



U.S. Department
of Transportation

Successful Practices for P3s

*A review of what works when delivering transportation via
public-private partnerships*

March 2016



U.S. Department of Transportation
Federal Highway Administration



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1 Introduction: the U.S. P3 Experience

1.1 Background

For many transportation agencies in the United States (U.S.), public-private partnerships (P3s) offer an opportunity to tap new financing sources and transfer certain project delivery risks. These partnerships differ from standard procurement practice wherein the public sponsor controls each phase — design, construction, finance, operation and maintenance — of the project’s lifecycle. In a P3, a single private entity (which may be a consortium of several companies¹) assumes responsibility for multiple phases, accepting long-term risks in return for prospective rewards. Transportation P3s often feature user fees or tolls, but the concept applies as well to projects funded with traditional government resources committed via long-term contract, known generally as availability payments.² As public entities and private developers create new arrangements to deliver, operate and maintain transportation services, P3s in the U.S. continue to evolve. This document focuses on long-term concession agreements where, in addition to project design and construction, the private partner is at least partly responsible for financing and bears most or all responsibility for operations and maintenance, an arrangement typically called Design–Build–Finance–Operate–Maintain (DBFOM).

As described in Sections 1534 (a) and (b) of the Moving Ahead for Progress in the 21st Century Act (MAP-21),³ the United States Department of Transportation (U.S. DOT) has developed this report to describe how government agencies can best work with the private sector to deliver transportation facilities that protect the public interest. These policy issues remain a focus. Section 9001 of the Fixing America’s Surface Transportation Act (FAST Act),⁴ signed into law on December 4, 2015, provides for establishment of a new National Surface Transportation and Innovative Finance Bureau (the Bureau) within the U.S. DOT. A key Bureau responsibility is to “work with the modal administrations within the Department, eligible entities, and other public and private interests to develop and promote best practices for innovative financing and public-private partnerships.” As one of the first P3 resources released since the FAST Act passage, this report fully supports the mission of the Bureau.

Since the early 1990s, P3 development has produced a body of practice specific both to the U.S. market and to individual States. Among these approaches, some have emerged as “successful practices” in the simple sense that they tend to result in successful project delivery. The goal of this report is to identify these successful practices and the important issues they address. Because these practices continually

1 A private sector consortium is typically organized as a stand-alone corporate body, called a “special purpose vehicle” (SPV), made up of several companies created specifically to implement a P3 project. Companies in an SPV provide specific services such as design, construction, and facility management and typically include engineering firms, building contractors, facility maintenance companies, etc. Typically, it is the SPV that signs the P3 agreement with the public agency and contracts with other subcontractors to complete necessary work.

2 An availability payment is a payment for performance regardless of demand or use. Availability requires the asset, or a section of the asset, to be open for full public use while meeting specified performance, safety and quality standards.

3 Moving Ahead for Progress in the 21st Century Act, Public Law 112-141, 112th Congress, <http://www.gpo.gov/fdsys/pkg/PLAW-112publ141/html/PLAW-112publ141.htm>

4 Fixing America’s Surface Transportation Act, Conference Report 114-357 to Accompany H.R. 22, 114th Congress, <https://www.gpo.gov/fdsys/pkg/CRPT-114hrpt357/pdf/CRPT-114hrpt357.pdf>

evolve, of course, this document represents the current state of knowledge rather than a timeless compendium of fundamental principles.

Although highway projects provide the predominant examples, both herein and in the U.S. at large, the practices need not be exclusive to highways. The same can be said of the Public-Private Partnership (P3) Toolkit⁵ maintained by the Federal Highway Administration's (FHWA) Office of Innovative Program Delivery (OIPD). This P3 Toolkit includes numerous primers, guidebooks, and tools that provide accurate and practical information on P3 project delivery, an approach viable for many types of transportation infrastructure.

1.2 Audience and Structure of the Report

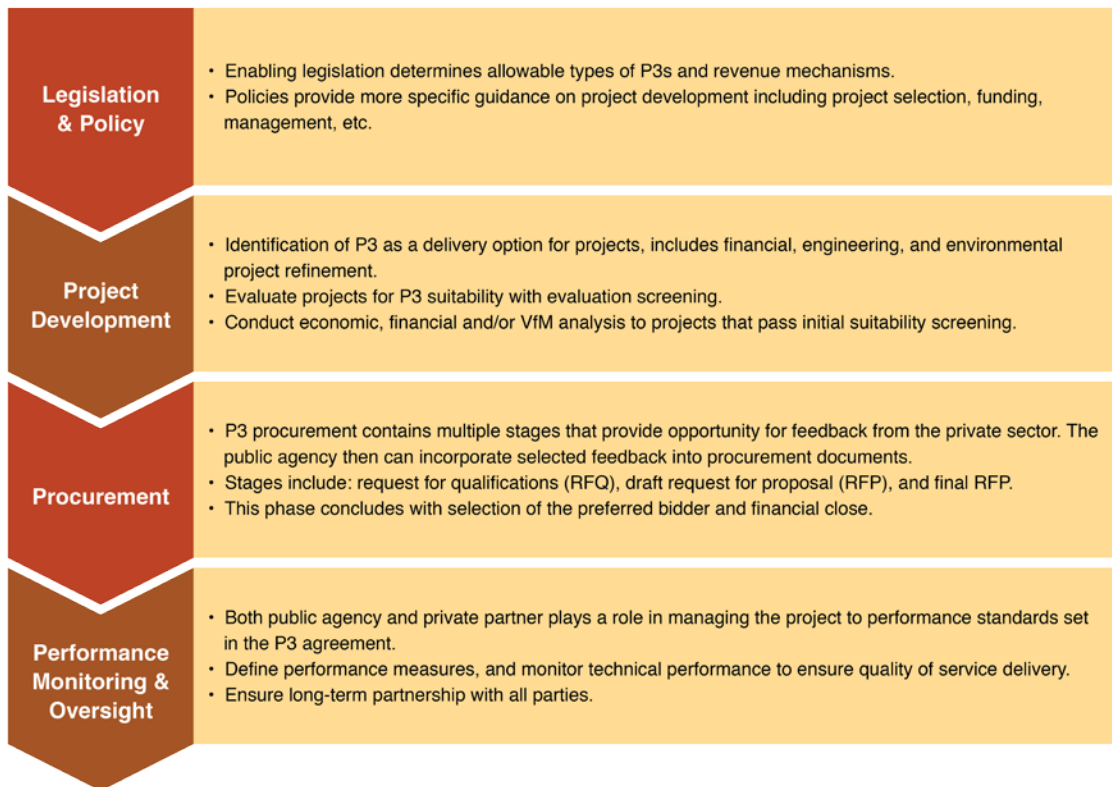
Our target audience is transportation professionals, from the public and private sectors, involved in P3 transactions. Since the report offers practical suggestions for public agencies in the early stages of establishing a P3 program, legislative and oversight staff should also find it of interest. Public agencies pursuing P3s may include State Departments of Transportation, regional authorities (such as the Los Angeles County Metropolitan Transportation Authority), bi-state entities (such as the Port Authority of New York and New Jersey), and special project authorities (such as the International Authority established to oversee a new bridge between Windsor, Ontario and Detroit, Michigan). Because most public agencies that engage in P3s are at the State government level—and because enabling legislation is passed at the State level—this document will refer mostly to States.

The successful practices included in this document were developed primarily from interviews and discussions with public entities and industry participants in U.S. P3s, and complemented by publicly available sources and published articles on the topic.

As shown in Figure 1-1 below, this document is organized around four phases of P3 program/project development: legislation and policy, project development, procurement, and performance monitoring and oversight. This framework has been used in prior U.S. DOT documents addressing P3s, and represents one approach to organizing successful practices. Given the chronological nature of this framework, however, potential trade-offs and cross-cutting issues may not be readily apparent. Nevertheless, these trade-offs are discussed throughout the document while Chapter 6 focuses exclusively on cross-cutting themes.

⁵ <http://www.fhwa.dot.gov/ipd/p3/toolkit/>

Figure 1-1: Phases of a P3 Project



In addition to this *Chapter 1 Introduction: the US P3 Experience*, which provides an overview of P3s and of the current state of the market in the U.S., this document includes the following chapters:

Chapter 2 Legislation and Policy

Topics discussed include P3 options contained within enabling legislation, the creation of a centralized P3 unit, the authority given to this P3 unit to negotiate contract terms, and the timing of legislative approvals. The section on policy covers public approvals and stakeholder input, stakeholder education, the creation of a pipeline of P3 projects, and the involvement of other departments in the public agency.

Chapter 3 P3 Project Development

Topics discussed include P3 project definition, with the inclusion of the project in long-range transportation planning documents and the relationship between the P3 project development process and the environmental documentation process. Topics also include project evaluation, with the use of multi-level screening and other analyses to select a P3 project, as well as the assessment of retained public liabilities. The section on public and industry outreach discusses the use of a proactive public outreach strategy and how to further develop projects with industry input. Finally, the last section of this chapter covers unsolicited proposals, describing how to manage the receipt of these unsolicited proposals, and how to initiate a competitive procurement after approval of an unsolicited proposal.

Chapter 4 P3 Procurement

Topics discussed include how to facilitate a competitive environment and foster private interest by shortlisting qualified bidders, using a draft Request for Proposal (RFP) process, allowing for alternative

technical concepts, and paying a stipend for unsuccessful compliant bids. The section on bid evaluation discusses the concept of “best value” and how to minimize negotiations after the selection of the preferred bidder.

Chapter 5 Monitoring and Oversight

Topics discussed include performance monitoring, with the definition of output-based performance metrics, the establishment of a system for monitoring P3 performance and how to provide performance incentives through a payment mechanism. This chapter also discusses how to establish a long-term collaborative working relationship between the public agency and the private entity.

Chapter 6 Cross-Cutting Themes

This chapter discusses important issues that are present throughout the P3 lifecycle and are particularly important for project success.

1.3 P3 Structures

To set the context for this report, the most common project delivery approaches in the U.S. are reviewed below, starting from the least amount of private involvement and risk transfer to the most.

Design–Bid–Build (DBB)

Under design-bid-build (DBB), the design and construction of the facility are procured in two separate contracts. The public entity remains responsible for setting the design specifications and then financing and operating the project. Although private contractors typically provide services in each phase, DBB is typically not considered a P3. It is, however, the traditional form of procurement for U.S. transportation projects.

Design–Build (DB)

Design-build (DB) is a project delivery method that combines two, usually separate services into a single contract. With DB procurements, transportation agencies execute a single, fixed-fee contract for both architectural/engineering services and construction. The DB entity may be a single firm, a consortium, joint venture, or other organization assembled for a particular project. With DB delivery, the design-builder assumes responsibility for the majority of the design work and all construction activities, together with the risks associated with providing these services for a fixed fee. When using DB delivery, public agencies usually retain responsibility for financing, operating, and maintaining the project.

