by sureties, this group of contractors represents the biggest and best surety clients, those highly qualified contractors who are able to obtain lower bond rates compared to a contractor with credit issues, financial deficiencies, or a lack of presence.

[92] Commissions are typically paid to licensed agents and agencies when issuing performance bonds. A commission is a predetermined percentage of the premium as per an agency agreement between surety and agent.

[93] NASBP/SFAA Joint Automation Committee, *ABC's Construction Executive Surety Bonding Section* (Nov. 2006), http://www.sio.org/pdf/ABC2006.pdf.

[94] *See id.*

[95] The delivery of an electronic bond that is digitally signed by the contractor and surety in a secure manner is also used by a number of agencies.

of assets to guarantee the contract, as well as the willingness to do so. A PCG is only as valuable as the assets of the company offering it, and a PCG from a company with little or no assets is worthless.

PCGs are commonly used outside of the United States because foreign performance bonds tend to only cover 10 percent of the total contract amount. In the United States, however, where performance bonds tend to cover 100 percent of the total contract amount, there is less need for a PCG. Nevertheless, a PCG can be useful in situations where the contractor is a company formed specifically for a particular construction project and therefore may not have substantial assets of its own. A common example of such a situation occurs when two or more contractors form a JV to undertake a major construction project. If the JV is structured as an independent company, it may lack any substantial assets and the contractors that formed the JV would likely be insulated from any liability. In this case, a PCG from the contractors who formed the JV would bind those contractors and hold them liable for performance of the project. Not only would the PCG allow the project owner to recover damages from the contractors in the event of a default, it also gives the contractors a greater incentive to ensure that the JV properly performs the contract in the first place and thereby avoids a default because the contractors now have "skin in the game." Without the PCG, the contractors that formed the JV only risk the assets that they transferred to the JV, which may be little or nothing. This aspect of a PCG, however, can be somewhat duplicated in a surety bond when the surety requires personal guarantees from the contractor's principals.

The PCG also benefits a project owner in that it generally does not cost much or anything. A surety bond may cost 2 percent (or more) of the contract price and thereby increase the bid price accordingly. Although 2 percent may not seem significant, on a $100 million contract, the bond cost will add $2 million to the overall price. In contrast, a contractor can often obtain a PCG from its parent or affiliate company for little or no cost—perhaps a small administrative fee. Additionally, unlike a surety bond, which usually caps liability at the amount of the penal sum of the bond, a PCG generally has no cap on liability other than what already exists in the construction contract.

In theory, a PCG provides a project owner with "deeper pockets" to reach into if the contractor defaults and becomes insolvent. Nevertheless, it is worth noting that it would not be rare for a parent company to become insolvent along with its subsidiary contractor. In that case, the parent's pockets would be just as empty as the contractor's, and the PCG would be rendered worthless. A PCG is only as strong as its guarantor.

Perhaps because of the potential insolvency of parent companies, the Miller Act does not provide for PCGs as an alternative to surety bonds for either performance bonds or payment bonds. Likewise, they are not widely offered as alternatives to surety bonds under state bonding requirements.

F. Determining the Strength and Sufficiency of a PCG

Because a PCG is only as sound as the party that provides it, determining the soundness of a parent company is critical in negotiating for this alternative form of security. For a public agency considering whether to accept a parent guarantee, the evaluation of the financial strength of a parent company is often no different from evaluating the contractor or JV's financial capabilities. The purpose is to determine whether the parent companies have the financial resources to fulfill contractual requirements.

The Defense Contract Management Agency conducts analyses of a contractor's financial capabilities and has formal guidelines and procedures to be used in evaluating certified financial statements.[96] Those guidelines suggest that in any financial capability assessment, it is important to recognize signs of undercapitalization, a condition "best reflected by a firm's inability to meet its debt at maturity."[97] The guidelines indicate that when this condition exists, the financial statements usually show "(a) Short Working Capital, (b) Heavy Debt in Relation to Working Capital, and (c) Rapid Capital Turnover."[98]

Additionally, the kinds of financial information that should be reflected on the certified financial statements include assets such as cash, marketable securities, accounts receivables, notes receivables, inventory, uncompleted contracts, prepaid expenses, tax refunds, fixed assets, stocks and bonds, investment in subsidiary companies, prepaid expenses and deferred charges, amounts due from stockholders, mortgages and real estate contracts, and miscellaneous assets.

The net worth of a company represents the "margin of safety" or protection to a company's creditors. As a result, changes to a company's net worth that take place year to year are concerning and a proverbial "red light." The Defense Contract Management Agency guidelines indicate that the balance sheet portion of a financial statement is only indicative of the company's position as of that date. In other words, it is only through a profit and loss statement and a net worth reconcilement that changes in a company's net worth can be adequately explained. Some "yellow flags" to look for as possible problem areas with a company's financial statement are indicated below:

- Accounts are not classified according to generally accepted accounting principles.
- Financial statements are on a hybrid cash and accrual basis (showing accounts receivables, but not cash payable).

[96] *See* Defense Contract Management Agency, Guide to Analysis of Financial Capabilities for Pre-Award and Post-Award Reviews, http://guidebook.dcma.mil/27/GUIDE%20TO%20ANALYSIS%20OF%20FINANCIAL%20CAPABILITIES.htm.

[97] *See id*. at § V, C.4.

[98] *See id.*

- Recording accounts or notes receivables from the officers of the company when the officers do not intend to repay the advances as loans.
- Footnotes are missing from financial statements.
- Investments in discontinued operations may not be written off.
- Ratio of gross profit to sales appears unusual when it is compared to previous years.[99]

Additionally, in ascertaining basic due diligence information about a potential parent company, dozens of reputable business Web sites dedicated to storing public and financial information on domestic and international companies are listed in the Guide.[100]

G. Recent Examples of PCGs used in Transit Projects

Like LOCs, parent company guarantees are a typical vehicle used to backstop the performance of a contracting party. Two prime examples in the rail sector are discussed at length in the Section IX case studies. Phase 1 of the Dulles Corridor Metrorail Project required guarantees from the parents of both members of the limited liability company (LLC) that was serving as the design-builder. Houston METRO also required PCGs on the 4-Lines Project, with the guarantees being required for all of the major project contracts—including the DB contract.

H. Subcontractor Default Insurance

In addition to using LOCs and PCGs in lieu of surety bonds, a third form of alternate security has recently emerged on the market and is commonly known as "contractor default insurance" or "subcontractor default insurance" (SDI). SDI is an alternative product to subcontractor performance bonds that provides coverage for the general contractor against a "catastrophic" subcontractor default. In other words, SDI is a general contractor's insurance policy that removes the subcontractor's surety altogether from the default equation.

Public transit owners should have a working understanding of how SDI is used, because 1) large contractors on major projects are using SDI with more frequency; 2) though not intended for owners, SDI insurance policies are sometimes purchased directly by owners as a component to owner-controlled insurance programs; and 3) in the event of a default at the general contractor level, an owner may step in to complete the contractor's scope, which may involve managing an SDI policy.

SDI emerged approximately 15 years ago as a result of perceived deficiencies with subcontractor performance bonds. The default of a major subcontractor can impact the overall project schedule, expose the general contractor to liquidated damages or other delay-related damages, and affect the work of other subcontractors. Faced with an imminent default by a subcontractor, a general contractor will typically make demand upon the subcontractor's performance bond. Ideally, the surety should be ready, willing, and able to step in and remedy the default. But serious criticisms have emerged from those making bond claims that the response time for the surety to act is too protracted given the urgency of the project schedule.[101] Also, as discussed in Sections III and V, the performance bond surety has the ultimate choice on how best to remedy the subcontractor default. The surety's decision to remedy the default may be based upon reasons that are advantageous to the surety for business or legal reasons, but may not be in the best interests of the project.[102]

Addressing these perceived shortcomings of surety bonds, Zurich created an SDI policy known as Subguard®. It works as a two-party agreement between the contractor and insurance company, with the contractor procuring the policy as the named insured. The general contractor is responsible for prequalifying the individual subcontractors and suppliers into the program. Coverage commences upon a formal declaration of default, but the general contractor is not required to terminate the subcontract. The direct costs of default that are typically covered under the policy include costs incurred in fulfilling the defaulted subcontractor's contractual obligations, correcting nonconforming work, and attorney's fees and consultant fees to remedy the default. Indirect costs that are covered include delay damages, acceleration costs, and extended overhead.

In terms of pricing, there are three categories of costs a general contractor will have in procuring this insurance, some of which may or may not be shared with the project owner: 1) the premium paid to the insurer; 2) the cost to manage the subcontractor prequalification and claims process; and 3) a loss-sensitive premium "to build up a reserve for anticipated future claims."[103] The premium itself is typically 0.35 percent of the subcontract or purchase order enrollment value. Contractors can recognize a savings only if the SDI is priced to the owner at, or slightly less than, a surety bond, which is usually 1 to 3 percent of the subcontract value, and losses are contained.[104]

While Subguard is touted as being a "faster and more reliable" alternative to surety bonds, the mechanics of how the policy operates are three-tiered. When a loss is suffered, the first level of protection is self-insurance in the form of a deductible. The program requires substantial deductibles that normally range from $350,000 to $2 million per loss (subcontractor de-

[99] *See id.* § VI, G.

[100] *See id.* at 24.

[101] *See* Dennis C. Bausman, *Subcontractor Default Insurance: Its Use, Costs, Advantages, Disadvantages and Impact on Project Participants*, Foundation of the American Subcontractors Association, Inc. & National Association of Surety Bond Producers 9 (Sept. 2009), http://asaonline.com/eweb/upload/Subcontractor%20Default%20Insurance%20Its%20Use%20Costs%20Advantages%20Disadvantages.pdf.

[102] *See id*. at 9.

[103] *See id*. at 12.

[104] *See id.*

fault).[105] Once the deductible is reached, the next level of protection is the "co-pay layer." This means that for losses between $1 million and $5 million, the costs are shared by the contractor and the insurance company on a percentage basis, with the contractor typically paying 20 percent.[106] Beyond that level, the insurance company is 100 percent responsible for losses, and policies can have limits up to $50 million.

From the owner's perspective, to the extent Subguard helps ensure that the project is completed on time and under budget, having a contractor procure the policy can be advantageous. Additionally, to the extent a large loss is occasioned, the higher per-loss limits are considered beneficial to contractors and owners. Moreover, because small, local, or minority subcontractors are unable to obtain surety bonding due to the rigorous prequalification process, some argue that an SDI policy "broadens the pool" of subcontractors that may not have bonding capacity.[107]

There are some potential disadvantages for owners.[108] If the general contractor itself is not bonded, and the general contractor defaults with no surety to step in and remedy the default, the owner will have to assume the payment and performance risks of the contractor—including the responsibility to manage the SDI program. Because it steps into the shoes of the general contractor, the owner would be directly responsible for paying that first-dollar coverage under the policy for a catastrophic subcontractor default, on top of a contractor default. Other disadvantages are that contractors may charge the owner a higher premium cost for the policy than is actually being incurred by the contractor.

It should be noted that despite its widespread use, there are some critics of SDI generally and Subguard specifically. The American Subcontractors Association strongly opposes the contractor screening process in Subguard, as some subcontractors are reluctant to disclose confidential financial information to the contractor. In addition, the SFAA opposes SDIs on the basis that sureties are more qualified in the underwriting process to verify a subcontractor's financial stability.

Table 3 highlights the primary differences between subcontractor surety bonds and Subguard.

[105] *See id*. at 11.

[106] *See id.*

[107] *See id.* at 16.

[108] *See id*. at 33.

Table 3. Subcontractor Surety Bonds vs. Subcontractor Default Insurance Policies

	Subcontractor Surety Bonds	Subguard®
Definitions	A three-party agreement among the surety, the *obligee* (the contractor), and the *principal* (the subcontractor). A performance bond protects the contractor from nonperformance and financial exposures should the subcontractor default. A payment bond, also known as a labor and material bond, protects certain lower-tier subcontractors, laborers, and material suppliers against nonpayment by the subcontractor.	A two-party agreement between the insured (usually the contractor) and the insurer. Reimbursement is for the contractor only for the performance default. There are no provisions to ensure that sub-subcontractors or suppliers get paid.
Prequalification	A surety company and producer assess the subcontractor's business operations, financial resources, experience, organization, existing workload and its profitability, and management capability to verify the contractor is capable of performing the contract. The purpose is to avoid default.	The general contractor assumes the prequalification process and is given latitude to determine who is enrolled. The enrollment can be project-specific, or by select subcontractors regardless of project affiliation.
Duration	Surety bonds remain in force for the duration of the contract plus a maintenance period, subject to the terms and conditions of the bond, the contract documents, and underlying statutes.	SDI policy usually covers nonconforming work, including latent defects for up to 10 years.
How to Obtain	The contractor obtains the bond through a surety bond producer. A list of surety bond producers is available through the National Association of Surety Bond Producers at www.nasbp.org.	The contractor obtains the SDI policy through Zurich Insurance.

Table 3 continued

	Subcontractor Surety Bonds	Subguard®
Cost	Generally 0.5% to 2% of contract price. The bond is project specific, covering the duration of the contract. Included in contractor's bid price.	Premium is 0.35% of the subcontract value or purchase order enrollment of the program. Indirect costs to maintain program and prequalify subcontractors.
Coverage	Performance bond—100% of the contract amount for project completion, limited to the penal sum of the bond. Payment bond—100% of contract amount protects certain subcontractors, laborers, and materials suppliers and protects owner against liens, limited to the penal sum of the bond. At least 10% coverage for maintenance of defects the first year after completion.	Unlimited coverage, i.e., not limited to the value of the subcontract. Can extend to $50 million per loss. Not first-dollar coverage. Deductible paid first by the contractor in the amount of $350,000 to $2 million. Copayer layer where general contractor pays 20% of the losses between $2 million and $5 million.
Claims	If the contractor declares the subcontractor in default, the surety investigates and determines the remedy. If the subcontractor defaults, the surety's options are to: • Finance the original subcontractor or provide support. • Take over responsibility for completion (up to penal sum of bond). • Tender a new subcontractor. • Pay the penal sum of the bond. With payment bonds, the surety pays the rightful claims of certain subcontractors, laborers, and suppliers up to the penal sum of the bond.	General contractor declares subcontractor in default; approval by the insurer is not necessary or required. General contractor maintains control and flexibility to remedy the default. General contractor prepares written documentation to make a claim and submits "proof of loss" documentation to insurer. General contractor has burden to show it complied with the terms of the policy. Insurer's review process and payment to general contractor occurs within 30 days.

V. PURSUING REMEDIES AGAINST A SURETY

The critical and primary purpose of a performance bond is to provide security for the owner that its project will be completed in accordance with the plans and specifications for the agreed-upon price. If the contractor defaults, most owners feel secure in their belief that the surety on the bond will honor its commitment and complete the work in lieu of the defaulted contractor. Many times that is exactly what happens, as the surety completes or arranges for completion and the owner receives its project.

Sometimes, however, the actions of the owner can impede or frustrate this anticipated successful conclusion, even to the point that the surety refuses to complete at all. Other times, because the contractor claims that it has been wrongfully defaulted, the surety may decide not to proceed. Even where the surety completes the work, the impact of a contractor default can cripple a project, inflicting tremendous delay in completion and incurrence of hidden, unrecoverable costs. The owner must evaluate and consider all of these potential outcomes as it is planning the project and during administration.

This Section will highlight the potential pitfalls facing an owner in an effort to educate and assist in planning for default. Note that the case studies in Sections X and XI provide some real-life examples of how sureties responded when required under the bond in two cases of contractor distress.

A. Typical Default Scenarios Triggering Surety Performance

Defaults by prime contractors occur with far less frequency than defaults by subcontractors, particularly on transit projects. This generally is due to the rigorous prescreening and qualification process that prime contractors on public contracts are subjected to, either by owners who are able to prequalify or by sureties as they underwrite the contractor's surety program. This is particularly true on the high dollar, complicated transit projects that are performed through DB, where only contractors that are larger and better financed and run compete.

As outlined in a recent study on contractor default, it is not usually one single factor that leads to default, but "a combination of factors that interacted, causing company performance to spiral toward inevitable bankruptcy."[109] This may be because "[c]onstruction is a dynamic and risky business" and "the causes of contractor failure are similarly dynamic and involve a number of difficult-to-manage risk factors."[110]

Notwithstanding the fact that a combination of events could combine to create a default, there are several common problems that arise on a construction project that would trigger an owner's decision to default terminate a contractor:

- Failure to pay subcontractors and suppliers.
- Substantial failure to maintain the progress of the work, including providing less manpower than expected or promised.
- Repeated violation of permits, laws or regulations.
- Falsification of certifications, such as payment applications or testing reports.

The key factor is often whether the problem is a "one-off" issue, or is a repeated violation that gives the owner reasonable concerns as to whether the contractor is capable of completing the work successfully.

B. Responses by Owner to a Contractor Default

If the owner believes that the contractor is in material breach of the contract and determines to terminate the contract and seek performance from the surety, the owner must ensure compliance with the contract and bond procedural requirements to trigger the liability of the surety. The operative point is somewhat simple. The law does not favor "forfeiture," and expects that parties who have entered into contracts will be allowed to complete these contracts. Therefore, owners should view termination for default as a remedy of last resort. If the owner elects to implement that remedy, then it must ensure that it has "dotted all of the I's and crossed all of the T's" required by its contract to effect the termination.

As a starting point, the owner should confirm that it has not materially breached the contract, as most commercially-available bond forms are conditioned upon the owner's faithful performance of its contractual duties. In other words, the owner cannot seek performance from the surety if the owner is the party who first breached the contract. Typical areas of concern for the owner to evaluate its compliance with the contract include confirming: 1) prompt and proper payments to the contractor; 2) the sufficiency of the plans and specifications; 3) appropriate owner response to contractor claims and proposed change order requests that assert significant impacts to either or both time and cost of the work; and 4) involvement of or creation by the owner of situations or conditions creating cardinal changes to the performance of the work.

If the owner is comfortable that its own actions in administering the contract are in substantial compliance with the contract, then the owner must examine the actions of the contractor and comply with the default and termination provisions of the contract, including giving proper notices and opportunity to cure, if required by the contract. These actions should be taken in careful coordination with the terms of the bond. For example, one of the more commonly used industry performance bonds, a form issued by the American Institute of Architects (AIA) known as the AIA A312 Performance Bond, provides detailed provisions for implementing default and triggering action by the surety. One of these conditions is that the owner give notice of its intent to declare a default, request a meeting with the contractor and surety, and provide an opportunity for the contractor (perhaps with the aid of the surety) to cure the breach. Note that this language is also typically included in the default and termination provisions of the contract between the owner and the contractor.

C. Industry Bond Forms

Many transit projects involve surety bonds issued on one of several commercially-available industry-created bond forms. Industry-created bond forms were developed in large measure because neither the Miller Act nor the Little Miller Acts prescribed forms for the required contract surety bonds, and the industry stepped up to remedy the lack.[111] There are currently three

[109] Hugh Rice & Arthur Heimbach, Ph.D., *Why Contractors Fail: A Causal Analysis of Large Contractor Bankruptcies*, FMI QUARTERLY, Issue 2, at 56 (2007), http://www.fmiresources.com/pdfs/LI12_1.pdf.

[110] *Id*.

[111] The Federal Acquisition Regulations set forth the standard form bonds for federal projects, Federal Standard Form 24–Bid Bond, Federal Standard Form 25–Performance, and Federal Standard Form 25A–Payment Bond. These bond forms are only used on federal construction projects.

regularly-used industry-created bond forms that may be used on a transit project, the first of which was developed by AIA in 1970. Subsequently the Engineers Joint Contract Documents Committee (EJCDC) published standard bid, performance, and payment bonds. More recently, standard bond forms were issued as part of the ConsensusDOCS® family of construction documents.

The AIA form documents are the most commonly used forms, and they have undergone a number of revisions since being first issued in 1970, with the current version of the A312 bonds having been most recently modified in 2010. The most commonly used version of the AIA forms is the 1984 AIA A312 performance bond form, which provides a detailed procedure to be followed to invoke performance by the surety. As noted earlier in this section, a condition precedent to declaring a default by the owner is the request for a meeting between the owner, contractor, and surety in an event to avert default. The owner is then required to wait 20 days after that meeting before declaring a default. The A312 bond then sets forth the surety's options upon default.

Paragraph 3 of the A312 bond form sets forth the owner's obligations for triggering the surety's obligations under the Bond, stating:

> If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
>
> 3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
>
> 3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and
>
> 3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

Under the AIA A312-1984, the owner must 1) not be in default of its own contractual obligations; 2) give written notice to the contractor and surety of its intent to declare a default and request a meeting to occur within 15 days of the notice; 3) provide an opportunity to cure; 4) declare a default and terminate the contract no earlier than 20 days from the first written notice; and 5) agree to pay to the surety the balance of the contract price. These obligations are in addition to whatever notice and termination provisions are contained in the construction contract. Note that while the notices may be combined if consistent, if the contract has additional notice requirements, the owner must comply with them.

If the owner complies with Paragraph 3 of the A312 bond, Paragraph 4 of the A312 Bond sets forth the surety's options as to how it may carry out its obligations under the Bond:

> When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
>
> 4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or
>
> 4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
>
> 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or
>
> 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
>
> .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or
>
> .2 Deny liability in whole or in part and notify the Owner citing reasons therefor.

The owner must permit the surety the opportunity to exercise one of these options, which, as discussed below, usually entails an investigation by the surety.

The 2010 amendments to the A312 bond have eliminated the requirement that the owner request a meeting before declaring a default—although it created in the surety the right to request a meeting if the owner does not. Moreover, the 2010 amendments to the A312 bond eliminated the 20-day waiting period required following the meeting before termination can be implemented. These changes were intended to provide owners with more flexibility in situations where it is clear the contractor cannot cure and the meeting and waiting period act only to delay the inevitable.

The EJCDC and new ConsensusDOCS standard contract bond forms contain similar requirements to the AIA A312-1984 performance bond form. The EJCDC C-610 performance bond form requires the owner to formally terminate the contractor's right to proceed in addition to declaring a default. The ConsensusDOCS 260 performance bond, although a more concise form than

the A312, shares many similar requirements with the AIA form, with one key difference. The ConsensusDOCS form does not require a meeting before a default may be declared.

Cases interpreting these standard bond forms are consistent in requiring compliance by the owner before the surety will be held responsible. Thus, owners need to be extremely careful when considering a contractor default to evaluate the applicable bond form and to comply with the notice and other procedural steps for requesting performance by the surety.

D. Typical Surety Response to Default

Upon receiving notice of default, the surety will usually issue a letter acknowledging receipt of the demand on the bond and commence its investigation. The letter will be careful to avoid conceding liability and will reserve all rights and defenses. It is universally held that once a demand has been made upon the bond, the surety has a duty to independently investigate the claim.[112] The goal of the investigation will be to determine 1) whether the owner properly defaulted the contractor, 2) whether the surety is obligated to perform, 3) the scope of the work to be performed, 4) the contract funds available to perform, and 5) how the surety will perform.

The acknowledgment letter will typically include a request for the owner to produce project-related documents to assist it in analyzing the contractor's performance, the status of the work, and the contract balance. Since the surety comes into the project as a relative outsider, having seen few or no project records since the bid documents, the letter will also seek copies of the contract, payment applications, schedules, plans, project communications, and other pertinent records. Although the surety should also have access to similar documents from the contractor (its bond principal), these records may not be complete, and the surety will not miss the opportunity to obtain everything it can from the owner. In conjunction with the acknowledgment letter issued to the owner, the surety will issue a similar letter to the contractor, advising of the demand on the bond, requesting access to the project records, and asking for the contractor's assessment of the situation.

The letter may also designate an outside consultant to act on behalf of the surety in analyzing the requested information and interfacing with the owner during the investigation. Outside consultants are commonly used. Some surety companies have in-house engineering and accounting personnel, but it may be more cost effective and efficient to have local outside consultants supplement or substitute for the surety in-house resources.

In parallel with its review of project records to ascertain, among other things, the status of the work, existence of complaints of defective work, the amount of the adjusted contract, and remaining contract balance, the surety will nearly always conduct a detailed site investigation, including taking photographs or videos of the work and conditions. Project records at the site office will be reviewed and any available management personnel will typically be interviewed. The schedule and any delay or impacts will be evaluated and an estimate of the time to complete the remaining work will be developed.

Once the investigation is completed, the surety must evaluate and determine the scope of its obligation under the bond. Following receipt of advice from its legal and technical consultants, the surety must decide whether the contractor was in default, whether the owner complied with the terms of contract in issuing a default and administering the contract, and whether any contract or bond defenses are available.[113] Even if the contractor concedes it is in default, the surety must still evaluate whether the owner is in breach before determining whether it is obligated to perform.

Assuming the surety concludes that it is obligated to perform, further decisions have to be made as to the method of performance. The surety's options include 1) financing the defaulted contractor to completion; 2) soliciting new bids for completion by a new contractor; 3) soliciting new bids for completion and tendering the new contractor and any shortfall between remaining contract funds and the contract price with the new contractor; or 4) refusing to perform on grounds that the owner's actions in some way discharged the surety. The more common reasons for the surety's discharge include the owner's failure to give timely notice under the bond or contract, the wrongful termination of the contractor, and the owner's failure to have properly paid contract funds before termination.[114]

E. Owner's Evaluation of Whether to Place Contractor in Default

As discussed earlier in this chapter, there are several considerations that an owner should assess before placing the contractor in default and triggering the performance bond:

1. *Ensuring that a good faith basis exists for placing the contractor in default*. In the absence of such a basis, the owner is inviting litigation with the contractor, the surety, or both over the termination. Litigation may occur even when there is a good faith basis, but at least the owner has a sense of validation if it has evaluated and determined that the actions (or nonactions) of the contractor justify default. To constitute default, there must be a material breach or series of breaches of such magnitude that the owner is justified in terminating the contract.

2. *Evaluating its own performance under the contract*. The owner needs to determine whether it is in substantial

[112] William Piper, *The Surety's Investigation*, *in* BOND DEFAULT MANUAL, ch. 2, § A, at 31 (Duncan L. Core et al. eds., ABA 3d ed. 2005).

[113] Philip L. Bruner, Patrick J. O'Connor & Tracey L. Haley, *The Surety's Analysis of Investigative Results*, *in* BOND DEFAULT MANUAL, ch. 3, at 83–84 (Duncan L. Clore et al. eds, ABA 3d ed. 2005).

[114] *Id*. at 84–85.

compliance with its obligations. Many states endorse the "first-breach rule," which holds that the party that first breaches a contract may not enforce it.

3. *Ensuring that it strictly follows the default and termination provisions of the contract and the bond, and that proper notice is given to the surety*. A primary defensive target by the surety when evaluating whether it is obligated to perform is the owner's compliance with such provisions. The owner also needs to determine whether it can make demand upon the surety following default or whether termination is also required. The terms of the bond will typically control this latter decision.

Repeating what was stated earlier in this section, American courts do not like the idea of a party to a contract being precluded from completing its performance. All else being equal, a court would prefer to see the contract completed and, if the counterparty has suffered damages because the performance was defective, then it should seek its remedies for those damages. This is not to say that terminations will not be upheld. But it is a note of caution that an owner must ensure that it has "clean hands" at the time it terminates, that it gives the contractor a reasonable opportunity to cure, and that it follows all of the procedural requirements in the contract and bond.

F. Owner's Cost and Time Considerations in Claiming Under a Bond

Once the decision has been made to place the contractor in default and make demand upon the surety, the owner must consider all of the costs associated with default. In addition to paying the remaining contract balance, the owner should plan on incurring additional costs, many of which will not be recoverable. The presence of liquidated damages clauses or the absence of a waiver of consequential damages clause in the contract may permit recovery of some damages from the defaulting contractor or surety, but other costs are likely going to have to be borne by the owner, including the following:

- *Project Maintenance/Security*—From the date of default until either the surety assumes responsibility for the site or a replacement contractor is engaged, the owner will have to provide maintenance and security for the site to protect already completed work and to ensure the safety of passers-by. Particularly with transportation projects, this might include traffic signalization or detours. Administrative staff time will likely be required to ensure proper site maintenance.
- *Right-of-Way Costs*—Temporary easements necessary for project staging work zones, detours, or other necessary conditions typically have a negotiated term and may have "rental" costs that may need to be extended as a consequence of default.
- *Economic Costs*—Delays in project completion may cost for traffic obstructions, delay commerce in the corridor, and increase risk to travelers, raising the risk of third-party claims against the owner. If the project involves replacement of an existing system or structure, default may increase the risk of additional maintenance costs and third-party safety risks of continuing to use the existing system or structure beyond its planned life cycle.
- *Financial Losses*—Delays in project completion will result in lost tolls or revenue, which will impact the various financing agreements upon which the project is based.
- *Internal Administrative Costs*—A default will inevitably require additional time from the owner's decision-making team to assist the surety in its investigation, respond to the surety's decision, either reprocure or monitor the surety's reprocurement of the work, and negotiate the takeover or other agreement with the surety.

If the surety agrees to perform, some of the risk of additional costs to an owner upon default will be borne by the surety, but in the event the surety declines to perform, the owner should include in its contingency plan the following types of expenses:

- *Remobilization Costs*—The completion contractor will require a mobilization payment to commence operations at the site.
- *Excess Reprocurement Costs*—If the owner must rebid the work and obtain its own completion contractor, legal and architectural and engineering costs associated with updating the contract documents and soliciting the work must be considered. In addition, the owner will likely pay a premium to have a contractor complete the defaulted contractor's scope of work because 1) competition will be reduced, thus driving up prices; 2) all bidders will add a contingency to address unknown conditions and account for the lack of efficiency in picking up a project midstream; and 3) rebidding work at a later point of time will result in higher prices simply due to price escalation of raw materials and labor. These costs could easily exceed the balance remaining in the contract.
- *Rework Costs*—The completion contractor will likely need to repair and/or replace portions of the original contractor's work, and, unless otherwise identified in the revised contract documents, the cost of such rework is borne by the owner.
- *Litigation Costs*—If the surety declines to perform, the owner will likely incur significant legal fees if it then chooses to sue the surety for breach of contract.

In addition to costs, the owner needs to determine the time impact on the project from a default termination. In total, a typical surety investigation and decision can take anywhere from 6 to 12 weeks from notice of demand for a moderate-sized contract, and even longer on a complicated or major project. Commercially-available performance bonds do not impose a time limit upon the surety, merely requiring that the surety act with reasonable promptness. Owners who have challenged the lengthy duration of a surety investigation have met with limited success in the courts, usually

learning that the courts will interpret "reasonable promptness" under the specific factual circumstances of the project.[115] Once a claim has been made upon the bond, sureties have an independent obligation to investigate the claim,[116] and a reasonable time to conduct that investigation is part of the price to be paid for that security. Once the decision on how to proceed is made, additional time will be consumed in implementing the decision and remobilizing the project. For this reason, owners should always factor a period of unrecoverable delay into their evaluation of whether to default and terminate a contractor.

G. Conclusion

Large contractor defaults are rare, and generally only large contractors bid on and obtain contracts for large transit projects.[117] Thus, owners should infrequently be faced with the issues of terminating for default the contractor on a large transit project and seeking performance by the surety. While, rare, however, defaults do occur, and owners should have contingency plans in place to mitigate the impact of default. As discussed elsewhere in this digest, the type of failure that is most likely to confront a transit owner is the type of total corporate collapse that an owner may not be able to detect from the conduct and administration of its own project.[118] First and foremost when confronted with conditions amounting to a default, owners should be aware of the requirements of the applicable contract and bond on their rights. Second, owners should be careful in ensuring their own compliance with their contractual obligations. Third, owners should plan for the cost and time impact on the project in the event a default occurs. As explained above, while there are significant costs that will be borne by the contractor's surety, there are unrecoverable costs and time impacts on the project that the owner will bear. Contingency funding and planning are, therefore, essential components to any transit agency's development of a project.

VI. COMMERCIAL ISSUES AFFECTING THE SURETY RELATIONSHIP ON LARGE, COMPLEX PROJECTS

As noted in Section II, more and more public infrastructure projects are being delivered through DB and other alternative project-delivery systems. Coupled with the relatively recent increase in the number of public-sector large-dollar contracts, this has led to a challenging surety environment. Contracts on alternative delivery systems generally shift greater risk to the private sector than do contracts on DBB projects. Since sureties ultimately take on these risks if there is a default, they pay attention to the contracts—particularly on large and complex projects.

To facilitate a better understanding of the myriad of commercial and liability issues affecting the surety industry's position on large projects, this section explores some basic contract and bond form issues, including 1) the contractual clauses to which sureties give particular attention, 2) the 2010 updates to AIA's bond forms, and 3) nonstandard bond forms and obligations that will be of concern to sureties. In addition to evaluating contract and bond terms, this section discusses the implications of bonding subcontractors and the underwriting concerns presented by the influx of multinational contractors to the U.S. large-project market.

This section concludes with a review of how surety capacity has influenced the packaging of certain large-dollar projects and resulted in reductions to 100 percent performance bond requirements. This topic is raised in several other sections, including Sections III, VIII, and the Section IX case studies.

A. Significant Contract Provisions

One factor influencing the surety underwriting process is the risk-shifting provisions of the bonded contract. Contractors are now working more closely with sureties in the initial phases of a project (e.g., after publication of the RFP and during contract negotiation), which is precisely the time sureties prefer to be brought in to review and negotiate key contract terms. As a signal of the sureties' heightened contractual involvement and awareness of contractual risk, Zurich North America Surety recently developed a risk management department based upon the company's perception that the majority of its losses in recent years could have been mitigated by more favorable contractual clauses.[119] Zurich's then-president, William E. Cheatam, stated, "Now…we keep track of risk-shifting clauses. And we are building an underwriting knowledge center."[120]

As part of its overall project risk assessment, the surety will focus on the following contractual provisions, annotated from the surety's perspective:

- *Payment Provisions*—Are there any unique funding concerns that will raise issues for the contractor or JV's cash flow?
- *Retention*—Is there a corresponding decrease in the retainage withheld as the work-in-place increases? Is the percentage of retention equitable?

[115] *Id*. at 83 (citing Seaboard Sur. Co. v. Town of Greenfield, 266 F. Supp. 2d 189 (D. Mass 2003) (promptness inquiries must focus on whether the surety's actions were reasonable under the circumstances of the underlying default, the status and complexity of the project, and the availability of information)).

[116] Dodge v. Fid. & Deposit Co. of Md., 161 Ariz. 344, 778 P.2d 1240 (1989) (commonly recognized that once a claim arises, the surety has a duty to independently investigate the claim).

[117] *See* Rice & Heimbach, *supra* note 109, at n.1.

[118] *See* ch. X.

[119] *See* Richard Korman, *Underwriters Reshaping Construction Industry One Surety Bond at a Time*, Northwest Construction (Apr. 2007), http://northwest.construction.com/features/archive/0704_feature2_story.pdf.

[120] *See id*. at 61.

• *Completion Date*—Is the proposed duration of the contract feasible, reasonable?

• *Liquidated damages*—Is the proposed stipulated sum commensurate with the actual or projected damages the owner may incur? Is there a cap on liquidated damages or some other provision that would act as a stop to prevent extended delays? If there is no liquidated damages provision, the surety might want its contractor to negotiate for one to mitigate against larger undefined or unknown delay-related damages, and as an incentive for the bonded contractor to complete the work on time.

• *Limitation of Liability*—Does the bonded contract contain an enforceable clause that clearly defines the maximum exposure that the contractor will be responsible for in the event of continuing defaults?

• *Hazardous Materials*—Does the hazardous materials provision require the contractor to assume cleanup obligations and be considered a generator of pollution under federal hazards waste law? If so, is the clause fair and reasonable so that the owner indemnifies for hazardous materials that are unknown? Federal laws concerning cleanup of hazardous sites make this a major cost risk for all parties in dealing with spills, leaks, or other costs of hazardous materials.

• *Differing Site Conditions*—If the bonded contractor encounters unforeseen soil conditions, does the owner assume the risk or does the contract make it difficult for the contractor to recover on such a claim? Typically, the means for reducing the risk of unforeseen conditions is through test borings. When an owner generates data and guarantees the accuracy of the interpretations, contractors encountering changed conditions will seek to have the owner liable for the representations. Likewise, if the owner provides little to no information on soil conditions, the risk shifts to the contractor to bear the costs of dealing with whatever conditions are found. This is likely to be reflected in the price of the bids, however.

• *Specifications for Construction*—Are the specifications performance or design specifications? How does the bonded contractor view the level of detail and quality of the design documents—regardless of whether the project is delivered through DBB or DB?

• *Insurance*—Do the requisite insurance provisions address the design component of a DB contract? In other words, is the surety adequately protected from design problems on a DB contract with the requisite design professional liability insurance? Does the insurance provision adequately insure the contractor teams involved in the project?

• *Warranties/Performance Guarantees*—What is the length and duration of the warranty period? Is the warranty a standard 1 to 3 years (i.e., workmanship and materials), or does the warranty clause impose performance guarantees (i.e., 15 to 20 years).[121] If it is a performance-type warranty, how is performance success measured and quantified? Who are the parties contractually responsible for the performance guarantees if the contractor is a DB JV team? Is the performance guarantee clause specific to the contractor or designer, assuming it is a DB project delivery method?

• *Substantial Completion*—Are the terms for substantial completion onerous or industry standard? Are there third-party impediments or required items over which the contractor has no control that would make achieving substantial completion difficult?

• *Contract Close-Out*—Does the close-out process appear to be streamlined and achievable? Are there provisions in the close-out process that extend or go beyond what is typical?

• *Default Provisions*—Should a default be occasioned on the project, is the owner required to give notice in advance and an opportunity to cure? Does the default provision require notice to the surety? Does the provision entitle the owner to default a portion of the work?

• *Hold-Harmless and Indemnification Provisions*—How broad are the obligations to which the contractor is agreeing? Do the hold-harmless and indemnity provisions include the duty to defend the owner (i.e., hire legal counsel and pay additional attorney's fees)? Do the hold-harmless and indemnity provisions require the contractor to indemnify the owner for attorney's fees, even if the contractor is suing the owner for breach of contract?

• *Bonding Provisions*—Assuming the bond forms are industry standard forms, such as AIA, EJCDC, or ConsensusDOCS, the surety will not be concerned. Bonds that are not standard industry forms will take longer for the surety to review to determine the level of risk with each bond provision, such as notice, default, duration, completion effort, and penal sum.

FTA's *Best Practices Procurement Manual* provides specific guidance on each of these contractual clauses from the transit owner's perspective.[122] The above clauses become part of the underwriting process, and therefore are part of the commercial deal negotiated between the contractor and owner. There are also an abundance of unique contract clauses that public obligees have sought to include in contracts and that sureties typically resist or refuse. One example of these con-

[121] *See* William Neuman, *New Bus Fuel Contract Softens Warranty that Saved Agency Money*, N.Y. TIMES, Sept. 27, 2008, available at http://www.nytimes.com/2008/09/27/nyregion/27fuel.html, as a recent example of how warranty language negatively impacted a transit owner's bus fuel contracts for New York City. In 2006, New York City Transit found a black "tacky" substance collecting in the fuel pump and diesel storage tanks at its bus depots. It used the broad warranty clause in its contract to require the fuel supplier, Sprague Energy, to pay $1.8 million for the cleaning. However, when New York City Transit re-bid the contract in 2008, it received no offers to bid. The agency was left "scrambling" to write a new contract with Sprague so that it would not run out of fuel. The fuel supplier not only increased its price to add $26 million annually to the contract, it refused to sign the contract unless the warranty provision was taken out.

[122] FED. TRANSIT ADMIN., *supra* note 71 §§ 8.2, 9.2, 10.1.

tractual provisions includes those that increase the penal sum of the bond for change orders, without notice to the surety. A common provision is as follows:

> Any increase in the Contract amount shall automatically result in a corresponding increase in the Bond's penal amount without notice to or consent from Surety, such notice and consent being hereby waived. Decreases in the Contract amount shall not, however, reduce the Bond's penal amount unless specifically provided in said Change Order.

In the past, the surety industry has negotiated this clause to include an increase in the penal sum of the bond for change-order work but to limit that increase to a percentage increase without surety consent:[123]

> The Penal Sum of this Bond shall automatically increase as the Contract Amount increases; provided, however, the initial Penal Sum shall not increase more than ___% absent the Surety's written consent. Surety's refusal to consent to such an increase in the Penal Sum shall not be a breach of this Bond.

Other contract clauses that put sureties on "high alert" include those that purport to have the surety waive notice of all changes, extensions of time, supplementation of work, or cancellation of the contract. Examples include:

> The Principal shall ensure that the Surety is familiar with all of the terms and conditions of the Contract Documents, and shall obtain the Surety's written acknowledgment that it waives the right of special notification of any changes or modifications of the Contract, or of extensions of time, or of decreased or increased work, or of cancellation of the Contract, or of any other act or acts by the Obligee or any of its authorized agents.

While it is common to have a contractual or bond provision stating that the surety waives notice of changes, other clauses, like the one above, that purport to waive notice of "cancellation of the Contract…or of any other act…by the Obligee…" arguably could be interpreted to mean that the surety waives all of its defenses against the owner for nonpayment.[124]

B. The 2010 Modifications to AIA's Bond Forms

The AIA bond forms are commonly used throughout the U.S. construction industry, even on civil works projects. It is thus worthwhile to note the changes made to the form when AIA released major revisions in 2010. Some of these changes are also discussed in Section V.

Developed in 1970, AIA's bid bond form had not been changed since its debut. The 2010 revision, AIA A310-2010, is similar to the original form, with the biggest change being that the surety has to be notified if an extension of more than 60 days is granted to accept the bid.

The 2010 updates to AIA's A312 performance bond conditioned the surety's performance bond obligations on the owner not being in "default." Arguably, this bolsters the surety's ability to refuse obligee claims on the bond in the event the contractor defaults. It is one of the key reasons owners sometimes elect to use LOCs as performance guarantees. As discussed more fully in Section IV, there is no true ability to argue owner default with LOCs, whereas performance bonds provide several proverbial "outs" for the surety.[125]

A multitude of other major changes to AIA's 2010 performance bond form protect and enhance the obligee's interests, which include 1) *allowing* the owner the discretion as to whether to request a conference with the surety prior to declaring a contractor default;[126] 2) *eliminating* the 20-day period the owner had to wait after providing notice before actually terminating the construction contract;[127] 3) providing that the owner's failure to comply with the notice provisions is *not* a condition precedent to the surety's liability on the bond[128] (as had been argued and ruled in favor of the sureties for years); and 4) *expanding* the surety's performance obligations beyond the penal sum if its elects to undertake to perform and complete the construction contract.[129]

Regarding the AIA-A312 payment bond form, new language exists to clarify the surety's responsibility to defend, indemnify, and hold the owner harmless against a subcontractor claim.[130] In addition, there is no longer a 30-day waiting period for a claimant to send notice to the surety after sending notice of nonpayment to the contractor. The most significant change to the bond form, however, is language that states that the surety's failure to act under the bond is not a waiver of defenses. Finally, the new payment bond form incorporates a new definition of "claim," which is designed to provide the surety with the information necessary to begin evaluating the claim's merits.

C. Nonstandard Bond Forms

An owner's use of nonstandard bond forms generally creates anxiety for the surety, as these forms inevitably use language that is confusing, contradictory, or contrary to the surety's interests. Set forth below are some specific bond provisions that owners put forth as a "belt and suspenders" measure to reinforce the surety's liability for the contractor's performance.

---

[123] Marilyn Klinger, International Risk Management Institute, Inc., *Killer Bond Forms and Contract Provisions* (Aug. 2007), www.irmi.com/expert/articles/2007/klinger08.aspx?cmd=print (last accessed May 5, 2011).

[124] *See id.*

[125] *See* David J. Barru, *How to Guarantee Contractor Performance on International Construction Projects: Comparing Surety Bonds with Bank Guarantees and Standby Letters of Credit*, 37 GEO. WASH. INT'L L. REV. 51 (2005).

[126] *See* AIA Bond Form Commentary and Comparison, AIA Documents A310-2010 and A312-2010, at 2, http://www.aia.org/aiaucmp/groups/aia/documents/pdf/aiab083075.pdf.

[127] *Id.*

[128] *Id.*

[129] *Id.*

[130] *Id.*

1. Surety Liability for Extended Warranties

As noted in Section VIII, transit agencies and state DOTs have recently sought to shift responsibility for quality control and maintenance to contractors through contractual warranty periods with extended durations, some lasting 15 to 20 years.[131] This is not a surprising trend, given the financial pressures faced by state DOTs and transit agencies. States facing budget deficits have reduced the number of public employees on their payrolls, thereby impacting their ability to perform inspections and maintenance. As a result, state transit agencies and DOTs are now using long-term warranties with increasing frequency.[132] Indeed, both FTA and FHWA are encouraging contracting for long-term warranties as an innovative contracting technique:

> [FTA] grantees are encouraged to exercise sound business decisions in structuring broader and more comprehensive warranties than that offered as a matter of trade practice or as an industry standard (i.e., an "extended warranty") where such warranties are advantageous and cost effective. Such business decisions must be based upon market research and price/cost analysis.[133]

Though longer warranty periods are embraced on the owner side, contractors and the surety industry are generally opposed to this major risk-shifting trend.[134] The SFAA, the preeminent lobbying arm for the surety industry, gives the following policy statement with respect to why it opposes extended warranties:

> When a surety writes a bond for a contractor, it is making a judgment about the contractor's financial and operational viability. As the duration of the bonded obligation becomes longer, and the surety must assess the contractor's operation for periods of time well into the future, the certainty of the judgment may be lessened. This is the case with a warranty bond that has a long-term duration.
>
> In addition to the uncertainty involved in underwriting a contractor far into the future, the method of payment for the work under the warranty also increases the risk to the surety. As the contractor progresses during the construction period of the project, the contractor is paid only for work put out in place. If the contractor defaults and the project is incomplete, the balance of contract funds should be available for the surety to complete the project. However, under most contracts, the contractor is paid fully upon final completion, leaving no contract balances to fund any warranty work. Therefore, if a surety must step in to complete the warranty work, it does not have any contract funds available to mitigate its loss.

The SFAA argues that to compensate for the increased risk due to the diminished certainty of underwriting and the method of payment, sureties typically raise their underwriting standards and provide long-term bonds only to the largest and most financially sound contractors. As a result, they say, many smaller contractors who are fully qualified to do the work would be precluded from bidding on these projects. If sureties raise their underwriting thresholds high enough to address the risks and uncertainty of an obligation lasting 10, 15, or 20 years, very few contractors compete for the project, which may cause an increase of bid prices and construction costs. Finally, they argue that long-term warranties also increase the costs of the surety bond itself.

Because sureties are attentive to the duration of their obligations under a contract or bond, they will generally object to a provision such as, "If Principal shall well and truly perform all the undertakings, covenants, terms, conditions, and agreements of the Contract within the time provided therein and any extension thereof that the Obligee may grant, and during the life of any guarantee or warranty required under said Contract…." As noted in the SFAA policy statement, this provision, whether in the bond itself or the underlying contract, would create an exposure that would be difficult to assess, particularly if there is any meaningful chance that the contractor would no longer be a client of the surety.

2. Surety Liability for Punch List and Latent Defects

Another bond provision that some owners try to insert into nonstandard forms addresses punch list and latent defects:

> The condition of this obligation is such that, if Contractor shall fully, promptly, and faithfully perform the contract and all obligations thereunder, including punch list, then this obligation shall be null and void; otherwise, it shall remain in full force and effect. The Bond shall remain in full force and effect and cover latent defects after the certificate of substantial completion and after Obligee acceptance of the construction.

The above bond provision defines the surety's liability as extending through a period where latent defects might be uncovered, however far into the future that may be. Similar to the extended warranty issue, this poses great concern to the surety, as it could be responsible for decades, depending on the statutes of repose in a given state. Most performance bonds will have some cut-off date (i.e., 1 or 2 years from substantial completion) to avoid this potential exposure.

3. Attorney's Fees in Excess of the Penal Sum

A surety's liability is generally limited to the penal sum of the bond, including attorney's fees incurred in enforcing the bond. A term sureties sometimes find in nonstandard bond forms that tries to expand the penal sum is as follows: "Principal and Surety agree that if

---

[131] *Surety & Fidelity Association of America Statement Concerning Bonding Long-Term Warranties*, The Surety & Fidelity Association of America, http://www.surety.org/GovRel/LongTermWarrantyStatement.pdf.

[132] Qingbin Cui, Philip Johnson & Elizabeth Sees, *Long-Term Warranties on Highway Projects,* Department of Civil, Construction & Environmental Engineering, The University Transportation Center for Alabama (Sept. 2008), available at http://utca.eng.ua.edu/research/projects/?id=6109.

[133] FED. TRANSIT ADMIN., *supra* note 71 § 6.3.5 (revision 2005); https://www.fhwa.dot.gov/pavement/warranty/index.cfm (last accessed Apr. 29, 2011).

[134] Neuman, *supra* note 121.

Obligee is required to engage the services of an attorney in connection with enforcement of this Bond, each shall pay Obligee's costs and reasonable attorney's fees incurred, with or without suit, in addition to the above penal sum." The above provision is premised on the theory that the penal sum corresponds with the contract default and the costs to complete, but that an owner's attorney's fees spent in trying to recover against the bond should be recoverable over the penal sum. "If the attorney's fees that an obligee must expend to recover against a surety can eat away at the penal sum, there is less money available for the obligee to complete the project or reimburse itself for the costs of completion."[135] Needless to say, sureties object to this clause, as they view their obligations as being limited to the penal sum for any theory or type of claim arising out of the default.

D. Use of Bonds on Concession Contracts

Most state agencies like to ensure that all downstream suppliers and subcontractors on a project are paid. They do so by, among other things, requiring the prime contractor to obtain a payment bond that benefits those parties. Needless to say, this is a requirement for which subcontractors heavily lobby, as they do not have the right to file a mechanic's lien on the project by virtue of sovereign immunity—public property cannot be liened.

While payment bonds are standard protocol on most public-sector construction projects (at least in those states where it is required by statute), there is a practical problem on PPP projects (i.e., DBFOM projects) where the owner contracts with a concessionaire. Because the owner does not have a direct contract with the DB team, policy questions arise as to whether any type of surety bonds will be required from the DB team. In these cases, agencies have had to consider whether requiring a performance or payment bond from the concessionaire itself gives the agency a real benefit in the event of a default—particularly when the project financing is being provided almost exclusively by the concessionaire.

At this point in time, most highway PPP projects using concession arrangements have not required either the concessionaire or its design-builder to provide performance or payment bonds for the benefit of the agency. This is a dynamic situation, as there are public policy concerns as to whether the interests of subcontractors and suppliers are being appropriately protected. Some state DOTs have considered mitigating this problem by mandating the use of escrow accounts or limited payment bonds.

E. Multinational Teams/International Contractors

Another unique issue affecting sureties on transit projects is the prevalence of national contractors teaming with non-U.S. (foreign) contractors to form joint ventures for bidding on projects. The difficulty for sureties in agreeing to bond foreign contractors is essentially an underwriting concern. Underwriting decisions involve a complex risk assessment of the credit, capacity, and character of the bonded contractors—and that assessment is altered and poses challenges for sureties in evaluating contractors on the international stage.

At its core, the term "underwriting" means to assume another's liability or risk, but it is also used to describe the process of determining whether, and under what terms, one will agree to assume that liability or risk. In the construction surety bond context, the underwriting process involves a careful examination of the reliability of the contractor, both in terms of performance ability and financial stability. A surety's agreement to bond a contractor not only reflects the surety's pledge to stand liable for the contractor's obligation, but also acts as a stamp of approval that signifies the contractor is capable of properly and timely completing the construction project for which it has obtained the bond. The underwriter's duty is to be as certain as possible that the contractor will be able to properly and timely perform the bonded work and thereby avoid any claim on the bond. Thus, obtaining a surety bond acts as a sort of stamp of approval, prequalifying the contractor as capable of performing the construction project.

As discussed at length in Section III, even if the contractor defaults on the bonded contract and the surety is forced to pay a claim, the surety does not expect to suffer any net loss. Underlying this theory is the fact that the surety has a right of indemnity from the contractor for any claims the surety pays on the bond.

Realistically, however, the contractor often lacks the resources to fully indemnify the surety in the event of a major claim. Obligated to pay the claim but unable to fully recover the costs from the contractor, the surety will then suffer a loss. The ratio of a surety's losses to the amount of bond premiums earned is called the "loss ratio." Instead of charging higher premiums to provide a financial cushion for possible claims, sureties rely on their underwriting practices to avoid that risk. Some of the risk factors that surety underwriters typically examine are:

- Contractor's financial books and records (credit, capacity, and character).
- Contractor's prior experience in building that type of project.
- Dollar value of the project relative to the contractor's previous largest job.
- Construction financing.
- Geographic location of the project/site conditions.
- Availability of labor.
- Availability of subcontractors.
- Availability of materials.
- Contractual provisions.
- Bid evaluation.[136]

[135] *See id.*

[136] Rolf Neuschaefer, *Project Risk Assessment*, Insurance Risk Management Institute (IRMI) (Oct. 2002) (www.irmi.com/expert/articles/2002/neuschaefer10.aspx?cmd=print) (last accessed Apr. 20, 2011).

Regarding the evaluation of the potential indemnitor's assets, sureties typically prefer "unencumbered tangible assets that can quickly and easily be liquidated into cash."[137] Examples include cash, certificates of deposit, irrevocable LOCs from acceptable financial institutions, U.S. government securities, stocks and bonds actively traded, or real property owned in fee simple. Conversely, not only is it more difficult to accurately assess a foreign contractor's books and records, but the assets a foreign contractor has to offer in case of a potential loss would be difficult for the surety to seize, recover, or liquidate.

This is certainly not to say that U.S. sureties do not bond teams where a foreign contractor is one of the participants. From select interviews with the major national sureties who underwrite and bond the majority of transit projects, underwriters advise only that the addition of a foreign contractor member makes the process more cumbersome; there are more issues to deal with in assessing capacity, character, and capability; and the underwriting may take longer as a result. Moreover, the likelihood increases that a co-surety arrangement will occur to spread the perceived risks to the surety.

F. Bonding the Big Dollar Project

The challenges of bonding the large-dollar project have been discussed in several areas of this digest. As noted in Section VIII, senior members of the surety industry have stated that there is currently no limitation on the amount of a bond that can be provided for a single project. However, it is clear that in the not-too-distant past the surety market had an informal "cap" on how much of a penal sum any individual surety would provide for a single project, particularly on DB projects. While the amount of that "cap" was never directly ascertainable, it appears to have been in a range of $250 to $350 million.[138] The reality of this bonding "cap" is reflected in several periodicals that have been issued to address the use of DB, turnkey, and PPP contracting methods in the transportation sector.[139]

One of the earliest pronouncements of bonding constraints on large projects was made in FTA's October 1997 publication, *Lessons Learned: Turnkey Applications in the Transit Industry*.[140] In relating the overall experiences for these first-in-breed DB projects, the report discussed surety issues as follows:

> Large Turnkey Projects. Often in large turnkey projects such as [the Honolulu Rapid Transit Project and Houston Fixed Guideway Project], the bonding requirements would have exceeded the ability of the surety industry to provide bonds. Big umbrella bonding or excessive bonding requirements can be restrictive of competition and often create a major barrier to contractors willing and able to participate in turnkey advances. Large conventional or turnkey contracts which are not parceled into small, more manageable segments can cause extreme problems (sic) and might also prevent participation by many prospective contractors, especially (sic) small and disadvantaged business. One approach to addressing this issue is to develop smaller, finite construction packages that can be accomplished incrementally through an addendum process, such as the process used by Los Angeles County MTA on its Union Station Gateway Project. Owners of large turnkey projects should be sensitive to this important issue, and consider carefully breaking up of very large contracts into smaller sizes. Such a scenario may result in a more manageable task, often providing simpler and clearer understanding as to the scope of the contract. This will make the project less risky, thus easier to bond and insure, which can in turn have an enormous impact on the ability and competitiveness of small and disadvantaged firms.[141]

This sentiment was repeated in Chapter 8 of FTA's *Best Procurement Practices Manual*, which states:

> *Design-Build Projects*. For design-build projects and large transit capital projects (those over $200M) it would be advisable to talk to prospective sureties before the solicitation is issued to see if the Design-Build contractors will have problems securing bonds because of the size of the project. There are two problems to be aware of: (1) the lack of bonding capacity in the industry at the current time, and (2) the fact that surety practice has historically been based on the conventional Design-Bid-Build method, where design and construction are performed by separate companies and where sureties have detailed designs completed for which they can assess the performance risks. On a Design-Build project, the lack of detailed designs desired by sureties to evaluate project risk may make it difficult to obtain performance bonds for the full value of the contract.[142]

---

[137] George Thomas, How Surety Bonds Work, Kilcullen, Wilson & Kilcullen (1996), www.attny.com/gciart2.html (last accessed Apr. 22, 2011).

[138] These numbers are based on Mr. Loulakis's direct experience with several large projects in the 2005 to 2007 period, and have been confirmed by several senior industry surety and contractor individuals who preferred to provide information on a nonattributable basis.

[139] While a "cap" of some sort could have been based on a variety of factors, it should be noted that in the early part of this decade, 12 reinsurers stopped underwriting surety lines altogether, leaving only 10 reinsurers in the market. Because sureties rely upon reinsurance to spread the risk associated with bonding large dollar projects, the market consolidation of the reinsurance industry raised concerns regarding surety capacity for larger projects. See Grant Thornton, LLP's 2007 Surety Credit Survey for Construction Contractors: The Bond Producer's Perspective, Grant Thornton LLP, Chicago, IL, http://www.grantthornton.com/staticfiles/GTCom/files/Industries/ConstructionRealEstateAndHospitality/2007_surety_survey_new.pdf.

[140] This publication reported on four transit projects that FTA selected to participate in its Turnkey Demonstration Program. The four programs were the Baltimore Light Rail Extension, San Juan Tren Urbano Rail, El Segundo Del Norte (Green Line) Station, and BART Airport Extension.

[141] FED. TRANSIT ADMIN., LESSONS LEARNED: TURNKEY APPLICATIONS IN THE TRANSIT INDUSTRY V-4, TRB abstract available at http://trid.trb.org/view.aspx?id=473658.

[142] FED. TRANSIT ADMIN., *supra* note 71, § 8.

Likewise, a June 2009 report, *Current Design-Build Practices for Transportation Projects*, *A Compilation of Practices by the Transportation Design-Build Users Group*,[143] discussed the surety issue on large projects as follows:

> For larger projects, agencies are often willing to accept reduced bond amounts, with the amount, based on the potential cost overruns resulting from a "worst case" scenario. * * * * * The decision to accept a reduced amount is based in part on the surety industry's reluctance to issue 100% bonds for mega-projects, and in part on the fact that only a handful of contractors have sufficient bonding capacity to provide such bonds. Requiring a 100% bond would therefore be likely to reduce the pool of interested contractors and could therefore have a significant impact on the contract price.[144]

Another report worth noting is the *Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects* (*PPP Report to Congress)*, referenced extensively in Section II. Consistent with industry rumblings regarding a "cap" on surety bonds, this report reiterated and underscored FTA's previous assessments, and cited the challenges of obtaining conventional bonding on PPP projects. Noting the then-current status of state bonding requirements, which largely required 100 percent performance and payment bonds, the report suggested that state and local transportation agencies should have greater flexibility with respect to the types of financial security needed for PPP projects.

> Ideally, [PPP statutes] would provide a simple exemption from those requirements and authorize the agency to develop its own approach to financial security requirements that can be flexibly applied to the needs of each PPP project on a case-by-case basis. In this way, the interests of the parties, the project and the public can all be weighed and advanced.[145]

Among the reasons cited in the *PPP Report to Congress* in making a recommendation for flexibility in surety bond requirements were the following:

- Providing full surety bonds on very large projects limited competition and could exceed the bonding capacity of many potential competitors.
- Shortlisting processes on PPP projects consider financial and technical capabilities, which is different from traditional low-bid procurements.
- A standard requirement for PPP programs is the obligation to provide parent company guarantees, and many proposers are consortia of companies, each of which provides such a guarantee.
- The private partners in a PPP can be required to provide LOCs and other forms of security in the event of a default.
- Most PPP projects involve a wide range of services other than construction, and it may be inappropriate to require these nonconstruction services to be bonded.[146]

It is evident that FTA has taken this particular surety issue seriously, as it has regularly consulted with the business community to reduce unnecessary bonding and has granted waiver requests by grantees of the 100 percent surety bond requirements. It started with the San Juan Tren Urbano project, one of FTA's turnkey demonstration projects procured in the mid-1990s. Tren Urbano procured a number of prime DB contracts, all of them in significant dollar values. San Juan sent FTA a request for a waiver of the 100 percent bonding requirement, based on the surety market stating that it could only provide 50 percent bonds. FTA approved the request, after considering how the proposals were obtained and evaluated, as well as a summary of the character, financial capacity, and technical experience of the bidders.[147]

A number of projects discussed in this digest demonstrate FTA's willingness to allow grantees to use less than 100 percent bonds. In discussions with senior personnel from FTA, the authors learned that there are no written or formal policies as to how FTA makes the decision to allow reduced bond amounts. Likewise, FTA does not appear to have a formula for, or policy on, setting the reduced bond amount. The discussions indicated that FTA makes these decisions based on a variety of factors, including 1) the ability of the surety market to provide performance bonds in the amount of the contract price; 2) the amount of self-perform work being performed by the prime contractor; 3) the procurement policies of the prime contractor and whether it requires subcontractor bonds; 4) the procurement process undertaken to contract with the prime contractor; and 5) the financial creditworthiness and reputation of the prime contractor, and its ability to stand behind the performance of the contract.

While much of the "large-dollar project" discussion in this digest and in the industry has focused on reduced bonds, it should be noted that several owners have handled this situation by descoping large contracts into smaller packages. Strategic contract packaging is done not only on alternatively delivered projects, but also on conventional DBB projects. A prime example is how the New York City MTA handled its DBB process for three megaprojects procured during the mid-2000s: the Number 7 Line Extension, East Side Access, and the Second Avenue Subway.

The Number 7 Line Extension project, which was projected to have a total cost of approximately $2.2 bil-

[143] The Transportation Design-Build Users Group consists of a number of transit agencies and DOTs around the country, and this report reflects a compilation of the design-build experiences of these members.

[144] FED. TRANSIT ADMIN., *supra* note 71, § 14.2, at 64.

[145] FED. TRANSIT ADMIN., REPORT TO CONGRESS ON THE COSTS, BENEFITS, AND EFFICIENCIES OF PUBLIC-PRIVATE PARTNERSHIPS FOR FIXED GUIDEWAY CAPITAL PROJECTS 30 (2007), http://www.fta.dot.gov/documents/Costs_Benefits_Efficiencies_of_Public-Private_Partnerships.pdf.

[146] *Id*. at 31.

[147] FED. TRANSIT ADMIN., *supra* note 141, at V-11.

lion, was completely funded by New York City through Transportation Infrastructure Finance and Innovation Act (TIFIA) bonds. To establish cost certainty on what was perceived to be the riskiest work, New York City MTA decided to have all of the underground civil works (2 mi of tunnel, shafts, and Station Cavern at 34th Street and 11th Avenue) covered by a single contract. The budget for this portion of the project was $1.1 billion. The RFP was issued in late 2006 and resulted in one proposal, for $1.43 billion, from S3 Tunnel Contractors, a joint venture consisting of J. F. Shea Construction, Skanska USA Civil Inc., and Schiavone Construction Company. After 3 months of negotiations, a $1.145 billion contract was awarded to the joint venture in November 2007. While the City of New York required a 100 percent bond, the negotiations ultimately resulted in a $500 million bond. Subsequent contracts on the Number 7 Line Extension project were packaged to be within the $350 million range and required 100 percent bonds.

On the East Side Access program, which has an estimated value of $8 billion, one of the first contracts let was considered to be one of the riskiest. It involved bringing the Long Island Railroad into a new station to be built below, and incorporated into, Grand Central Terminal in Manhattan. FTA committed to provide $2.6 billion through a Full Funding Grant Agreement (FFGA) in December 2006. A $732 million construction contract for a 1-mi tunnel in Manhattan was awarded in July 2006 to the joint venture of Dragados/Judlau. Because of bonding challenges faced by the joint venture in obtaining a bond of this magnitude, the contract was negotiated in two parts. One was a base contract of $400 million, which was bonded 100 percent. The other part was a $332 million option that was to be bonded when the option was exercised, which was to be during performance of the contract.

As to the Second Avenue Subway project, New York City MTA had strongly preferred to have a single contract for Phase 1 of this work, which covered four stations between 96th and 63rd Street. However, with an estimated cost for Phase 1 of approximately $1 billion, New York City MTA found that the surety market was not able to provide a 100 percent bond, and that this size contract was limiting competition. To address these issues, the agency changed its contracting plan and debundled Phase 1 into packages of approximately $300 million, requiring full bonds on each contract.

Consistent with FTA guidance, and how transit agencies like New York City MTA have handled their megaproject programs, it is incumbent upon a transit agency that has a large project to examine how sureties will respond. The mere fact that sureties state that bonding capacity is available does not mean that it is appropriate to require a bond in the full amount of the contract price. The agency should evaluate whether its contract packaging will create reasonable competition and, if not, how to debundle the project to accomplish its competitive goals. Once it has optimized its packaging plan, the agency should objectively balance what it considers to be its maximum probable loss on the project with what is needed to foster competition, and require penal sums in those amounts. This is similar to the process used in the State of Washington, and is discussed in the Section IX case study on the Alaskan Way Viaduct project.

VII. CURRENT PRACTICES AND PERSPECTIVES OF TRANSIT AGENCIES

To develop an understanding of current industry practices with respect to the use of surety bonds on public transportation projects, the authors sent a 68-question survey to approximately 300 transit agencies around the country. The survey is included in Appendix C and comprised the following major topics:

- *Construction Project-Delivery Systems*. This section of the survey examined the project-delivery practices of agencies. It assumed the baseline delivery system to be DBB and asked the responders to provide feedback on their use of different procurement techniques under DBB (e.g., prequalification), as well as their experiences with alternative delivery systems (e.g., DB, CMAR).
- *Use of Performance and Payment Bonds on DBB Projects*. This section explored several aspects of performance and payment bonds on DBB projects—particularly the agency's ability to use bonds that were less than 100 percent of the contract price. It also asked whether the agency had the authority to use alternatives to surety bonds on DBB projects.
- *Use of Performance and Payment Bonds on Alternative Delivery Systems for Construction Projects*. Questions relating to the practices of agencies in using surety bonds under alternative project-delivery systems were the focus of this section.
- *Use of Alternative Forms of Security*. This section examined other forms of project security, including LOCs and parent guarantees.
- *Use of Performance and Payment Bonds on Construction Projects Funded by FTA*. The use of surety bonds on FTA-funded construction projects, with attention being given to flexibility in the penal sum of the bonds, was explored in this section.
- *Use of Performance and Payment Bonds on Large Construction Projects*. The final construction-related section studied the use of surety bonds on large construction projects, regardless of the delivery system used for the project.
- *Bonds for Nonconstruction Contracts*. The concluding questions explored the use of bonds on nonconstruction contracts, including the procurement of rolling stock, technology, and services.