Design–Build–Finance (DBF)

With the design-build-finance (DBF) procurement model, one contract is awarded for the design, construction, and full or partial financing of a facility. Responsibility for the long-term operations and maintenance (O&M) of the facility remains with the project sponsor. This approach takes advantage of the efficiencies of the DB approach and also allows the project sponsor to completely or partially defer financing during the construction phase of the project. With DBF delivery, the design-builder assumes responsibility for the majority of the design work, all construction activities, the financing for all or a portion of the project, and the risk of providing these services for a fixed fee. When using DBF delivery, public agencies usually retain responsibility for the long-term operation and maintenance of the project.

Design–Build–Operate–Maintain (DBOM)

The design-build-operate-maintain (DBOM) model is an integrated partnership that combines the design and construction responsibilities of DB procurements with O&M. These project components are procured from the private entity in a single contract with financing secured by the public sector. This project delivery approach is also known by a number of different names, including "turnkey" procurement and build-operate-transfer (BOT). With a DBOM contract, a private entity is responsible for design and construction as well as long-term operation and/or maintenance services. The public sector secures the project's financing and retains the operating revenue risk and any surplus operating revenue.

Design–Build–Finance–Operate–Maintain (DBFOM)

Under the design-build-finance-operate-maintain (DBFOM) approach, the responsibilities for designing, building, financing, and operating are bundled together and transferred to private sector partners. There is a great deal of variety in DBFOM arrangements in the U.S., and especially the degree to which financial responsibilities are actually transferred to the private entity. DBFOM concessions can be awarded for the construction of a new asset or for the modernization, upgrade, or expansion of an existing facility. DBFOM concessions often extend for a period of 30 to 50 years or even longer, and are awarded under competitive bidding conditions. DBFOM procurements are intended to shift a great deal of the responsibility for developing and operating surface transportation infrastructure to private sector partners. In nearly all cases, the public agency sponsoring a project retains full ownership of the project. However, as with the DBOM approach, the private partner assumes DB responsibilities along with maintenance and operations to levels stipulated in the concession agreement.

A commonality among all DBFOM projects is that they are either partly or wholly financed by debt repaid with project revenues. If future revenues by themselves are insufficient to raise all the capital needed, they are often supplemented by public sector grants or in-kind (e.g., right-of-way) contributions. In most cases, private partners will be required to make equity investments. DBFOM concessions are often attractive to public transportation agencies, as they can provide access to new sources of financing, transfer long-term life-cycle performance risk to the private sector, and deliver similar schedule and cost-efficiency benefits as DB and DBOM procurements.⁶

1.4 Most Common Project Revenue Mechanisms

To generate project revenues, U.S. P3 concessionaires rely primarily on user fees and/or availability payments.⁷ The concessionaire that directly sets and collects fees from users is typically accepting the risk that project revenues may fall short of expectations.⁹ The concessionaire receiving availability payments from a public owner, in contrast, agrees to meet specific performance standards in return for a stable revenue source. Importantly, these approaches are not mutually exclusive. The facility for which

⁶ http://www.fhwa.dot.gov/ipd/p3/defined/design_build_finance_operate.aspx (accessed September 10, 2015).

⁷ http://www.transportation-finance.org/funding_financing/financing/other_finance_mechanisms/ (accessed September 10, 2015).

⁸ Other countries have used mechanisms such as pass-through tolls. Pass-through tolls are sometimes called "shadow payment" or "shadow toll."

⁹ https://www.fhwa.dot.gov/ipd/pdfs/p3/p3_concession_primer.pdf (accessed September 10, 2015).

the concessionaire receives an availability payment may also have a user charge, which the public owner sets and collects.¹⁰ These revenues can then, in effect, fund the payment to the concessionaire.

In the U.S., highways have been the most common transportation projects to pursue P3 financing, mostly using toll-based, revenue-risk concessions. Availability payments, extensively used in Canada, Europe, and Australia, are beginning to gain a foothold in the U.S., where they have been employed in projects with and without tolls.¹¹

1.5 Current Transportation P3 Experience in the U.S.

The use of P3s for transportation in the U.S. is relatively new compared to countries such as Australia and the United Kingdom, which began using P3s more than three decades ago. The U.S. preference for public agency delivery stems in great part from State and local government access to inexpensive long-term debt via tax-exempt municipal bonds. No similar preference for municipal borrowing exists in other developed countries. As described below in section 1.5.2, however, access to tax-exempt Private Activity Bonds and low-cost TIFIA financing has significantly lowered borrowing costs for P3s.

1.5.1 U.S. DBFOM Projects

In terms of P3 contract structures, this guide is focused on DBFOM. Appendix C lists U.S. DBFOM/P3 projects that are either in operation or construction as of October 2015. In the U.S., unlike other countries with national standards, individual States set their own policies and pass their own P3 legislation. Some States have broad enabling legislation that has spurred P3 project development, other States have legislation but little activity, and others have not pursued P3s at all. As a result, there are varying levels of experience among the States with regards to their capabilities to identify, develop, and implement transportation P3s—which can present challenges to private partners used to a single national program.

One result of these differences is the market concentration in specific States with experience in P3s. For example, of the 21 highway DBFOM transactions that have reached financial close as of June 2015, two-thirds were in four States: Texas (4), Virginia (4), California (3), and Florida (3).¹² The project value of the transactions from these four States is approximately 79% of the total \$24.6 billion investment in all 21 projects.¹³ Figure 1-2 shows the value and number of U.S. highway DBFOM projects that reached financial close.

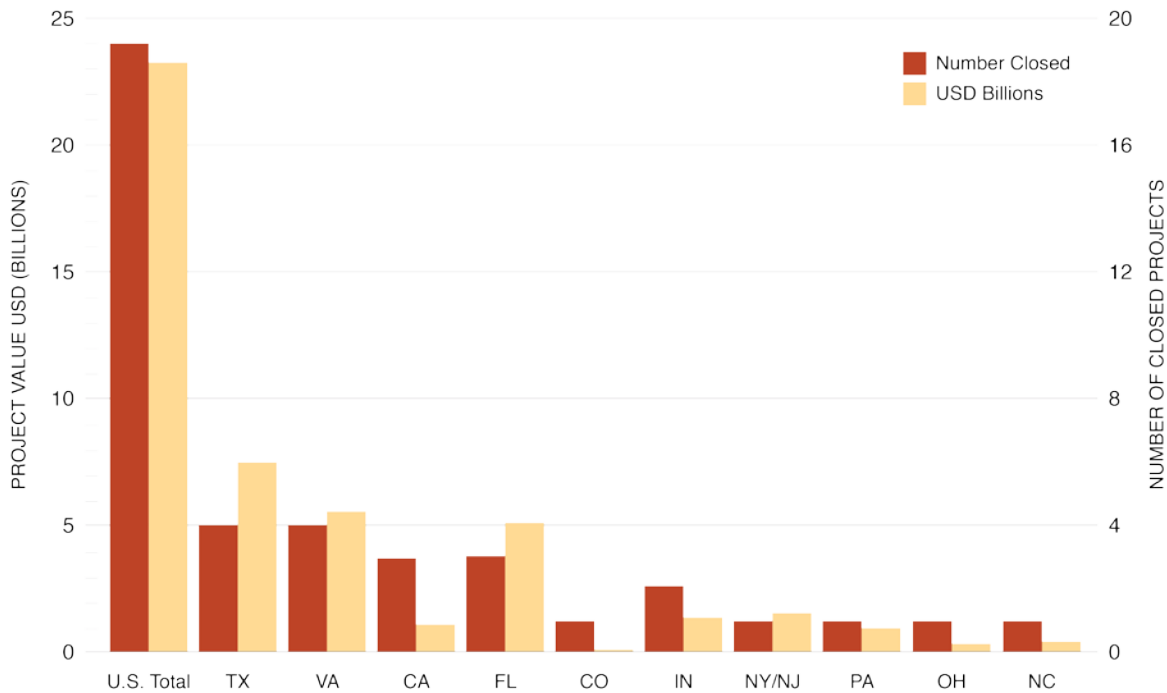
¹⁰ http://www.pwfinance.net/document/research_reports/9%20intro%20availability.pdf (accessed September 10, 2015)

¹¹ AASHTO Website “Center for P3 Excellence,” http://www.transportation-finance.org/funding_financing/financing/other_finance_mechanisms/availability_payments.aspx (accessed September 11, 2015).

¹² Public Works Financing, June 2015 Newsletter.

¹³ *Ibid.*

Figure 1-2: Value and Number of U.S. Highway DBFOM Projects in Operation or Construction (December 2015)

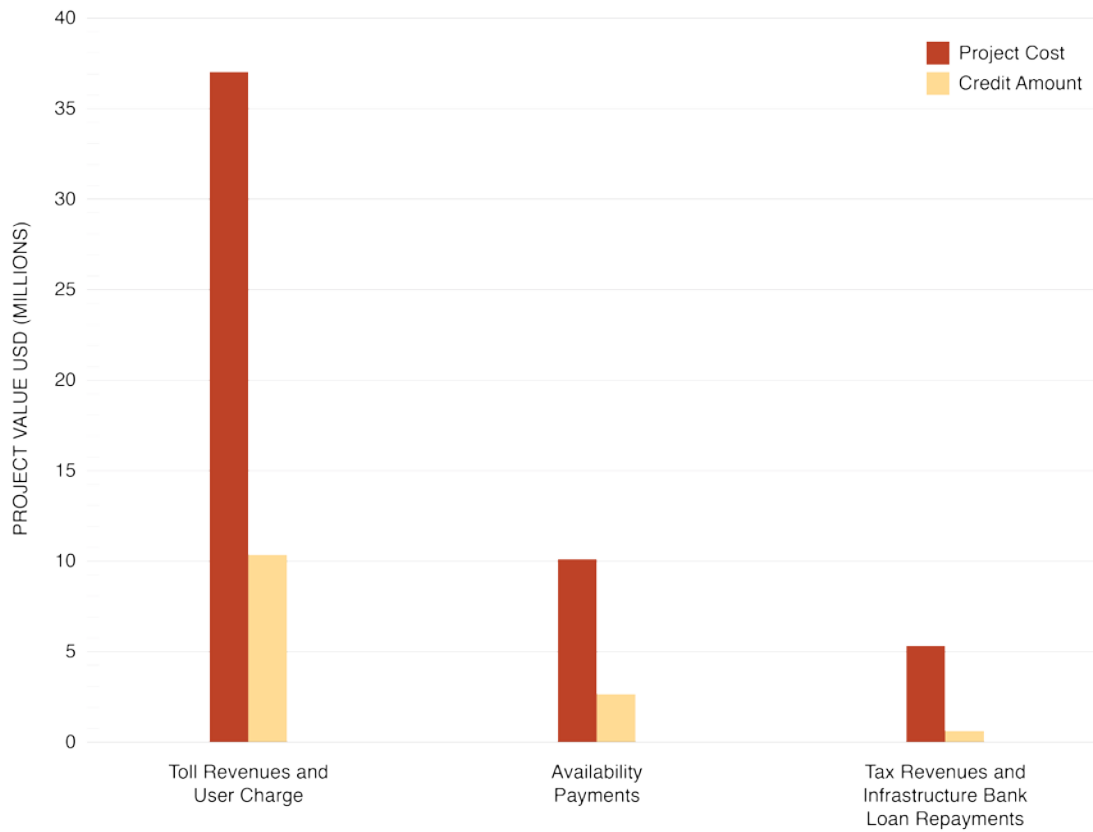


1.5.2 Federal Involvement and Financing Mechanisms

Two U.S. DOT financing tools, the specially allocated Private Activity Bonds (PABs) and the Transportation Infrastructure Finance and Innovation Act (TIFIA) credit program, have proven instrumental to the establishment of transportation P3 projects. PABs are tax-exempt debt instruments, issued by State or local governments, whose proceeds are used to construct projects with significant private involvement. The 2003 passage of the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) Act made \$15 billion in PABs available for highway, transit and intermodal projects at the discretion of the U.S. DOT. The TIFIA program primarily provides direct loans, at low rates and under favorable terms, to surface transportation projects of national or regional significance. Both PABs and TIFIA can lower the cost of debt, and thereby increase the attractiveness of P3 transactions. Many large P3 projects use both as part of debt financing.