While the authors were attempting to extract as much information as possible about an agency's surety philosophies, several particular areas were of the greatest interest. First, the survey attempted to gain insight as to whether agencies have different philosophies for

DBB construction projects versus those delivered through alternative delivery processes. Next, the survey targeted whether agencies rigidly follow the Third Party Contracting Guidance FTA Circular 4220.1F, Rev. 3 (February 15, 2011) (FTA C4220.1F), which contains, among other things, minimum requirements for bonds. In addition, given the perception that obtaining bonds for 100 percent of the contract price on large construction projects can be challenging, and considering FTA C4220.1F's guidance about the potential that reduced bond amounts may be needed to foster competition, the survey was designed to discover the level of flexibility agencies have to consider reduced bond amounts on their projects. Finally, since FTA C4220.1.F does not mandate the use of bonds on nonconstruction projects, the research sought information as to whether agencies are using bonds on rolling stock, services, and other nonconstruction contracts.

The survey resulted in a 10 percent response rate, with 31 responses being received. A list of the responding agencies can be found in Appendix B. In addition to analyzing the information provided through the surveys, the authors contacted several transit agencies to learn their views on the effectiveness of surety bonds, particularly in responding to defaults by contractors. This Section VII of the digest summarizes the key findings and comments on agencies' practices.

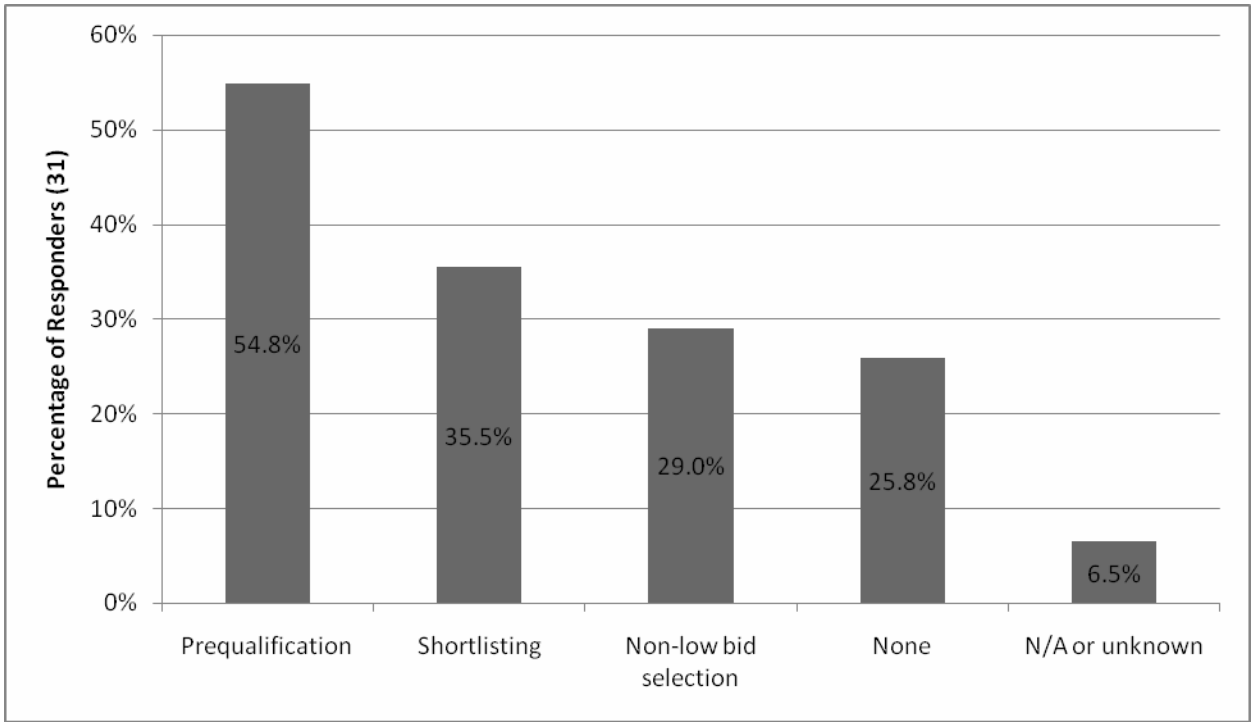
A. Construction Project Delivery Systems

As noted above, the survey assumed that each agency's standard delivery approach for construction projects is DBB, where the agency has a contract with a design professional for 100 percent design of the project and a lump-sum contract with a general contractor based upon its obligation to perform 100 percent of the construction associated with the same design. The survey asked respondents to indicate which of the following procurement techniques their agency is authorized to use on these projects:

- Prequalification (i.e., prequalifying general contractors before accepting bids).
- Shortlisting (i.e., reducing the field of general contractors who will be invited to submit by evaluating their qualifications).
- Non-low-bid selection (e.g., selecting a general contractor that is not the low bidder).

As can be seen from Figure 5 below, prequalification is permitted by more than half of the agencies responding. Shortlisting and non-low-bid selection are permitted by 35.5 percent and 29 percent, respectively. Note that 12.9 percent of the respondents stated that they were permitted to use all three of these methods, with 25.8 percent stating that they were not authorized to use any.

Figure 5. Techniques Authorized on DBB Projects



Responses total more than 100 percent because some respondents appropriately chose more than one answer.

Respondents were also asked about their actual, rather than merely authorized, use of the above-referenced procurement techniques. Forty-five percent of the agencies have not yet used prequalification, shortlisting, or non-low-bid selection, even though they are authorized to do so. Of the 54.8 percent authorized to use prequalification, 32 percent have actually done so. Shortlisting and non-low-bid selection have been used by 23 percent and 19 percent of the respondents, respectively.

Chapter IV of FTA Circular 4220.1F permits grantees to prequalify contractors within certain parameters. For those agencies responding to the survey, it was clear that several have taken advantage of this process on DBB projects. Some agencies (e.g., Santa Clara Valley Transportation Authority (VTA); Omnitrans; Indianapolis Public Transportation Corporation (IPTC); and San Joaquin Regional Transit District (San Joaquin RTD)) cited specific dollar value requirements for use of this process. Other agencies were more general about the use of prequalification based on project size, indicating "large" or "large complex" projects rather than a specific dollar value.

Some agencies use prequalification based upon the type of project (e.g., "required for all capital improvement contracts," "when project involves natural gas systems," "specialty work"). One agency comments that its choice to use prequalification related to the timing and type of procurement ("quick reaction procurement for services, equipment, or repairs; procurement of property involving lengthy evaluation to determine satisfaction of standards"). Southeastern Pennsylvania Transportation Authority (SEPTA) stated that it uses prequalification on a "case-by-case basis depending more on complexity of the project more than costs." It contrasted prequalification with two-step bidding, which is used by SEPTA for specialized procurements, "where scope is definitive and [where we] require a minimum level of qualification." Rounding out the responses were those who said their agencies "may prequalify vendors prior to bid opening, but cannot prohibit new vendor participation," and "we establish a necessary standard, based upon project scope and needs, then prequalify contractors based upon submitted information."

The information on shortlisting drew similar comments. VTA stated that it can use shortlisting on DBB projects over $1.15 million, while San Joaquin RTD and IPTC specified that it can be used on DBB projects over $100,000 "and if [it] requires specialized skills or [a] variety of disciplines." Among the more general responses were "large professional service contracts," "all construction, simple to complex," "two-step RFP," and "emergency projects." MTA and SEPTA mentioned that project complexity was a determining factor, with SEPTA citing the same parameters that were expressed for prequalification under the preceding paragraph.

While 29 percent of the agencies responding to the survey claimed that they had the ability to select someone other than the low bidder, the commentary pro-

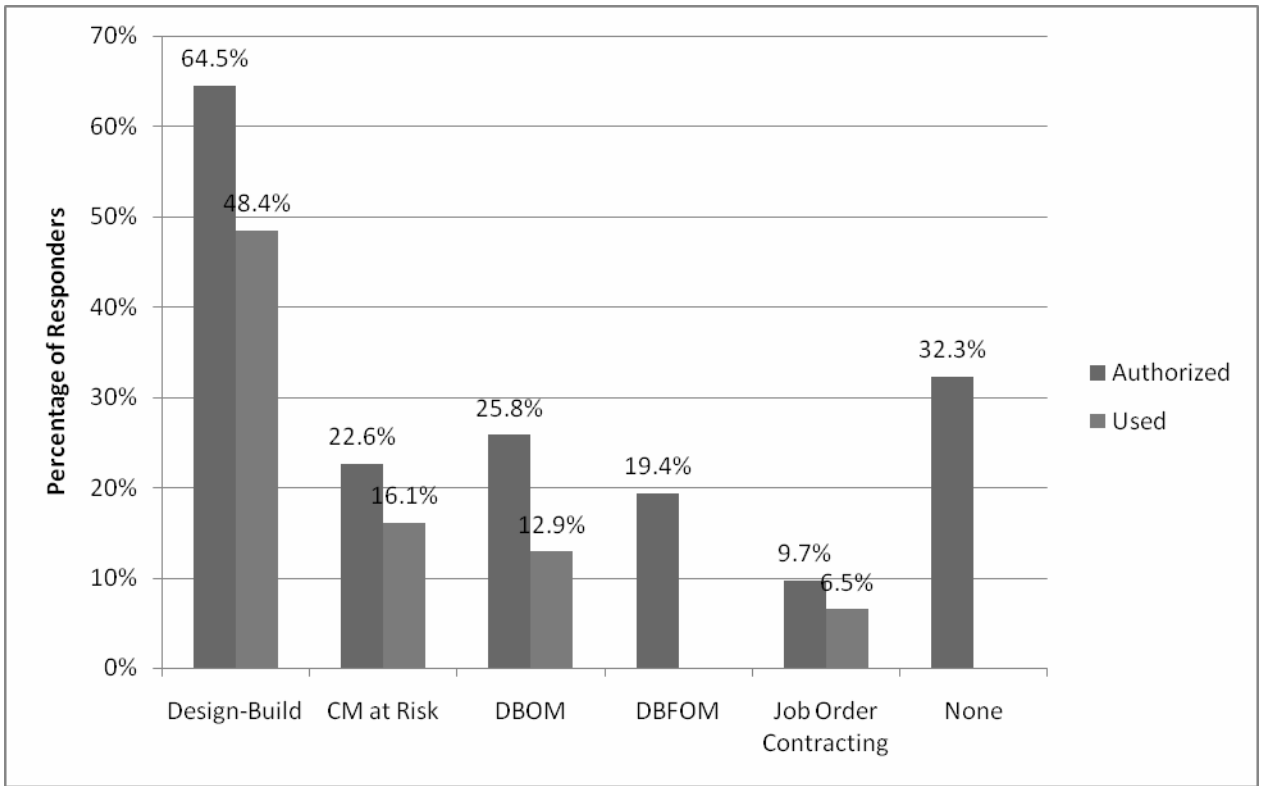
vided with their responses made it clear that this is not something that can be done routinely or as a matter of choice. The overwhelming number of responses cited to the use of this process when the lowest bidder was "nonresponsive," had "incorrect pricing," or did not "meet the test as a responsible contractor." Two respondents stated that they were able to use someone other than the lowest bidder on emergency projects. Bay Metropolitan Transportation Authority (Bay Metro Transit) stated that it "often use[s] proposals which allow us to select contractors based on certain criteria and then see if their cost offer is reasonable." MTA and the Salem Area Mass Transit District (Salem-Keizer Transit) gave similar responses.

Turning its focus to other project-delivery systems, the survey next asked which delivery systems the agencies are authorized to use for construction projects. Respondents could choose from the following, as well as identify other systems not mentioned:

- DB.
- CMAR.
- DBOM.
- DBFOM.

Almost 68 percent of the respondents are authorized to use at least one alternative delivery system for construction projects. DB is permitted for 64.5 percent of the agencies, while CMAR is permitted for 22.6 percent of the respondents. The two construction delivery systems extending beyond the design and construction process, DBOM and DBFOM, are authorized for 25.8 percent and 19.4 percent of the respondents, respectively. Thirty-two percent of the respondents stated that their agency is not authorized to use any of these systems. Two agencies (Spokane Transit and Phoenix Public Transportation Department) noted that they were permitted to use job order contracting.

Figure 6. Alternative Delivery Systems: Authorized vs. Used



Responses total more than 100% because some respondents appropriately chose more than one answer.

Based on the above, it should be no surprise that more respondents have used DB than any other alternative system: 48.4 percent claimed to have used it to date. Forty-five percent have not used any alternative system. CMAR and DBOM have been used by 16.1 percent and 12.9 percent of the respondents, respectively. One of the major transit agencies that is a frequent user of DB is NJT. In discussing its use of DB on the ARC project (discussed in Section II), NJT reported being "very satisfied" with the DB method.[148]

As stated in FTA Circular 4220.1F,

> [B]oth FTA and the Common Grant Rules generally require each bidder to provide a bid guarantee equivalent to 5 percent of its bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid to ensure that the bidder will honor its bid upon acceptance. Given this language, the survey asked agencies to indicate whether they require some form of bid guarantee for their alternative delivery system procurements.

Of those agencies who indicated that they are authorized to use alternative project-delivery systems, over 85 percent of the respondents stated that they must have some form of bid guarantee. In fact, only 2 of the 21 agencies authorized to use some form of alternative delivery replied that they do not require bid guarantees. Three of the agencies (VTA, WMATA, and MTA) indicated that they can waive the requirement under both DB and CMAR. WMATA also responded that it can waive this under a DBOM contract.

B. Use of Performance and Payment Bonds on DBB Projects

While FTA Circular 4220.1F states that both FTA and the Common Grant Rules generally require construction contractors to provide performance bonds for 100 percent of the contract price, it specifically notes that reduced bond amounts may be appropriate:

> FTA recognizes that bonding costs can be expensive. FTA will accept a local bonding policy that conforms to the minimums described in this subparagraph 2.h(1) of this Chapter. FTA reserves the right to approve bonding amounts that do not conform to these minimums if the local bonding policy adequately protects the Federal interest. A recipient that wishes to adopt less stringent bonding requirements, for a specific class of projects, or for a particular project should submit its policy and rationale to the Regional Administrator for the region administering the project.

The survey asked the agencies if they mandate the general contractor on a DBB project to provide a performance bond for 100 percent of the contract price. Ninety-four percent of the survey respondents stated that they follow this policy, and 60 percent of those respondents stated that they had no authority to waive this requirement.

For those who could waive it, the circumstances under which they could do so varied from the specific (e.g., contracts under $25,000, under $100,000, or under $200,000) to the more general ("performance and history of the contractor" and "assessment of risk of performance—balance made up by parent guarantee or line of credit"). Others cited the need for approval of the waiver, such as by a board of directors, director of the department, or concurrence from the authority granting the funds. Miami-Dade Transit's ability to waive the requirement is based on the complexity of the project and upon full review and approval by its risk assessment personnel. Metropolitan Atlanta Rapid Transit Authority's (MARTA's) ability to waive these bonding requirements depends on the type of work and the risk assessment. If the risk analysis supports that a lower amount for the performance bond would cover the maximum risk, then MARTA can reduce the amount of the bond.

As set forth in Chapter III, FTA Circular 4220.1F states the following with respect to payment bonds on construction projects:

> The Common Grant Rules generally require the third party contractor to obtain a standard payment bond for 100 percent of the contract price. A "payment bond" is obtained to ensure that the contractor will pay all people supplying labor and material for the third party contract as required by law. FTA, however, has determined that payment bonds in the following amounts are adequate to protect FTA's interest and will accept a local bonding policy that meets the following minimums:
>
> 1. *Less Than $1 Million*. Fifty percent of the contract price if the contract price is not more than $1 million,
>
> 2. *More Than $1 Million but Less Than $5 Million*. Forty percent of the contract price if the contract price is more than $1 million but not more than $5 million, or
>
> 3. *More Than $5 Million*. Two and one half million dollars if the contract price is more than $5 million.

The survey asked about the agencies' payment bond practices. Slightly more than 77 percent of the respondents require 100 percent payment bonds, although about one-third of these agencies said they had the authority to waive this requirement. As with waivers of performance bonds, contract size is a major factor. Some agencies stated that they had the ability to waive payment bonds where contract values were less than $25,000, $100,000, and $200,000, while others replied that the benchmark was based on the performance and history of the contractor. As with performance bonds, Miami-Dade Transit's ability to waive the requirement is based on the complexity of the project and upon full review and approval by Miami-Dade Risk Assessment. The San Diego Association of Governments (SANDAG) commented that a waiver may require concurrence from the agency granting the funds; otherwise, it is done at the discretion of the department director.

[148] *First Tunneling Contract Awarded for Mass Transit Tunnel Project*, NJ Transit Press Release (Dec. 9, 2009), http://www.njtransit.com/tm/tm_servlet.srv?hdnPageAction=PressReleaseTo&PRESS_RELEASE_ID=2569.

Of the respondents who said that 100 percent payment bonds were not mandatory for DBB projects, some noted that they had the ability to use LOCs and parent guarantees in substitution of payment bonds or in combination with payment bonds. Others indicated that they follow FTA's minimum requirements set forth above. Included among those who said they use this sliding scale are WMATA, Connecticut Transit, Bay Metropolitan Transportation Authority, Spokane Transit Authority, and Gold Coast Transit.

C. Use of Performance and Payment Bonds on Alternative Delivery Systems for Construction Projects

One of the major questions that the survey was intended to answer is whether agencies that deliver projects through alternative delivery systems use different performance and payment bond approaches with those systems than they do under DBB. The answer was clear. None of the agencies completing the survey changed their bonding approaches based on delivery systems. Those agencies authorized to use either DB or CMAR stated that their policies on performance bonds and payment bonds are identical to what they use for DBB.

The survey asked whether the agency requires design-builder's design services to be covered by the bond. Only two of the respondents (Phoenix Public Transportation Department and NJT) stated that they do not require the performance bond to cover the design component of the work.

Although there were no differences cited among bonding policies between DB and DBB, NJT, which has an extensive amount of alternative project delivery experience, gave several examples of alternatively-delivered projects where the penal sum of the performance bond on the project was less than 100 percent of the contract price. NJT used 50 percent performance bonds on two DBOM projects (Hudson-Bergen Light Rail and River Line), and authorized a 50 percent performance bond on both the Palisades Tunnel and Manhattan Commuter Rail Tunnel, DB projects that were ultimately cancelled by Governor Christie in late 2010. WMATA stated that it has the flexibility to use performance bonds in amounts less than 100 percent of the contract price, although it did not cite any examples. Both agencies noted that they conduct assessments of likely loss in event of default; NJT specifically noted that it also relies heavily on the surety market regarding available bonding capacity.

The survey asked the agencies whether they had ever "de-bundled" or reduced the scope of a contract to ensure that it could create a market to obtain a 100 percent performance bond. Only two respondents stated that they had, with one commenting that it generally kept its construction contracts to a maximum of about $100 million to provide enhanced competition.

D. Use of Alternative Forms of Project Security and the Effectiveness of Security

Although surety bonds are the most common form of security on construction projects, there are other means of securing the performance of a construction contractor. The survey asked the agencies to describe the circumstances under which they use these alternate forms of security. Approximately 30 percent of the respondents said that they did use alternative forms, including LOCs, parent guarantees, and cashier's checks. Those who responded said that they will sometimes use these other forms to make up the difference when accepting a lower percentage bond or on a case-by-case basis if doing so does not jeopardize the agency's interests.

The agencies were asked to rank security instruments according to the level of protection they provide with respect to contractor performance. The least effective instruments were deemed to be LOCs and parent guarantees, with performance bonds being considered by an overwhelming percentage of the respondents to be the most effective instrument. One agency that did not rank performance bonds as highly effective stated that "performance bonds are difficult to collect on and the Authority is dependent upon the surety for the project."

Those agencies responding to the survey were unaware of any examples where their agencies had to make demand on a surety under a performance bond for a construction project with a contract value in excess of $200 million. Some transit agencies were contacted by phone to discuss their experiences in dealing with sureties and defaulting contractors. What was clear from these findings is that the events of contractor default are few and far between.

While WMATA experienced several contactor defaults, they reported that no notable surety issues were associated with those defaults. One of its notable defaults involved Mergentime Corporation's bankruptcy, which affected two Green Line projects being constructed in the early 1980s. WMATA stated that while there was extensive litigation involving WMATA and Mergentime, the litigation involved the propriety of the terminations and claims for additional money, and the surety was not dealt with directly by WMATA. When Guy F. Atkinson Construction Co. declared bankruptcy in 1997, it had some minor work to complete on WMATA contracts. WMATA noted that the primary involvement of Atkinson's surety was to take control of the litigation, which included responding to WMATA's claims for liquidated damages. In short, while WMATA stated that it rarely deals directly with sureties in completing work, it felt that the surety bonds "functioned the way they were supposed to work."

E. Construction Projects Funded by FTA

The survey polled the agencies about whether they had ever requested FTA to use performance and payment bonds on construction projects in amounts less than 100 percent of the contract price. NJT was the

only one that answered this question affirmatively; it stated that in the past 10 years, it had requested relief from full bonding on the four projects referenced in Section VII.C above, all of which were approved by FTA. As noted in Section VII.C, these projects all used alternative project-delivery approaches and ultimately had bonds in the penal sum of 50 percent of the contract price.

F. Use of Performance and Payment Bonds on Large Construction Projects

As discussed more fully in Section VIII, there has been some discussion in the construction industry that "large" projects create bonding challenges—largely based on concerns over competition (i.e., how many contractors can provide a 100 percent bond on a single large project) and surety willingness to underwrite these contracts. While the definition of "large" projects that would affect competition and surety capacity is subject to debate, the survey focused on projects that were greater than $200 million and asked respondents to report on their bonding experiences for such projects.

Only 25 percent of the respondents stated that they had a construction project over the past 10 years with a contract value in excess of this amount (NJT, WMATA, Connecticut Department of Transportation (ConnDOT), Miami-Dade Transit, Orange County Transportation Authority (OCTA), BART, and SEPTA). NJT was the only one of this group that replied that it used something other than a performance and payment bond with a penal sum in the amount of 100 percent of the contract value, and cited the effect on competition as the reason for making this decision. As noted above, NJT used 50 percent bonds on these projects. Four of the reporting agencies (NJT, WMATA, OCTA, and SEPTA) stated that they require bid or proposal bonds on these large projects.

G. Bonds for Nonconstruction Contracts

With respect to nonconstruction contracts, FTA Circular 4220.1F states that:

> To encourage greater contract participation in FTA-assisted projects, FTA does not require the recipient to impose bonding requirements on its third party contractors other than construction bonding specified by the Common Grant Rules and this circular for construction.[149]

This FTA Circular provides further guidance in terms of excessive bonding, citing the potential impact that this would have on competition:

> Compliance with State and local bonding policies that are greater than FTA's bonding requirements do not require FTA approval. FTA recognizes that in some situations bond requirements can be useful if the recipient has a material risk of loss because of a failure of the prospective contractor. This is particularly so if the risk results from the likelihood of the contractor's bankruptcy or financial failure when the work is partially completed. Nevertheless, if the recipient's 'excessive bonding' requirements would violate the Common Grant Rules as restrictive of competition, FTA will not provide Federal assistance for procurements encumbered by those requirements. Consequently, if the recipient's bonding policies far exceed those described in this subsection, FTA reminds the recipient that it may find it useful to submit its policy and rationale to the Regional Administrator for the region administering the project.[150]

Given this flexibility, the survey wanted to understand how agencies respond to this area, focusing particularly on procurements for rolling stock, operations and maintenance, and information technology.

From a big picture perspective, 45 percent of those who responded stated that they have a policy that requires the contracting entity to provide the agency with performance and/or payment bonds for any nonconstruction contract. A broad range of procurements was cited, from rolling stock to contract/equipment purchases/service contracts over $50,000 as well as new software applications. Of those that replied that they have a policy, almost 79 percent said these policies are substantially the same as those for DBB construction projects.

With respect to rolling stock procurements, almost 42 pecent of the responding agencies have not required a performance and/or payment bond. SANDAG qualified its answer by noting that "if rolling stock is to include overhead catenary (per Buy American evaluation) then it is procured under a construction contract and is covered by payment and performance bonds."

Thirty-six percent replied that their agencies have required a performance and/or payment bond on rolling stock procurements. The respondents gave a wide range of examples. Several indicated they required 100 percent performance bonds for rail cars and bus rolling stock, as well as for airport equipment, fire equipment, snow removal equipment, and airfield maintenance equipment. One respondent that used 100 percent bonds indicated that his agency also permits LOCs or parent guarantees. Some agencies referenced using 10 percent bonds (e.g., ConnDOT), 25 percent bonds (e.g., MTA and WMATA), and 50 percent bonds (e.g., Port Authority of Allegheny County). WMATA stated that it used a $5 million performance bond on a $250 million contract for 600 buses. WMATA offered that it determined its 25 percent performance bond amount by undertaking a detailed analysis for the design, manufacture, and delivery of the rail cars.

A recent rolling-stock procurement conducted by VTA provides a representative example of the issues associated with bonds. VTA requested proposals for the manufacture and delivery of 107 40-ft transit buses. Each offeror was to provide bid security in the amount of 5 percent of the contract price, with the security being either a certified or cashier's check, cash, or a bond. It also required performance security for all of the con-

[149] *See* FTA C 4220.1F, Rev. 3, ch. IV, § 2.i(4)(e).

[150] *See* FTA C 4220.1F, Rev. 3, ch. IV, § 2.i(4)(f).

tractor's obligations (other than warranty) in the amount of 10 percent of the contract price, which could be secured by a cashier's check, LOC, or performance bond. This performance security amount was to decrease as the work was performed (i.e., 65 percent of the original amount when 50 percent of the buses were delivered and accepted, 30 percent when 75 percent of the buses were delivered and accepted, and 0 percent after all buses were delivered and accepted). After delivery of all the buses, the contractor was to provide a 4-year warranty bond in the amount of 10 percent of the contract price, which amount could be reduced, at VTA's discretion, after the first year of warranty coverage.

With respect to operations and maintenance contracts, a slight majority of those responding said that they have not required a performance or payment bond for such a contract. Those who said they do require bonds provided a diverse number of examples and bond amounts. For example, 100 percent performance bonds were used on 1) a 3-year maintenance contract over $1 million (VTA), 2) Americans with Disabilities Act transit services for a $95.5 million contract (OCTA), and 3) a $2 million custodial services contract (ConnDOT).

Similar to the experience with O&M contracts, a slight majority of the respondents stated that they do not require bonds on IT procurements (e.g., hardware, software, and other IT services) or train control systems. Those who do require bonds provided examples of 100 percent payment and performance bonds on fare collection, 100 percent bid and 100 percent performance for Computer-Aided Dispatch and Automatic Vehicle Location systems, and 100 percent performance bond on a large software project. Another agency described a 100 percent performance bond required on a $3.6 million contract for the installation of new maintenance and purchasing software.

VIII. THE SURETY PERSPECTIVE ON BONDING TRANSPORTATION MEGAPROJECTS

While there is no universal definition of what constitutes a construction "megaproject," most construction industry players have come to associate this term with those projects having a large contract value (e.g., in excess of $500 million) and requiring the involvement of a sophisticated design and construction team.[151] Only a few contractors in the United States have the sophistication, expertise, and bonding capacity to bid on such projects. Depending on the complexity and size of the project, this select group of contractors will often form JVs with each other to pool their resources and limit their risks, which has the effect of further reducing the pool of potential contractors for a particular project.

Just as there are a limited number of contractors who can compete for and successfully execute a megaproject, there is a limited pool of surety companies with the financial capacity to furnish performance or payment bonds on domestic megaprojects. Few sureties have the capital necessary to underwrite these types of projects because of the potential risk of major losses.[152] The fact that defaults on megaprojects occur less frequently than in the small or middle markets does not matter.

This section provides the surety market's perspective on bonding public sector megaprojects. In addition to providing feedback on capacity, which has been addressed in several other areas of this digest, it addresses some of the ancillary questions that arise on a transit megaproject, such as how sureties view bonding rolling stock. The content of this section is largely based on interviews the authors conducted with senior underwriters, general counsel, and corporate managers at the largest surety underwriters in the United States. While some of the following repeats concepts discussed elsewhere in the digest, the authors viewed it as important to report all of the direct feedback received during the surety interviews.

A. Bonding Requirements Affecting Competition

As discussed in Section IV, the existing literature on surety bonding for megaprojects is replete with discussions regarding the purported lack of bonding capacity and lack of contractors with access to billion dollar bonds. The crux of the arguments put forth is that megaproject procurements have the unintended consequence of limiting bidder competition because of the reduced pool of qualified contractors.

The AGC echoes the sentiment that megaprojects unfairly reduce bidder competition and aggregate project risk.[153] AGC and others argue that debundling or descoping megaprojects would allow more competition. From the owner's perspective, the problem with this approach is that debundling or descoping will likely increase overall project price, as the use of multiple prime contractors creates interfaces that, among other things, complicate procurement and schedule coordination. Interestingly, the surety market concurs to some degree with AGC that megaprojects attract only a select group of contractors. Sureties recognize that these contractors all have the financial depth, experience, and market presence, including personnel and established subcontractor relationships, to perform a high dollar volume of work in a particular market segment. Thus, for transit projects involving light rail, the same cadre of contractors is active in building such projects, while a different group of contractors vies for megaproject

[151] SAFETEA-LU defines a "Major Project" as "a project with a total estimated cost of $500 million or more that is receiving financial assistance." FHWA also has the discretion to designate a project with a total cost of less than $500 million as a Major Project, if the project: 1) requires a substantial portion of the state DOT's program resources; 2) has a high level of public or congressional interest; 3) is unusually complex; 4) has extraordinary implications for the national transportation system; or 5) is likely to exceed $500 million in total cost.

[152] ENR Construction, Surety Market Report (June 28, 2010), http://www.surety.org/PDF/ENR_2010.pdf.

[153] http://www.agcsd.org/Departments/Government Relations/LegislationPolicy.html.

highway and bridge work. Sureties believe this concentration is not, as AGC suggests, an artificial limit on competition, but simply a natural reaction to the higher dollar risk and associated management specialization required for megaprojects. In 2010, the management consulting firm FMI conducted a survey of surety firms. FMI reported that some survey responders predict that the economic recession may result in fewer competitors surviving the market downturn, although this contraction may not affect megaprojects as much as it will smaller projects.[154]

For each of the large sureties, only a small percentage, possibly as few as their "largest" 20 contractors, will be involved in megaproject work. These same contractors are involved in an array of midmarket projects that range from one-third to three-fourths the size of megaproject contract work. This concentration makes the underwriting process for the surety slightly easier, as a surety tends to repeatedly evaluate the ability of the same contractors to perform this type of work.

B. Underwriting Considerations for Major Projects

Sureties engage in rigorous underwriting review before issuing bonds, given that suretyship is essentially the extension of standby credit to the contractor. In the underwriting process, assessment of the contractor's financial strength is equally as important as the assessment of risk inherent in a particular project. Factors such as "net worth, cash flow, past financial history, and present profitability trends" are key to a surety's underwriting consideration, as are more intangible considerations, such as the contractor's history with the surety, character, reputation for integrity, and management expertise, competence, and experience.[155] Sureties give careful consideration to their assessment of the contractor's "three C's": character, capacity, and capital.[156] Sureties also evaluate the risk associated with a particular project, including the specific scope of work, the schedule, the contract terms, the identity of the owner, and the source of project funding, as well as the contractor's experience with the defined scope of work, capacity to perform, and geographical constraints.

FMI confirms that the most important criteria for sureties when considering whether to extend credit are expertise of the client's management team, balance sheet strength, successful project history, and consistent profitability.[157] As is discussed in Section X's look at the Modern Continental case, what appeared to be an underwriting strength for the surety to issue bonds for the Big Dig project, i.e., geographical proximity to the contractor's headquarters and availability of the contractor's best people resources, was instead a negative, where the contractor's business contained extremely diverse operations and geographical locations.

Underwriting considerations for megaprojects are no different from underwriting for smaller projects. As a practical matter, "the surety's greatest exposure is in the first 10% to 20% of the bond amount…."[158] This is why sureties are not affected by an owner's attempts to reduce project cost by lowering penal sum amounts from 100 percent of the contract price to something less. Regardless of what percentage of the contract price the bond is required to be, the surety will always underwrite the bond, and assess the premium, based on the total value of the project. Thus, efforts employed on megaprojects to set a performance bond amount lower than the contract value are ineffective from the surety's perspective, as they simply yield a self-imposed limitation on the performance protection purchased by the owner. In other words, the surety will still evaluate, underwrite, and price the bond as if it were issuing a 100 percent penal sum bond.

C. Co-Surety and Reinsurance as a Means to Expand Surety Capacity for Megaprojects

Sureties rely on a thorough underwriting process to minimize and protect against losses, but they frequently hedge against losses by using personal indemnity arrangements with the contractor, its parent, or its principals. Sureties also spread the risk and expand their capacity for issuing large single bonds through co-surety arrangements and reinsurance.[159] Co-surety arrangements are extremely common on megaprojects not only because of the substantial financial risk, but because the contractor on such a project is frequently a joint venture of two companies that have relationships with two different sureties who become involved in the project. The continuing consolidation of the surety industry, and the corresponding increase in capital reserves of the larger sureties, has also expanded the ability of sureties to support megaprojects.[160]

As noted in the introduction to this chapter, co-surety arrangements typically arise when contractors enter into JVs to take on megaproject work, with the goal of spreading the risk between two or more sophisticated and financially sound contractors. Typically, the JV partners obtain bonds from different sureties, pav-

[154] Surety Firms Weigh in on Construction Markets and Contractors: FMI Surety Providers Survey, published May 10, 2010, https://www.asaonline.com/eweb/upload/SuretySurvey_2010April.pdf.