TIFIA generally lends into projects in conjunction with senior debt, such as revenue bonds (which can be PABs) and commercial bank loans. As shown in Figure 1-3, the majority of the TIFIA P3 portfolio is associated with projects that pledge user charges and toll revenues as the form of repayment.

Figure 1-3: Total Lending by TIFIA for P3 Projects, by Primary Revenue Pledge¹⁴



¹⁴ FHWA TIFIA Project Portfolio. <https://www.transportation.gov/tifia/projects-financed> (accessed September 18, 2015).

2 Legislation and Policy

Legislation & Policy

- Determine allowable types of P3s and revenue mechanisms through enabling legislation.
- Provide specific guidance on P3s through policies that include project selection, funding, management, etc

Enabling legislation provides the framework for designing and delivering projects through a P3 and provides public agencies with the legal authority to enter into a P3. Enabling legislation: 1) sets conditions for P3s; 2) provides a framework for contracts between a public agency and private partner; and 3) allows for risk transfer between parties. Conditions determined by legislation include: allowable types of P3s and revenue and payment mechanisms. Additionally, P3 policy is used to guide public agencies in their implementation of P3 projects and, possibly, a P3 program. This policy must be consistent with the P3-enabling legislation and other existing policy including, for example, a region's long-range transportation plan. Policies provide specific guidance on project development including project selection, funding, and management.

Many States have crafted unique P3 legislation that reflects their own priorities and circumstances. State-enabling legislation can also include limits on the type of transactions, the duration of transactions, the number or location of projects, the project selection and review process, disclosure and transparency guidelines, setting toll rate controls, and assigning rights to non-toll road routes. In some instances, States have developed similar legislative approaches.

P3-enabling legislation provides a framework for the executive branch of a government to implement a P3 and create policies necessary for implementation. Some issues, for example structuring a State's P3 transaction environment, are well suited to being addressed in legislation. Other issues such as those related to defining the executive body's capabilities in implementing a P3 are addressed through policies. Finally, issues typically addressed through contracts relate to the specifics of a proposed P3 project. The parameters for contract negotiations are typically set through policy or enabling legislation.

Table 2-1 below describes typical legal issues faced in establishing a P3 program or P3 project. The issues are categorized using the typical venue of address—legislation, policy, or contracts.

Table 2-1: Legal Issues Commonly Addressed Through Legislation, Policy, or Contract

Issue Type	Description
<i>Issues typically addressed through legislation</i>	<ul style="list-style-type: none"> • Authority to enter P3 contracts • Authority to approve or review P3 contracts • Types of P3 contracts allowed • Types of facilities allowed • Types of financing/subsidies allowed • Maximum concession contract length • Establishing of P3 office • Whether unsolicited proposals are allowed
<i>Issues typically addressed through policy (but authorized through legislation)</i>	<ul style="list-style-type: none"> • Public uses of proceeds • Ability to hire external advisors • Types of procurement allowed • Whether bidder stipends are allowed • Whether administrative fees are allowed • Whether to require performance security • Criteria to evaluate potential P3 projects • Criteria to select bidder • Disclosure and transparency guidelines
<i>Issues typically addressed through contracts with parameters set through policies or legislation</i>	<ul style="list-style-type: none"> • Concession contract length • Payment mechanism • User fee/toll rates and rate setting mechanisms • Risk allocation • Revenue sharing • Dispute resolution • Buy back provisions • Refinancing provisions • Termination provisions • Output-based specifications • Ongoing performance audits or reports

2.1 P3 Legislation

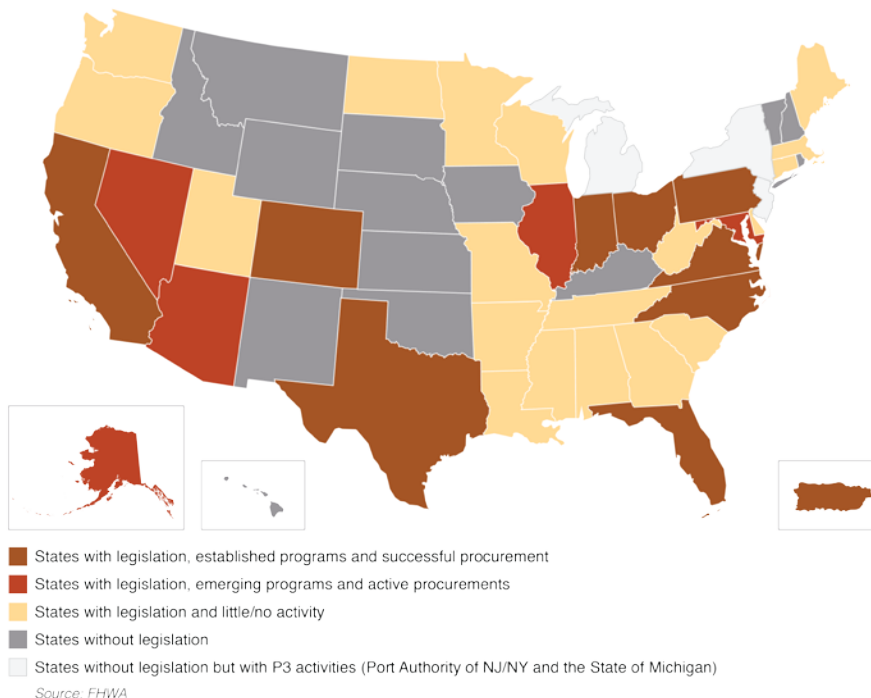
Given a conducive Federal legislative environment for P3s, States have begun to consider and pursue alternative options for delivering transportation infrastructure apart from the traditional model of municipal bonds and government grants. Putting in place legislation to enable P3s is the first step towards allowing a P3 project or P3 program to be developed and implemented. If a State intends to use Federal funds to pay for part of its P3 projects, State-level P3 legislation must also fit within the Federal P3 legal framework.

P3 legislation can also vary in terms of its scope; it can be specific to transportation or include other infrastructure sectors (e.g., water, energy, or social). Legislation can also vary according to the agencies authorized to use it; it can be limited to State DOTs or include other agencies (e.g., regional, county, or municipal).

Recent experience with P3s varies widely among States. Some have mature P3 programs and have implemented a large number of projects. In 1989, California became the first State to adopt specific P3-enabling legislation. Six years later, Virginia adopted P3 legislation with its comprehensive *Public-Private Transportation Partnership Act*. In 2009, Puerto Rico enacted P3 legislation, which included the establishment of the Puerto Rico Public-Private Partnership Authority. Other States have since followed

suit and are launching P3 pilot projects and programs. Still others are contemplating P3-enabling legislation, while some have not advanced P3 legislation to any degree. It is common for States to revise their P3 legislation in light of project experience. For example, the Florida legislature has revised Florida Department of Transportation's (FDOT's) P3-enabling statute seven times since it was first adopted in 1991.¹⁵ Figure 2-1 below depicts the states and territories that have enacted some form of enabling legislation.

Figure 2-1: State Adoption of P3-Enabling Legislation¹⁶



2.1.1 Allow for a Variety of P3 Options in Legislation

State governments determine which delivery methods, including P3 options, are appropriate for the delivery of their transportation infrastructure. P3-enabling legislation typically addresses key issues that affect the scope of P3s within a State. Enabling legislation can allow for a variety of P3 options, including types of P3 structures (e.g., DBFOM, DBF, etc., as discussed in Section 1.3), allowable revenue and payment mechanisms (as discussed in Section 1.4), and allowable financial instruments. P3 legislation that provides for a range of delivery options maximizes flexibility for the public agency and can provide a greater degree of certainty for the private sector.

Large transportation projects typically face unique circumstances and challenges. In order to address these challenges, State agencies that are permitted to deliver infrastructure through P3s need to have a range of options to raise revenue for projects and allocate risk between the private and public sectors. In terms of risk allocation, enabling legislation can allow for P3 delivery options that include transfer of risk

¹⁵ Transportation Research Board, Strategic Highway Research Program. "The Effect of Public-Private Partnerships and Non-Traditional Procurement Processes on Highway Planning, Environmental Review and Collaborative Decision Making" <http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2prepubC12.pdf> (accessed September 18, 2015).

¹⁶ FHWA, with updates by project team

related to not just design and construction—but also O&M. Enacting legislation that allows State or local agencies a variety of options for implementing P3s has been successful.

In terms of revenue, enabling legislation can explicitly allow for P3s to access different compensation mechanisms including user fees/toll revenues and availability payments. Enabling legislation for availability payment projects needs to allow the public agency to obligate funding for multiple years.¹⁷ Some States, however, explicitly prohibit the use of availability payments for P3s, and legislation allowing for user fees may limit the way this revenue can be used. For example, P3 legislation could prohibit the use of tolls on a facility once project debt has been repaid.¹⁸ Enabling legislation often allows the State to dedicate various revenue sources to a P3 project, including taxes, fees, special assessments, and impact fees.

Financial instruments used in P3s can include revenue bonds, TIFIA loans, PABs, and other forms of public financing. Enabling legislation that explicitly allows the use of any combination of Federal, State, or local tools to finance the project has led to successful P3 projects. Final determination of the use of public financing for a particular P3 project can still be determined by the applicable authority such as a State finance authority.

Key Points:

1. Legislation forms the foundation upon which P3 projects and programs are based.
2. Well-crafted and flexible legislation incentivizes private sector participation in P3s.
3. The complex nature of projects requires enabling legislation that is flexible enough to accommodate many different circumstances.
4. P3-enabling legislation can allow for multiple P3 structures, project repayment mechanisms, (including tolls and availability payments), financing options, and risk allocations.

Example: State of Texas

In Texas, P3 legislation authorizes the use of a wide range of P3 structures for the delivery of road, highway and rail projects. Many delivery options are allowed, such as DB, DBB, and DBFOM. Each has been used by the State's Strategic Project Division to deliver high-value projects over the years. The use of availability payments is not permitted.

Texas has developed legislation, per Chapter 223 of the Texas Transportation Code, allowing the State and regional governments to enter into flexible Comprehensive Development Agreements (CDAs) with a private entity. By design, CDAs are adaptable to the particularities of a project. They allow for delivery options such as DB, DBB, and DBFOM, based on project circumstances. Furthermore, to procure work under CDAs, the State can issue RFPs but can also receive and accept unsolicited proposals. Finally,

¹⁷ *Ibid.*

¹⁸ FHWA, "Challenges and Opportunities Series: Public Private Partnerships in Transportation Delivery". http://www.fhwa.dot.gov/ipd/pdfs/feedback_forum/challenges_and_opportunities.pdf (accessed September 18, 2015).

flexibility is retained regarding transfer of the transportation asset, which can occur either after the end of construction (if the CDA were for DB) or after the CDA term expires, in the case of DBFOM P3s.¹⁹

Since Texas enacted its flexible P3-enabling legislation, the State has closed P3 transactions worth approximately \$12 billion.²⁰ The adaptable nature of CDAs in Texas has been an important feature of the State's P3 program.

2.1.2 Create a Centralized Unit with Specialized Skills to Implement P3 Transactions

Although most State DOTs have robust policies and processes for completing projects through traditional procurement, P3 project procurement requires specialized skills – including expertise in risk allocation, private financing, and concession contracting – that are not typically found in DOTs. Agencies that have pursued a pipeline of P3 projects have found that implementation through a centralized P3 unit is helpful. Centralizing implementation of P3 project delivery within a statewide team with technical, financial, and legal expertise has been beneficial to the delivery of P3 projects.

If P3 opportunities are sporadic, a dedicated unit may not be justified, and if public facility ownership or governance is fragmented, it may be politically complicated to set up a P3 unit. However, States that have completed multiple P3 transactions have found that concentrating P3 implementation into one unit facilitates the execution of transactions and reduces transaction costs for the public agency. Centralized units can also help standardize, to the extent possible, procedures across P3 transactions. Centralized communications may increase coordination and streamline decision-making. Additionally, a P3 unit sends a strong message about the State's commitment to completing multiple transactions by the investment of resources.

Organizationally, P3 units can be centralized within or outside of a State DOT. In either case, it is crucial for the unit to have the authority and expertise to deliver P3 projects. An effective P3 staff has technical expertise, project management skills, procurement training, as well as commercial and financial backgrounds. It is also very helpful for other State agencies, such as finance and legal (e.g., through the State's budget division and attorney general), to assign the right individuals to work with the P3 unit; this helps those departments understand the impact of P3 projects, and it centralizes the knowledge in dedicated staff members.

Even with such a specialized unit, additional expertise likely will be needed from external consultants and advisors. A State agency charged with administering a P3 project or program needs to determine the appropriate mix of staff and external consultants based on cost, value, and projected needs. Certain discrete tasks, such as legal or financial advisory services on individual transactions, can be well suited for the use of outside expertise.

Table 2-2 below delineates typical roles of a public agency and consultants.

¹⁹ Toner, D. AASHTO Subcommittee on Right of Way and Utilities. May 2, 2012. "Design-Build: The Texas Story" <http://bit.ly/1o1vfc5> (accessed September 18, 2015).

²⁰ KPMG. P3 Program Comparison. October 15, 2013. Massachusetts Department of Transportation: <http://bit.ly/1ujeHfA> (accessed September 18, 2015).

Table 2-2: Typical Roles for Public Agencies and Consultants in Administering P3s²¹

Role	Public Agency	Consultant
Program Direction	<ul style="list-style-type: none"> • Sets overall program direction and program and project goals 	
Project Selection	<ul style="list-style-type: none"> • Screens and selects projects 	<ul style="list-style-type: none"> • Technically evaluates potential projects
Project Evaluation and Structuring	<ul style="list-style-type: none"> • Makes decisions regarding the structure of the agreement based on evaluation 	<ul style="list-style-type: none"> • Prepares traffic and revenue studies, ridership estimates, etc. • Conducts risk assessment, financial feasibility, value-for-money (VfM) analyses, and provides financial advice
Project Procurement	<ul style="list-style-type: none"> • Sets Request for Qualification (RFQ) and RFP goals • Selects partners and bids • Leads final negotiations 	<ul style="list-style-type: none"> • Develops language for RFQ and RFP • Advises on contract structure and risks • Assists final negotiation
Project Monitoring	<ul style="list-style-type: none"> • Monitors performance and administers contract 	<ul style="list-style-type: none"> • Assists with inspections and performance monitoring

Key Points:

1. A centralized unit with P3 expertise is helpful for completing multiple P3 transactions.
2. Executing P3 projects requires specialized technical, finance, and legal expertise, often with the involvement of outside consultants.
3. Centralized units can be either inside or outside the State DOT structure.

Example 1: Centralized P3 Team within a State DOT: Texas Department of Transportation (TxDOT)

The State of Texas charged TxDOT with implementing the State’s P3 program for the procurement and development of highways. Within TxDOT this effort is led by its Strategic Project Division (SPD) with primary assistance for financial and legal analysis coming from the Innovative Finance and Debt Management Office (DMO) and the Office of General Counsel (OGC), respectively, and additional procurement and oversight assistance from the affected local district. The group is tasked with a wide range of responsibilities to bring P3 projects to fruition. The SPD is involved in P3s from the initial planning stages, including conducting feasibility studies of candidate projects, through procurement, development and operations. Additionally, SPD oversees turnpike corridor system planning and undertakes toll feasibility planning. Procurement policies and right of way acquisition are also overseen by the SPD for P3s.²² Currently, guidelines and procedures that guide TxDOT staff are found in Texas Transportation Code Chapter 223, which outlines the statutory framework and procedures for CDAs, including: description of authority, department obligations and limitations on financial participation, and provides guidance on the process, project identification, screening, development and implementation for both solicited and unsolicited CDA projects.

²¹ Federal Highway Administration Office of Innovative Program Delivery. *Establishing a Public-Private Partnership Program: A Primer*. Guidance Document, Washington, DC: U.S. Department of Transportation, November 2012.

²² Texas Department of Transportation. (2014). Strategic Projects. TxDOT.gov: <http://www.txdot.gov/inside-txdot/division/strategic-projects.html> (accessed September 20, 2015).

Originally, TxDOT did not centralize P3 project development and responsibility within one unit, but over time found that a dedicated staff helped in delivering multiple projects. As the P3 project pipeline in Texas grew, the dedicated team led by SPD became essential to the management of the P3 program.

Example 2: Centralized P3 unit under the Secretary of Transportation: Commonwealth of Virginia

The Commonwealth of Virginia's Office of P3s (VAP3) reports to the Commonwealth's Secretary of Transportation. The mission of VAP3 is to identify, develop, procure and implement a statewide program for project delivery under the 1995 Public-Private Partnership Transportation Act (PPTA) that is consistent with the transportation goals of the Commonwealth.

The VAP3 staff develops multimodal solutions consistent with State, regional, and local policies, plans, and programs and encourages competition for private sector investment. VAP3 staff is also responsible for developing, publishing, and using standardized procedures and policies. As such, VAP3 published the 2014 PPTA Implementation Manual and Guidelines to provide guidance on project identification, screening, development, procurement and implementation of P3 projects. Additionally, it outlines guidance regarding the legal, organizational, reporting, and funding framework of VAP3. VAP3 has produced guidance on VfM analysis, risk management, and public engagement. VAP3 has published a pipeline of potential P3 projects, which is updated annually (the latest is from 2013), available online, and is developed through a public involvement process.

VAP3's responsibilities include day-to-day project management from project identification and development through completion of P3 procurement. To achieve this, VAP3 has a small, dedicated staff of professionals with backgrounds in law, finance, project development, environmental, engineering, construction, and maintenance and operations. The office is fully funded by the Commonwealth and uses outside consultants (legal, financial, and technical business consultants) to supplement their staff. The director of VAP3 reports directly to the Secretary of Transportation and works in coordination with the Commonwealth's seven transportation agencies.

The strong governance structure for Virginia's P3 program was further expanded in 2014/2015.²³ Additional stakeholder input and comment opportunities were added throughout the process as well as the addition of two separate check points where the public agency and Secretary of Transportation complete a Finding of Public Interest (FOPI) which affords an initial finding and then a final determination that advancing a project into P3 delivery is in the public's best interest before a contract is executed with the private sector.

Other enhancements to the VAP3 process include a Transportation Public-Private Partnership Advisory Committee, which consists of: two members of the Commonwealth Transportation Board, representatives such as the staff directors (or designees) of the House and Senate Money Committees, a Deputy Secretary of Transportation, the chief Financial Officer of the relevant agency, and a non-agency public financial expert member. Additional members may be assigned based on special project characteristics by the Secretary of Transportation. The Transportation Public-Private Partnership Advisory Committee will be briefed on potential P3 projects and will make a recommendation to the relevant agency whether a project should advance to the P3 project development stage.

²³ http://www.virginiadot.org/office_of_transportation_public-private_partnerships/resources/UPDATED_PPTA_Implementation_Manual_11-07-14_FOR_POSTING_TO_WEBSITE_-_changes_accepted.pdf (accessed September 10, 2015)

Example 3: Centralized P3 unit outside the State DOT: Commonwealth of Puerto Rico

The Puerto Rico Public-Private Partnerships Authority (P3A) was created to regulate and facilitate P3s in Puerto Rico across all departments and ministries.²⁴ The P3A has been in existence since 2009 and is housed within the Government Development Bank. It is responsible for the implementation of public policy regarding P3s in Puerto Rico. P3A staff develops every project in collaboration with other public entities, and the support of financial, technical, and legal consultants.

The P3A is governed by a five-member board of directors, including three appointed by the Governor, one selected by the President of the Senate of Puerto Rico, and another selected by the Speaker of the Puerto Rico House of Representatives. The Board is headed by the Puerto Rico Government Development Bank president and day-to-day operations are headed by an executive director.

2.1.3 Enable P3 Authority to Set Policy and Contract Terms

Even with broad and flexible P3 legislation, many aspects of P3 implementation are best resolved through policy actions and contractual agreements. When infrastructure is delivered through a P3, the complexity typically increases, requiring flexible policies and contracts. Therefore, it is desirable that a P3-enabling legislation provides the State DOT or P3 authority the ability to set policy and contract terms.

Legislation should largely place the control of policy development and contract negotiations in the hands of the designated P3 authority, whether within or outside the State's DOT. Matters such as the mechanics of project identification and screening are typically best handled through public policy guidelines developed by the relevant P3 authorities. This is also the case for contract terms that may need to be flexible to accommodate the particularities of projects. Overly prescriptive legislative requirements may impede the development of the flexible policy measures necessary to successfully implement a P3 project or program. State procurement rules, such as small business goals, typically apply to P3s, although the legislation can also provide waivers for P3 projects, depending on the State's policy priorities. The P3 legislation should take into account the potential impact of existing State regulations on P3 projects and address potential conflicts.

Key Points:

1. Allow State agencies to arrive at customized solutions, within the State's legislative bounds.
2. Allow P3 authority to develop policy and negotiate contracts.

Example: Pennsylvania DOT (PennDOT)

Pennsylvania's legislation allows for the Commonwealth's P3 authority to actively create, implement, and revise policy as needed. In 2012, the Pennsylvania legislature passed Act 88 (74 Pa.C.S. 9101-9124), which enables the Commonwealth "to enter into agreements with the private sector to participate in the delivery, maintenance, and financing of transportation related projects."²⁵ To execute the duties of implementing P3 projects, the legislation created the Office of Public-Private Partnerships (P3 Office), within PennDOT.