[155] BRUNER & O'CONNOR, JR., *supra* note 39, at ch. 12:11, p. 68.

[156] *Id*. at ch. 12:11, n.1.

[157] Surety Firms Weigh in on Construction Markets and Contractors: FMI Surety Providers Survey, at 8, https://www.asaonline.com/eweb/upload/SuretySurvey_2010April.pdf.

[158] BRUNER & O'CONNOR, JR., *supra* note 39, at 72, ch. 12:11.

[159] Surety Firms Weigh in on Construction Markets and Contractors: FMI Surety Providers Survey, at 4, https://www.asaonline.com/eweb/upload/SuretySurvey_2010April.pdf.

[160] *Id.* at 2.

ing the way for a co-surety relationship for the project's performance bond. In a typical co-surety arrangement, the sureties either share the risk of loss in the same percentages as their contractors share in the joint venture, or the sureties may agree to be jointly and severally liable under their bond for the performance obligation of the underlying joint venture contract.[161] Regardless of how the sureties agree to share the risk, this type of arrangement expands the contractor's ability to get a large bond it could not otherwise obtain. Co-surety arrangements can also be entered into for megaprojects where a single contractor is performing the work and the amount of the required bond is greater than the underwriting limits available to the surety with whom it has a relationship.[162] The ability to expand a surety's capacity by adding a co-surety relationship can be particularly helpful in obtaining a bond for a megaproject.

Reinsurance is another mechanism by which sureties can expand their capacity for issuing bonds for megaprojects. It is routinely used by sureties as a means of avoiding loss. Like insurance companies, sureties have long turned to reinsurance to gain greater capacity for writing bonds and to permit the writing of large, single bonds for which the surety might otherwise not have an appetite or authority. Currently, the U.S. Treasury limits the size of a single bond a surety may issue to 10 percent of the aggregate value of the surety's surplus and the total value of its capital.[163] This amount is set by the Secretary of the Treasury. Sureties who ignore or exceed these limitations risk being delisted, which will essentially scuttle their entire surety program. The availability of reinsurance expands that limitation dramatically, which is a useful tool when it comes to megaprojects.[164]

Reinsurance comes in two general forms: "treaty reinsurance" or "facultative reinsurance."[165] Treaty reinsurance is essentially an agreement between a surety and a reinsurer by which the surety transfers the full risk over a defined retained amount, identified either as a percentage of the amount of each bond or as the total aggregate loss on all bonds during a defined period.[166] Most sureties have treaty agreements with several reinsurers to provide standby capacity to meet market demand. Facultative reinsurance is, essentially, insurance for a specific bond that can be purchased to meet the request for a large single bond, such as might be required for a megaproject.[167] Sureties frequently procure both types of reinsurance. Facultative reinsurance may be purchased even if the surety does not "need" the expanded capacity, but is simply looking to spread its risk. The increased availability of reinsurance underscores that sureties writing bonds for the megaproject market have access to more than sufficient capacity to write a bond in virtually any amount required. The only reason a bond for a megaproject will not be issued is because the surety has determined that the risk assessment of the contractor or the specific project is not favorable.

D. Scope of Bonded Obligations

As might be expected, sureties assess their risk tolerance for a project by focusing on the scope of the obligation that is to be bonded. As a whole, sureties prefer to avoid bonding certain contractual obligations that might be required of a contractor. The surety will work at the front end of the megaproject to define the bonded obligation by isolating any perceived undesirable scopes. These "undesirable" scopes may include design, operations, maintenance, and financing. Transit projects, by their very nature, raise additional considerations because of the heavy concentration of signaling and electronic requirements and the potential for bonding rolling-stock procurement, none of which the surety industry desires to bond.

Initially, most sureties evaluating megaprojects determine what the obligee expects the bond to cover. The surety is looking to bond the construction component, not operations, maintenance, or financing. As one surety representative stated, "there is not a lot of appetite for bonding at the concession level." Owners are expected to have flexibility with respect to unknowns (e.g., hazardous materials, seismic zones, or unstable soils) so the underlying DB agreement will be reasonable and bondable. Other issues that concern sureties on all projects, but particularly megaprojects, include extremely complicated designs and onerous contractual risk-shifting provisions. The more complicated the design, the more onerous the terms, or a combination of both, the less appetite the surety industry will have to issue a performance bond.

1. Bonding Design Responsibilities

Given the rise in popularity of DB and the increasing competition within the surety industry, sureties appear to have come to terms with the reality that they will be required to bond both the design and construction portions of DB contracts.[168] This acceptance is critical for megaprojects, which are frequently based on the private party providing some form of DB.

Even though DB has become commonly used, its popularity has not lessened the surety industry's concerns with bonding design. The interviewees stated that the issuance of a bond for design is usually done on a

[161] BRUNER & O'CONNOR, JR., *supra* note 39, at 325, ch. 12:101.

[162] Under current federal regulations, two companies may jointly underwrite a risk so long as the bond does not exceed their aggregate underwriting limitation. 31 C.F.R. § 223.11.

[163] 31 C.F.R. § 223.10, as authorized by 31 U.S.C.A. §§ 9304-08 (2000).

[164] 31 C.F.R. § 223.11(b).

[165] BRUNER & O'CONNOR, JR., *supra* note 39, at 72, ch. 12:12.

[166] *Id.* at 73, ch. 12:12.

[167] *Id.*

[168] BRUNER & O'CONNOR, JR., *supra* note 39, at 257 § 12:85.

case-by-case basis, taking into account the specific risks transferred to the design-builder as a result of its assumption of design responsibility.[169] The major specific areas of surety concern in underwriting a DB contract include traditional surety concerns as well as some unique to DB:

1. Performance complexity (use of new technology or required performance guarantees).
2. Clarity of contract scope.
3. Structure, experience, management skills, and working relationships of the design-build team.
4. Contractor's financial ability to finance the work and indemnify the surety.
5. Owner's sophistication, experience, and reputation.
6. Contract terms and conditions.
7. Bond terms (penal sum, scope, and duration).
8. Overall insurance programs of project participants.[170]

In assessing a project and contractor for issuance of a bond for a DB project, sureties will carefully undertake traditional underwriting in light of the perceived enhanced risk associated with DB. Most contractors seeking a bond for a DB project are larger companies, with fairly sophisticated and experienced DB skill sets, or they consist of JV partners, where one venturer is a design entity with a track record that can be evaluated relatively easily. Thus, sureties approach DB projects by engaging in traditional underwriting, buttressed by additional investigation into the risk appetite of the contractor or joint venturers, further evaluation of insurance coverage of the contractor or venture partners, and further inquiry and evaluation of capabilities, experience, knowledge of the industry, and the skills of the companies.

The most significant concern usually stems from the scope and size of the project, with the increasing number of variables or more onerous contract terms leading to graver concerns. To address these concerns, some industry-developed bond terms recognize and limit the surety's obligation for the contractor's design responsibility by expressly excluding performance bond coverage for design[171] or limiting the owner's recovery against the surety to the level of design defect insurance coverage under the general liability or professional liability insurance required of the design-builder.[172]

2. Bonding Extended Warranties and Performance Guarantees

Owners often seek to impose warranty periods in excess of the standard 1-year workmanship warranties. It is common to see extended warranties on certain types of equipment, roofing material, and even paving to ensure the durability of the product or work, but efforts to expand the general 1-year warranty of workmanship is frequently a hard sell to sureties. Sureties are willing to bond contracts with extended warranties for specified portions of the project, but typically are only willing to bond an extended general workmanship warranty for a maximum period of 3 to 5 years. Where the transit project includes maintenance, sureties will usually refuse to include that scope in the bond. Note that Section IV discusses the negative view of the SFAA on extended warranties.

3. Bonding Performance Guarantees

Major project contracts frequently contain performance guarantees that the contractor or JV must meet. Performance guarantees are a risk, like design risks, which are difficult for sureties to assess and which they prefer not to bond. In some situations, the surety will either not be able to evaluate the risk or will deem the risk of performance guarantees as too great and will refuse to bond. In those circumstances, the owner may be able to obtain alternative forms of security, such as liquidated damages supported by LOCs.

4. Bonding Rolling Stock

Rolling stock consists of all transit vehicles, whether powered or unpowered, such as locomotives, rail cars, trolley cars, coaches, wagons, buses, vans, cars, and ferry boats, and including vehicles used for support services.[173] Some transit projects using PPP delivery systems (such as the Houston METRO 4-Lines project) include the purchase of rolling stock in the contractor's work scope. Depending on how the contract is structured and the type of contract vehicle, the cost of procuring the rolling stock may be bundled with the construction scope of work. Owners will typically seek to have the surety bond cover the contractor's procurement of the rolling stock.[174] This request poses several

[169] As the body of completed design-build projects grows, historical experiences support the conclusion that design-build, with its heightened control and cooperation, is far less risky for the surety than a design-bid-build project. *Id.* at n.7, citing Loulakis and Shean, Risk Transference in Design-Build Contracting, Construction Briefings No. 96-5, at 12 (Apr. 1996).

[170] BRUNER & O'CONNOR, JR., *supra* note 39, at 264–65 § 12:85.

[171] BRUNER & O'CONNOR, JR., *supra* note 39 § 12:86 (citing the AGC's Consensus DOCS 471, Design-Build Performance Bond (Surety is Not Liable for Design Services)).

[172] *Id.* (citing the AGC's Consensus DOCS 470, Design Build Performance Bond (Surety is Liable for Design Costs of the Work), which provides that the surety is not liable for any damages specified to be covered by required insurance).

[173] See 49 C.F.R. § 661.3 and App. A.

[174] For public contracts partially or wholly funded by a federal grant, bonding of the portion of the contract involving rolling stock is not required by FTA; the decision whether to bond lies within the owner's discretion. *See* FTA Dear Colleague Letter C-01-04, dated Jan. 20, 2004, *Performance and Payment Bonding Requirements*, available as a (doc.) form at www.fta.dot.gov/documents/BPPM_appA2.doc.

problems for the surety, such as 1) surety bonds guarantee performance of work, not procurement of specific, specialized pieces of equipment, which carries a different risk and creates difficulty in underwriting and setting premiums; and 2) rolling stock is practically a proprietary product, whose procurement may be time-sensitive, opening the surety to significant contingent liability if the specified manufacturer fails or the specified rolling stock later becomes unavailable at the time an option to purchase additional cars is exercised. For these reasons, sureties as a group are extremely unwilling to bond rolling stock and will go to lengths to exclude or limit the scope of the bonded obligation related to rolling stock.

As noted during the interviews, sureties feel that attempting to bond procurement of rolling stock is simply at odds with the purpose of a performance bond, which is to guarantee completion of the work. In approaching underwriting and establishing bond premiums, unlike an insurance company, which spreads its expected risk of loss over a portfolio of policies, sureties do not assume some defined loss percentage and factor that expected loss into the premium. Instead, sureties assume a zero-loss scenario for every bond they write, which is supported by indemnity and historical data. If a surety had some expectation of a loss, it would not know how to set the premium and it would likely not issue the bond.

Rolling-stock procurement historically carries with it a risk of loss and thus it falls into the category of risks that a surety will avoid bonding. This is not to say that sureties never bond rolling-stock procurement, as is evident by the transit agency surveys reported on in Section VII. They will, but only if they can limit the duration and scope and if they can obtain additional sources of indemnity or guarantees from both the rolling-stock manufacturer and the bond principal. The complexity and time necessary to obtain such limitations and indemnity, however, make bonding procurement of rolling stock particularly more undesirable to a surety.

The second complication from a surety's viewpoint in bonding rolling stock is that there are only a handful of manufacturers of rolling stock commonly used in transit-related megaprojects; for rail projects, those manufacturers include Bombardier, Siemens, Sumitomo, and Kawasaki, and for hybrid buses, commonly used manufacturers include Gillig Corporation, New Flyer Industries, and North American Bus Industries. Nonhybrid bus manufacturers include General Motors, Siemens, Mitsubishi, and Volvo. Typically, transit agencies select designs for rolling stock based on preliminary designs developed specifically for the project by one of this limited group of manufacturers. A proprietary specification is developed for the project's rolling stock, and a specified number of cars or other vehicles may be identified for startup of the project. Often, however, the contract contains an option for the agency to purchase additional rolling stock years after substantial completion of the system infrastructure.[175] Thus, the effect of such clauses is to extend the contractor's obligations to obtain a very specific piece of rolling stock for a period of time far in excess of achieving substantial completion of the construction.

The extension of the contractor's obligation also extends the surety's corresponding obligation for that extended duration. Sureties, as a whole, tend to dislike extended obligations such as this because their collective experience shows that, with so few manufacturers, there is a real risk that the manufacturer will fail or merge with another company, and a substitute manufacturer will have to be brought in to essentially recreate the proprietary rail car or bus, and the surety will face a penal sum loss. By contrast, the risk feared by the owner—that it will face increased costs of procuring additional rail cars or buses in the future—is not really satisfied by a performance bond, because neither the contractor nor the surety can control whether the specified product will remain available for the duration desired by the owner. Sureties, therefore, negotiate diligently to exclude altogether any obligation for rolling stock or, at a minimum, limit their exposure to specific manageable durations or phased levels of procurement. Interviewees stated that once the sureties engage in an educational process with the owner about the purpose of the bond and the unmanageable risk associated with rolling stock, they have been mainly successful in excluding coverage for rolling stock from megaproject performance bonds.

5. Bonding Operations and Maintenance Obligations

In the PPP model, part of the JV's obligations may include O&M for an extended duration. Most sureties simply refuse to bond long-term maintenance obligations. As addressed above, surety bonds, unlike insurance products, are not underwritten with loss percentages factored in. Surety bonds are underwritten with a zero-loss scenario, and the premium is established based upon the principal's history. If there were some expectation of loss, as might be expected in any maintenance obligation, the surety would not be able to set the premium to address that expected loss. Further, typical surety bonds have a limited duration—based on the time set in a statute, the project's contract, or the bond terms.[176] If nothing is expressly stated, the duration of a performance bond is usually viewed as ending upon achievement of substantial completion[177] or, at the latest, upon expiration of any warranty period associated with final completion.[178] Thus, sureties approach all projects with the mindset that there is a defined

[175] 49 U.S.C. § 5326(b) limits the procurement of rolling stock and replacement parts to no more than 5 years' worth of requirements under a single contract, but delivery is often scheduled to occur well beyond 5 years from the date of the contract.

[176] BRUNER & O'CONNOR, JR., *supra* note 39 § 12:23.

[177] *Id.* at 101, n.4.

[178] *Id.* at 105.

duration beyond which their liability ends. The concept of extended exposure during a period of O&M is simply foreign and, therefore, difficult if not impossible to evaluate and underwrite.

6. Bonding Gap Financing

On some projects, there may be a substantial gap between the time the construction costs are being incurred by the JV contractor and when the owner begins paying for the project or revenue is generated from project operations to reimburse the contractor. Sureties are averse to bonding a principal under such a financing structure. For example, Florida DOT (FDOT), which was a pioneer in using this "gap financing" approach, has several major contracts underway where the contractor finances a multiyear project, and FDOT begins reimbursing the contractor starting sometime after construction commences.

For sureties, a key concern with gap financing is the security of their collateral—the contract balance—in the event of default and their priority to the contract balance against competing claims by others. Generally speaking, following a contractor default, a surety has priority to the contract balance over any claimant other than the Internal Revenue Service.[179] With gap financing, where the contractor is doing the work now in expectation of being paid later through tolls or other future funds, the surety could be forced into a situation where it has the obligation to fund completion and may have a fight as to priority over the right to be paid the future contract balance. In that event, the surety will have to negotiate an acceptable arrangement with the concessionaire, the lender, and the ultimate owner/end user as part of the up-front agreements to ensure that the surety has priority to the funds or revenue to be paid in the future. These negotiations are highly complex and will require the owner's or end user's involvement and consent and may command a higher premium due to the significant expansion of the surety's exposure. The level of underwriting and efforts to negotiate acceptable arrangements make the bonding of gap financed projects not a very cost-effective or sustainable form of construction.

Less frequently, owners or obligees will seek to bond the concessionaire, including the concessionaire's obligation to obtain financing for the construction. From the surety's perspective, seeking this type of bonding is understandable but not very practical. Where the owner is not funding the work, but faces the possibility that it could be left with an unfinished project if the concessionaire defaults, the owner is looking for a source of funds to complete the work. While the agency may prefer a conventional surety performance bond, obtaining such a bond is problematic. Sureties find it difficult to underwrite a concessionaire because it is usually a shell company, set up for the purpose of a specific project. Thus, it has no track record, no relationship with a surety, and it does not have the type of financial resources that will support the size bond that would be required. Some sureties simply refuse to consider bonding the obligation to finance a project, and instead spend time educating the owner as to what a performance bond does and why bonding the finance obligation is not obtainable.

E. Use of Insurance to Address Risk Allocation

To the extent that transit projects pose unknown risks with respect to soil conditions, tunneling, unknown foundations, or highly complex, never-before-tested designs, the surety at times will require its principal to obtain and furnish insurance policies to cover the design component of the bonded obligations. As noted above, sureties prefer to avoid bonding the design component of any project, including those that are built through DB. The reality of megaprojects, however, is that design is normally part of the package; it is the rare project where the surety can avoid bonding that part of the scope.

To partially address the risk inherent in guaranteeing completion of design, sureties will require the JV, or at least the design entity that is part of the JV, to obtain errors and omissions (E&O) insurance coverage, naming the surety as an additional insured. Higher levels of insurance or project-specific insurance may also be required, but sophisticated contractors and design entities almost always already have this level of insurance in place before approaching the surety.

Even though they may demand higher coverage limits, most sureties understand the illusory protection insurance offers the surety in the event of default. According to one surety underwriter, the "E&O coverage available pales in comparison with the exposure" expected by the surety for design. E&O coverage typically is available at $1 million, $2 million, or $10 million levels, which is *de minimus* compared to the design component of a megaproject with a total contract value of $500 million or more. In evaluating requests to bond design, sureties look at the same factors they do for other aspects of the work: does the contractor have the requisite experience, infrastructure, resources, and track record to support the project? Particular underwriting efforts to confirm the type and amount of insurance available for the project are also critical.

F. Surety Capacity/Status of the Surety Market

Given the recent examples of the Oakland Bay Bridge and Missouri Safe and Sound Bridge projects, where the contractors were unable to obtain bonds at 100 percent of the contract value, many industry participants question surety capacity for megaprojects in excess of $500 million. Through the surety interview process, however, sureties uniformly refute that there is

[179] Edward G. Gallagher, *Entitlement to Contract Proceeds*, *in* THE LAW OF PERFORMANCE BONDS, ch. 4, at 65–75, (Lawrence R. Moelmann & John T. Harris eds., ABA 1999); BRUNER & O'CONNOR, JR., *supra* note 39 § 12:102.

any such capacity issue.[180] Importantly, and without exception, each of the sureties interviewed identified strong support for bonding megaprojects, and stated that they had sufficient market capacity, through the use of co-suretyship arrangements, to provide surety bonds for these large infrastructure projects.[181]

With respect to bonding capacity, the sureties who service large national accounts generally, not surprisingly, hold the view that the surety market has adequate capacity to issue billion dollar bonds. In other words, in their view, sureties will find a product that meets the needs of the obligee. This is particularly true where most megaprojects involve the use of JVs, co-sureties, and reinsurance to "spread" the potential for surety losses.

Some sureties say that they are asked to, and do, in fact, bond megaprojects upwards of $750 million at 100 percent of the contract value. The FMI Annual Surety report supports this contention, finding current ample capacity in the surety industry for megaproject bonds.[182] As a result of an extended period of above-average profits for the surety industry as a whole, starting in 2004, and including reinsurers, as well as the availability of co-surety arrangements and a "return to underwriting basics," surety industry analysis predicts that the surety industry is poised to provide bonds at whatever level is required for megaprojects.[183] This may change as we move into a projected loss cycle, expected to peak in 2012 before subsiding.[184]

With this backdrop, then, why do some owners and contractors feel that bonds are not currently available for megaprojects? Some interviewees attributed this disconnect to the facts that megaprojects are each incredibly unique, and that individual experiences on a project where a bond was not obtained (for reasons unrelated to capacity of the market) and the sensationalistic publicizing of certain projects where bonds were not obtained has skewed the overall perception.

Another contributing factor may be that the recent market cycles and sureties' reaction to them has caused this misconception. One surety executive explained that over the last 10 years the lack of new capacity in the surety industry may have created the perception that the industry could not accommodate megaproject bonds. This is especially true where, in the post-Enron era, some reinsurers exited from the market entirely and some sureties unilaterally reduced their capacity. It is reported that one surety even wrote letters saying the maximum bond it would issue was $250 million.

As the loss results have improved since 2004, however, sureties' appetite for risk has increased and the ability to obtain larger and larger bonds has improved. With the right JV partners and the right surety, surety executives predict it is probable that a $1 billion bond could be obtained. As we move into the forecasted loss cycle, however, the surety market may tighten up, with the consequence that bonds for megaprojects may once again become harder to obtain.[185]

IX. CASE STUDY: THE USE OF SURETY BONDS ON LARGE AND INNOVATIVELY DELIVERED PROJECTS

As discussed in previous chapters, using 100 percent performance and payment bonds can create challenges for public agencies on certain types of construction projects. At the top of the list is the megaproject, where the contract price is so high that either 1) the surety market does not have the capacity to readily provide 100 percent bond coverage, or, if there is sufficient market capacity, 2) competition will be reduced if the agency requires 100 percent bond coverage. If the agency decides to use performance and payment bonds with penal sums less than the contract price, then it faces the challenging prospect of balancing market concerns (i.e., surety capacity and competition) with the need to protect its interests in the event of a contractor default.

In addition to handling the challenges that big-dollar projects can create, agencies also struggle to deal with using surety bonds on certain types of delivery systems—most notably CMAR and PPP projects. Agencies that use these delivery systems face commercial issues over which contracting party (if any) will provide performance and payment bonds, who is the beneficiary of the bond, and whether other forms of performance security are more practical and effective.

Many projects provide interesting examples of how agencies have dealt with these challenges. The five case studies discussed below involve recent, and, in some cases ongoing, projects, and show the spectrum of considerations that can arise under different delivery approaches:

- A Virginia heavy rail project using a negotiated DB process.
- A Washington State highway tunnel project using a competitive DB approach.
- A Texas light rail project using a negotiated facility provider delivery approach, with the facility provider having responsibility for designing, building, operating, and maintaining a new light rail system, as well as purchasing rolling stock.

[180] Marc Ramsey, 2010 Surety Market Report, available at http://www.constructionexec.com/Issues/November_2010/Special_Section8.aspx.

[181] Co-suretyship involves two sureties being jointly and severally liable for the bonded obligation.

[182] Surety Firms Weigh in on Construction Markets and Contractors: FMI Surety Providers Survey, at 2, https://www.asaonline.com/eweb/upload/SuretySurvey_2010April.pdf.

[183] *Id.* at 4.

[184] WILLIAM J. MCCONNELL, P.E., 2010 STATE OF THE CONSTRUCTION & SURETY INDUSTRY REPORT 26–32, http://www.phillysuretyclaims.org/wp-content/uploads/2010/11/2010-State-of-the-Construction-Surety-Industry-Report.pdf.

[185] *Id*. at 26–32.

• A Colorado rail project using a DBFOM delivery system, procured on a competitive best value basis.
• A Rhode Island intermodal facility that connects a previously existing Interstate highway and airport with a new train station and rental car garage, delivered through a CMAR approach.

The Texas and Colorado projects are both part of FTA's Penta-P initiative.

Each case study begins with a brief discussion of pertinent aspects of the project and the procurement and delivery processes. Contract terms that affect liability (i.e., that could affect surety underwriting) are also discussed. Each case study ends with an explanation of how the agency handled performance security and bonding, as well as any applicable legislative issues associated with bonding the project.

A. Dulles Corridor Metrorail Project (Silver Line)—Northern Virginia

The Metropolitan Washington Airports Authority (MWAA) is in the process of constructing a 23-mi extension to the existing Metrorail system, with the project being commonly known as the "Dulles Corridor Metrorail Project." [186] When completed, the project will be turned over to another agency, the WMATA, for O&M and will be known as the "Silver Line." The project will provide transit from East Falls Church, Virginia, to Washington Dulles International Airport (IAD) and west to Ashburn, Virginia. In doing so, it will service Tyson's Corner (a major commerce center in Northern Virginia) and offer a one-seat ride from IAD to downtown Washington, DC.

The project is broken into two phases and is expected to have a total cost of approximately $6 billion. Phase 1 of the project is about 13 mi long, will have four stations in the Tysons Corner area, and will extend to Wiehle Avenue in Reston. It is expected to be completed by 2013. Phase 2 will extend the transit system to IAD and eastern Loudoun County, Virginia. Construction and DB solicitations for Phase 2 were expected to be issued in summer 2011 and construction to begin in 2012.

Dulles Transit Partners, LLC (DTP), a consortium of Bechtel Infrastructure Corporation and Washington Group International, Inc, is the Phase 1 design-builder. A June 2004 Comprehensive Agreement executed under Virginia's Public-Private Transportation Act called for DTP to perform a variety of services, including 1) certain development services (i.e., support of financing, permits, and ROWs); 2) preliminary engineering; and 3) developing a fixed-price DB proposal for Phase 1 based on that preliminary engineering. Based on the work done under the Comprehensive Agreement, MWAA and DTP executed a DB contract on June 17, 2007, in the approximate amount of $1.6 billion.

The critical element for Phase 1 project financing was the ability of MWAA to obtain $900 million from FTA under an FFGA. Because MWAA expected the FFGA to be issued by February 2008, the DB contract and $1.6 billion price were predicated on, among other things 1) DTP obtaining a full release by February 2008, and 2) the assumption that DTP could start utility relocation (U/R) and ROW acquisition by August 2007 through task orders issued on a cost-reimbursable basis under the Comprehensive Agreement. Since MWAA had ultimate financial responsibility for U/R and ROW, the cost-reimbursable contracting approach offered under the Comprehensive Agreement enabled MWAA to have DTP serve as MWAA's representative in performing this work, with MWAA ultimately controlling the pace and disposition of the negotiations for land and relocations.[187]

Although DTP started U/R and ROW work as planned in August 2007, there were substantial delays to the FFGA process. To accommodate these delays, MWAA and DTP entered into a series of interim agreements, whereby certain work preparatory to final engineering and construction was authorized and, as applicable, Letters of No Prejudice (LONPs) were sought from and approved by FTA. An amended and restated DB contract was executed by the parties on July 25, 2008, to reflect the changes and expectations for a new full release date. The FFGA was ultimately signed on March 10, 2009, and full release under the DB contract was issued shortly thereafter. As of spring 2011, the project is ongoing and appears to be on budget and on schedule.

The Phase 1 DB contract had several unique risk-sharing clauses affecting the commercial relationship between DTP and MWAA, including 1) indexing of certain commodities, 2) sharing of certain differing site conditions and time-related impacts, 3) the use of allowances for almost $600 million of work (where MWAA bore procurement risk and DTP bore execution risk) and 4) an early-completion bonus. From a liability perspective, the DB contract contained an overall liability cap of $500 million, with DTP's liability for latent defects expiring 5 years from substantial completion. Liquidated damages were staged at $25,000 to $100,000 per day at various points and capped at $60 million.

Because this was a negotiated procurement, there was substantial dialogue between MWAA and DTP about how to most effectively handle performance secu-

[186] Much of the information in this § 9.1 is based upon Mr. Loulakis's direct knowledge derived from serving as lead counsel for MWAA in drafting and negotiating the design-build contract on this project.

[187] In addition to control over the U/R and ROW process, two factors influenced MWAA to use the Comprehensive Agreement and to create a cost reimbursable contracting relationship. First, this process allowed MWAA to strip away from the fixed design-build price the substantial contingencies DTP would have had if this work were part of the fixed price design-build scope. Second, using the Comprehensive Agreement enabled DTP to start work on these critical activities several months in advance of the design-build work. The MWAA team viewed this as mitigating the impact to project schedule that could come from having this work performed concurrently with the release of the design-build package.

rity. With respect to the work done under the Comprehensive Agreement, DTP's services were deemed to be professional services and no performance bonds were required. For the cost-reimbursable U/R work that DTP managed, DTP did obtain performance and payment bonds from its subcontractors.

With respect to the DB contract, both corporate members of DTP agreed to provide parent company guarantees that fully stood behind DTP's contractual obligations on a joint and several basis. Given this, and the fact that the mid-2007 surety market was not amenable to providing bonds in excess of approximately $500 million, MWAA agreed that having performance and payment bonds, each in the amount of $250 million, would provide sufficient security for the project. The parties also agreed to "stepdown" these amounts 1 year after substantial completion to a total amount of $50 million. As discussed in Section III, the premium charged by the surety for furnishing the bonds was not a function of the penal sums of the bonds. Rather, it was based on the $1.6 billion contract price and the lengthy time of performance.

MWAA's decision to rely upon reduced bonding and parental guarantees was not only influenced by the market conditions, but also by 1) the corporate balance sheets, past performance, and reputational risks of the guarantors; 2) the likelihood that the projected cash flow curves and retainage would not give rise to a claim in excess of such amounts; and 3) DTP's procurement policies, which mandated that every subcontractor provide 100 percent performance and payment bonds for its work. Citing these and other factors, MWAA requested that FTA waive its 100 percent performance bond requirement for the Dulles project.

In considering this waiver request, FTA required MWAA to 1) identify the value of the construction work DTP was to perform directly, 2) demonstrate that 100 percent of the value of all subcontracted work would be covered by separate 100 percent performance bonds, and 3) require that all subcontract performance bonds have MWAA as a "joint beneficiary" of the bond. MWAA demonstrated that the value of construction work to be performed directly by DTP was $274 million, which had been included as part of the open-book price negotiation for the DB contract, and that the majority of this work consisted of civil earthworks and structural concrete work. DTP also confirmed that MWAA would be added as a joint beneficiary to subcontractor performance bonds using a dual obligee rider to each bond.

Based upon MWAA's responses, FTA granted a waiver, although it did increase the penal amount of DTP's bonds from the $250 million originally requested to $274 million, reflecting the amount of DTP's self-perform construction work. FTA was also willing to allow MWAA to convert the bonds from separate performance and payment bonds to a combined performance and payment bond, which resulted in some commercial concessions being given to MWAA from DTP. Section 22.5 of the July 25, 2008, amended and restated DB contract contains the final bonding requirements for this project:

> Within fifteen (15) days of Full Notice to Proceed, Contractor shall deliver to Owner a combined Performance and Payment Bond in the amount of Two Hundred Seventy-Four Million Dollars ($274,000,000). The Surety's obligations under the Payment Bond component will be maintained, and shall remain in full force and effect, until one (1) year after the Substantial Completion Date. The Surety's obligations under the Performance Bond component will be maintained, and shall remain in full force and effect, until three (3) years after the Substantial Completion Date, provided, however, that as of the date that is one (1) year after the Substantial Completion Date, the Surety's penal sum under the Performance Bond component shall be reduced to Fifty Million Dollars ($50,000,000). The Performance and Payment Bond shall be in the form set forth in Exhibit 22.5.1.

B. SR-99 Bored Tunnel Alternative Design-Build Project—Seattle, Washington

The SR-99 Bored Tunnel Alternative Design-Build Project (SR-99 Bored Tunnel Project), also known as the "Alaskan Way Viaduct and Seawall Replacement Program," is the result of a May 12, 2009, agreement among the State of Washington, King County, and the City of Seattle to replace the Alaskan Way Viaduct (SR-99) with a two-level, 1.7-mi bored tunnel and a new seawall.[188]

The original SR-99 was constructed in the 1950s and is a 2-mi long, double-tiered viaduct that parallels the Alaskan Way. It carries about 110,000 vehicles each day and is partially supported by the seawall, which was built from concrete and timber in the 1930s and extends along Seattle's waterfront. Studies in the 1990s showed that the viaduct was nearing the end of its useful life. The 2001 Nisqually earthquake further damaged the viaduct, causing the Washington State DOT (WSDOT) to close it for inspection and make some limited repairs. The condition of SR-99 and the seawall prompted substantial discussion about how to address the situation, with options ranging from a cut-and-cover tunnel to replacement of the existing viaduct with a new elevated structure.

WSDOT, which was responsible for administering the procurement of the SR-99 Bored Tunnel Project, determined that a two-phase DB process was the best delivery approach for the project. It first issued a request for qualifications (RFQ) on September 15, 2009, with the RFQ culminating in a shortlist of four proposers: Seattle Tunneling Group (STG),[189] Vinci/Traylor/Skanska (VTS JV),[190] AWV Joint Venture

[188] Certain information for this § 9.2 has been derived from Mr. Loulakis's participation in WSDOT's CEVP risk advisory workshops.

[189] STG is a joint venture consisting of S.A. Healy Company; FCC Construction, S.A.; Parsons Transportation Group, Inc.; and Halcrow, Inc.

[190] VTS JV is a joint venture consisting of VINCI Construction Grand Projects; Traylor Bros., Inc.; and Skanska USA.

(KBB),[191] and Seattle Tunnel Partners (STP).[192] On May 26, 2010, WSDOT issued an RFP to the shortlisted proposers. The RFP contained a price/technical evaluation process, with a stipend of $4 million to the unsuccessful proposers, and required a 5 percent proposal bond to be submitted with the proposals.[193]

In mid-December 2010, WSDOT named STP the apparent best-value bidder. STP exceeded several of the RFP's requirements by proposing to build a tunnel that included an 8-ft-wide safety shoulder in each direction of traffic and to open the tunnel to traffic by late 2015—a year sooner than the RFP required. STP's lump-sum proposal price was just under $1.09 billion, with allowances included for inflation, bonding, and insurance requirements. The DB contract was signed on January 6, 2011.

Because the National Environmental Policy Act (NEPA) documentation and environmental permits for the project were not complete as of the date of contract execution, and to comply with the requirements of FHWA, the DB contract called for WSDOT to use a two-phase Notice to Proceed (NTP) process. The first NTP, which was issued in February 2011, authorized STP to proceed with certain preliminary engineering and other work that would support WSDOT's NEPA documentation for the Final Environmental Impact Statement. This ensured that no commitments were made to any alternative (including the no-build alternative) being evaluated in the NEPA process prior to the conclusion of the process and enabled WSDOT to continue to investigate the comparative merits of all alternatives presented in the NEPA document. The second NTP would be issued only if the final NEPA documents chose the preferred alternative (i.e., the bored tunnel alternative) as the selected alternative, whereupon STP would perform the final design and construction to complete the project. If the no-build alternative was selected, the DB contract would be terminated for convenience.

The SR-99 Bored Tunnel DB contract has several unique incentive clauses, including a shared savings allowance of $40 million that is split 75 percent to the contractor and daily early-completion bonuses of $100,000, up to a maximum of $25 million. From a liability perspective, the contract contains several overall liability caps, including a $500 million ceiling to complete the project and perform warranty obligations. Liquidated damages are staged at $50,000 to $100,000 per day for late substantial completion. Other damages relate to failure to achieve designated contract milestones. The overall cap on liquidated damages is $75 million.

The approach to determining the bonding for the SR-99 Bored Tunnel Project is unique and among the most interesting of the large projects evaluated in this digest. This is largely based on an amendment to Washington State's bonding statute, which was passed in July 2009 as SSB 5499. This law permits WSDOT to allow contractors to provide surety bonds at less than 100 percent of the full price of contracts exceeding $250 million:

> If surety bonds at less than the full contract price are authorized, the contractor must provide both a performance bond and a payment bond. The Department must set the amount of the performance bond to adequately cover 100 percent of the state's exposure to loss but no less than $250 million. The payment bond must be set at no less than the performance bond amount. The Department must develop risk assessment guidelines for the purposes of assessing the state's exposure to loss on highway construction contracts. The Office of Financial Management (OFM) must approve the guidelines before the Department may authorize contractors to provide surety bonds at less than the full price of a contract.

The legislative history of this bill explained that this change was based on "recent activity in the surety market and on industry information" that sureties "do not generally sell bonds in which the value of the bond exceeds $500 million." It further cited that WSDOT indicated that the "maximum risk at any given time on a highway construction project…is about 30 percent of the contract amount."[194]

[191] KBB is a joint venture consisting of Kiewit Pacific Co., Bilfinger Berger Ingenieurbau, and AECOM.

[192] The joint venture originally consisted of Dragados-USA, HNTB Corporation, and Arup. A change to the team was allowed by WSDOT after the shortlisting, with the joint venture partners now being Dragados USA and Tutor Perini Corporation, with major subcontractors being Frank Coluccio Construction and Mowat Construction for construction and HNTB Corporation and Intecsa-Inarsa for design.

[193] VTS JV and KBB dropped out and did not submit proposals.

[194] WASH. REV. CODE 39.08.030(3) states in full as follows:

> (a) On highway construction contracts administered by the department of transportation with an estimated contract price of two hundred fifty million dollars or more, the department may authorize bonds in an amount less than the full contract price of the project. If a bond less than the full contract price is authorized by the department, the bond must be in the form of a performance bond and a separate payment bond. The department shall fix the amount of the performance bond on a contract-by-contract basis to adequately protect one hundred percent of the state's exposure to loss. The amount of the performance bond must not be less than two hundred fifty million dollars. The payment bond must be in an amount fixed by the department but must not be less than the amount of the performance bond. The secretary of transportation must approve each performance bond and payment bond authorized to be less than the full contract price of a project. Before the secretary may approve any bond authorized to be less than the full contract price of a project, the office of financial management shall review and approve the analysis supporting the amount of the bond set by the department to ensure that one hundred percent of the state's exposure to loss is adequately protected. All the requirements of this chapter apply respectively to the individual performance and payment bonds. The performance bond is solely for the protection of the department. The payment bond is solely for the protection of laborers, mechanics, subcontractors, and suppliers mentioned in RCW 39.08.010
>
> (b) The department shall develop risk assessment guidelines and gain approval of these guidelines from the office of financial management before implementing (a) of this subsection. The guidelines must include a clear process for how the department measures the state's exposure to loss and how the performance bond amount, determined under (a) of this subsection, ade-

In compliance with this statute, WSDOT developed draft Surety Bond Risk Assessment Guidelines (dated June 18, 2009) that outline the process for examining bond amounts. The general purpose of these guidelines is to identify the additional costs that the state would incur in the worst-case event of a contractor defaulting and abandoning the project. The guidelines have three components:

1. Identify the worst-case scenario in terms of type of contract action that results in a default that implicates bond funds.
2. Identify all possible cost items associated with the worst-case scenario identified above.
3. Identify the point in contract time that the sum of the cost items is at its greatest point, thereby identifying the State's maximum risk of loss. This maximum risk of loss would help to determine the amount of the performance bond required for any particular project.

In a December 2009 report entitled, "SR-99 Bored Tunnel Alternative—Revised Surety Bond Assessment," Parsons Brinckerhoff submitted to WSDOT the analysis called for by the WSDOT Guidelines. The Assessment Report noted that while there were a number of scenarios that could occur after a contractor default, the worst-case scenario arose if a new contractor needed to be hired to finish the project. It further concluded that the "absolute worst-case scenario" would be the complete failure of the tunnel boring machine (TBM) during the construction of the tunnel or the TBM being damaged to the point where it would need substantial repairs and major component replacement. This scenario would entail hiring a new contractor, buying a completely new TBM, digging a hole to remove the old TBM, installing a new TBM, and continuing tunneling operations.

Because the WSDOT Guidelines state that "contractor default is most likely to occur just after the project has been initiated, or at the end of project stages," the assessment report looked at what would happen if the contractor defaulted 1 month into the project and just before the tunneling began. It also analyzed four situations where the TBM breaks before completion of the project: 500 ft into the tunnel; the middle of the tunnel (i.e., 5,000 ft into the tunnel); 1,500 ft from the end of the tunnel; and 500 ft from the end of the tunnel. For each scenario, it considered how much WSDOT would spend in finding and contracting with a replacement contractor, focusing on the following cost categories:

- Demobilization.
- Mobilization.
- Contract document update.
- Reduced competition for a replacement contractor.
- Administrative maintenance.
- Worksite maintenance.
- ROW considerations.
- Rework.
- Third-party damages.
- Annual escalation.
- Liquidated damages outstanding.
- Economic loss.
- Current facility risk.
- Financial risk.
- SR 99 general engineering consultant team costs.
- State legal costs.
- Consequential damages.

The assessment report also considered the cost of the TBM failure for the four tunnel-related scenarios.

The worst-case scenario was found to be a failure that occurred 500 ft into the tunnel. The assessment report concluded that this would result in a 3-year project delay (1.5 years to procure a new TBM, 6 months to obtain a new contractor, and 1 year for lost tunneling efficiency). The total cost of the default was $467 million, or 37.85 percent of the then-projected DB contract value. It therefore recommended that performance and payment bonds equal to $250 million, or 37.85 percent of the total contract value, whichever was greater, would be sufficient to protect the State.

Based on this information, and a lump-sum contract value of approximately $1.1 billion, WSDOT could presumably have required bonds in the amount of $416 million and satisfied the state's statutory requirements. The DB contract ultimately required payment and performance bonds each in the amount of $500 million, with the two JV partners, Dragados USA and Tutor Perini Corporation, being jointly and severally liable for contract performance as well.

C. Houston METRO 4-Lines Project, Houston, Texas

In 2005 the Texas legislature passed the Hybrid Delivery System Act, which gave the Metropolitan Transit Authority of Harris County (Houston METRO) the authority to allow private entities to act as facility providers and develop, design, construct, equip, finance, operate, and/or maintain qualifying transportation facilities.[195] Houston METRO elected to use this new hybrid delivery process for a major expansion of its light rail system, which at the time consisted of the 7-mi Red Line running along Main Street in downtown Houston.

Houston METRO issued an RFP in August 2006, seeking a facility provider for its light rail expansion. It received three proposals, and Washington Group Transit Management Company was ultimately awarded an agreement to perform certain predevelopment services, including negotiating a final development agreement for the project. On April 30, 2008, after it became apparent that the parties would not be able to reach

quately protects one hundred percent of the state's exposure to loss.

[195] Informational sources for § 9.3 include senior individuals at FTA, Houston METRO, and HRT, as well as Internet articles reporting on this project.

agreement on the terms of a development agreement, Houston METRO apparently terminated the agreement and began negotiations with Parsons Transportation Group, Inc. (Parsons). About a month later, Houston METRO and Parsons entered into an agreement whereby Parsons was to perform certain predevelopment services while proceeding with the negotiations of a development agreement.

On April 21, 2009, Houston METRO and Parsons entered into a $1.46 billion Development Agreement for Parsons to act as the Facility Provider on the project. This contract provided for designing, building, and potentially financing, operating, and maintaining four new lines (North Corridor, Southeast Corridor, Uptown Corridor, and East End Corridor).[196] The lines total approximately 20 mi, along with approximately 32 stations and storage and inspection facilities. The project also encompassed a major renovation to the existing operations center and the purchase of more than 100 light rail vehicles, including some vehicles for the existing Red Line.

As might be expected, the Development Agreement reflects a complex structure that contains multiple contracting relationships. In addition to Parsons, as the Facility Provider, three entities designated as "Primary Contractors" have separate contracts, designated as "Implementation Agreements," with Houston METRO:[197]

- *Design-Build Contract*: The design-builder is the JV known as Houston Rapid Transit (HRT), the members of which include Parsons, Granite Construction Company, Kiewit Texas Construction L.P., and Stacy and Witbeck, Inc. Parsons is the managing member of HRT. The Design-Build Contract was originally in the amount of $1.28 billion.
- *Vehicle Supply Contract*: Houston METRO determined that the light rail vehicles were to be obtained from Construcciones y Auxiliar de Ferrocarriles (CAF). The primary contractor for this work was Houston LRV 100, L.L.C., an entity that has CAF USA, Inc. (a subsidiary of CAF) as its economic member and Parsons as its noneconomic member.
- *Ownership and Maintenance (O&M) Contrac*t: The O&M contractor is Houston Operation and Maintenance, LLC, the initial equity of which is held 70 percent by Veolia Transportation Services, Inc., and 30 percent by Parsons.[198]

The Development Agreement makes it clear that Parsons is not a guarantor of the underlying performance of any of the Primary Contractors, and that Houston METRO retains the right to pursue any of the Primary Contractors to the extent that they are responsible for problems. However, it is also clear that the success of the overall project can be affected by the cooperation of all parties involved in the project and by Parsons' efforts to integrate the schedules of the Primary Contractors through implementing processes to resolve issues and conflicts among them. In this regard, Parsons has the duty to manage, coordinate and integrate these interfaces and work activities:

> The success of the Project will…require joint efforts by the Primary Contractors and the Facility Provider. The Facility Provider is responsible for management, coordination and integration of the entire (p)roject until five years after the Revenue Service Date for all Facilities, and shall take appropriate steps so that all required efforts by the Primary Contractors are undertaken in accordance with the terms and conditions of (the Development Agreement), the Implementation Agreements and the Interface Agreement. The FP shall take the appropriate action to resolve conflicts and disputes between or among the Primary Contractors regarding liability for problems with the Project expeditiously, eliminating the need for Metro to involve itself in such matters.[199]

A few elements of the Implementation Agreements are worthy of note. The Design-Build Contract's $1.28 billion contract price consists of $831 million for fixed-price work, with the $449 million balance for allowances that are subject to adjustment. HRT provided a 5-year warranty on each LRT facility, with the overall limitation of liability on the contract being 15 percent of the contract price. Liquidated damages were set at $40,000 per day for each LRT facility, up to a maximum of $10 million per facility. There are also $50 million in performance incentives available to HRT under the contract. The limitations of liability for the O&M Contract and Development Agreement were 15 percent and 20 percent of the contract value, respectively.[200]

As of the date of this digest, Houston METRO is still awaiting FTA's approval of an FFGA for the North and

[196] While the Development Agreement mentions financing, Parsons never took any responsibility for performing this activity. Likewise, as discussed in note 13, while the Development Agreement mentions operation and maintenance, Parsons did not ultimately take on this responsibility, as the O&M Contract was signed directly by Houston METRO with Operation and Maintenance, LLC, an entity essentially owned and controlled by Veolia Transportation Services, Inc.

[197] While the Design-Build Contract and the Vehicle Supply Contract were initially entered into between Houston METRO and Parsons, they were immediately assigned, and all rights and obligations of Parsons thereunder were transferred to HRT and to Houston LVR 100 LLC, respectively.

[198] Other than providing its initial equity contribution and having voting rights on some major issues affecting the LLC, Parsons does not have any economic interest in this LLC, and it is, for practical purposes, owned and controlled by Veolia Transportation Services, Inc.

[199] Excerpted from § 4.1 of the Development Agreement.

[200] While the design and construction of this project has been proceeding well, it should be noted that a major issue arose with respect to the LRV purchases. In September 2010, FTA concluded that Houston METRO's contract for the LRV purchases was flawed in that, among other things, it violated the Buy America Act and FTA's competition rules. This ultimately resulted in a termination of the contract with Houston LRV 100 L.L.C. and a reprocurement of the LRVs for the project. On April 6, 2011, Houston METRO awarded Siemens an $83 million contract for the purchase of 19 LRVs.

Southeast Corridors, which are part of FTA's Penta-P initiative. HRT has been advancing certain early work (e.g., U/R) during the 2 years since the contract was executed through the use of LONPs, with Houston METRO directly funding this work. The LONP process has allowed the project to maintain the guaranteed completion dates. Additionally, because of local funding issues, Houston METRO totally suspended work on the Uptown Corridor.

As for performance security, each agreement contained a different approach. The Development Agreement did not require surety bonds; it required Parsons to provide a parent company guarantee. The O&M Contract likewise provided for a parent company guarantee from the parent of Veolia Transportation Services, Inc., but required performance and payment bonds in the event the O&M contractor performed any actual construction work undertaken during the performance of the O&M term. The Design-Build Contract required parent company guarantees, as well as performance and payment bonds for the first phase of utility relocation work that was to be performed prior to full notice to proceed on the overall project.

Houston METRO's decision to use parent guarantees as opposed to surety bonds was based in large measure on preproposal surveys that indicated the surety market could not respond to a 100 percent performance bond on a project of this magnitude. Houston METRO believed that Texas law allows a public agency that cannot obtain performance bonds to go forward without the bond, with the understanding that the agency takes on the risk of the contractor's failing to perform or pay its subcontractors. Houston METRO concluded that these market conditions, coupled with guarantees from financially sound parent companies, adequately protected the public's interest.

The decision not to use performance bonds was widely criticized by, among others, the Texas Construction Association (which represents subcontractors and suppliers) and those involved in the surety industry.[201] The SFAA wrote a lengthy letter arguing that Texas law mandates that bonds be supplied on the project and that there was adequate surety capacity to cover the entirety of the construction work on the project. There were also newspaper articles that cited the risk to taxpayers for not having a bond in place.

As the project moved forward, the decision on bonding was reconsidered. By April 2010, Houston METRO and HRT had concluded major negotiations that converted approximately $400 million of allowances into fixed-price work. As part of this, Houston METRO directed HRT to provide 100 percent performance bonds for the full construction value of the project as of the date of the full notice to proceed for the project, which was expected to be received at or about the time the FFGA approval was expected. There was a modification to the Design-Build Contract to reflect this requirement as well as the conversion of the allowances to fixed pricing.

D. Eagle—Denver, Colorado

FasTracks is the voter-approved transit program developed by the Denver RTD to expand rail and bus services throughout eight counties in the Denver area.[202] FasTracks will ultimately consist of 122 mi of commuter rail and light rail; 18 mi of bus rapid transit services; related facilities, such as parking garages; and the redevelopment of Denver Union Station.

As of the date of this digest, the Eagle Project is the largest of the FasTracks projects. It consists of 47 mi of new commuter rail, including 1) the East Corridor, from Denver Union Station to Denver International Airport; 2) the Gold Line, from Denver Union Station to Arvada-Wheat Ridge; 3) a short segment of the Northwest Rail corridor to south Westminster; and 4) the commuter rail maintenance facility in north Denver. As the first DBFOM public rail project in the United States, the scope of work under the Eagle Project also includes the purchase of rolling stock and a 40-year concession to operate and maintain rail service. The East Corridor and Gold Line were selected by FTA in July 2007 to be part of FTA's Penta-P initiative.

Denver RTD issued an RFP on September 30, 2009, for the project, with selection based upon a best-value process that scored the financial proposal 60 percent and the technical proposal 40 percent. The RFP provided for a $2.5 million stipend to the unsuccessful proposers. Of the two entities that proposed, DTP, a consortium of Fluor Enterprises Inc., and Macquarie Capital Group Ltd., was found to have offered the best value.[203] DTP's proposal not only ranked higher technically, but had a lower cost than the other proposal (Mountain-Air Transit Partners). DTP's proposal price of $2.085 billion was $300 million lower than RTD's budget estimate, and had a January 2016 completion date, 11 months earlier than RTD required in the RFP. DTP also brought private financing to the table, with RTD making annual payments to DTP based on DTP's performance in meeting RTD's service standards.

Phase I of the project includes property acquisition, construction of the East Corridor, construction of the Maintenance Facility and control center, the purchase of certain rail vehicles, and the electrical systems at Denver Union Station. This work began in August 2010. Phase II of the project includes the Gold Line and the short segment of Northwest Rail, and is scheduled to begin following the award of an FFGA by FTA. RTD

[201] *Houston Metro Project, "Parent Guarantees,"* TEXAS CONSTRUCTION ASSOCIATION QUARTERLY (Fall 2009), http://www.texcon.org/Fall%2009%20Newsletter%20WIP.pdf.

[202] Informational sources for § 9.4 include a variety of Internet articles reporting on this project.

[203] Other major members of DTP's team include Balfour Beatty plc. (part of the design-build entity as well as the operations/maintenance entity); Alternative Concepts, Inc. (O&M services); Hyundai-Rotem USA (manufacturer of the electrified commuter rail cars); and Ames Construction (a design-build subcontractor).

is seeking $1 billion through the FFGA and expected to receive FTA approval of the FFGA in 2011.

The July 9, 2010, contract between RTD and DTP is framed as a "Concession and Lease Agreement" and is quite complex. One notable feature is the liquidated damages regime. The daily liquidated damages to be paid to RTD by DTP for late completion of the construction is the amount of 0.05 percent of the sum of specific amounts identified in the agreement and defined as "Maximum Annual Early Work Construction Payment Amounts," capped at 5 percent of those amounts. Likewise, for late delivery of a rail car, liquidated damages were in the amount of 0.5 percent of the price per delayed car per week of delay, with the total liquidated damages not to exceed 7.5 percent of the aggregate value of the total number of rail cars ordered by RTD.

Two types of performance security are required under the contract. The first is a Proposer's Security in the amount of $25 million, which was to be posted either in cash or an LOC. This security was to ensure that DTP would take the project to financial closing (which was to occur after contract execution).

The second performance security is the financial backstop for DTP's performance of the design and construction portion of the work. Colorado law (Colorado Revised Statutes § 38-26-106) required any construction contractor on a public project to provide a performance bond in the penal sum of not less than 50 percent of the contract value. In conducting its evaluation of market conditions for the Eagle Project, RTD learned that it would have difficulty in meeting these requirements. As a result, it introduced legislation that would change this for large projects. Senate Bill 09-248, which was enacted on April 21, 2009, changed the 50 percent bonding requirement for projects having a total value of $500 million or more, and stated that "…a bond or other acceptable surety, including but not limited to a letter of credit, may be issued in a penal sum not less than one-half of the maximum amount payable under the terms of the contract in any calendar year in which the contract is performed."[204]

The Eagle Project contract uses this statute and allows DTP to post either a performance bond or LOC in an amount that varies per year, based on the amount of work placed per year, with the bond expiring after final completion of the construction.[205]

[204] The legislative history shows that RTD's general counsel, Marla Lien, testified in favor of the bill. She stated that RTD experienced troubles encountered while seeking bonding for the FasTracks program, and that relaxing the 100 percent performance bond requirement would improve the surety process and lead to potential cost savings on large public works projects. Likewise, a representative of Marsh & McLennan, Inc., a major surety broker, testified in favor of the bill, discussing the inability to secure surety bonds for large construction projects and surety bond amounts for several recent public works projects.

[205] The contract defined the term "Construction Security" as:

A bond substantially in the form attached as Appendix G to Volume I of the RFP in favor of RTD (or in favor of RTD, the Concessionaire, the Agent Bank and the Design/Build Contractor as multiple obligees) or a letter of credit or other surety (in such form as may be reasonably required by RTD) in a penal amount equal to not less than the greater of (a) 50% of the total Earned Value of the Work scheduled under the Original Baseline Schedule (or, as the case may be, Revised Baseline Schedule) to be performed under the Design/Build Contract and any other contracts entered into by the Concessionaire for construction, erection, repair, maintenance or improvement of any building, road, viaduct, tunnel, excavation or other public works in any calendar year in which such contract is performed and (b) 5% of the total Earned Value for all Work not yet performed under the Design/Build Contract and any other contracts entered into by the Concessionaire for construction, erection, repair, maintenance or improvement of any building, road, viaduct, tunnel, excavation or other public works in any calendar year in which such contract is performed, in each case (x) calculated as of the first day of the calendar year, (y) not including the Phase 1 Work prior to the Phase 1 Effective Date or the Phase 2 Work prior to the Phase 2 Effective Date and (z) in compliance with Section 38-26-106, Colorado Revised Statutes.

E. InterLink—Warwick, Rhode Island

InterLink is an innovative intermodal project located in Warwick, Rhode Island, that is contiguous to I-95, U.S. Route 1, and the T.F. Green Airport.[206] This complex and high-profile project, which is about a 10-minute drive from Providence, has several components, including 1) an MBTA commuter train platform for service between Warwick, Providence, and Boston using Amtrak rails; 2) a 3,200 car, six-story parking garage for rental cars and public vehicles that straddles the Amtrak train tracks; 3) a three-story building containing services for rental car customers; and 4) an intercity bus stop. The project also has a 1,250-ft, glass-enclosed, climate-controlled elevated walkway with moving sidewalks to connect the southern edge of the airport terminal to parking, rental car, and train facilities.

The project owner is the Rhode Island Airport Corporation (RIAC), with major funding through the FHWA and the Rhode Island DOT (RIDOT). RIAC handled the project's contract, construction, and overall project management and delivery, and is in charge of operations at the airport and the intermodal facility. RIDOT owned the land where the airport and intermodal facility are situated, and managed the project during the planning, programming, environmental, and design phases.

Rather than using the traditional DBB approach, RIAC selected a CMAR delivery system. The RIAC Procurement Manual authorized the agency to decide upon a delivery system based upon project-specific factors. RIAC determined that CMAR was the most cost-effective method to ensure project completion within a set schedule and budget, basing its decision on, among other things, the following:

[206] Informational sources for § 9.5 include senior individuals at RIAC, as well as Internet articles reporting on this project.

• The use of CMAR would help in schedule coordination, which was viewed as a critical need given that the project had an operational airport and construction over both active rail lines and a major access road.

• The project had a number of diverse and highly complex elements that were technically unique and required extremely complex coordination to ensure that existing transportation operations were not impacted during construction.

• The project was beyond RIAC's capacity to manage internally, and the financial risk associated with scheduling, specialty trades, and commodity fluctuations made CMAR a way to mitigate these risks.

• The scope and complexity of the project made it difficult to establish a set budget through the traditional multiple-bid process with a general contractor and various trades each working and bidding independently. The CMAR contractor would be able to provide a far more coordinated and efficient effort in this regard.

In short, RIAC decided that the project required the highest level of construction management support and warranted the retention of a highly-sophisticated project management team.[207] CMAR offered this benefit and enabled construction to begin while the design was proceeding, reducing the total project cost and duration.

RIAC's designer for InterLink was Jacobs Engineering Group, and its program manager was PB Americas, Inc. RIAC issued an RFQ on July 25, 2006, with the intent of shortlisting up to four firms based upon an equal weighting of corporate qualifications and staff qualifications and experience. On August 25, 2006, an RFP was issued, with selection based upon corporate and staff qualifications, project understanding, work plans, and interviews.

Gilbane Building Company (Gilbane) was the successful proposer and on November 1, 2006, RIAC and Gilbane executed an AIA Document A121CMc–2003, Standard Form of Agreement between Owner and Construction Manager. The agreement called for, among other things, Gilbane to provide a variety of preconstruction services, many of which involved coordinating activities with FHWA and other project stakeholders (e.g., TIFIA lenders, rental car companies). Part of these services included some limited construction activities, such as U/Rs and modifications to the short-term parking lot and terminal canopy. The contract limited the total compensation to Gilbane for preconstruction services to a not-to-exceed amount of $5.8 million. Once the design was completed to 60 percent, Gilbane provided a GMP proposal, with the parties ultimately executing a $184.9 million GMP amendment on August 12, 2008. By all accounts, the project was deemed a success, and opened on time and under the GMP amount.

[207] RIAC successfully requested FHWA to approve the use of CMAR Special Experimental Project No. 14, Innovative Contracting.

RIAC spent significant time evaluating the most effective way to obtain performance and payment bonds on the project. The RFP called for the CM to provide 100 percent performance and payment bonds. However, during the solicitation period, RIAC reevaluated its position. On private-sector projects delivered through CMAR, it is common for 100 percent dual obligee bonds to be provided by the CM's trade subcontractors for the benefit of both the owner and CM, and for the CM not to provide any bond of its own. The primary reason for this is economics, as many owners do not feel there is a benefit to, in effect, paying twice for bond premiums, particularly when the CM does not generally self-perform trade work.

The November 1, 2006, contract adopted this philosophy, and did not require Gilbane to provide its own performance and payment bonds. Instead, the contract required Gilbane to secure its construction phase services under the GMP through an LOC "in an amount sufficient to cover the faithful performance of [Gilbane's] Contract and payment of obligations arising thereunder." The contract further required each of Gilbane's subcontractors and subconsultants (and each subtier) to provide 100 percent performance and payment bonds for the benefit of RIAC. The contract did note, however, that if bonding was required by applicable law, Gilbane was to provide the bonds, with the costs thereof being reimbursable.

As the GMP was being developed, RIAC reconsidered its position on bonds. It appeared that Rhode Island law mandated 100 percent performance and payment bonds for construction services, even under a CMAR delivery approach. To avoid any potential problems, it was agreed that Gilbane would provide its own bonds, and this was reflected in the GMP Amendment. While not contractually obligated to do so, Gilbane, to manage its risks and consistent with common practices, required 100 percent performance and payment dual obligee bonds from its subcontractors.

X. CASE STUDY: MODERN CONTINENTAL—MITIGATING A FAILURE

A. Introduction

An owner's worst nightmare is that it will meet all the challenges of project planning, financing, design, and procurement only to see its project stopped cold in its tracks by the failure of its contractor. Contractor default, however, is a fact of life that all owners, including transit owners, should consider and be prepared to address. Performance security is, obviously, the easiest and most common way to mitigate against contractor default, but oftentimes contractor performance during construction will tip off the owner that default is potentially imminent, providing an opportunity to plan and act before the default actually occurs. A gradual reduction in progress, coupled with a decrease in responsiveness and quality of communications, complaints or inquiries about payment from lower-tier contractors, and

the existence of disputes over scope could be an indicator of an imminent contractor default.

More insidious is a contractor default that results from an overall failure or financial crisis at the contractor's corporate (or parent) level that cannot be detected or anticipated but which, nonetheless, has a major adverse impact on the project. Examples of such colossal corporate failures include the 2003 bankruptcy filing of Dillingham Construction following a number of acrimonious and very expensive legal disputes with public owners[208] and the 1995 bankruptcy of Morrison-Knudsen Co. following the ouster of its CEO, William Agee, after he led the company into some risky noncore areas.[209] These types of collapses cannot be prepared for, but an educated, prompt, proactive, and collaborative response can significantly mitigate the negative impact such a failure has on a project. The recent collapse of Modern Continental Construction Co., Inc., (Modern Continental) provides instructive insight into how an owner can, in cooperation with the surety, proactively and successfully manage a major contractor failure.[210]

B. Historical Background

Founded in 1967 by Kenneth Anderson and Les Marino, Modern Continental started modestly with a wheelbarrow and a $4,000 contract to install sidewalks.[211] By the late 1980s, Modern Continental had grown into a strong regional contractor specializing in the construction of highways and transit projects in New England. The company built up a core of key, productive managers and employees and successfully prosecuted work in a limited geographical region, enjoying great success in its core areas.

By 2000, Modern Continental was a $1.3 billion conglomerate, with more than 4,000 employees, doing work all across the United States.[212] Some of the nonconstruction industries in which Modern Continental had gotten involved included restaurants, a resort in St. Lucia, a bus company in Boston, a boat company, an organic farm, and real estate investments in such far-flung places as Brazil. In addition, Modern Continental had amassed a vast array of construction equipment, including numerous tug boats and barges, which it used on its bridge and tunnel marine construction projects. Modern Continental also moved beyond the limitations of its original market niche, undertaking such complex projects as wastewater and water treatment plants, commercial buildings, and pipelines.[213]

C. Modern Continental's Role on the "Big Dig"

The Central Artery/Tunnel Project in downtown Boston has been recognized as the largest, most complex, and technologically challenging highway project in the history of the United States. Affectionately and commonly referred to as the "Big Dig," the project was first conceptualized in 1982, with the first work beginning in 1991 and the entire project completed in 2007. The project replaced Boston's deteriorating six-lane elevated Central Artery (I-93) with an 8-to-10 lane, state-of-the-art underground highway; two new bridges over the Charles River; an extension of I-90 to Boston's Logan International Airport and Route 1A; and the creation of more than 300 acres of open land, reconnecting downtown Boston to the waterfront.[214] Originally owned and managed by the Massachusetts Highway Department and then by the Massachusetts Turnpike Authority (the Authority), the Big Dig is now part of the Metropolitan Highway System. Design and construction management consulting was provided by Bechtel/Parsons Brinckerhoff, a joint venture of Bechtel Corporation of San Francisco and Parsons Brinckerhoff Quade & Douglas, Inc., of New York.[215] Total construction and ancillary costs of the Big Dig have been estimated to be over $22 billion.[216]

The Big Dig was constructed in many phases, with more than 118 construction contracts awarded over the span of approximately 16 years. During the peak years of construction, from 1999 to 2002, approximately 5,000

---

[208] *See, e.g.*, Carolyn Said, *Construction Giant Files for Bankruptcy*, http://articles.sfgate.com/2003-02-06/business/17478044_1_oahu-dillingham-pleasanton-s-dillingham-construction-treatment-plant.

[209] *See, e.g.*, John Greenwald et al., *The Wreck of Morrison Knudsen*, TIME MAGAZINE, Apr. 3, 1995, http://www.time.com/time/printout/0,8816,982764,00.html.

[210] Some of the information in this chapter was obtained from former senior executives of Modern Continental who preferred to share their insights on a non-attribution basis. The authors also gratefully recognize the invaluable assistance of Kurt L. Dettman, Esq., Constructive Dispute Resolutions (www.c-adr.com); John R. Dingess; Joseph L. Luciana, III; and George B. Foster, who practices at Dingess, Foster, Luciana, Davidson & Chleboski LLP (www.dfllegal.com). Mr. Dettman was associated with the Massachusetts Turnpike Authority (MTA) and was intimately involved with the dispute resolution process developed and implemented on the Big Dig projects. Messrs. Dingess, Luciana, and Foster served as outside counsel for the MTA.

[211] Sean P. Murphy & Jonathan Saltzman, *Accused Big Dig Firm Files for Ch. 11*, BOSTON GLOBE (June 24, 2008), http://www.boston.com/news/traffic/bigdig/articles/2008/06/24/accused_big_dig_firm_files_for_ch_11/.

[212] http://www.highbeam.com/doc/1G1-132097257.html.

[213] https://secure.pqarchiver.com/boston/access/635684371.html?FMT=FT&FMTS=ABS:FT&type=current&date=May+12%2C+2004&author=Anthony+Flint%2C+GLOBE+STAFF&pub=Boston+Globe&desc=STATE+PUNISHES+BIG+DIG+COMPANY+MODERN+CONTINENTAL+BARRED+FROM+BIDDING.

[214] http://www.massdot.state.ma.us/Highway/bigdig/bigdigmain.aspx.

[215] http://www.massdot.state.ma.us/Highway/bigdig/projectbkg.aspx#challenges.

[216] By all accounts, actual construction costs were nearly $15 billion, with another $7 billion in interest on construction financing loans. See *Boston Globe* reports, http://www.abc.org/Newsroom2/News_Letters/2008_Archives/Issue_29/Union_Only_Big_Dig_Price_Tag_Balloons_to_22_Billion.aspx.

construction workers were on the job and about $3 million of work was completed each day.[217] Modern Continental garnered approximately 25 contracts on the Big Dig, aggregating approximately $3.3 billion in contract value.[218] Some of these contracts were performed solely by Modern Continental, and others were performed by a joint venture involving Modern Continental, such as the I-90 Bird Island Flats Tunnel, which was performed by the Modern Continental/Obayashi Corporation joint venture. The $3.3 billion in contract values made Modern Continental the largest single contractor of the 25 or so contractors involved in the project. The size of the individual contracts obtained by Modern Continental ranged from $20 to $30 million to as large as $400 million.