²⁴ Puerto Rico Public-Private Partnership Authority (www.app.gobierno.pr/?lang=en). (accessed September 23, 2015)

²⁵ Pennsylvania Department of Transportation. (2014). Implementation Manual and Guidelines. PennDOT Office of Policy and Public Private Partnerships: <http://www.dot.state.pa.us/public/Bureaus/press/P3/P3ImplementationManual&Guidelines.pdf> (accessed September 23, 2015).

Pennsylvania's P3 Office was instrumental in developing policy documentation on how implementation of P3s should be conducted, specifically the "*Implementation Manual & Guidelines for P3s*" (the 'Manual'). It describes the organization of the Commonwealth's P3 unit and its oversight committees, and provides guidelines on project identification, project screening, project development, and project procurement. The P3 Transportation Board has been approved the manual for use by PennDOT, other eligible public entities, and interested private entities.

The Manual recognizes the intrinsic need for flexibility in transportation projects, especially P3s. It states, "...each P3 project is unique and that certain elements set forth in this manual may not apply in all circumstances and may be subject to change as deemed appropriate by the [P3 Transportation] Board in certain circumstances." Additionally, it recognizes that the Manual may need to be revised in the future to continue meeting the mission of the Board and the objectives of the Commonwealth's P3 program. Changes to the document are to be made "based on the recommendations of the P3 Office, in consultation with the Secretary and subject to approval by the P3 Transportation Board."

The P3 Office used the *Implementation Manual & Guidelines for P3s* most recently in the Commonwealth's Rapid Bridge Replacement Project P3, which will replace 558 structurally deficient bridges across the Commonwealth. This innovative bundling of infrastructure replacements underwent the Commonwealth's prescribed identification and screening process by the P3 Office. The P3 Transportation Board then approved the P3 Office's proposal to undertake the rapid bridge replacement project as an availability payment based P3. The benefits of delivering this work as a P3 are projected to include time and money savings, minimization of disruption to the traveling public, and long-term life-cycle transfer as each bridge includes a 25-year maintenance performance based term.

2.1.4 Establish Upfront Legislative Involvement and Approvals for P3 Projects

Some States have legislation requiring that the legislature review or approve any project that is delivered via a P3. Legislative provisions that allow for entities other than the project sponsor to review or approve of P3 projects are intended to protect the public interest. However, if approvals occur late in the process, it can result in higher costs for both public and private partners due to the uncertainty involved in the provision.²⁶ Uncertainty regarding project approvals can make private partners less willing to incur proposal development costs—or pursue P3 projects. Involving legislators and other entities upfront in the P3 project development process can help to alleviate this uncertainty. In general, if legislative approval is desired for P3 projects, it is more effective to require them as early in the development process as possible and ideally before the private sector becomes heavily engaged.

Legislative approval can take many forms. Some States require that their legislative finance committees, or leaders of the committees, meet to approve or disapprove a proposed P3 project or agreement. Other States may not require legislative approval *per se*, but require that project sponsors present the legislature and governor with a letter of intent to initiate deal negotiations once a private partner has been selected. These types of late stage requirements can hamper private participation in P3s by introducing additional uncertainty after significant private investment.

Clarification of the level and extent of legislative involvement can be further complicated in States with self-help counties, such as California. In California, there is strong local control by statute where counties have funding authority for transportation infrastructure, for example, Measure R funding the Los Angeles County Metropolitan Transportation Authority. However, a statewide transportation agency, Caltrans,

²⁶ FHWA, "Challenges and Opportunities Series: Public Private Partnerships in Transportation Delivery."
http://www.fhwa.dot.gov/ipd/pdfs/feedback_forum/challenges_and_opportunities.pdf.

has title to transportation facilities, but cannot propose P3 projects or act as the project sponsor because it does not control the funding mechanism. It is important to take into account the individual State's structure for legislative decision making for P3s and find a balance between the public sector's need for input and private sector's need for certainty.

Key Points:

1. Legislative approval may protect the public interest, but can increase cost and uncertainty for both public and private partners, if it comes late in the procurement process.
2. Securing legislative approval, if required, as early as possible in the development process decreases uncertainty for all project participants and increases the private sector's willingness to engage in the partnership.

Example: Transportation Code of the State of Texas

The Transportation Code of the State of Texas covers CDAs under Chapter 223, "Bids and Contracts for Highway Projects," Subchapter E. "Comprehensive Development Agreements," and sets an authorized list of P3 projects and the timeframe in which to meet specific project milestones. Sec. 223.201(f) lists all of the projects for which TxDOT can enter into a CDA. Sec. 223.201(j) stipulates the dates by which the department must provide updates on each project's status to the commission as well as meet project milestones such as obtaining appropriate environmental clearance. Prior to entering into a CDA, TxDOT must present to the commission a full financial plan for the project, including cost methodology and cost proposals.²⁷ TxDOT is governed by the Texas Transportation Commission, which consists of five members appointed by the governor, with the consent of the Texas Senate and the TxDOT executive director, who is selected by the commission.²⁸

In the 2013 legislative session, SB 1730 was enacted, which amends Sec. 223.201 and grants authorization for 12 TxDOT CDA projects (six new projects and six previously authorized projects). Additionally, SB 1730 amended the list of specific projects eligible for CDAs in Sec. 223.201(f) and extended the expiration date for CDA authority over the projects until fiscal year 2017.²⁹

2.2 P3 Policy

A legal framework is only the foundation for the implementation of a P3 project or program. Most legislation leaves policy development to an appointed entity, typically a State's DOT.

Establishing clear P3 policies and guidelines demonstrates what the government plans to do with its P3 program and projects and how it plans its implementation. Clear P3 policies help to minimize confusion and risk for all parties by making government actions more predictable. This section describes successful practices related to establishing clear P3 policies and provides key points and examples.

2.2.1 Educate Stakeholders and Cultivate Political Support

P3 projects include structures and concepts that differ from traditional procurement. This can lead to misconceptions about P3s for elected officials, agency staff, and the general public. Education on what

²⁷ <http://www.statutes.legis.state.tx.us/Docs/TN/htm/TN.223.htm> (accessed September 24, 2015).

²⁸ <http://www.txdot.gov/inside-txdot/administration/commission.html> (accessed September 24, 2015).

²⁹ Texas Department of Transportation. 83rd Legislative Session Building on Success. <http://ftp.dot.state.tx.us/pub/txdot-info/sla/83rd-legislative-summary.pdf> (accessed September 24, 2015).

P3s are, how they are structured, and their costs and benefits is key to obtaining public support and buy-in and can clarify any misconceptions.

Obtaining public approvals and political support can be facilitated when stakeholders fully understand the P3 structure and project proposed—including the costs and benefits. During interviews with sponsoring agencies, private entities, and stakeholder groups, the following concepts related to P3s were raised as needing additional education: ownership structures, risk transfer, responsiveness to public needs, the justification of profit-making of private partners, and revenue generating mechanisms. These concepts generally are not included in traditional public infrastructure projects.

Developing P3s is a complex process that can be difficult to understand. P3s require learning new information and changing behavior, which can be met with resistance. It is important to manage the transition, tackle fears, and help change habits. Education is a key component of this process and it should not be confined to staff that are directly working on P3 projects. Educating a broad range of staff on P3s is an essential part of developing support for P3 projects within agencies.

Similar to other major projects, cultivating political support for P3 projects is further strengthened by having political “champions.” Ideally, political champions are leading policy makers or elected officials who understand the benefits and costs of the project and can fully articulate them to the public. Political champions act as a rallying force, reaching out to influential parties and to the general public to drum up support for a project.

Key Points:

1. P3 projects contain concepts that differ from traditional procurement, particularly risk transfer, ownership structures, etc., and this sometimes leads to misconceptions.
2. An understanding of P3 concepts is needed to facilitate public buy-in that leads to project approvals.
3. P3 projects benefit greatly from project “champions” who can serve as a rallying force to gather political and public support.

Example: Los Angeles County Metropolitan Transportation Authority

The Los Angeles County Metropolitan Transportation Authority, commonly referred to as Metro, is the agency responsible for planning, coordinating, designing, building, and operating transportation assets within its 1,433 square-mile service area. Metro undertook an effort to educate both internal staff and external stakeholders on P3s. Metro began to consider P3s at the request of the Metro Board in 2008. After investigating the appropriateness of P3s for transit and highway projects, Metro developed a Strategic P3 program in 2009.

Before pursuing a pilot project, Metro developed an approach to screen potential projects. Metro initially screened 81 projects and identified 14 high potential candidates, which were narrowed down to six projects, three highway and three transit projects.

In developing its P3 program, Metro identified misconceptions about P3s from both internal staff and stakeholders. Because of this, Metro found it necessary to better communicate the definition of P3s and the purpose of the P3 effort. Metro prepared a one-page handout with essential P3 terms and definitions for internal staff, allowing them to quickly reference P3 definitions and share it with other staff, board members, and stakeholders. It also developed training sessions on P3s and it even offered the opportunity for selected staff to attend two graduate school courses taught at California State University Northridge

on P3s. Approximately 30 staff members attended the courses. The courses were also offered to Caltrans staff with which Metro staff members worked on highway P3 candidates.

Metro also provided extensive information on their website regarding the program, with sections covering such topics as: P3 definitions and benefits, current P3 projects, P3 FAQs, and a link to related innovative project delivery initiatives.³⁰ Currently, Metro is evaluating three highway P3 projects, including the High Desert Corridor, State Route 710 North, and Sepulveda Pass. The first two are going through the environmental process and the latter is going through a further project definition stage. Beyond these projects, Metro is open to additional P3 projects, including considering an unsolicited bid policy.

2.2.2 Seek Early Public Approvals and Stakeholder Input

A key concern articulated by many private partners is the unpredictability of public agency decision-making. Intervention by the government particularly at a late stage can derail projects, and thereby wasting public and private time and resources. However, input from agency staff and the general public is necessary to ensure that projects delivered through P3s meet public needs. P3 policies can address these competing concerns at the program level by balancing the private sector's need for assurances with the desire to incorporate public decision-making. Allowing for robust public deliberation and participation through early agency approvals (separate from legislative approvals) and stakeholder input is a successful practice that not only reduces changes at a late stage but also increases transparency.

P3 procurements typically include negotiations between parties. Upfront, comprehensive public decision making can make contract negotiation smoother by limiting public approvals after a certain point in the process. A steering committee or working group that includes a mix of public officials, State agency representatives, and other stakeholders can foster public debate and political buy-in for P3 projects. P3 policies that clearly state how recommendations and findings from steering committees or working groups are considered early on in the P3 process can provide assurance of political support to all stakeholders, and be helpful to both a P3 program and individual projects.

Private bidders invest significant time and resources in the P3 procurement process. In addition to being clear about when public decisions and approvals are made, successful implementing agencies have found that frontloading any public decision-making, not just legislative, helps assure private partners. This also helps to decrease uncertainty, and protects both public and private investment during the procurement process and during negotiations.

Key Points:

1. Political support of P3 program or project creates an environment conducive to private investment.
2. Political support also allows for public debate and participation early in the process—and supports transparency about when decisions by a public agency need to be made.
3. Limit additional public agency approvals later in the procurement process to avoid delays during negotiations and reduce bidder uncertainty.

Example: Commonwealth of Virginia

The Commonwealth of Virginia's Office of Public-Private Partnerships (VAP3) is responsible for developing, procuring and implementing a statewide program for projects. In its PPTA Implementation

³⁰ Metro website: http://www.metro.net/projects/public_private_partnerships/ (accessed September 20, 2015).

Manual, the VAP3 clearly outlines and highlights the public decision points within the P3 procurement process. The process includes an early point of evaluation for the Transportation Public-Private Partnership Advisory Committee, the agency oversight board, and stakeholders. This transparent support and approval structure helps provide assurances to private partners that the Commonwealth has a reliable, structured process that starts to address political risk early.

VAP3 enjoys strong support from the Commonwealth's Secretary of Transportation, who acts as a champion of the Commonwealth's P3 efforts. Moreover, VAP3 has strong connections with other government executives, both in transportation and other branches of government.

2.2.3 Create a Pipeline of P3 Projects

In the case of States that are considering multiple projects for P3 delivery, an organized project list ("pipeline") sends a strong, positive signal to the private sector about the public agency's commitment to P3s. Engaging a new public partner can be time consuming and expensive, and a project pipeline allows prospective private parties more time to investigate opportunities and prepare proposals. Private partners typically start establishing consortia for a P3 procurement six months to a year in advance of the formal procurement launch.

An additional advantage of a P3 project pipeline is the ability for the public agency to leverage lessons learned to future procurements. The process of putting together a project pipeline can also be used to improve other aspects of project development including education of stakeholders, public outreach, and project evaluation.

Key Points:

1. A pipeline of projects sends a strong message about the commitment of the public sector.
2. Project pipelines allow prospective concessionaires more time to investigate opportunities and prepare proposals.

Example: Virginia PPTA Project Pipeline

The Commonwealth of Virginia started publishing a publicly available P3 project pipeline in 2012, which has been subsequently updated in 2013.³¹ The P3 project pipeline contains projects that the VAP3 identified as potential candidates for P3 procurement and serves to help VAP3 proactively identify, develop, select, prioritize, and deliver P3 projects.³²

Candidate projects can be identified by the VAP3, VDOT, various Virginia transportation agencies, metropolitan planning organizations, or other stakeholders. Candidate projects are then advanced by the VAP3 team through a high-level screening and a more detailed-level screening process that incorporates both financial and business considerations, as well as feasibility and desirability of a potential P3.

Projects that pass the multi-level screening are then assessed durations of short-term (less than 2 years to implement), medium-term (between 2-4 years), and long-term projects (between 4-6 years). VAP3 publishes its draft pipeline and invites the public, organizations and agencies, to comment and suggest adding or deleting projects from consideration. VAP3 then provides a final recommendation to the PPTA Steering Committee as to whether the projects are an appropriate P3 project and the level of priority that the Commonwealth should put on each project. The pipeline is not considered static or final and is used as a dynamic planning tool, which is updated on a yearly basis as projects are screened and advanced and new potential projects are added.

2.2.4 *Involve All Relevant Departments of the Public Agency Early*

Many State DOTs have an office, division, or department that takes the lead during the early P3 development process. However, in later stages of the lifecycle of a P3 project, other departments of the sponsoring agency will play an important role, such as the procurement offices and local district offices. It is critical that staff members in all relevant departments of a sponsoring agency be involved with the P3 project as early as possible to ensure project delivery that meets all stated goals and is considered a successful practice.

Most State DOTs have local district offices that serve particular areas of the State, typically organized by groups of counties. These local district offices are usually responsible for maintaining transportation infrastructure within their jurisdiction. In many instances, P3 projects are led by staff in the State DOT headquarters with financial, policy, and/or legal expertise, but once a P3 contract is finalized, the responsibility for administering the P3 contract falls to local district offices. The local districts are usually tasked with construction oversight, and performance management and monitoring after the asset is made available. Many decisions related to the P3 project are made during procurement, which have significant impacts on construction and monitoring. As such, involving local districts as early as possible in the P3 project development process can ensure smoother project delivery.

Involving local districts early in the P3 development process gives them an opportunity to provide technical input based on their expertise in construction, project management, and operations. Moreover, involving the future contract managers and administrators throughout project preparation and procurement will help them to develop the expertise, skills, and mindset they will need to successfully implement the P3 after financial close. For example, if a P3 project is going to be output-based rather than

³¹ http://www.p3virginia.org/wp-content/uploads/2014/12/2013_Conceptual_and_Candidate_PPTA_Map.pdf (accessed September 20, 2015).

³² 2012 PPTA Pipeline Final document: http://www.p3virginia.org/wp-content/uploads/2015/04/Complete_Final_P3_Pipeline_05_24-2012.pdf (accessed September 20, 2015).

relying on traditional construction specifications, the districts will need to fully understand the approach in order to monitor the project effectively.

Similarly, other relevant departments of the sponsoring agency should be involved with the P3 project to ensure successful outcomes. For example, if the P3 project includes a payment mechanism that differs from what is typically used for traditional projects, it is important for staff members from the finance department understand the different concept. Involving the relevant departments as early as possible allows for staff members to provide input and could lead to smoother administration of P3 projects.

A successful model that several DOTs are using is to have the centralized P3 unit leading the project preparation and procurement with the district strongly involved in a support role. The district takes the lead once the contracts are finalized and the project has reached financial close supported by the centralized unit during construction and operations. This model effectively uses all the agency's skills and expertise. The model also ensures continuity, which is relevant because projects in which the public and/or the private team completely changes after financial close typically encounter capacity issues and serious conflicts.

Key Points:

1. Local districts oversee P3 projects once contracts are finalized.
2. Involvement of local districts at early stages of project development allows for continuity, district input and familiarity with the P3 project structures.
3. Involvement of other relevant departments of the sponsoring agency, such as finance and legal, is a key element of success.

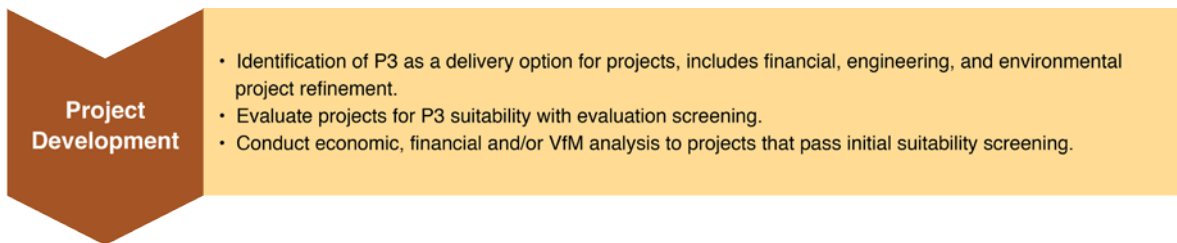
Example: Ohio Department of Transportation (ODOT)

ODOT delivers its P3s through a separate P3 unit, the Division of Innovative Delivery. The Division of Innovative Delivery was created to develop and implement ODOT's P3 policy and program. The Division of Innovative Delivery evaluates potential projects for P3 feasibility and assists in the evaluation and development of procurement options for a project.³³ This office is housed in the headquarters office of ODOT under the Office of the Assistant Director/Chief of Staff. Final decisions for proceeding with a P3 project lies with the Division Director: further legislative approval for P3 projects are not needed in Ohio.

The local districts of ODOT are organized by geography and tasked with the maintenance of all lane miles, roads, and bridges within their jurisdiction. The Division of Innovative Delivery includes at least three local district staff at every phase of P3 procurement. The local district staff is identified as responsible for the project at the district level. Local district staff is involved in the short-listing of P3 teams, development of technical requirements, and contract development and negotiation. ODOT's P3 team expressed that this policy helps with gaining the support of the district staff, along with leveraging their technical expertise.

³³ <http://www.dot.state.oh.us/Divisions/InnovativeDelivery/Pages/About-the-Division.aspx> (accessed September 20, 2015).

3 P3 Project Development



Project development for P3s focuses on selecting, evaluating, and structuring potential projects. This process should be guided by legislation and policy, such as long-term transportation planning objectives. Projects suitable for P3s are typically large and complex, providing opportunities for innovation in delivery. As with any major project, extensive analysis determines economic benefits and financial viability. Assuming the project passes these tests, analysis is conducted to compare the value of a P3 delivery with a conventional procurement.

After selecting a project to be delivered through a P3, public agency staff refine technical and financial details such as scope, schedule, revenue streams, performance measures, etc. This effort typically involves conducting preliminary engineering and developing a procurement strategy—which includes bid evaluation criteria and drafting the P3 contract. The optimal structure of a P3 depends on the characteristics of the project, the goals and capabilities of the public agency, and the quality and capabilities of potential private partners. Key elements considered in this phase include the allocation of responsibilities and risks; compensation mechanisms; concession terms; performance standards; and performance management processes.³⁴

3.1 Project Definition

The P3 project definition stage does not differ substantially from traditional project definition. The generated information includes high-level project concepts, sketch level cost estimates (capital and operating), and projected revenues (if applicable). This preliminary project information serves as the foundational data for key assumptions used for further evaluation.

A fundamental project definition step occurs as part of the National Environmental Policy Act (NEPA) process. During NEPA, a project’s purpose and need are refined and a range of alternatives (including a “no-build” scenario) is developed. The NEPA process is critical to general project development and has clear implications for the eventual P3 configuration. The project alternative chosen through the NEPA process will have a major impact on costs and revenues. For instance, the project definition could result in the construction of additional bridges over wetlands, increasing project cost, or the removal of a toll road segment from the project, reducing operating revenues.

3.1.1 Select P3 Projects from Long-Range Transportation Plans

A long-range transportation planning effort helps States articulate a vision for the future by evaluating proposed projects in light of public goals. Projects consistent with the long-range plan have been analyzed

³⁴ USDOT Federal Highway Administration. *Key Considerations in Implementing a Public-Private Partnership (P3) Program*. 2014. http://www.fhwa.dot.gov/ipd/pdfs/fact_sheets/factsheet_key_considerations_impementing_p3s_072314.pdf (accessed on September 20, 2015). USDOT Federal Highway Administration. *Conducting Procurement for Public-Private Partnerships (P3s)*. 2013. https://www.fhwa.dot.gov/ipd/pdfs/p3/factsheet_06_conductingprocurement.pdf (accessed on September 20, 2015).

for technical feasibility and transportation benefits. Ensuring that projects chosen for P3 delivery are consistent with long-range transportation plans helps P3 project success.

By Federal statute, each State's DOT prepares and maintains a long-range, 20-year plan encompassing a broad range of transportation improvements, i.e., highway, transit, passenger rail, and non-motorized. Based on this plan, the State's DOT also develops a shorter-term (4-6 years) Statewide Transportation Improvement Program (STIP) showing specific projects designed to further the goals of the long-range plan. The STIP must be fiscally constrained, and approved by the Federal Highway Administration (FHWA) and Federal Transit Administration.³⁵ Major metropolitan regions within each State develop similar long-range plans and regional Transportation Improvement Programs (TIPs) under the auspices of Metropolitan Planning Organizations (MPOs). Development of the STIP and TIPs includes input by local governments and their constituents. Projects that have undergone the vetting process for inclusion in a STIP or TIP have demonstrated their importance, are technically viable, and are fiscally constrained.