D. Modern Continental and Its Sureties

Modern Continental obtained the required performance bonds for its many Big Dig contracts from a variety of sureties and co-sureties. Over time, the co-surety relationships ended, and for the last group of contracts, Modern Continental obtained bonds solely from one company. The effect of this constriction was to allow Modern Continental's surety virtually unfettered flexibility to orchestrate the biggest surety bailout of the modern era.

E. Failure

By 2002, Modern Continental was teetering on the brink of failure.[219] The majority of the problems arose on projects outside of the Big Dig, including a huge default on a wastewater treatment plant construction project in Virginia, which resulted in a $99 million loss for the company, and a default termination and subsequent explosion at a jet fuel plant construction project in Walnut Creek, California, which killed a number of workers. Bloated overhead and a far-flung operation, with insufficient depth of management, also contributed to the adverse impact that these and other single-project debacles had on the company. Typically, the most common causes of surety failure include contractors "being overleveraged, taking on more work than [the contractor has] capacity to perform, not having sufficient management depth, working in markets where they are not well-qualified, and carrying too much overhead."[220] The situation Modern Continental found itself in by 2002 fit this model perfectly.

In July of 2003, Modern Continental's co-sureties on the majority of the then outstanding bonds offered a relatively small amount of financing to help avert disaster. By early fall, Modern Continental's cash needs exploded, to the point that loans by the sureties were becoming quite substantial. Given the fact that an estimated $1.4 billion of contracts spread across the country were subject to being declared in default if no financing assistance was offered, the sureties chose the best course to mitigate losses, continuing to loan money on an ongoing basis to allow Modern Continental to remain in control of the management and administration of its outstanding contracts. The sureties dedicated a large team of in-house claims managers, attorneys, engineers, and accountants to monitor the projects and engaged a plethora of outside attorneys and consultants to assist. Most significantly, local Boston contractor Jay Cashman, Inc., was retained by the lead surety to provide advice and assistance to the surety concerning Modern Continental's management and performance of work on the Big Dig.

By 2004, construction problems exacerbated Modern Continental's precarious financial situation, when first the company was implicated in complaints about significant leaking in tunnels due to an alleged failure to properly apply waterproofing, and, in July 2006, when ceiling panels collapsed in a tunnel, killing 35-year-old Milena Del Valle and injuring her husband, Angel Del Valle. A later failure of a portion of slurry walls in another tunnel further complicated the completion of the work and increased construction costs. At about that time, under pressure from both its sureties and the owner to retain its key personnel to finish its contracts, Modern Continental developed and initiated a retention-and-performance incentive program to ensure Modern Continental had the resources to focus on completing the open projects as reasonably and economically as it could. That program, together with the lure of potential employment directly with Jay Cashman, allowed the Big Dig to benefit from continuity of management at Modern Continental. The surety reaped another benefit beyond the economic benefit of retaining high-quality management through the conclusion of the projects; it allowed the surety access to a wealth of knowledge necessary to manage revolving claims for extras and disputes over scope.

Ultimately, all of the contracts on the Big Dig were completed, and, in the aggregate, returned profit to the company. Sizable monetary losses on a small number of other projects across the country, however, had already dealt the death blow to the company.

F. The Owner's Perspective

Beginning in 2002, the Authority was aware that Modern Continental was having cash flow issues on its Big Dig contracts. As noted above, Modern Continental was the contractor holding the most Big Dig contracts and its continued commitment to progress its work was vital to keeping the Big Dig on track. The Authority, with Modern Continental's permission, met with surety representatives to seek assurances that if the Authority worked with Modern Continental to address its Big Dig

[217] http://www.massdot.state.ma.us/Highway/bigdig/facts_figures.aspx.

[218] http://www.boston.com/news/traffic/bigdig/articles/2008/06/24/accused_big_dig_firm_files_for_ch_11/.

[219] http://www.boston.com/news/local/breaking_news/2008/06/modern_continen.html.

[220] Surety Firms Weigh in on Construction Markets and Contractors: FMI Surety Providers Survey, at 1, https://www.asaonline.com/eweb/upload/SuretySurvey_2010April.pdf.

cash flow issues, the sureties would stand behind Modern Continental to assure its continued performance.

The Authority engaged outside counsel to review Modern Continental's legal position, including preparing for a possible bankruptcy. The Authority also engaged an outside accounting firm to review Modern Continental's financial position and verify its cash flow needs as they related to the continued progress of its work. Based on the sureties' assurances that they would continue to finance Modern, the Authority negotiated what became denominated the Omnibus Global Settlement (OGS) to assist Modern Continental with its cash flow needs to continue to progress its vital work on the Big Dig.

The OGS totaled almost $51 million, comprised $3.2 million of reallocated amounts among contracts, $9.8 million in release of retainage, provisional payment of $5 million, and $33 million in claim settlements. The OGS also contained other commercial terms:

- A commitment to render performance that included a schedule of sources and uses of funds.
- Rights of set off/recoupment for certain amounts.
- Waiver of certain claims as to the amounts paid.
- Requirements for Modern Continental to provide monthly financial updates to the Authority's outside accountant.

In addition to tracking the financial status of Modern Continental, the MTA implemented a system of controls to ensure that the monies being paid under the OGS were indeed being used to pay for Modern Continental's Big Dig work.

As a companion to the OGS, the MTA and Modern Continental's sureties entered into a Subordination, Assignment of Subrogation and Consent Agreement (Surety Agreement). The Surety Agreement provided:

- Subordination of the sureties' rights against the amounts of so-called "Accommodation Payments";
- Assignment of the sureties' claims in the event of a bankruptcy up to the amount of any unrecovered Accommodation Payments;
- Assignment of the sureties' security interests in Modern Continental to secure the amount of the unrecovered Accommodation Payments;
- Surety consent to all of the payments to Modern Continental;
- If there was a Default Event, a commitment to take all actions necessary to complete the contracts in a timely fashion, in accordance with performance and payment bonds; and
- Waiver and release of all defenses to the sureties' obligations to complete Modern Continental's work if it defaulted under the terms of the OGS.

Although the Authority took careful steps to protect the interests of the Commonwealth of Massachusetts, it also worked closely with Modern Continental and its sureties to ensure that the funding needed to progress the work was provided in an effective and timely manner. Instead of an antagonistic relationship, the parties cooperated in a transparent manner to mitigate the large risk to all parties of Modern Continental's work being stopped, with the attendant increase in excess reprocurement and completion costs to the sureties and the public.

G. The Aftermath

Before completing its Big Dig contracts, in June 2008, Modern Continental was indicted on 49 federal counts of negligent work, use of substandard materials, knowingly filing false certification reports, submitting false time and materials documents, and fraud.[221] "The charges relate to the well-known defects in slurry wall construction that led to a flooding incident and chronic leaks, and to the use of epoxy anchors for heavy ceiling panels that subsequently collapsed."[222] Modern Continental later pleaded guilty to 39 federal charges of submitting false claims relating to billings totaling approximately $167,000 submitted over 15 years.[223] The charges relating to the negligent construction were dropped as part of the plea bargain.

On June 23, 2008, shortly after the charges were first brought, Modern Continental filed for bankruptcy protection.[224] The surety submitted a substantial proof of claim in the bankruptcy, claiming significant unrecovered losses in the hundreds of million dollars. Given the approximate $1.4 billion in potential exposure on open-bonded contracts when the sureties first began financing Modern Continental, it appears that their decision to mitigate losses by providing that financing was prescient. Sureties consider a 30 percent loss ratio a "breakeven point,"[225] and while the ultimate loss ratio did not achieve that point, the mitigation in losses achieved through significant proactive planning and action in making the original and continuing decision to finance Modern Continental rather than let it fail certainly positively influenced the outcome.

---

[221] http://www.tollroadsnews.com/node/3616.

[222] *Id*. The slurry wall collapse in the I-93 Connector Tunnel ceiling (Contract 17A1) was also the subject of a settlement between the management consultant to the Big Dig Project, Bechtel/Parsons Brinckerhoff, and the United States and the Commonwealth of Massachusetts in January 2008. Bechtel/Parsons Brinckerhoff agreed to pay $450 million to resolve its civil and criminal liabilities, the majority of the settlement being put into a fund for Big Dig repair and maintenance. http://www.mass.gov/?pageID=cagopressrelease&L=1&L0=Home&sid=Cago&b=pressrelease&f=2008_01_23_big_dig_agreement&csid=Cago.

[223] http://www.boston.com/news/local/breaking_news/2009/05/modern_continen_2.html.

[224] *In re: Modern Continental Construction Co., Inc.*, Case 08-14558 (June 23, 2008 Bankr. D. Mass.).

[225] Surety Firms Weigh in on Construction Markets and Contractors: FMI Surety Providers Survey, at 3, https://www.asaonline.com/eweb/upload/SuretySurvey_2010April.pdf.

As of the issuance of this digest, there remain two significant open Modern Continental contracts and a small number of payment bond claims. The worst is definitely over for the surety. Modern Continental is still awaiting sentencing on its guilty plea to 39 federal charges regarding overbilling and defective work, which could result in criminal fines of up to $20 million.[226]

H. Lessons Learned from Modern Continental

Notwithstanding the large losses incurred by Modern Continental's sureties, there appears no hesitancy on the part of sureties to consider issuing major project bonds in the future.[227] The bonds that were issued to Modern Continental for projects within their core competency and that could be serviced by their elite group of managers did not cause the company to fail. Instead it was the projects Modern Continental undertook in areas outside its comfort zone that caused the collapse. Careful underwriting, focusing on the three "Cs" of underwriting—character, capacity, and capital—will minimize the recurrence of similar collapses in the future, but nothing will completely stop such catastrophic failures from occurring. Therefore, sureties will simply continue with good underwriting practices, designed and refined to give sureties the best opportunity to provide for full indemnity if a principal fails.

Owners can also put into place measures to monitor for potential default and contingency plans to assist in mitigating the impact of a catastrophic financial default by a contractor. First and foremost, owners should build into the mindset of project administration the concept of constant vigilance for potential default. Regular and periodic inquiries into the overall "health" of the contractor, similar to what is provided in the prequalification process or through online research and Dun & Bradstreet inquiries, could be considered to obtain a generalized view of the contractor's continuing viability. Midproject snapshots of the contractor's financial strength will either assure or alert the owner to take further steps. Of course, receipt of any inquiries about payment or to obtain payment bonds from lower-tier subcontractors or suppliers should also trigger further inquiry by the owner. Similarly, inexplicable and extended lags in performance by the contractor should also prompt further inquiry by the owner.

Because there is little an owner can do to halt a default caused by systemic corporate issues, the owner should be prepared to initiate mitigation plans upon the advent of potential default. Defining the core team to evaluate and determine appropriate action is key. Arranging for access to legal and financial resources to support the decision-makers, whether these are internal or external resources, is also critical to informed decision-making. Once the specter of default arises, the owner needs to evaluate what its rights are with respect to default and invoking performance by the surety, including mapping out the contractually-required triggers for performance by the surety. Once those conditions have been triggered, prompt and complete disclosures to the surety and its consultants will speed up the investigative process. An open mind about potential avenues of action and a collaborative approach with the surety will assist in reaching a successful conclusion. The Modern Continental failure was somewhat unique in that the breadth of the failure resulted in the wholesale financing of the entity by the surety, leaving in place the operations personnel who could successfully complete the Big Dig projects. Where this situation does not occur, the owner should consider ways of retaining quality contractor personnel with knowledge of the project, as consultants or employees, as one means of ensuring complete and expeditious performance of the remaining work. It is also important for the owner to remember that the surety and owner have similar primary goals upon default—completing the scope of remaining work at a cost approximating the remaining balance of the original (or close to original) cost of the work in the most expeditious time frame. Approaching negotiations with the surety with these goals in minds may help in framing the most appropriate response to the situation.

XI. CASE STUDY: THE BRAZILIAN OIL PLATFORM CASE—AN EXAMPLE OF SURETY EXPOSURE WHEN A LARGE PROJECT GOES BAD

A. Introduction

One of the first questions that agencies ask when discussing performance bonds is, "Will the surety be there to take care of a contractor default?" As explained throughout the digest, the performance bond places substantial obligations on the surety to "take care" of the obligee (i.e., the project owner) when there is a default. However, surety bonds are unlike irrevocable letters of credit, and there can be major disputes between the surety and the owner about exactly what the surety needs to do to be responsive.

There are many reported cases available that explains a surety's obligations under a performance bond. However, this case study discusses litigation, commonly known in the industry as the "Brazilian Oil Platform case," that is truly unique. Described as "perhaps the most important in the field of surety law in several decades,"[228] and as having redefined "the ground rules…for surety companies,"[229] the Brazilian Oil Platform case is reported to be the largest loss ever suffered by a surety on a performance bond (nearly

[226] Saltzman, Jonathan, *Big Dig Contractor Modern Continental Pleads Guilty*, BOSTON GLOBE, May 8, 2009, http://www.boston.com/news/local/breaking_news/2009/05/modern_continen_2.html.

[227] This topic is discussed at length in § VIII.

[228] William F. Savino & David S. Widenor, *Commercial Law: 2003–2004 Survey of New York Law*, 55 SYRACUSE L. REV. 761 (2005).

[229] U.S. Fidelity and Guaranty Co. v. Braspetro Oil Servs. Co., 369 F.3d 34, at 34 (2d Cir. 2004).

$270 million). This case study provides owners with insight into how sureties can respond when a loss is large. It also provides a cautionary tale for surety companies that do not uphold their contractual duties under surety bonds.

Several written opinions arose from the Brazilian Oil Platform case. This case study focuses on the opinions that address the relationship between the owner and the surety. The first reported decision was a 74-page opinion issued by a U.S. District Court in New York (the 2002 Opinion), finding the surety responsible for over $370 million.[230] The surety appealed this decision to the U.S. Court of Appeals for the Second Circuit, which resulted in a 40-page opinion (the 2004 Opinion) that essentially upheld the district court's decision, but reduced the damages by approximately $100 million.[231]

B. The Project

After a competitive bidding process in the mid-1990s, Braspetro Oil Services Company (Braspetro), a subsidiary of the Brazilian government-owned utility Petrobras, awarded two large naval DB contracts (the Contracts) to a consortium of Brazilian contractors (the Consortium).[232] The contract for the P-19 Project involved the design and conversion of a platform formerly used for oil and natural gas exploration into a semi-submersible oil and natural gas production platform. The conversion of the P-19 vessel was the largest of its kind ever undertaken. The P-31 Project involved the design and conversion of an oil tanker into a floating production, storage, and offloading vessel.

The Consortium, as principal obligor, obtained $273.5 million in performance bonds for both projects from United States Fidelity & Guaranty Co. (USF&G) and American Home Assurance Co. (AHAC) (collectively, the Sureties). The Sureties, which became the secondary obligors, collected a premium of $7.5 million and named Braspetro and several financing banks as the beneficiaries (together, the Obligees).

The bonds, based on AIA Document A312, were three-page, standard form bonds containing 12 paragraphs. Each bond required the satisfaction of three identical conditions precedent to trigger the Sureties' obligations:

1. Braspetro had to notify the Consortium and the Sureties that it was considering declaring a default and try to arrange a conference with the parties to resolve the situation.
2. Next, Braspetro had to formally declare a default and terminate the Consortium's right to complete a particular contract.
3. Finally, Braspetro had to pay off that contract's balance.

The bonds thereafter obligated the Sureties to respond in one of four ways:

1. Arrange for the Consortium to complete the Contract at issue.
2. Perform the Contract themselves.
3. Re-bid the Contract and pay Braspetro damages.
4. Waive completion and either pay off their liabilities under the bonds or deny liability.

Almost immediately, the Consortium fell behind. Both the P-19 and P-31 projects were plagued by huge cost overruns, which Braspetro claimed were caused by the design-builder's substantial underbids on them and by other market conditions for which Braspetro was not responsible. The Consortium subsequently became less and less able to comply with its contractual obligations.

In response, Braspetro made several attempts to rearrange the payment scheme and schedule to attempt to get the Consortium back on track. When that appeared not to work, Braspetro took an even more drastic step, resolving to make direct and advance payments to subcontractors and suppliers and to deduct those payments from the Consortium's billed progress payments. Braspetro also attempted to involve the Sureties in the process, putting them on notice that a $189 million gap existed between the contract balance and the cost to complete the project, and informing them of its decision to make the direct and advance payments.

The Sureties apparently neither objected to the direct and advance payments nor instructed Braspetro to discontinue making them. Instead, the Sureties took a number of steps to discourage a declaration of default. Rather than offering solutions, they threatened months-long work stoppages for investigation of a default, refused to determine the validity of the bonds or to declare their intentions in the event of a default, and suggested that a declaration of default would jeopardize Braspetro's ability to obtain future bonding.

Braspetro eventually called on the Sureties to meet their obligations on the bonds. The Sureties failed to do so, arguing, among other things, that Braspetro had substantially changed the nature of the projects by making numerous changes in the requirements of the contracts, without notice to the Sureties. They argued these changes, for which the Consortium had not been compensated, vastly increased the costs of the projects and created the Consortium's performance problems. Based on this, the Sureties claimed that they were discharged from any requirement to pay any amounts under the bonds. Braspetro eventually completed the projects and sued the Sureties for the cost of the completion, costs of project delay, interest, and attorney's fees.

C. The 2002 Opinion

After a 2-month trial, the U.S. District Court for the Southern District of New York found that the Sureties had breached their obligations under the performance

[230] U.S. Fidelity and Guaranty Co. v. Braspetro Oil Servs. Co., 219 F. Supp. 2d 403 (S.D. N.Y. 2002).

[231] *Braspetro,* 369 F.3d 34 (2d Cir. 2004).

[232] These facts are taken from the 2002 Opinion.

bonds. Its lengthy opinion reviewed and rejected each of the defenses raised by the Sureties.

Central to the district court's holdings in this case was the requirement under New York law that the parties act in good faith with regard to contractual obligations. The trial court found that Braspetro "acted both reasonably and in good faith." For example, the court determined that Braspetro gave the Consortium a chance to finish the Contracts even though the Consortium was already in breach. It also cited to Braspetro having advanced monies to subcontractors and suppliers to keep cash flow moving on the project. The court further found that Braspetro satisfied the bond's specific requirements that it first notify, meet, and work with the Sureties before having the right to make a claim under the bond. In fact, the court cited to numerous meetings and pleas by Braspetro to have the Sureties assist, all of which were unanswered.

In contrast, the district court determined that the Sureties did *not* act in good faith with regard to their contractual obligations, even after having "all the information reasonably required to make an immediate decision" once Braspetro declared default:

> It is plain that the Sureties were attempting to delay any action on the Bonds. By emphasizing the length and difficulty of any investigation and the need to declare a default on the Bonds before triggering the Sureties' obligations on the Bonds, the Sureties were emphasizing the disruption that would be occasioned by any invocation of the Bonds.

Evidence showed that the Sureties continually attempted to discourage Braspetro from declaring a default on the bonds. The Sureties emphasized to Braspetro that they were entitled to stop work on the projects for at least 3, and possibly as long as 6, months while they conducted "an investigation." The court stated:

> The consequences of stopping work on the projects for a period of three months or more would have been catastrophic even if the projects remained at the same shipyards, and would have escalated the eventual cost of completion. * * * * Among other things, the work force would be demobilized and scattered, and suppliers could increase prices. * * * * Moreover, as the Sureties were fully aware, time was of the essence and Petrobras would lose millions of dollars each day in lost oil and gas revenues while the projects were halted.

The court rejected the Sureties' arguments that Braspetro had created the cost overruns and that this discharged them from any liability. It found that the Sureties' arguments were "an inaccurate after-the-fact reconstruction of the way in which the contracts were actually administered and performed." The court agreed with Braspetro that the problems were the result of the actions of the Consortium. The total cost of changed work under both contracts was fairly small (5.5 percent and 13 percent), and many of the changes occurred during the design stage, which did not disrupt the contractor's performance.

The court also rejected the notion that the advance payments to the Consortium relieved the Sureties from performance under the bonds. Braspetro made the payments to help avoid a default and properly notified the Sureties of its actions. The court further determined that the balance left on the Contracts was properly reduced by the advance and direct payments made by Braspetro to vendors, as these payments were used for the sole purpose of completing the Contracts, and they did not prejudice the Sureties.

The court was clearly impacted by the Sureties' actions in evaluating the risks associated with this project:

> [T]he Sureties did not review the construction contracts before issuing the Bonds, and there is no other evidence that they considered the payment schedules before issuing the bonds. * * * * The Sureties, having collected approximately $7.5 million in premiums for the P-19 and P-31 Bonds, …attempt to avoid their obligations under those Bonds based on modifications to provisions of the underlying contracts with which they never bothered to acquaint themselves in the first place, despite the fact that the modifications improved, rather than prejudiced, the Sureties' position. * * * * An obligee's act of leniency towards a principal does not suffice to release a surety from its obligations if the principal remains obligated under its original agreement.

The court noted that the Sureties "conducted little more than a token investigation of their options under the bonds, instead electing to prepare for the litigation that was obviously imminent." The Sureties denied liability and declined to take over the Contracts, leaving Braspetro "to try to minimize its damages by itself completing the [Contracts]."

Turning to damages arising from the Sureties' breach, the court accepted the approach taken by Braspetro, which charged the Sureties the entire cost of completing the two projects, plus liquidated damages. It found that the liquidated damages clause (which provided for damages of 0.1 percent of the contract price per day up to a maximum of 20 percent of the contract price) was enforceable, given the substantial amounts of lost oil and gas production at stake and the uncertainty of the precise value of those losses. The bond also covered the attorney's fees incurred by Braspetro in collecting against the Sureties, plus prejudgment interest. After all was said and done, the 2002 Opinion against the Sureties on both projects was approximately $240 million, plus attorney's fees and interest.

D. 2004 Opinion

The Sureties appealed almost every aspect of the trial court's decision to the U.S. Court of Appeals for the Second Circuit. The Second Circuit concluded that the trial court had correctly decided that Braspetro's termination was proper and that the Sureties were "on the hook" for all of the costs to complete the project. The only area where it disagreed with the trial court was relative to the 2002 Opinion's ruling that the Sureties were responsible to pay liquidated damages and legal fees. For the reasons explained below, this had the net effect of reducing the Sureties' $370 million liability by almost $100 million.

The Second Circuit agreed with the district court that

> (a) the Consortium had a "fundamental obligation…to deliver the completed platforms for the agreed prices"; (b) the Consortium was unable to meet this obligation; (c) that inability constituted a failure to comply with "clauses, specifications, designs[,] or deadlines" in the Contracts; and (d) such a failure was among the events of default specified in the Contracts.

All of these findings were supported by evidence that the Consortium had run out of money, had no ability to borrow any more money, and would have to stop work unless Braspetro paid it more money. These facts constituted ample grounds to support the conclusion that the Consortium was unable to complete the contracts for the original contract prices.

The Second Circuit next considered the Sureties' argument that under Brazilian law "exhaustion of contract funds" was not an event of default under the contracts. In essence, the Sureties argued that it was inappropriate for an owner to use this as a basis for termination, since running out of money was a "future," not a "present," breach of contract. The court carefully examined both Brazilian and U.S. law to evaluate issues of anticipatory repudiation of contract and how this played out with the facts. The Second Circuit held that when the Consortium informed Braspetro that it was unable to continue without additional funding or financing from Braspetro, it was "admitting" its inability to perform under the contracts "in the present, not at some point in the future." The court concluded, therefore, that it was irrelevant as to how one would interpret the law of anticipatory repudiation of contract under Brazilian law—the breach was an immediate breach, not a future one:

> [U]nder Brazilian law, as under American law, where performance of the promissor's obligation is presently due, but has become impossible due to some established, verifiable occurrence or circumstance, an immediate, or present, breach has occurred. Thus, under either Brazilian or American law, the pertinent inquiry is whether the Consortium's inability to complete the Contracts for the agreed prices constituted an immediate and present breach. We conclude that it did.

The court looked not only at the legal aspects of the Sureties' argument that exhaustion of funds was not a proper basis for default, but at the policy reasons as well. The following quote clearly demonstrates the trouble the Second Circuit had with the Sureties' position:

> Indeed, to hold otherwise would set a most troubling precedent. Were we to hold that the Consortium could not have been in breach until delivery of the P-19 and P-31 facilities was due, as the Sureties and their experts seem to urge, then, for example, where a contractor had seriously underbid a large-scale, multi-year construction contract and, early on, exhausted its own funds and financing in trying to complete the work (as did the Consortium), the owner could not claim a breach until the anticipated date of delivery had arrived. This would unfairly place the burden of the contractor's nonperformance on the owner, inevitably lead to a greater volume of litigation, and inefficiently increase the costs of large-scale construction projects.

Another argument the Sureties advanced was that Braspetro was required, after declaring the Consortium in default, to pay the Sureties the "Balance of the Contract Price" in each of the contracts, including the adjusted contract values due for extra work. The Sureties argued that the proper balance was not paid, and that this was a condition precedent to their obligations to perform.

The Second Circuit agreed that payment of the contract price was a condition precedent. However, it disagreed that Braspetro had not properly discharged this condition, since Braspetro viewed the contract balance as "zero" by virtue of having advanced substantial monies to the Consortium to keep it afloat. The Sureties argued that this money should not have been advanced and that it should have been considered part of the "contract balance." The Second Circuit concluded that this was simply a factual question, and that the district court's ruling would not be overturned when there was sufficient evidence to support its view of the facts.

The next major issue raised by the Sureties was that they were discharged from their bond obligations because Braspetro and the Consortium had implemented a direct and advance payment system that materially altered the DB contracts and prejudiced the Sureties. The Sureties claimed that this system "exhausted the monies in the contracts prematurely, leaving [them] empty-handed but on the hook for the costs of completion." This was an argument that the Sureties raised at the trial court without success.

They fared no better before the Second Circuit, which concluded that the Sureties had "simply stood by, took no action, and offered no opinion while [Braspetro] amended the Contracts and implemented the system of direct and advance payments, both of which actions were taken for the sole purpose of keeping the Projects afloat and moving forward." Quoting several other decisions in New York and in the Second Circuit, the court stated:

> It is well settled that "the law does not favor the indifferent, unseeing surety who fails to help himself"….And, as we have stated, "the policy behind surety bonds is not to protect a surety from its own laziness or poorly considered decision"…."A surety cannot rest supinely, close his

> eyes, and fail to seek important information, and then seek to avoid liability under the guaranty by claiming he was not supplied with such information."

The Second Circuit further noted that the Sureties had "stretched the definition of 'good faith and fair dealing' to its limits" by the way in which they had "artfully dodg[ed] the issue of the validity of the bonds, and in persistently threatening to stop work on the Projects for up to six months." The district court had used this as a backdrop for some of its factual findings relative to the Sureties' investigation, and the Second Circuit found that the evidence supported these factual findings. As a result, based on the record, the Second Circuit rejected the view that the Sureties were prejudiced by anything Braspetro did in trying to keep this project going. It found the Sureties liable under the bonds, and then turned to the question of the damages due from the Sureties for their breaches.

The Sureties argued that they were not responsible for the costs "paid" by Braspetro after the termination, but only for the costs that were "incurred" after the termination. The reason for this argument: the Sureties did not want to be exposed to the Consortium's unpaid bills for work performed before the termination notice. The Second Circuit rejected this contention, finding that the bonds clearly stated that the Sureties were liable for "all costs associated with completing the projects, and not merely the costs 'incurred' by Braspetro after the Consortium defaulted." As a result of this finding, the Sureties were liable for $174 million, the amount the district court found to be the cost of project completion.

The next question considered by the Second Circuit related to liquidated damages. Each contract contained a *multas moratorias* provision that provided for a delay-related "fine" or "penalty" in the amount of 0.1 percent of the total contract price per day, not to exceed 20 percent of the contract price. The district court concluded that, under Brazilian law, this provision was "equivalent" to the American concept of liquidated damages. It held the Sureties responsible for $63 million in damages under this clause, finding the clause to be valid and enforceable under New York law and the value to be a "reasonable estimate" of the damages that would arise from a delay in completion. The Sureties argued on appeal that the *multas moratorias* provisions were not reasonable attempts to value Braspetro's estimated losses and that they constituted an unenforceable penalty under New York law.

The Second Circuit devoted substantial attention to the differences between New York and Brazilian law on this issue. After this analysis, it concluded that the Sureties were correct and that the provision was not enforceable under New York law. Its primary rationale was that any projected losses in oil and gas production resulting from construction-related delays in the projects' completion would have been sustained by Petrobras, not Braspetro. Petrobras was the ultimate end-user of the oil and gas production platforms; Braspetro was neither a seller nor producer of oil and natural gas. Therefore, the court stated that while the *multas moratorias* clauses might be a reasonable forecast of the damages to Petrobras for delays, they were not a reasonable estimate of Braspetro's damages. Because Braspetro was the contracting party with the Consortium, the provision was not enforceable.

The next issue considered by the Second Circuit was the $37 million in legal and expert fees awarded to Braspetro under the bond. Its determination came down to whether Braspetro's rights under the bond to recover "legal costs" were to be construed as the legal fees incurred by Braspetro 1) in its fight with the Sureties or 2) in its administration of the default, including reprocurement and finishing the work. The Second Circuit found no clear caselaw or evidence as to the intent of this term:

> The only thing that is unmistakably clear here is that we grapple with a contract term that is susceptible to two, equally valid interpretations. And, while the parties have zealously advocated competing interpretations, they have failed to provide us with even a shred of extrinsic evidence, which might have aided us in choosing between them. Nor does the case law shed a significant degree of light on the term "legal costs" in this context. Thus, even giving full weight to the general principle that we must construe the challenged provision in the "manner most favorable to [the] claimant,"…we conclude that it is not unmistakably clear that the use of the term "legal costs" in the Bonds was intended to obligate the Sureties to pay [Braspetro's] attorneys' fees in litigation between the Sureties and [Braspetro] over the Bonds.

The Second Circuit further supported this conclusion by finding that Braspetro failed to meet its "heavy burden" of persuading the court to depart from the American Rule on legal fees, which requires that each party bear its own legal fees unless there is a clear contract provision or statute to the contrary.

Finally, the court examined whether the trial court's award of $100 million in prejudgment interest was proper. The Sureties raised several arguments, including the fact that the dollar value of the Sureties' liability was too uncertain to trigger New York's prejudgment interest statute. The Second Circuit completely rejected these arguments, noting that the Sureties could have either completed the remaining work (thereby incurring the costs themselves) or deposited the money with the court if they did not believe they had any obligations under the bond. As is evident from the way in which it characterized the Sureties' actions, the Second Circuit viewed the Sureties as having done nothing productive, that they just sat back and let Braspetro spend money:

> Instead, the Sureties filed an action seeking a declaratory judgment that they were not liable under the Bonds, and waited for that action to wend its way through the courts, while Braspetro paid hundreds of millions of dollars of its own funds to complete the Projects. The Obligees should not have been forced to devote their own resources exclusively to the completion of the Projects while the Sureties, meanwhile, huddled together plotting courtroom strategy. Having lost the use of those funds for a time, the Obli-

gees, to be rendered whole, are now entitled to prejudgment interest.

While the prejudgment interest was reduced to reflect the adjustment for legal costs and liquidated damages, it undoubtedly remained substantial.

E. Lessons Learned from the Brazilian Oil Platform Case

Transportation agencies should not look at the Brazilian Oil Platform case and conclude that it has limited application to public-sector transportation projects because the case arose out of an oil and gas project and was based on Brazilian law.[233] To the contrary, this case is exactly what agencies need to consider when viewing how sureties could behave when confronted with a major loss on a large construction project that is in trouble. The case has been heavily discussed in "surety circles" regarding the extent of investigation and exposure associated with large DB projects, and it remains at the forefront when the industry considers exposure on a performance bond. Here is a summary of some key points.

1. Sureties must act promptly when their principals default or risk paying a steep price.

The AIA A312 bond form is generally considered to be "suretyfriendly," since it gives the surety rights to receive notice, opportunities to cure, and various other procedural safeguards. But at the end of the day, when a project is in jeopardy, courts do expect that the surety will step up and do what it is paid to do. Both the Federal District court and Second Circuit, two of our country's most well-respected courts, clearly viewed the Sureties as having abdicated their duties to Braspetro. The Sureties paid a heavy price for this, even with delay damages and attorney's fees eventually being reduced from the award.

2. Asserting a "classic" surety bond defense provides no guarantee that the surety will prevail in litigation.

The *Braspetro* courts were unwilling to accept two classic surety bond defenses. One defense involved the alleged overpayment to the principal, which the Sureties argued prejudiced their right to use the contract balance to complete the work. This was rejected because the Sureties never reviewed the DB contract and relied upon when and how the Consortium was being paid. The courts also believed Braspetro's position that the moneys were being advanced to give the Consortium cash flow and an opportunity to perform, and that the Sureties were not prejudiced.

The other classic surety defense raised by the Sureties was that the number of changes made on the project was exorbitant and impacted the Consortium's ability to perform. The court concluded that 5.5 percent and 13 percent overruns for changes on a project of this magnitude were not excessive. Additionally, the courts were undoubtedly persuaded by the substantial amount of evidence that virtually all of the cost overruns were the responsibility of the Consortium's mistakes. These findings by the courts should remind transportation agencies that if there is a default, they will have some ability to recover those losses from the surety bond.

3. Parties need to ensure that their liquidated damages provisions are enforceable.

The Second Circuit rejected the owner's right to recover liquidated damages, but this was based on a liquidated damages clause that was somewhat unconventional in the United States. Parties should not be lulled into thinking that this is not an issue on public-sector projects. On large projects, particularly involving PPP or DB, the liquidated damages clauses will be heavily scrutinized if there are major delays to ensure that they are not penalties under the applicable law.

4. Owners (i.e., obligees) must fulfill their obligations under a bond if they want to prevail. Likewise, a surety must act in "good faith" with regard to its contractual obligations.