Many State DOTs ensure continuity with existing plans by stipulating that projects considered for P3 be consistent with long-range transportation plans. Projects in metropolitan areas should be consistent with local transportation plans and should be included in the MPO's Transportation Improvement Program as appropriate.

If the law permits unsolicited P3s, it may result in proposals for projects not included in the STIP or long-range transportation plans. Enabling legislation or other P3 policies can establish a process by which State DOTs determine whether unsolicited proposals have merit and meet established State needs. Additionally, using P3s as a way to circumvent the long-range transportation planning process and the project prioritization that results from it is detrimental to non-P3 projects that were higher on the STIP priority list before the P3 project "jumped the queue." Even if P3 projects do not affect the availability of funding for other projects, the fact that a P3 could be built earlier than previously planned in the STIP could detract agency staff from implementing other projects.

Key Points:

1. Projects considered for P3 delivery should be of significant importance to the State, demonstrated by inclusion in long-range transportation plans.
2. Projects considered for P3 delivery should be consistent with local priorities.

Example: Commonwealth of Virginia

Virginia's PPTA Implementation Manual and Guidelines provides guidance to the VAP3 for the identification, screening, and prioritization of projects considered P3 candidates. VAP3 staff may identify candidate projects from local transportation agencies in this process. Agencies are to identify candidates from STIP and various planning documents, such as a six-year improvement program, a port authority master plan, etc. A high-level screening report is required of all candidate projects. The report includes

³⁵ "Fiscally constrained" means that the funding for the project is reasonably expected to be available, and if it is in the first two years of the Transportation Improvement Program (TIP) in a nonattainment or maintenance area, funding for the project is available or committed. A P3 project may be "reasonable" if there are clear expressions of support by appropriate local/regional decision makers and a strategy exists for securing necessary approvals. Other indicators of "reasonableness" include if a State or local jurisdiction has had past success in implementing P3s, the State has P3-enabling legislation in place, or efforts are underway to enact legislation. http://www.fhwa.dot.gov/planning/guidfinconstr_qa.cfm (accessed on September 20, 2015)

criteria to ensure that the project is consistent with Federal requirements, meets a public transportation need, and addresses priorities identified in State, regional, and/or local transportation plans.³⁶

3.1.2 Inform the P3 Process with Data from NEPA Analysis and Inputs from the Public Involvement Process

NEPA requires, to the fullest extent possible, that the policies, regulations, and laws of the Federal government be interpreted and administered in accordance with its environmental protection goals. NEPA requires the examination and avoidance of potential impacts to the social and natural environment when considering approval of proposed transportation projects. Conclusion of the NEPA process results in a decision that addresses multiple concerns and requirements. As a result, a new-build project is likely to undergo an extensive NEPA review.

The NEPA outreach process requires extensive coordination among government environmental resource agencies. The typical process involves professional input from engineers, urban planners, and environmental specialists, as well as public input from citizen groups, public meeting participants, interest groups, and public officials. The project alternatives and their design features are developed and, ultimately, a “preferred alternative” is selected. The public involvement process can benefit the P3 process as well, ensuring that the public understands how the process will work. Beyond meeting regulatory requirements, potential P3 projects that have completed the NEPA process are more attractive to private investors because physical parameters and environmental mitigation requirements have been defined. Furthermore, projects that have completed the NEPA process have usually assembled considerable data essential to further P3 evaluation.

Typically, the environmental process ends with the issuance of a decision document that explains the reasons for a project decision and summarizes any mitigation measures. Although a completed NEPA process provides assurance, it can also limit both the public and private appetite for innovative approaches that would entail revisiting the environmental review. For this reason, government agencies may choose to begin a P3 procurement process before the end of the NEPA process. In this situation, public agencies must be careful that the P3 procurement does not prejudice the environmental process, particularly by affecting the choice of alternatives. Additionally, initiating the P3 procurement process before the end of the NEPA process will likely lower private sector interest in the project, since by definition the project may not proceed as expected due to the possibility of a delayed or “no-build” option being selected through the environmental process.

Public agencies can initiate the P3 procurement after a draft environmental document has been completed, or even earlier. If they elect to begin before the draft environmental document, care should be taken with how alternatives are discussed in public meetings and documents. Any RFQ or RFP would need to be structured so that bidders are prepared to deliver the project for any of the alternatives considered in the NEPA process. Government agencies must primarily carry out the environmental process. While an agency may engage consultants to carry out the technical work and lead some of the outreach efforts, government sponsorship and leadership is essential to the integrity of the NEPA process.

Although baseline project data needed for the P3 processes can draw from the NEPA process, the analyses conducted via the two processes can differ. Most notably, traffic or ridership forecasts developed for NEPA review will differ from those used to evaluate P3 feasibility. For NEPA, the focus is on assessing the

³⁶ http://www.virginiadot.org/office_of_transportation_public-private_partnerships/resources/UPDATED_PPTA_Implementation_Manual_11-07-14_FOR_POSTING_TO_WEBSITE_-_changes_accepted.pdf (accessed September 10, 2015)

viability of alternatives, selecting a preferred option, and determining the maximum possible environmental impact. For the P3 process, the focus is on developing user forecasts with a high degree of certainty, which may result in lower forecasted activity than in the NEPA process. The government entity should make clear which forecast is being used and for what purpose.

To address these environmental and procurement issues, some States have adopted the use of a pre-development agreement (PDA) that allows the private entity to participate in preliminary project design at a reduced or deferred cost, in exchange for right of first refusal during the procurement phase. The intent of the PDA approach is to incorporate private partner input to arrive at a preferred alternative that will be less costly to implement and operate—and generally to accelerate the development timeframe. PDAs are employed when the project has yet to advance to a level where a defined technical approach with firm pricing and financing can be proposed. Therefore, the private partner is selected on qualifications, experience, team members, and sometimes a prototypical proposal. The selected private partner then assists and supports the agency with the environmental process, performing studies, preliminary engineering, and helping to develop the project delivery financial plans. Price validation can also be conducted before the environmental process is completed. It is very important to ensure that the selection of the preferred alternative is not prejudiced in any way by the selection and influence of the private partner.

Governments sometimes find it important to explain to the public that the type of project delivery—whether traditional DBB, DB or a P3 concession—will generally not have any material impact on the environmental process. Overall, governments separate the environmental impacts from those of the delivery method.

Key Points:

1. Determine the appropriate data from the environmental review, analysis, and compliance process to use in the P3 process. Identify where data needs will overlap and where supplemental data will have to be produced based on the needs of the P3 process.
2. If the environmental process is not finished before the P3 procurement starts, the latter should be structured such that bidders can realize any of the alternatives considered in the NEPA process and such that it does not prejudice the outcome of the environmental process and the selection of a preferred alternative.
3. The public agency needs to lead the environmental process, although it may subcontract certain technical tasks to private firms, as is frequently the case. This may also include a PDA arrangement.

Example: North Tarrant Express and the NEPA Process

The North Tarrant Express (NTE) will be a system of managed lanes in the Fort Worth region of Tarrant County, Texas. The system comprises 35 miles of managed lanes broken down into seven segments along Interstate Highway 35-W, Interstate 820, and State Highways 121 and 183. In June 2009, after completing the procurement the overall NTE concession was approved through the negotiation and agreement of two CDAs with the same consortium led by Cintra. The first CDA was for the development of Segments 1 & 2A and reached financial close in December 2009. The second CDA contained components similar to that of PDAs allowing Cintra to become engaged early in preliminary project design of Segments 2 through 4 in exchange for right of first refusal. Segments 3A & 3B were developed under the second CDA and reached financial close on September 18, 2013.

The NTE Segments 1 and 2A make up a \$3.7 billion DBFOM project consisting of a series of major highway improvements to the I-820 and SH 121/183 corridor between I-35 West and Industrial Boulevard in North Tarrant County, Texas.³⁷ Improvements include rebuilding and expanding 13.5 miles of I-820 from the existing four to six main lanes. Additionally, four managed tolled lanes will be added, plus frontage roads and auxiliary lanes. The NTE project is expected to provide relief from traffic congestion and bottlenecks in the Dallas-Fort Worth region. Construction commenced in late 2010 and is scheduled for completion by mid-2015. The NTE project team received national recognition for its environmental processes including implementation of a Comprehensive Environmental Protection Program that resulted in the development and implementation of an Emergency Management System, which identifies, monitors, and minimizes environmental impacts.³⁸

Under the second CDA, the \$1.7 billion NTE Segments 3A & 3B project extends along 10.2 miles of IH-35W into downtown Fort Worth, TX and an interchange with I-820. The project includes construction of two managed lanes in each direction, and improvements to general purpose lanes and frontage roads. In preparation for the environmental review for these segments, the second CDA included descriptions of the private partner's roles and responsibilities regarding engineering, technical, and support services for completing the NEPA process as well as the methodology and terms for compensation for the developer's support.³⁹ As part of this CDA, the private partner developed a Master Development Plan (MDP) that provides the vision for realizing future NTE facilities through P3s.⁴⁰ The MDP was the result of engineering, socioeconomic, traffic and revenue, and cost and financial analyses. The MDP was developed while TxDOT was in the process of preparing NEPA Environmental Assessments (EAs) for Segments 3A, 3B, and 3C of the project. The MDP took into account the findings of the concurrent NEPA analysis. The environmental assessment processes for Segments 3B and 3C were completed in March 2012, and Segment 3A was completed in August 2012⁴¹.

³⁷ North Tarrant Express wins ARTBA award, 2014. <http://www.ntetexpress.com/news-and-resources/newsroom/press-releases/nte-project-team-recognized-community-relations> (accessed September 23, 2015).

³⁸ *Ibid.*

³⁹ North Tarrant Express Comprehensive Development Agreement website: <http://www.txdot.gov/government/partnerships/current-cda/north-tarrant-express/nte-cda.html>. (accessed July 30, 2014).

⁴⁰ NTE Segments 2-4 Master Development Plan. Executive Summary. December 6, 2010. <http://www.txdot.gov/government/partnerships/current-cda/north-tarrant-express/cda-mdp.html> (accessed September 23, 2015).

⁴¹ <http://www.txdot.gov/inside-txdot/projects/studies/fort-worth/north-tarrant-express/environmental-studies.html> (accessed September 23, 2015).

3.2 Project Evaluation

Once a public agency has identified a project with the potential for procurement as a P3, it typically conducts a series of progressively rigorous evaluations to determine the best delivery approach.

Selecting appropriate projects for P3 delivery is necessary but can be expensive and time-consuming. Implementing agencies need to be able to rule out unsuitable projects and focus on more attractive candidates. Multi-level screening for evaluating P3 projects can help agencies quickly assess whether or not P3 procurement is appropriate.