If Braspetro had not carefully and thoroughly satisfied the bonds' conditions precedent to triggering the Sureties' obligations, the results in the Brazilian Oil Platform case could have been very different. Similarly, if the Sureties had not "simply stood by, [taken] no action, and offered no opinion while [Braspetro]" kept "the Projects afloat and moving forward," we probably would have seen a different result. The actions of the parties are critical when evaluating such things as how long an owner should wait before exercising its rights to "self-help" and how long the surety has to investigate. Both the 2002 and 2004 opinions make this clear.

5. Before you sign the contract, make sure you know who is responsible for paying attorney's fees and how one might calculate interest.

Finally, a word needs to be said about the Second Circuit's overturning the award of $37 million in legal fees. The bond form for this project was AIA Document A312, and it seems hard to believe that there was no authority explaining what the term "legal costs" actually means. It is unlikely that Braspetro ever thought it had a significant risk of not collecting its attorneys' fees, and it was undoubtedly shocked by this result. This is a reminder of how the "American rule" on attorneys' fees differs from the rest of the world, where the "loser" has to pay the "winner's" attorneys' fees. An agency needs to consider this carefully in developing its bond forms and contract for the major project.

By the same token, the prejudgment interest award was a major blow to the Sureties and a stark reminder of how important these "add-ons" can be to litigation results. The Second Circuit had no sympathy for the Sureties on this, as was evident by the court's comments that the Sureties just "sat on their hands" while Braspetro spent money.

[233] These lessons learned are excerpted from MICHAEL C. LOULAKIS, DESIGN-BUILD LESSONS LEARNED (2004 ed.), A/E/C Training Technologies, LLC (2005).

XII. A GAME PLAN FOR DEALING WITH SURETY ISSUES ON COMPLICATED PROJECTS

Fortunately, very few owners experience a contractor default. Unfortunately, this may cause them to underestimate the importance of obtaining surety bonds on a specific project and understanding the implications of what might happen if issues start to arise. This is due to a variety of factors. On most "normal" construction projects, transportation agencies face little challenge in getting bidding interest from a sufficiently large pool of general contractors who can provide 100 percent bonds. Contractors generally know what is required of them in bidding these projects, and there is a strong surety market that underwrites small to midsized contractors. The typical surety issue that arises is when a contractor has problems during contract performance. When that happens, the agency's senior project management and legal staff quickly become involved and, if necessary, call upon the surety to perform through the processes described in Section V.

This is not to suggest that agencies do not face surety challenges on "normal" projects. They may feel industry and political pressure to relax bonding to allow small, disadvantaged businesses to participate. They may find themselves involved in policy debates over whether it is appropriate to bond nonconstruction work, such as the procurement of pieces of equipment or services. Also, as is evident from the Modern Continental case study and the fact that Amwest Surety Insurance Co. was placed into liquidation in 2001,[234] there are times when a major default causes the agency to take affirmative steps to protect its interests. The key, however, is that most transportation agencies have experienced procurement, project management, and legal staff to address these issues.

Contrast this with an "abnormal" project. It may use alternative project delivery methods that are not well-known to the agency's staff. It might bundle other services with construction (e.g., design, financing, procurement of rolling stock and O&M) that can create consternation in the surety market. If financing is indeed provided on the project by the contractor, there can be a question as to whether any bonding will be available. An "abnormal" project is often epitomized by complex, nonstandard form contracts that shift substantial risk to the contractor and create discomfort for the surety market. If the project is a megaproject, it will have dollar values that limit contractor competition and potentially strain the capacity of the surety market to provide full bonding. In fact, the project may be so large as to require JV teams and co-surety relationships, which complicate the response action in the event of a default. Given all of this, an agency that is about to embark on an "abnormal" project must have a game plan for addressing surety issues. This section provides 10 suggestions for developing such a game plan.

A. Thoroughly and Objectively Assess Project Delivery and Contract Packaging Options

The ever-increasing use of DB and CMAR, along with various PPP configurations, gives many transit agencies substantial flexibility to choose the right system for their particular project. The choice of delivery system should not be controlled, or even dominated, by the issue of surety bonds. Rather, the agency should conduct a thorough project delivery assessment process that evaluates, among other things, 1) the agency's goals, constraints, and internal capabilities; 2) the agency's authority, by way of statute, charter, or by-laws, to use different delivery models; 3) the interests of financial stakeholders and the perception of the public; 4) the market climate in terms of contractor interest; and 5) the need for cost competition. This process will enable the agency to have an objective view of which project-delivery system best meets the public interests.

The examples cited elsewhere in this digest provide useful guidance as to the flexibility that an agency might have. The Dulles Corridor Metrorail and Houston METRO's 4-Lines projects used a competitive, qualifications-based selection process to choose their contractors and negotiated the final price after these proposers completed preliminary engineering. Houston METRO originally "bundled" design, construction, O&M, and rail car procurement into a single contract, as was permitted by Texas law.[235] Contrast this approach with those used on RTD's Eagle project and NYC MTA's three megaprojects. RTD used a competitive DBFOM procurement process, and NYC MTA used DBB on its Number 7 Line Extension, East Side Access, and Second Avenue Subway projects.

As noted, while the ability to obtain 100 percent surety bonds should not control the final project delivery or contract packaging strategy, its availability will influence the delivery and strategy from at least two perspectives. First, the lack of availability of these bonds will encourage an agency to focus on whether it is advisable to de-bundle scope to increase contractor competition and, in cases involving financing, increase surety interest. The NYC MTA and Houston METRO projects provide excellent examples of how contracting strategies were ultimately affected by surety considerations. Second, if the project remains of a large dollar

[234] Amwest Surety Insurance Co. was put into liquidation by order of the Nebraska Department of Insurance on June 7, 2001. See http://www.doi.ne.gov/legal/amwest/amwest.htm for official Web site. Since that time, its successor entity has been winding down its affairs. As of April 2011, some bonds are still open and claims are still being liquidated, http://www.amwest.com/amwcnt/lp/website_notice_4-5-05.htm. By all accounts, it appears as if some creditors received as much as 50 percent of their claims. Amwest's collapse appears to be due to overall losses compounded by rapid expansion into a new market and insufficient quality control over underwriting in the new market. http://www.insurancejournal.com/magazines/magfeatures/2001/05/21/18034.htm.

[235] As noted in the case study in § IX, all but the design and construction scope were eventually "de-bundled" and placed into separate prime contracts directly with Houston METRO.

value, the lack of bonding will force the agency to focus on mitigation measures, such as LOCs and PCGs.

B. Reach Out to the Contractor and Surety Market Before Developing a Project Delivery and Contract Packaging Strategy

Section VI provides substantial support for the proposition that a transit agency is well-served to reach out, early in project development, to the contractor and surety industries to assess the ability to obtain bonding support for the new project. This is clearly contemplated by FTA's *Best Procurement Practices Manual*, and has helped allow agencies to "get real" over what is available for bonding. Note that this is not foolproof. Both midsized and large contractors would prefer, all else being equal, to have bonding amounts capped at some amount less than the contract value of a megaproject, even if the surety market claims to have capacity to support the full bond. However, with information gathered from all sources, the agency can then make an informed decision based on best-available information.

C. Understand Legislative Bonding Constraints and Proactively Move to Change Them

Although procurement statutes around the country have changed significantly, it is not unusual for bonding statutes to lag behind—creating conflict over what is actually required by an agency. Some statutes, such as Virginia's Public-Private Transportation Act (PPTA), specifically exempt PPTA projects from the balance of the Commonwealth's procurement requirements, including its requirement for 100 percent performance and payment bonds on construction projects. As a result, the Dulles Corridor Metrorail project, a PPTA project, was not constrained by statute to require full bonding; the decision was based on commercial issues instead.

An agency needs to consider two factors when assessing the bonding requirements created by statute. First, it should determine how firm the statute is relative to requiring bonds. As discussed in Section IX, Houston METRO and RIAC initially concluded that their respective bonding laws allowed them the flexibility to not require 100 percent performance bonds of their DBOM and CMAR contractors respectively. On the InterLink project, RIAC ultimately reached a different conclusion prior to developing a final contract price. On the 4-Lines project, Houston METRO, either because of political pressure or in realization that Texas law required bonds, eventually modified its contract to include full bonding of the DB work.

Second, agencies should not assume that simply because a bonding law exists, it cannot be amended. A prime example is the legislative initiatives taken by the Denver RTD on its FasTracks program. RTD recognized that the surety market would not support its program, and went to the Colorado legislature to change the bonding law. This approach requires foresight by the agency, as it takes time to explain to legislators why changes like this are necessary. However, it is truly the most successful way to accomplish the agency's goal of having bonding flexibility on large projects.

D. Undertake an Objective Analysis of Maximum Probable Loss in Setting Reduced Penal Sums

Experience has shown that FTA is willing to waive its 100 percent performance bond requirements for New Starts projects if the grantee provides adequate explanations of why the waiver is needed. What is less clear is how FTA determines the actual amount of the reduced bond. FTA approved a $274 million performance bond on the Dulles Corridor Metrorail project because that was the amount of self-perform work being undertaken by the design-builder. On the NYC MTA megaprojects, FTA approved a "flat" amount of $400 million for the East Side Access project, although there was a requirement that the $332 million "option" contract also be bonded.

Much can be gained by looking at how WSDOT has handled this issue of setting reduced bond amounts. Its Surety Bond Risk Assessment Guidelines compel the agency to assess maximum probable loss in an analytical, thorough, and objective manner. This is in the public's interest, and it helps answer the common question, "If the project goes south, how much bond coverage do I really need?"

E. Do Not Shift Unreasonable Contractual Risks to the Contractor

One of the selling points of alternative project delivery is that it transfers more risk away from the public agency. For example, DB reduces the *Spearin* risk that an owner faces for conflicts and errors within the completed design documents, as the design-builder is charged with finalizing the design. Likewise, depending upon when the contractor is retained, the risk of U/R and ROW acquisition can be mitigated substantially by having the contractor perform some services that are traditionally done by the agency. Using DBOM and DBFOM can shift even more risk to the contractor, as it will have responsibility to design the facility to minimize long-term maintenance costs. The contractor and surety market do not object to these types of commercial and project delivery risks, as they are fundamentally part of the business deal.

The risks that the industry strongly objects to are the unknown, unpredictable, and unquantifiable risks that are inherent in the construction process. Many of these are described in Section VI and include 1) changes of law; 2) liability for unknown, preexisting hazardous materials; 3) differing site conditions; 4) force majeure events; and 5) unreasonable and untimely acts of a government agency. From a surety perspective, placing these risks on the contractor increases both the likelihood of contractor default and the likelihood that the contractor will experience financial pressures on one project that may result in a collapse of its business everywhere.

The other elements of the contract that sureties will pay close attention to are procedural in nature, such as,

1) time frames for giving notice of problems to the owner, 2) predicates for triggering a default, and 3) remedies available to the contractor if there is a dispute. These can go to the heart of the surety's rights to cure and protect its interests.

As noted in Sections VI and VIII, the surety industry today is different than it was 5 years ago. In the past, sureties would not take proactive positions on contracts—believing that it was up to the contractor to protect its own contractual interests. If the balance sheets of the contractor and its indemnitors were strong, the surety felt protected. By the mid-2000s, after facing some significant losses, sureties decided that this *laissez faire* attitude was not working well, particularly as the number of "abnormal" projects increased. They started looking carefully at these contracts and directly advising owners of objectionable terms. If the owners did not change the terms, the sureties refused to provide bonding support—regardless of the financial strength of their contractors. As a result, many owners on large projects now find themselves "negotiating" during the bid/proposal procurement process with both the bidders/proposers and their respective sureties.

The take-away on this is clear. There have always been many compelling reasons for balanced contracts and for owners retaining certain project risk. Owners now have another reason for doing so. If they do not, they will not get bonding support for their project.

F. Analyze the Attributes of Standard Industry Bond Forms and Modify Agency Forms Accordingly

A corollary to the preceding recommendation is the content of the bond form itself. Based on the authors' experiences, many transit agencies continue to use old, outdated bond forms that are hard to understand and even harder to manage if there is a default. They also are frequently at odds with the underlying contract, particularly relative to notices for default and opportunities to cure. Additionally, while some sureties will not pay significant attention to the bond forms on small or midsized projects, they will certainly do so on "abnormal" projects, and will not hesitate to call out objectionable language to the owner.

While the AIA A312 form and the comparable EJCDC and ConsensusDOCS forms are somewhat surety-friendly, they offer the benefit of providing a clear benchmark on the process to follow if there is a default. Agencies would be well served to have their counsel compare their internal forms with these industry forms, and then have an internal policy discussion about what the agency will require for addressing notice, surety options for a default, and similar issues. Agencies also need to make sure that their contracts do not conflict with the form they ultimately use.

G. Consider Whether Bid Bonds Are Appropriate for Alternatively Delivered Projects

As Section VII demonstrates, a large number of transit agencies use bid bonds (or other forms of security) to ensure that a bidder or proposer will enter into a contract after award. While this is protocol for virtually all U.S. public-sector construction work, regardless of sector, it is not necessarily customary on megaprojects—particularly those using alternative project delivery. Some agencies that use two-phase DB procurements (i.e., qualifications-based shortlisting followed by a combined technical-price proposal) elect to forego bid bonds, on the basis that if a proposer drops out after this lengthy and costly process, there are usually good reasons. Some state DOTs modify this approach, requiring that the concessionaire provide security (typically an LOC) that the project will go to financial close after the commercial terms have been fully negotiated.

There is no black-and-white answer to the question of whether proposal security should be obtained on non-DBB construction projects. However, responses to the transit agency surveys indicate that, with only a handful of exceptions, agency policies on the use of bid bonds for alternatively-delivered projects were no different than on DBB projects. It is recommended that the agency consider proposal security on alternatively-delivered construction projects as it would any other project-specific issue, such as stipends, selection factors, and the importance of price versus technical submissions.

H. Consider Whether Bonds Are Needed for Procurement of Nonconstruction Goods and Services

The feedback from transit agencies indicates that bonds are used on a wide range of nonconstruction procurements, including rolling stock and information technology contracts. While there is certainly nothing wrong with this approach, agencies should evaluate whether this requirement affects competition or has added any value. As the surety interviews pointed out, most surety companies prefer not to bond nonconstruction services, as they are difficult to underwrite and, if there is a default, difficult or impossible to complete. This is particularly true on rolling stock, where the ability to substitute a specified item with the product of another manufacturer is frequently not viable.

FTA leaves the bonding of nonconstruction contracts to the discretion of the transit agency. Based on the survey information, it is unclear whether the agencies are making informed, reasoned decisions as to why they are using such bonds or simply doing so because of historical precedent and inertia. Particularly on large rolling-stock procurement, it would appear that a more efficient option would be to use LOCs or PCGs instead of bonds, as the vendors on these contracts are typically well-financed. These would give the agency the benefit of financial support beyond the contracting party's balance sheet to address such things as liquidated damages and warranty issues. LOCs or PCGs would likely be more practicable as a vehicle for recovering excess reprocurement costs in the unlikely event of a complete default.

I. Develop an Action Plan for Ineffective Contractor Performance

The preceding guidelines all deal with the issue of obtaining a surety bond. This guideline, and the one that follows, address perhaps an even more important question: how does the agency protect its interests if the contractor is not performing under the contract and where does the surety fit in?

On the "abnormal" project, the consequences of failure are not acceptable, either politically or financially. While there are few examples of this on large projects, the Modern Continental and Braspetro case studies, discussed in Sections X and XI respectively, provide excellent guidelines about what an owner and surety should do if there is a problem.

It is incumbent upon a transit agency, like any other owner, to have a system of project controls in place so that it can know the real status of the project. This starts with the contract's requirements for turnover of information, including electronic schedules in native format, and continues with monthly reports, progress updates, and requirements for regular meetings.

Even if the contract has these requirements, experience shows that many seemingly sophisticated agencies do not require compliance with these requirements. They also take a somewhat lax approach to evaluating time-extension and change-order requests. The philosophy is often, "We'll figure this out as the job goes along, and I really don't want to show the public that we have cost or time overruns. In any event, we can make up schedule delays by mitigation." This approach can lead to a latent problem with a contractor's performance, and potentially leads to challenges in dealing with the surety if there is an actual default.

The purpose of this guideline is not to identify precisely how an agency should manage the project. It is intended to remind agencies that they need to keep their eyes open and be mindful of problems that could be brewing, and that the contract has notice provisions and submission requirements for good reasons.

J. Develop a Well-Thought-Out Process for Keeping the Surety Involved During the Project

Even though sureties have started to spend more time assessing contract risk on the "abnormal" project, they have not demonstrated a propensity to stay actively involved and monitor how the project is proceeding. To the extent a surety does this, it is frequently by communicating solely with its principal, who is often incentivized to paint a rosier picture than the reality of the situation. Most owners do not think about whether the surety is involved while the project is going well, but very much want the surety's attention when it is not. By that time, the contractor does not want the surety to hear directly from the owner that there is a problem, as it may affect its ongoing relationship with the surety.

Some experienced industry advocates of progressive dispute resolution have suggested that the owner, contractor, and surety should agree upon a management system that enhances communication, coordination, and cooperation of the parties as the project is proceeding.[236] This management program could include such items as 1) early orientation to the project participants about the terms of the bond and what it does and does not cover; 2) processes to mitigate the possibility of the bond being triggered and to ensure a smooth transition if the bond is called; 3) regular project updates to the surety; 4) agreed-upon lines of communication and "trigger points" for notice/communications among the contractor, owner, and surety if there are problems that might lead to a notice of default; 5) a claims-monitoring system to permit early assessment and intervention if there are issues that may implicate the surety bond; and 6) the use of early dispute resolution techniques, such as facilitated negotiations, early neutral evaluations, and some form of mediation.

It may take a creative owner, contractor, and surety to agree upon these techniques. There are legal ramifications to involving a surety early, and most sureties are not staffed to manage this type of effort. However, given one of the major complaints about performance bonds—"the surety is slow to react, and they really don't have the owner's interests in mind, they just want to minimize their exposure"—an approach like this could be useful, particularly on those "abnormal" projects that have high visibility and high risk.

XIII. SUMMARY

Given the evolving market conditions for both the transit and surety industries, coupled with the unique trends in the delivery of construction projects, public owners now face cutting-edge legal issues concerning how to adequately obtain security through project bonding or other sources. The objective of this digest was to provide a thorough guidebook that transit owners can use as a tool in navigating these never-before-seen legal and contractual issues relative to surety bonding.

The authors believe that the single most useful manner in which transit owners can gain a sophisticated level of understanding about these issues is to study the precedent of what approaches are being used successfully on other projects. As a result, our research was aimed at canvassing transit, surety, and construction industry participants in an effort to explore the methods currently being used to negotiate an acceptable level of risk and project security through surety bonds and alternative forms of security.

The authors conducted extensive interviews with the major national sureties who underwrite the majority of surety bonds in the United States. A comprehensive

[236] Kurt L. Dettman, Esq., Constructive Dispute Resolutions (www.c-adr.com), is one such advocate of rethinking the surety process. As noted in § X, Mr. Dettman was associated with the Massachusetts Turnpike Authority (MTA) and was intimately involved with the dispute resolution process developed and implemented on the Big Dig projects. He has used this experience to evaluate how the surety relationship can be improved.

research survey was conducted with transit officials across the country on surety bonding and delivery systems. Relevant literature on surety bonding, current market trends, alternative project-delivery systems, and megaprojects was evaluated and assessed. An identification of all state legislation governing bonding requirements was developed, along with consideration of the pertinent federal rules applicable to bonding on state transit projects. Finally, projects using innovative methods and approaches to tackle complex surety issues were studied in depth and distilled into case studies. The highlights from the research are as follows:

- While state legislation does not currently authorize all 50 state DOTs to use innovative delivery systems, the legislative trend increasingly permits alternative delivery systems for transit agencies.
- Almost every state statute requires 100 percent surety bonding for projects over a specified contract value. However, some states are responding to the perception that surety capacity does not exist to support 100 percent bonding on large-dollar projects and allowing bonding levels at amounts less than 100 percent. FTA rules governing state transit projects also permit waivers of the 100 percent bonding requirement.
- Most transit official survey respondents report that they do not change their bonding requirements based upon which project-delivery method is chosen. Some (30 percent) of the respondents use alternate forms of project security, such as LOCs and PCGs, to make up the difference when accepting a bond at less than 100 percent of the contract value.
- No transit agencies responding to the survey had made a demand on a surety for a performance bond claim and no transit agency had experienced a contractor default on a project. Some agencies provided telephone feedback about their experiences with sureties on defaulted contracts, and the reports were generally positive. Almost every agency respondent ranked performance bonds as the most effective security, with LOCs and PCGs being considered less effective than surety bonds.
- Though bonds are not required by FTA for nonconstruction contracts, almost a third of the respondents reported obtaining performance and payment bonds for nonconstruction contracts, giving examples such as the provision of rail cars and buses and fire, snow removal, and airfield maintenance equipment.
- Surety representatives that were interviewed do not perceive that surety capacity is a problem in today's marketplace. All company representatives stated that there was no limit or cap on bonds they are willing to provide their clients for the right project, under the right circumstances. This stands in contrast perhaps to the 2000 to 2005 time period, when sureties were experiencing major losses and contractors were reporting they could not obtain bonding over $250 million.
- While surety representatives indicate that they are not leery of bonding large projects, they do resist bonding nonconstruction obligations such as extended warranties/performance guarantees, design obligations, rolling stock, gap financing, and O&M obligations.

The research gathered concerning the contractual and legal issues pertaining to surety bonding is very much impacted by the status of today's market, as opposed to any other single factor. As a result, the authors expect and hope that the guidebook serves as the most current perspective for transit industry participants in obtaining appropriate levels of security for their projects.

REFERENCES

31 C.F.R. § 223.11.

31 C.F.R. § 223.10, as authorized by 31 U.S.C.A. §§ 9304–08, 2000.

31 C.F.R. § 223.11(b).

30 Ill. Comp. Stat. 550/1.

8 Pa. Cons. Stat. § 193.1.

62 Pa. Cons. Stat. § 903.

40 U.S.C. § 3131(b).

40 U.S.C. § 3131(e).

40 U.S.C. § 3132(a).

41 U.S.C. § 253m(c) (1987 and Supp. 2002).

41 U.S.C. § 253m(c)(4) (1987 and Supp. 2002).

49 U.S.C. § 5309.

AIA Bond Form Commentary and Comparison, AIA Documents A310-2010 and A312-2010, p. 2.

Allensworth, W., et al., eds. Project Delivery Systems, *Construction Law*. American Bar Association, Forum on the Construction Industry, Chicago, 2009.

American Surety Co. v. Pauly, 170 U.S. 160, 181, 1898.

APTA Primer on Transit Funding, The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users, Extensions, and Other Related Laws, FY 2004 through FY 2011, Rev. June 2010.

Ark. Code Ann. § 18-44-503.

Ark. Code Ann. § 27-65-131(b).

Barru, David J. How to Guarantee Contractor Performance on International Construction Projects: Comparing Surety Bonds with Bank Guarantees and Standby Letters of Credit. *The George Washington International Law Review,* Jan. 2005.

Bausman, Dennis C. *Subcontractor Default Insurance: Its Use, Costs, Advantages, Disadvantages and Impact on Project Participants.* Foundation of the American Subcontractors Association, Inc., and National Association of Surety Bond Producers, Sept. 2009, p. 9.

Bramble, B. Design-Build and Other Project Delivery Methods. *Design-Build Contracting Claims* (B. Bramble and J.D. West, eds.). Aspen Law and Business, 1999.

Bruner, Philip L. and O'Connor, Patrick J., Jr. *Bruner & O'Connor on Construction Law*, Vol. 4A, chs. 12:10, 12:11, 12:102, West, Eagan, MN, 2009.

Bruner, Phillip L., O'Connor, Patrick J., and Haley, Tracey L. The Surety Analysis. *Bond Default Manual*, 3d ed., American Bar Association, 2005, p. 31.

Cui, Qingbin, Johnson, Philip, and Sees, Elizabeth. *Long-Term Warranties on Highway Projects*. Department of Civil, Construction, and Environmental Engineering, The University of Transportation Center for Alabama, Sept. 2008.

Cushman, Robert F., and Loulakis, Michael C. *Design-Build Contracting Handbook*. Aspen Law and Business, 2d ed.

David, Allen N. Bid Bonds. *The Law of Suretyship (*Edward G. Gallagher ed.), 2d ed., 2000, p. 63.

Dettman, Kurt L., Esq. Constructive Dispute Resolutions. www.c-adr.com.

Department of Transportation, Federal Highway Administration. New Special Experimental Project (SEP-15) to Explore Alternative and Innovative Approaches to the Overall Project Development Process; Information. 69 *Fed. Reg.* 59983, Oct. 6, 2004.

Docket No. FTA-2006-23697. Public-Private Partnership Pilot Program. 72 *Fed. Reg.* 2583, Jan. 19, 2007.

Dodge v. Fid. & Deposit Co. of Md. 778 P.2d 1240, Ariz. 1989.

FAR 15.304(c)(1).

FAR 15.304(c)(2).

Federal Highway Administration. *Design-Build Effectiveness Study* (Report to Congress as required by TEA-21, Section 1307(f)), Jan. 2006.

Federal Transit Administration (FTA). *Best Practices Procurement Manual*, Section 6.3.5 (revision 2005) (https://www.fhwa.dot.gov/pavement/warranty/index.cfm, last accessed Apr. 29, 2011).

First Tunneling Contract Awarded for Mass Transit Tunnel Project, NJ Transit press release, Dec. 9, 2009.

Fla. Stat. § 255.05(7).

FTA C 4220.1F. Rev. 3, ch. IV, Section 2.i(4)(e), Feb. 15, 2011.

FTA. *Lessons Learned—Turnkey Applications in the Transit Industry*, Oct. 1997.

FTA Guidance Circular 4220.1E (11).

Ga. Code Ann. § 32-2-60(e).

Gallagher, Edward G. *The Law of Performance Bonds*, ch. 4, pp. 65–75, ABA 1999.

Greenwald, John, et al. The Wreck of Morrison Knudsen. *Time Magazine*, Apr. 3, 1995, http://www.time.com/time/printout/0,8816,982764,00.html.

Griffin, D. Insurance and Bonds. *Construction Law*, American Bar Association, Forum on the Construction Industry, Chicago, 2009.

Heard Act, ch. 280, 28 Stat. 278, 1894.

http://www.agcsd.org/Departments/GovernmentalRelations/LegislationPolicy.html.

http://www.amwest.com/amwcnt/lp/website_notice_4-5-05.htm.

http://www.boston.com/news/local/breaking_news/2008/06/modern_continen.html.

http://www.boston.com/news/local/breaking_news/2009/05/modern_continen_2.html.

http://www.boston.com/news/traffic/bigdig/articles/2008/06/24/accused_big_dig_firm_files_for_ch_11/.

http://www.doi.ne.gov/legal/amwest/amwest.htm.

http://en.wikipedia.org/wiki/Big_Dig#cite_note-4 (relying on Boston Globe reports);
http://www.abc.org/Newsroom2/News_Letters/2008_Archives/Issue_29/Union_Only_Big_Dig_Price_Tag_Balloons_to_22_Billion.aspx.

http://www.highbeam.com/doc/1G1-132097257.html.

http://www.insurancejournal.com/magazines/mag-features/2001/05/21/18034.htm.

http://www.massdot.state.ma.us/highway/TheBigDig.aspx.

http://www.massdot.state.ma.us/highway/TheBigDig/FactsFigures.aspx.

http://www.massdot.state.ma.us/highway/TheBigDig/ProjectBackground.aspx#challanges.

http://www.mass.gov/ago/news-and-updates/press_releases/2008/big-dig-4582-million-global-agreement.html.

http://secure.pqarchiver.com/boston/access/635684371.html?FMT=FT&FMTS=ABS:FT&type=current&date=May+12%2C+2004&author=Anthony+Flint%2C+GLOBE+STAFF&pub=Boston+Globe&desc+STATE+PUNISHES+BIG_DIG+COMPANY+MODERN+CONTINENTAL+BARRED+FROM+BIDDING.

http://www.tollroadnews.com/node/3616.

http://en.wikipedia.org/wiki/Rolling_stock, citing to several dictionaries.

Ind. Code § 36-1-12-14(h).

Ind. Code § 36-1-12-13.1(e).

Ind. Code § 36-1-12-14(i).

Klinger, Marilyn. *Killer Bond Forms and Contract Provisions (Part 2).* International Risk Management Institute, Inc., Aug. 2007. www.irmi.com/expert/articles/2007/klinger08.aspx (last accessed May 5, 2011).

Korman, Richard. *Underwriters Reshaping Construction Industry One Surety Bond at a Time*. Northwest Construction, Apr. 2007.

La. Rev. Stat. Ann. § 38:2216(A).

La. Rev. Stat. Ann § 48:255(D).

Loulakis, M.C. and Shean, O.J. Risk Transference in Design-Build Contracting. *Construction Briefings*, No. 96-5, Apr. 1996, p. 12.

Loulakis, Michael C. *Design-Build for the Public Sector*. Aspen Publishers, 2003.

Loulakis, Michael C. *Design-Build Lessons Learned*. AEC Training Technologies, LLC, 1995–2004.

Loulakis, Michael C. *Innovative Delivery Systems and ID/IQ Contracts*. Federal Government Contracting, American Bar Association, Forum on the Construction Industry. Aspen Law and Business, 2009.

McConnell, William J., P.E. *2010 State of the Construction & Surety Industry Report*, pp. 26–32. Available at http://www.vertexeng.com/news_articles.html.

Me. Rev. Stat. Ann., tit. 14 § 871(3-A).

Mich. Comp. Laws § 129.203.

Mich. Comp. Laws § 570.101.

Minn. Stat. § 574.261(1a).

Missouri Senate Press Release. *Governor Signs Legislation to Upgrade Hundreds of Missouri Bridges*, Sept. 2007.

Mo. Rev. Stat. § 107.170(2).

Mo. Rev. Stat. § 227.100.

Modern Continental Construction Co., Inc., Case 08-14558 (Bankr. D. Mass. June 23, 2008).

Mont. Code Ann. § 18-2-201(2)(b).

Murphy, Sean P. and Saltzman, Jonathan. Accused Big Dig Firm Files for Ch. 11. *Boston Globe*, June 24, 2008.

NASBP/SFAA Joint Automation Committee. *ABC's Construction Executive Surety Bonding Section*, Nov. 2006.

NCHRP Synthesis 402. *Construction Manager-at-Risk Project Delivery for Highway Programs*. Transportation Research Board, Washington, DC, 2010, p. 75, fig. 8.

Neuman, Williams. New Bus Fuel Contract Softens Warranty that Saved Agency Money. *New York Times*, Sept. 27, 2008.

Neuschaefer, Rolf. *Project Risk Assessment*, Insurance Risk Management Institute (IRMI) (Oct. 2002). (www.irmi.com/expert/articles/2002/neuschafer10.aspx?cmd=print) (last accessed Apr. 20, 2011).

Nev. Rev. Stat. § 339.025.

Nev. Rev. Stat. § 408-357.

N.D. Cent. Code § 22-02-23.

Okla. Stat. tit. 61, § 1(A)(2).

Piper, William. The Surety's Investigation. *Bond Default Manual*, 3d ed, American Bar Association, 2005, p. 31.

Pub. L. No. 103-355, 108 Stat. 3243, Oct. 13, 1994.

Pub. L. No. 104-106 § 4001, 110 Stat. 679, Feb. 10, 1996.

Pub. L. No. 109-59, 119 Stat. 1144, *et seq*., 2005.

Ramsey, Marc. *2010 Surety Market Report*, p. S2, www.enr.construction.com/resources/special/.

Ramsey, Marc. Surety Market Report, *Construction Executive*, Nov. 2010, p. 8, http://www.constructionexecutive.com/report.html.

Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects. Nov. 2007, p. 30.

Rice, Hugh and Heimbach, Arthur, Ph.D. Why Contractors Fail: A Causal Analysis of Large Contractor Bankruptcies, *FMI Quarterly*, Issue 2, 2007, p. 56.

Said, Carolyn. Construction Giant Files for Bankruptcy. http://articles.sfgate.com/2003-02-06/business/17478044_1_oahu-dillingham-pleasanton-s-dillingham-construction-treatment-plant.

Saltzman, Jonathan. Big Dig Contractor Modern Continental Pleads Guilty. *Boston Globe*, May 8, 2009.

S.C. Code Ann. § 11-35-3037.

Seaboard Sur. Co. v. Town of Greenfield, 266 F. Supp. 2d 189 (D. Mass 2003), *aff'd*, 370 F.3d 215 (1st Cir. 2004).

Sheys, Kevin. "*SEP-15" for Transit?* Partnerships in Transit Program. Presented at Partnerships in Transit, a program of the National Council for Public-Private Partnerships, May 30, 2008.

Surety & Fidelity Association of America Statement Concerning Bonding Long-Term Warranties, Surety & Fidelity Association of America.

Surety Firms Weigh in on Construction Markets and Contractors: FMI Surety Providers Survey. Published May 10, 2010. Available for download at http://www.fminet.com/article/776.

Surety Information Office. www.sio.org/html/SBvsLOC.html (last accessed on June 30, 2010). Reprinted with permission.

Surety Market Report. *ENR Construction*, June 28, 2010.

Tenn. Code Ann. § 12-4-201(c)(4).

Texas Construction Association Quarterly. Houston Metro Project, "Parent Guarantees," Fall 2009.

Thomas, George. *How Surety Bonds Work*, Kilcullen, Wilson, and Kilcullen, 1996, www.attny.com/gciart2.html (last accessed April 22, 2011).

Touran et al. *A Guidebook for the Evaluation of Project Delivery Methods*. Transportation Research Board, Transit Cooperative Research Program, 2008.

United States Fidelity and Guarantee Company v. Braspetro Oil Services Company, 219 F. Supp. 2d 403 (S.D.N.Y. 2002).

United States Fidelity and Guaranty Company v. Braspetro Oil Services Company, 369 F.3d 34 (2d Cir. 2004).

United States Fidelity and Guaranty Company v. United States ex. rel. Golden Pressed Fire Brick Company, 191 U.S. 416, 426 (1903).

United States v. Spearin, 248 U.S. 132 (1918).

United States ex. rel. Hill v. American Surety Company, 200 U.S. 197 (1906).

Va. Code Ann. § 2.2-4338(B).

Vt. Stat. Ann. tit. 19, § 10.

Warner v. Connecticut Mut. Life Ins. Co., 109 U.S. 357, 363, 1883.

Wash. Rev. Code § 39.08.030.(3).

www.FHWA.gov.

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
Alabama	Ala. Code § 39-1-1, *et seq*.	$50,000	100% of the contract price	50% of the contract price	None	Ala. Code §§ 23-1-80 to 23-1-95
Alaska	Alaska Stat. § 36.25.010	$100,000	$100,000–$1,000,000: Bond penalty equal to 50% of the contract payable; $1,000,000–$5,000,000: Bond penalty equal to 40% of the contract payable; $5,000,000 +: Bond penalty of $2,500,000	$100,000–$1,000,000: Bond penalty equal to 50% of the contract payable; $1,000,000 – $5,000,000: Bond penalty equal to 40% of the contract payable; $5,000,000 +: Bond penalty of $2,500,000	Contractor can use multiple sureties as long as total penal limit equals minimum requirement; municipalities can exempt contracts under $400,000	Ala. Stat. §§ 19.75.111, .113, .211, .221, .330, .332, .334, .336, .338, .340, .241, .915, .920, and .980
Arizona	Ariz. Rev. Stat. §§ 34-221, *et seq*.	Payment: All public projects, except DOT contracts under $50,000; Performance: All public projects, except design-build contract with DOT under $50,000.	100% of the contract amount	100% of contract amount	None	Ariz. Rev. Stat. 28-7701 *et seq*.

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
Arkansas	Ark. Code Ann. § 18-44-503	$20,000	100% of the contract amount	100% of the contract amount	None	None
California	Cal. Pub. Cont. § 10221	Performance: $0 Payment: $5,000 (state), $25,000 (other public works)	50% of the contract price; for $250,000,000+ DOT projects: lesser of 50% of contract price or $500,000,000	100% of the contract price; for $250,000,000 DOT projects, the lesser of 50% of the contract price, or $500 million	None	Cal. Sts. & High. Code §§ 143 & 149.7
Colorado	Colo. Rev. Stat. § 38-26-106 Colo. Rev. Stat. § 24-105-202	Cities, counties, municipalities, school districts, other political subdivisions: $50,000 State projects: $100,000	50% of the contract award. For $500,000,000+: bond or other security in an amount payable under contract in 1 calendar year	50% of the contract award. For $500,000,000+: bond or other security in an amount payable under contract in 1 calendar year	Letter of credit permitted	Colo. Rev. Stat. §§ 43-1-1201 to 1209, 43-4-801 to 812, 43-3-201 to 43-3-416
Connecticut	Conn. Stat. § 49-41	Payment: $100,000 Performance: No bond mandated by state law, but if required by officer, only on $25,000+ projects	Performance bonds not required	Amount of the contract	None	None

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
Delaware	29 Del. Code Ann. §§ 6961–6962	Adjustable	100% of the contract price (bond or other security)	100% of the contract price (bond or other security)	None	Del. Code Ann. tit. 2, pt. II, ch. 20, §§ 2001 to 2012
Florida	Fla. Stat. § 255.05	$100,000	100% of contract price; for $250,000,000+, if a bond is not reasonably available, the amount that is reasonably available, but no less than $250,000,000	100% of contract price; for $250,000,000+, if a bond is not reasonably available, the amount that is reasonably available, but no less than $250,000,000	Letter of credit permitted	Fla. Stat. Ann. § 334.30; 337.251; 338.165; 338.22 to 338.251; 339.55; 348.0004
Georgia	Ga. Code Ann. § 13-10-40	$100,000	100% of contract price (other security accepted if less than $300,000)	100% of the contract price (other security accepted)	DOT, on projects that exceed $300 million, can determine that 100% bonds are not available	Ga. Code. Ann. §§ 32-2-78 to 32-2-80
Hawaii	Haw. Stat. § 103D-324	$25,000	100% of the contract amount	100% of the contract amount	The board may adopt rules granting officer authority to reduce performance and	Haw. Rev. Stat. § 103D-303

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
					payment bond amounts	
Idaho	Idaho Code § 54-1926	$0—Required on all public projects	85% of the contract amount; Construction Managers: equal to total amount of contract	85% of the contract amount	None	None
Illinois	30 Ill. Comp. Stat. § 550/1, *et seq*.	$50,000—state; $5,000—local	None	None	Letter of credit permitted	SB 3482, currently in committee; SB 3659—creates P3 for Illinois Expressway
Indiana	Ind. Code § 4-13.6-7-7 (Title 4); Ind. Code § 4-16-5.5-4 (Title 5); Ind. Code 36-1-12-14 (Title 36); Ind. Code § 8-23-9-1, *et seq*. (Title 8—DOT)	Title 4—$150,000 Title 5—$100,000 performance; all payment Title 36—$100,000 Title 8—All performance, $100,000 payment	100% of contract price	100% of contract price	Title 8—waivable if contract less than $100,000; letters of credit and other forms of surety permitted for capital improvement projects	Ind. Code §§ 8-15; 8-15.5; 8-15.7; and 8-23-7-22 through 25

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
Iowa	Iowa Code Ann. § 573.2	Performance: $25,000	75% of contract price, except where no part of the contract price is paid until after completion, in which case bond penalty of at least 25% of contract price	75% of contract price, except where no part of the contract price is paid until after completion, in which case bond penalty of at least 25% of contract price.	Waivable for small businesses in contracts for $50,000 or less	None
Kansas	Kan. Stat. Ann. § 60-1111 (Payment); Several (Performance)	Payment: $100,000 Performance: Minimums range from $0 to $10,000	Typically 100% of contract amount	100% of contract amount	None	None
Kentucky	Ky. Rev. Stat. 45A.190	$40,000	100% of the contract price	100% of the contract price	None	Pending
Louisiana	La. Rev. Stat. 38:2216(A) (1), *et seq.*; DOTD Public Works Act La. Rev. Stat. 48:250, *et seq*.	$25,000	Bond penalty equal to 50% of the contract price	Bond penalty equal to 50% of the contract price	Small businesses can provide lower bond for $200,000 or less projects; alternative forms of security permitted;	La. Rev. Stat. Ann. §§ 48:2072(C) and (D); 48:2084 through 2084.15

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
					"secondary underwriter" can serve as "primary" if needed	
Maine	Maine's Public Works Surety Bond Law of 1971, 14 Me. Rev. Stat. Ann. § 871, 23 Me. Rev. Stat. Ann. § 3054	$125,000	Bond penalty equal to 100% of contract price; For highways, roads, bridges: Bond penalty equal to at least 20% of contract price	100% of contract price	Letter of Credit permitted	None
Maryland	Md. State & Fin. Proc. Art. § 17-103	$100,000	Amount the public body considers adequate for protection	50% of contract price	Other forms of security permitted	Md Code Regs. 11.07.06
Massachusetts	Mass. Gen. Laws ch. 149 § 29	$5,000 (Commonwealth of Massachusetts) $2,000 (all other projects)	No requirements	Equal to 50% of the contract price	For P3 projects, performance bond set by Division of Roads and Bridges, but not in amount less than $300,000	Chapter 25 of the Acts of 2009
Michigan	Mich. Comp. Laws 129.201	$50,000	25% of contract price	25% of contract price	Performance bonds only required for non-MDOT projects	Michigan Comp. Laws §§ 124.401 to 124.426

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
					in excess of $50,000	
Minnesota	Minn. Stat. § 574.26-574.32	$75,000	Equal to contract price	Equal to contract price	Letter of credit permitted	Minn. Stat. Ann. §§ 160.84–160.93
Mississippi	Miss. Code Ann. § 31-5-51	$25,000	Equal to full amount of the contract	Equal to full amount of the contract	None	Miss. Code Ann. 65-43-1, 65-43-3, 65-43-7
Missouri	Mo. Rev. Stat. § 107.170(2)	$25,000 (payment); no performance bond requirement	None	Fixed by public entity	None	Mo. Rev. Stat. §§ 227.600 through .669; §§ 238.300 through .367; HB 1380–P3 to finance, develop, and operate toll bridge between Illinois and Missouri
Montana	Mont. Code Ann. § 18-2-201(1)	$50,000	Equal to contract price	Equal to contract price	A municipality may set a lower penal sum for the bond, but no less than 25% of the contract price; letters of credit permitted	None

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
Nebraska	Neb. Rev. Stat. § 52-118	Performance: $40,000 Payment: $10,000 (local); $15,000 (state)	Equal to contract price	Equal to contract price	None	None
Nevada	Nev. Rev. Stat. 339.025	$100,000	50% of contract price	50% of the contract price	None	Nev. Rev. Stat. §§ 338.161 to 168
New Hampshire	N.H. Rev. Stat. 447:16	$35,000	100% of the contract price	100% of the contract price	None	None
New Jersey	N.J. Stat. Ann. §§ 2A:44-143, *et seq*.	$100,000 (local) $200,000 (state)	100% of the contract price	100% of the contract price	N.J. Stat. Ann. 2A:44-143(a)(2) and (3): permitted to establish the penal sum at any percentage not exceeding 100%	N.J. Stat. Ann. § 27:25-1, *et seq*.
New Mexico	N.M. Stat. Ann. 1978, § 13-4-18	$25,000	100% of the contract price	100% of the contract price	May reduce payment and performance bond requirements to 50% of contract amount if more advantageous to self-insure	None

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
New York	N.Y. State Fin. Law §§ 127(2) and 136	$5,000	None	None	None	None
North Carolina	N.C. Gen. Stat. § 44A-26	$50,000	Equal to the contract amount	Equal to the contract amount	None	N.C. Gen. Stat. §§ 136-89.180 through 136-89.198
North Dakota	N.D. Cent. Code § 48-01.2-23	$100,000	Equal to contract price	Equal to contract price	None	N.D. Cent. Code § 48-02.1
Ohio	Ohio Rev. Code Ann. § 153.54	$0/Required on all public projects	Equal to contract price	Equal to contract price	None	Ohio Rev. Code Ann. § 5501.70 through 5501.83 *et seq.*
Oklahoma	Title 61 Okla. Stat. § 113	$50,000	Equal to contract price	Equal to contract price	Letter of credit permitted	None
Oregon	Or. Rev. Stat. § 279C.380	$50,000	Equal to contract price	Equal to contract price	Contracting agency may waive performance bond requirements	Or. Rev. Stat. §§ 367.800 to 367.826.; Or. Rev. Stat. §§ 383.001 to 383.019
Pennsylvania	8 Pa. Stat. § 193	$5,000	100% of contract price	100% of contract price	Letter of credit permitted	None
Rhode Island	R.I. Gen. Laws § 37-12-1	$50,000	50% of contract price	50% of the contract price	Prohibits DOT from waiving bond requirements	None

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
South Carolina	S.C. Code § 11-35-3030	$50,000	100% of the contract price	100% of the contract price	Letter of credit or parent corporate guaranty permitted; bond requirements are limited to construction phase, not design, maintenance, and finance	S.C. Code § 57-3-200; § 57-5-1310 through 1495.
South Dakota	S.D. Codified Laws § 5-21-1	$50,000 (state) $25,000 (other)	100% of the contract price	100% of the contract price	None	None
Tennessee	Tenn. Code Ann. § 12-4-201	$100,000	25% of the contract price	25% of the contract price	Letter of credit permitted	Tenn. Code Ann. §§ 54-3-101 through 54-3-113
Texas	Tex. Gov't Code § 2253.021	$25,000 to $100,000, depending on contracting authority and bond	Equal to contract amount	Equal to contract amount	The penal amount for a common law performance bond is negotiable	Tex. Transp. Code Ann. chs. 91, 222, 223, 227, 228, 366, 370
Utah	Utah Code Ann. § 63G-6-605	Performance: $0/Required on all public projects Payment:	100% of the contract price	100% of the contract price	Rules may provide for waiver of performance or payment bond when state	Utah Code Ann. §§ 63G-6-503; 72-6-118; and

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
		$100,000			considers any or all of the bonds to be unnecessary to protect the state	72-6-201 through 206
Vermont	19 Vt. Stat. Ann. § 10(8)	$100,000 (only required for Agency of Transportation projects)	Set by the Agency of Transportation	Set by the Agency of Transportation	May accept any alternative security deemed sufficient	None
Virginia	Va. Code Ann. § 2.2-4337(A)(1)	$100,000 (generally); $250,000 (state transportation)	100% of the contract price	100% of the contract price	Letter of credit permitted	Va. Code Ann. §§ 56-556 through 56-575
Washington	Wash. Rev. Code § 39.08.030	$0/Required on all projects	100% of the contract price	100% of the contract price	Permits less than 100% bonding on DOT projects in excess of $250 million, but bond must be at least $250 million	Wash. Rev. Code ch. 47.29; 47.46
West Virginia	W. Va. Code § 5-22-1	$25,000	No minimum	No minimum	None	W. Va. Code § 17-27-1 through 17-27-18
Wisconsin	Wis. Stat. § 779.14	$50,000	100% of the contract price	100% of the contract price	None	None

APPENDIX A—50 STATE LEGISLATIVE BONDING REQUIREMENTS

(Information as of September 2010)

State	General Statutory Framework—Bonds on Construction Projects	Minimum Size of Contracts Requiring Bonds	Performance Bond Penal Sum Minimum	Payment Bond Penal Sum Minimum	Deviations Permitted from Statutory Minimum Penal Sums	Public-Private Partnership Legislation
Wyoming	Wyo. Stat. § 9-2-1016(b)(xvii)(C)	$25,000	100% of the contract price	100% of the contract price	Bidders may combine bonding capacity.	None

APPENDIX B–LIST OF TRANSIT AGENCIES RESPONDING TO THE SURVEY

1. Santa Clara Valley Transportation Authority.
2. New Jersey Transit.
3. Omnitrans.
4. Metropolitan Atlanta Rapid Transit Authority.
5. Washington Metropolitan Area Transit Authority.
6. Connecticut Department of Transportation.
7. Indianapolis Public Transportation Corporation.
8. Port Authority of Allegheny County.
9. Keyline Transit.
10. Connecticut Transit.
11. San Joaquin Regional Transit District.
12. Bay Metropolitan Transportation Authority.
13. New Orleans Regional Transit Authority.
14. Lane Transit District.
15. Simi Valley Transit.
16. Spokane Transit Authority.
17. Phoenix Public Transportation Department.
18. Fort Worth Transportation Authority.
19. Billings Logan International Airport.
20. Metropolitan Transportation Authority (New York City).
21. Montachusett Regional Transit Authority.
22. Miami-Dade Transit.
23. Orange County Transportation Authority.
24. Gold Coast Transit.
25. Salem Area Mass Transit District.
26. City of Arcadia.
27. San Francisco Bay Area Rapid Transit District.
28. City of Mesa.
29. Memphis Area Transit Authority.
30. Southeastern Pennsylvania Transportation Authority.
31. San Diego Association of Governments.

APPENDIX C—SURVEY ON SURETY BONDING TO TRANSIT AGENCIES

Name of Agency:
_____

City in which the Agency is
headquartered:_____

Name and Title of Agency representative completing
questionnaire:_____

Representative's length of employment with
Agency:_____

Would you be willing to be contacted for follow-up information relative to this survey, and if so, would you please provide appropriate contact information (e.g., telephone or email)?
_____

****

Some of the questions in this survey may seem to request answers given in another section. We would appreciate your answering the question nonetheless, as it will help us in organizing and categorizing the overall responses.
Please indicate "N/A" (not applicable) where appropriate.

SECTION ONE: CONSTRUCTION PROJECT DELIVERY SYSTEMS

1. This survey assumes that your Agency's standard delivery approach for construction projects is design-bid-build (DBB), where your Agency has a contract with a design professional for 100% design of the project and a lump sum contract with a general contractor based upon its obligation to perform 100% of the construction associated with such design. Relative to your Agency's use of DBB, place a check next to any of the following that your Agency has the authority to use on a DBB project:

   - ☐ Prequalification (i.e., prequalifying general contractors before accepting bids)
   - ☐ Shortlisting (i.e., reducing the field of general contractors who will be invited to submit by evaluating their qualifications)
   - ☐ Non-low bid selection (i.e., selecting a general contractor that is not the low bidder)

2. If you checked any of the boxes in Question 1 above, please explain the circumstances (e.g., dollar value, project complexity, etc.) when your Agency is able to use these techniques on a DBB project.

   - ☐ Prequalification

   _____
   _____
   _____

- ☐ Shortlisting: _____
  _____
  _____
- ☐ Non-low bid selection: _____
  _____
  _____

3. If you checked any of the boxes in Question 1 above, place a check next to those that your Agency has actually used to date on a DBB project.

   - ☐ Prequalification
   - ☐ Shortlisting
   - ☐ Non-low bid selection

4. Place a check next to each project delivery system ("Alternative Delivery System") your Agency is authorized to use for construction projects.

   - ☐ Design-build (DB)
   - ☐ Construction management at risk (CMAR)
   - ☐ Design-build-operate-maintain (DBOM)
   - ☐ Design-build-finance-operate-maintain (DBFOM)
   - ☐ Any alternative delivery systems not mentioned above (if applicable):_____

5. Of the Alternative Delivery Systems your Agency is authorized to use, place a check next to those that your Agency has actually used to date.

   - ☐ Design-build (DB)
   - ☐ Construction management at risk (CMAR)
   - ☐ Design-build-operate-maintain (DBOM)
   - ☐ Design-build-finance-operate-maintain (DBFOM)
   - ☐ Any alternative delivery systems not mentioned above (if applicable):_____

6. Of the following Alternative Delivery Systems, place a check next to those that your Agency requires the successful bidder/proposer to provide either a bid/proposal bond or some other form of security that it will execute the contract (e.g., letter of credit, parent guarantee).

   - ☐ Design-build (DB)
   - ☐ Construction management at risk (CMAR)
   - ☐ Design-build-operate-maintain (DBOM)
   - ☐ Design-build-finance-operate-maintain (DBFOM)
   - ☐ Any other alternative delivery systems not mentioned above (if applicable):_____

7. For those Alternative Delivery Systems you checked in Question 6 above relative to bid/proposal security, place a check next to those that your Agency has the ability to waive the requirement for such security.

- ☐ Design-build (DB)
- ☐ Construction management at risk (CMAR)
- ☐ Design-build-operate-maintain (DBOM)
- ☐ Design-build-finance-operate-maintain (DBFOM)
- ☐ Any other alternative delivery systems not mentioned above (if applicable):_____

SECTION TWO: USE OF PERFORMANCE AND PAYMENT BONDS ON DBB PROJECTS

1. Does your Agency require the general contractor on a DBB project to provide a performance bond with a penal sum in the amount of 100% of the contract price?

☐ Yes ☐ No

2. If your answer to Question 1 was yes, does your Agency have the authority to waive this requirement, and if so, what are the circumstances?

_____
_____
_____
_____

3. If your answer to Question 1 was no, does your Agency require any other form of performance security (e.g., letter of credit, parent guarantee)?

_____
_____
_____
_____
_____

4. Does your Agency require the general contractor on a DBB project to provide a payment bond in the amount of 100% of the contract price?

☐ Yes ☐ No

5. If your answer to Question 4 was yes, does your Agency have the authority to waive this requirement, and if so, what are the circumstances?

_____
_____
_____
_____

6. If your answer to Question 4 was no, does your Agency require any other form of security (e.g., letter of credit, parent guarantee)?

_____

_____
_____
_____

7. If your answer to Question 4 was no, because your Agency requires the general contractor to provide a payment bond in an amount less than 100% of the contract price, what is the amount of the payment bond in relation to the contract price?

_____
_____
_____
_____

SECTION THREE: USE OF PERFORMANCE AND PAYMENT BONDS ON ALTERNATIVE DELIVERY SYSTEMS FOR CONSTRUCTION PROJECTS

1. If your Agency is authorized to use design-build (DB), place a check next to the responses below relative to your Agency's policies and/or requirements for performance bonds:

- ☐ Our Agency's policies on performance bonds for DB projects are identical to our policies for DBB projects.
- ☐ Our Agency's policies on performance bonds for DB projects are different than our policies for DBB projects.
- ☐ Our Agency has not specifically addressed our policies on performance bonds for DB projects.
- ☐ Our Agency does not require that performance bonds on a DB project cover the design component of the work.
- ☐ Our Agency allows performance bonds to be less than 100% of the contract price on projects that are over a specific dollar size.

2. If your answer to Question 1 was that your policies on performance bonds for DB projects are different from those on DBB projects, please describe the primary differences.

_____
_____
_____
_____

3. If your Agency is authorized to use DB, place a check next to the responses below relative to your Agency's policies and/or requirements for payment bonds:

- ☐ Our Agency's policies on payment bonds for DB projects are identical to our policies for DBB projects.
- ☐ Our Agency's policies on payment bonds for DB projects are different than our policies for DBB projects.
- ☐ Our Agency has not specifically addressed our policies on payment bonds for DB projects.

- ☐ Our Agency allows payment bonds to be less than 100% of the contract price on DB projects that are over a specific dollar size.

4. If your Agency is authorized to use construction management at risk (CMAR), place a check next to the responses below relative to your Agency's policies and/or requirements for performance bonds:

- ☐ Our Agency's policies on performance bonds for CMAR projects are identical to our policies for DBB projects.
- ☐ Our Agency's policies on performance bonds for CMAR projects are different than our policies for DBB projects.
- ☐ Our Agency has not specifically addressed our policies on performance bonds for CMAR projects.
- ☐ Our Agency requires that the CMAR contractor provide a performance bond on or before the date of contract award in the estimated value of the contract price (or, as applicable, guaranteed maximum price).
- ☐ Our Agency does not require the CMAR contractor to provide a performance bond until the full contract price (or, as applicable, guaranteed maximum price) has been established, even if this is after the date of contract award.
- ☐ Our Agency allows the CMAR contractor to provide a performance bond for only the value of its services (e.g., general conditions, self-performed work and fees), and requires that each trade subcontractor to the CMAR contractor provide a bond that runs in favor of both the Agency and the CMAR contractor.

5. If your answer to Question 4 was that your policies on performance bonds for CMAR projects are different from those on DBB projects, please describe the primary differences.

_____
_____
_____
_____

6. If your Agency is authorized to use CMAR, place a check next to the responses below relative to your Agency's policies and/or requirements for payment bonds:

- ☐ Our Agency's policies on payment bonds for CMAR projects are identical to our policies for DBB projects.
- ☐ Our Agency's policies on payment bonds for CMAR projects are different than our policies for DBB projects.
- ☐ Our Agency has not specifically addressed our policies on payment bonds for CMAR projects.
- ☐ Our Agency allows payment bonds to be less than 100% of the contract price (or, if applicable, guaranteed maximum price) on CMAR projects that are over a specific dollar size.

7. If your Agency is authorized to use either DBOM or DBFOM project delivery, place a check next to the responses below that are applicable:

- ☐ Our Agency mandates the type of performance security the contracting entity will require from the DB contractor (e.g., 100% performance and payment bonds, letters of credit).
- ☐ Our Agency allows the contracting entity with discretion to determine whether and how to secure the performance of the DB contractor.
- ☐ Our Agency requires the DBOM and/or DBFOM contracting entity to provide 100% performance bonds.
- ☐ Our Agency requires the DBOM and/or DBFOM contracting entity to provide 100% payment bonds.

8. Are you aware of any construction project undertaken by your Agency that used DB (or any other Alternative Delivery System where the contractor was in privy of contract with the designer) where a surety was unwilling to bond the design component of the work, resulting in only the construction work being bonded? If so, please identify the project and approximate dollar value of the project.

_____
_____
_____

9. Is there a contract price under any Alternative Delivery System in which your Agency has the authority to consider using a performance bond in a penal sum that is less than 100% of the contract price?

☐ Yes ☐ No

10. If your answer to Question 9 was yes, what is the dollar value of such contract price?

_____

11. If your answer to Question 9 was yes, has your Agency actually executed a contract where it allowed a penal sum performance bond less than 100% of the contract price?

_____

12. If your answer to Question 11 was yes, give project-specific examples of the amounts of the penal sum of the performance bond in terms of either a percentage of the contract value or specified dollar value.

_____
_____
_____

13. If your answer to Question 11 was yes, did your Agency require the contracting entity to provide other security in addition to the reduced performance bond (e.g., parent guarantees or letters of credit) to support the obligations of the contracting entity?

_____
_____
_____

14. If your answer to Question 11 was yes, place a check next to the responses that described how your Agency established a performance bond amount less than 100% of the contract price.

- ☐ Our Agency applied a specific formula to determine the amount of the bond.
- ☐ Our Agency conducted an assessment of the likely loss in the event of a default to determine the amount of the bond.
- ☐ Our Agency relied heavily on what the surety market told us regarding available bonding capacity.
- ☐ Our Agency's finance/treasury department heavily influenced the amount of the bond.
- ☐ Our Agency has guidance memoranda that assist in determining the amount of the bond.
- ☐ Other: _____

15. If your answer to Question 11 was yes, was the value of the payment bond equivalent to the value of the performance bond?

☐ No ☐ Yes

16. If your answer to Question 11 was yes, what, if any, process did you use to arrive at the value of the payment bond?

_____
_____
_____
_____

17. Has your Agency ever de-bundled or reduced the scope of a contract to ensure that your Agency could create a market to obtain a 100% performance bond?

_____
_____
_____
_____

18. Under what circumstance, if any, does your Agency use an alternate form of security (e.g., letters of credit and corporate guarantees) in lieu of performance and payment bonds on its construction projects?

_____
_____
_____
_____

19. How would you rank the following instruments in providing your Agency with the fullest protection of contractor performance on a project delivered through an Alternative Delivery System? ("3" being most effective, "1" being least effective)

Letter of Credit in the amount of 10% of the contract price ___
Parent Guarantee of all of the obligations of the contractor ___
Performance bond for 100% of the contract price ___

20. If you ranked the 100% performance bond as anything other than "most effective," please state why you deem other security instrument(s) superior to the performance bond.

_____
_____
_____
_____

21. Has your Agency ever allowed a contracting entity to use a security other than a performance bond (e.g., letter of credit or parent guarantee), yet still required the contracting entity to furnish a payment bond?

☐ No ☐ Yes

22. If your answer to Question 21 was no, did your Agency permit the contracting entity to provide something other than a payment bond to protect the interests of lower tier subcontractors and suppliers that would otherwise have been protected by a payment bond?

_____
_____
_____
_____

23. If your answer to Question 21 was yes, give project-specific examples of the amounts of the payment bond in terms of either a percentage of the contract value or specified dollar value.

_____
_____

24. Has your Agency ever required a contractor to provide a warranty bond in an amount less than the performance bond to protect the Agency for warranty obligations of the contractor?

☐ No ☐ Yes

25. If the answer to Question 24 was yes, describe the process that your Agency went through to assess the amount and terms of the warranty bond?

_____
_____
_____
_____

SECTION FOUR: USE OF PERFORMANCE AND PAYMENT BONDS ON CONSTRUCTION PROJECTS THAT ARE FUNDED BY FTA

1. In the past ten (10) years, has your Agency requested FTA to approve the use of a performance and payment bond less than 100% of the contract value on any construction project?

☐ No ☐ Yes

2. If your answer to Question 1 was yes, for how many projects has your Agency requested such approval?

☐ 1
☐ 2–4

□ 5 or more

3. If your answer to Question 1 was yes, how many such requests were approved by FTA?

□ All of our requests were approved
□ Most of our requests were approved
□ None of our requests were approved

4. If your answer to Question 1 was yes, which of the following delivery systems were used on those projects?

□ Design-Bid-Build
□ Design-Build
□ Construction Management at Risk
□ Other Alternative Delivery System _____

5. If your answer to Question 1 was yes, for those projects where FTA approved an amount less than 100% of the value of the contract, what was that amount in terms of either a percentage of the contract value or an actual dollar amount?

_____
_____

SECTION FIVE: USE OF PERFORMANCE AND PAYMENT BONDS ON LARGE CONSTRUCTION PROJECTS

1. How many construction contracts has your Agency executed over the past ten (10) years that have a contract value in excess of $200 million?

□ 0
□ 1
□ 2–4
□ 5 or more

2. If your Agency entered into at least one construction contract in excess of $200 million within the past ten (10) years, which of the following delivery systems were used on that project?

□ Design-Bid-Build
□ Design-Build
□ Construction Management at Risk
□ Other Alternative Delivery System

3. If your Agency entered into at least one construction contract in excess of $200 million within the past ten (10) years, did you ever use something other than a performance and payment bond with penal sums in the amounts of 100% of the contract value?

□ No □ Yes

4. If your answer to Question 3 was yes, please identify the project and the amount of the performance and payment bonds.

_____
_____
_____
_____

5. If your Agency entered into at least one construction contract in excess of $200 million within the past ten (10) years, using a delivery form other than DBB, how often did you require bid or proposal bonds?

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Never

6. If your Agency entered into at least one construction contract in excess of $200 million within the past ten (10) years, and you allowed the contracting entity to provide something other than 100% performance and payment bonds, what were the primary reasons for doing so?

- ☐ The surety market did not have the capacity to support providing bonds for 100% of the contract value.
- ☐ Requiring 100% bonds would have negatively impacted competition.
- ☐ The scope of the work included financing, which the surety market would not cover.
- ☐ The scope of the work included design, which the surety market would not cover.
- ☐ The scope of the work included long term warranties, which the surety market would not cover.
- ☐ Other _____

7. Are you aware of any time in which your Agency had to make demand on a surety under a performance bond for a construction project that had a contract value in excess of $200 million?

☐ No ☐ Yes

8. If your answer to Question 51 was yes, please identify the project and whether the surety performed its obligations.

_____
_____
_____
_____

9. Are you aware of any time in which a surety on one of your Agency's projects failed to honor its payment bond obligations to unpaid suppliers on a construction project that had a contract value in excess of $200 million?

☐ No ☐ Yes

10. If your answer to Question 9 was yes, please identify the project and describe the eventual outcome.

_____
_____
_____
_____

SECTION SIX: BONDS FOR NON-CONSTRUCTION CONTRACTS

1. Does your Agency have any policies that require the contracting entity to provide your Agency with performance and/or payment bonds for any non-construction contract?

☐ No ☐ Yes

2. If you answered yes to Question 1, what are the types of procurements to which these policies apply?

_____
_____
_____
_____

3. If you answered yes to Question 1, are these policies substantially the same as the policies your Agency has for DBB construction projects?

☐ No ☐ Yes

4. If you answered no to Question 3, please explain how your Agency's policies for non-construction procurements differ from your Agency's policies for DBB projects.

_____
_____
_____
_____

5. Has your Agency ever required a performance and/or payment bond for a rolling stock procurement?

☐ No ☐ Yes

6. If you answered yes to Question 5, please provide a description of a representative procurement and the type and amount of the bonds.

_____
_____
_____
_____

7. Has your Agency ever required a performance and/or payment bond for a bus procurement?

☐ No ☐ Yes

8. If you answered yes to Question 7, please provide a description of a representative procurement and the type and amount of the bonds.

_____
_____
_____
_____
_____

9. Has your Agency ever required a performance and/or payment bond for an operations and maintenance contract?

☐ No ☐ Yes

10. If you answered yes to Question 9, please provide a description of a representative procurement and the type and amount of the bonds.

_____
_____
_____
_____
_____

11. Has your Agency ever required a performance and/or payment bond for hardware, software or other IT contract?

☐ No ☐ Yes

12. If you answered yes to Question 11, please provide a description of a representative procurement and the type and amount of the bonds.

_____
_____
_____
_____

13. Has your Agency ever required a performance and/or payment bond for train control systems?

☐ No ☐ Yes

14. If you answered yes to Question 13, please provide a description of a representative procurement and the type and amount of the bonds.

_____
_____
_____
_____

END OF SURVEY
WE SINCERELY APPRECIATE YOUR HELP

****

ACKNOWLEDGMENTS

This study was performed under the overall guidance of TCRP Project Committee J-5. The Committee is chaired by **Robin M. Reitzes**, San Francisco City Attorney's Office, San Francisco, California. Members are **Rolf G. Asphaug**, Denver Regional Transportation District, Denver, Colorado; **Sheryl King Benford**, Greater Cleveland Regional Transit Authority, Cleveland, Ohio; **Darrell Brown**, Darrell Brown & Associates, New Orleans, Louisiana; **Dennis C. Gardner**, Ogletree, Deakins, Nash, Smoak & Stewart, Houston, Texas; **Elizabeth M. O'Neill**, Metropolitan Atlanta Rapid Transit Authority, Atlanta, Georgia; and **James S. Thiel**, Wisconsin Department of Transportation, Madison, Wisconsin. **Rita M. Maristch** provides liaison with the Federal Transit Administration, **James P. LaRusch** serves as liaison with the American Public Transportation Association, and **Gwen Chisholm Smith** represents the TCRP staff.

Transportation Research Board
500 Fifth Street, NW
Washington, DC 20001

ISBN 978-0-309-25832-6

Subscriber Categories: Administration and Management • Law • Public Transportation

These digests are issued in order to increase awareness of research results emanating from projects in the Cooperative Research Programs (CRP). Persons wanting to pursue the project subject matter in greater depth should contact the CRP Staff, Transportation Research Board of the National Academies, 500 Fifth Street, NW, Washington, DC 20001.