Once a project has passed initial screening, the public agencies begin detailed evaluations to determine if the project is economically beneficial and financially viable. Then, public agencies conduct VfM analysis to answer the critical question of which delivery model—P3 or other—is best for the project. These evaluations help decision-makers choose the best project scope definition and the optimal structure of a potential P3 project.

3.2.1 Conduct Multi-Level Screening to Evaluate Projects on Suitability for P3 Delivery

Ideally, a public agency assesses the optimal delivery model for each individual project. Part of this assessment can be the screening of projects for P3 suitability, which can be expensive and time-consuming. Therefore, public agencies need to be able to rule out unsuitable projects and focus on more attractive candidates. Multi-level screening can help public agencies quickly assess whether or not a P3 procurement is an appropriate delivery option.

Multi-level screening criteria can include a high-level, mostly qualitative, screening and a detailed, more quantitative, analysis. Typically, the high-level screening serves as a first hurdle, assessing a project's suitability for P3 delivery. High-level screening provides a way for State agencies to systematically evaluate if candidate projects have the necessary elements for successful P3 implementation. These elements may include: sufficient complexity to leverage private sector innovation, compliance with Federal requirements, possible accelerated project delivery, alignment with long-range transportation plans, potential for efficiencies through P3 delivery, and potential to generate revenue. Long-range transportation plans and NEPA documents typically provide the type of data needed to answer qualitative questions in a high-level screening.

Projects that pass high-level screening then move on to detailed screening. This secondary screening is used to determine if procurement via P3s offers additional efficiencies that cannot be achieved through traditional procurement such as the ability to transfer risk, or the ability to raise capital. Data needed to conduct a detailed screening include: sketch-level usage forecasts, risk assessments, and preliminary construction, operations, and maintenance cost estimates.

Key Points:

1. Multi-level screening allows agencies to determine quickly and systematically if projects are suitable for P3 delivery.
2. Qualitative, high-level screening is useful as an initial test for P3 feasibility.
3. More quantitative, detailed screening can be used for candidate P3 projects that pass the initial qualitative screening.

Example: Commonwealth of Virginia

The Commonwealth of Virginia's 2014 PPTA Implementation Manual and Guidelines serves as guidance

to the VAP3 for the identification, screening, and prioritization of projects considered for P3.⁴² The screening process and criteria are as follows:

High-Level Screening

The criteria for high-level screening are similar for each project—although unique aspects are addressed on a case-by-case basis—and answer the following questions:

- **Project Complexity:** Does the complexity of the project warrant the additional use of private sector knowledge and expertise?
- **Accelerating Project Development:** Does a P3 allow the project to be built under a faster time schedule than the traditional delivery method?
- **Transportation Priorities:** Does the project meet transportation needs and is it consistent with the overall agency's objectives and priorities?
- **Efficiencies and Risk Transfer:** Does risk transfer create efficiencies and can projects be bundled together, and are these risks transferable to the private sector over the long-term?
- **Funding and Capital:** Will revenue generation offset or partially offset public funding, does the project meet availability payment criteria, and would funding the project as a P3 allow for more free capital to be spent on other transportation projects?

Detailed-Level Screening

A detailed-level screening examines the feasibility of solicited and unsolicited projects that are candidates for PPTA procurements, ultimately resulting in a Detail-level Screening Report for each project to be delivered within 15 days of the review.⁴³ Detail-level screening of selected, unsolicited proposals also occurs within 15 days.

Below is a brief summary of the two major categories within the detailed-level screening:

Desirability of the Project:

- Does the project address needs in local and State transportation plans, and will it improve safety, capacity, and other positive externalities?
- Does the project improve regional economic development and attract industries and businesses?
- Is there a market demand for P3 procurement?
- Is there sufficient stakeholder support within the community and are communication strategies in place, and will it meet approval within regional transportation plans?

Feasibility of the Project:

- Does the project meet the required technical feasibility to be built? This includes everything from design standards and scheduling to right-of-way, permitting, and environmental standards.
- How will land use be impacted and will the project interface well with existing facilities?

⁴² http://www.virginia.gov/office_of_transportation_public-private_partnerships/resources/UPDATED_PPTA_Implementation_Manual_11-07-14_FOR_POSTING_TO_WEBSITE_-_changes_accepted.pdf (accessed September 10, 2015)

⁴³ http://www.virginia.gov/office_of_transportation_public-private_partnerships/resources/UPDATED_PPTA_Implementation_Manual_11-07-14_FOR_POSTING_TO_WEBSITE_-_changes_accepted.pdf (accessed September 10, 2015)

- Is public funding required, and does the proposed financial plan adequately address questions of financing?
- Will new legislation be required?
- Are there any unacceptable risks being shouldered by the agency and are there any major risks that are not being addressed that can impair the project?
- Are the concession terms acceptable for this type of project to maximize value, and are the arrangements for performance management and hand back outlined?

Virginia’s PPTA policies stipulate that candidate projects which pass the detail-level review and are selected for P3 procurement are then categorized into short, medium, and long-term durations within its P3 project pipeline—each with an estimated timeframe for reaching financial close.

3.2.2 Conduct Economic, Financial and/or VfM Analysis before Proceeding to Procurement

After a project passes through the multi-level screening analysis (Section 3.2.1), additional information is necessary for evaluating project suitability for P3 delivery. Additional analysis can address economic feasibility, financial feasibility, and compare delivery options. Serious issues related to the financial feasibility of the project or drastic changes in project scope during the procurement phase could lead to significant delays and reduce market appetite. Conducting these analyses before the project proceeds to procurement has proved successful.

Typically, for large-scale projects, two types of analysis are conducted: a benefit cost analysis and a financial feasibility analysis. For P3s, an additional analysis can be conducted in which a conventional delivery method (typically called the “Public Sector Comparator”) and a P3 delivery alternative (typically called the “Shadow Bid”) are compared. This type of analysis is typically called a “value for money,” or VfM analysis. VfM analysis is typically led by the State’s P3 unit and its specialized consultants. Inputs to all analyses, including the VfM, typically come from subject matter experts within the State DOT, such as engineers, cost estimators, etc. VfM analysis benefits from being conducted at least twice: once prior to procurement to determine whether the project is suitable for P3 delivery, and again after the bids have been received to confirm the value received from P3 delivery.

Table 3-1 below describes in detail the three types of analyses.

Table 3-1: Typical Analyses Completed for P3 Projects

	Type of Analysis	Possible Tool	Technical Description	Key Question that the Analysis Answers
1	Economic feasibility	Benefit-cost analysis	Net Present Value (NPV) calculation of all social and economic benefits and costs of the project	“Is the project economically attractive from the perspective of society?”
2	Financial feasibility	Financial viability analysis	NPV calculation of all financial cash flows of the project	“Is the project financially feasible?” or “Can the public agency afford the project?”
3	Comparing delivery options	VfM analysis	Comparison of the NPV of (expected) P3 cash flows and expected conventional delivery method cash flows	“What is the optimal delivery method?” or “At what point is the P3 bid more attractive than conventional project delivery?”

State DOTs often find it useful to discuss the potential value-driving mechanisms of the P3 option with project stakeholders. These mechanisms include, for instance, life-cycle costing, output specifications,

financial incentives, and efficient risk management. Developing this understanding helps all stakeholders define project performance measures.

Efficient transfer of project risks from the public to the private partner is an essential goal of P3s. A VfM analysis is based on an “apples to apples” comparison that incorporates the value of all relevant project risks in the cash flows of both the Public Sector Comparator and the Shadow Bid. The principal challenge in VfM analysis is that in a conventional approach, some project risks are not quantified. The reason is that risk categories associated with the long-term and integrated characteristics of a P3 contract—such as long-term performance risk and project coordination risks—are reflected in P3 bids but often overlooked in the conventional approach, as they are simply absorbed by the public agency. In order to attain a true “apples to apples” comparison, a robust risk assessment is essential and should be incorporated into the VfM analysis.

While the core of the VfM analysis is a quantitative comparison of delivery models, it does not capture all the differences relevant for decision-making. For example, specific considerations with respect to regulation, complexity, or organizational capacity often cannot be monetized. A successful practice is to not only to compare the cash flows of the Public Sector Comparator and the Shadow Bid, but also to assess any non-monetary impacts important for decision-making.

For more information on these topics, the FHWA’s (P3) Toolkit⁴⁴ includes a series of primers on VfM, risk assessment and financial structuring for P3s. The Toolkit also features a detailed educational model – P3-VALUE 2.0⁴⁵ – demonstrating how VfM can incorporate benefit-cost analysis. Familiarity with the concepts behind VfM is essential to understanding the work of the specialized consultants often tasked with conducting the quantitative analysis.

Key Points:

1. P3 projects benefit from comprehensive and transparent financial, economic, and delivery option analyses.
2. Conducting these analyses can lead to better decision-making and improve public understanding.
3. A VfM analysis: 1) incorporates the value of all relevant project risks in the cash flows of both the Public Sector Comparator and the Shadow Bid, 2) includes a qualitative discussion of non-financial effects and non-monetized financial effects, including the implications of the implementation of a P3 solution, and 3) contributes to a better understanding of the potential value-driving mechanisms of the P3 option.
4. These analyses should be conducted prior to project procurement and a VfM analysis should be conducted again after the bids have been received.

⁴⁴ <http://www.fhwa.dot.gov/ipd/p3/toolkit/>

⁴⁵ http://www.fhwa.dot.gov/ipd/p3/toolkit/analytical_tool/

Example: VfM Analysis of I-70 East Corridor, Colorado

Interstate 70 (I-70) East is one of the most heavily traveled and congested highway corridors in Colorado. The corridor serves a number of critical transportation functions and is the main route between downtown Denver and Denver International Airport. Additionally, I-70 serves as a main access point to adjacent employment, residential, and new development centers.

The Colorado Department of Transportation (CDOT) wanted to achieve a complete corridor solution for I-70; however, the cost of these improvements exceeds current funding availability making this solution unattainable without additional resources. Therefore, CDOT has indicated a desire to award the project based on the number of improvements attainable for its fixed budget. CDOT considered DB, DBF, DBOM and DBFOM procurement approaches; the analysis recommended a DBFOM approach for the project.

To determine which procurement approach delivers the greatest public value, CDOT prepared a VfM analysis. CDOT decided to produce a separate report that presents the full VfM analysis and discusses the different project delivery and financing options and the key drivers of potential VfM of a P3 approach in this project in an easily understandable way. This is a good example of using the insights gained from the VfM analysis for public outreach.

The project is currently under procurement. In March 2015, CDOT released an RFQ and four shortlisted bidders were selected. A draft RFP was issued in September 2015. The award is expected in the fall of 2016.⁴⁶

3.2.3 Assess Retained Public Liabilities

P3s are long-term contracts with long-term financial obligations for the government. These obligations fall into two broad categories:

1. Direct financial obligations, such as availability payments or milestone payments, to the private concessionaire.
2. Contingent liabilities, such as payment for compensation events, which reflect specific risk allocation between the public agency and the private concessionaire. In a compensation event, the public agency pays the concessionaire for a government action that adversely affects revenues.

The identification of contingent liabilities is a key element of the P3 contract, and the public agency's explicit acceptance of these liabilities is rarely quantified under conventional delivery. Therefore public agencies need to assess explicitly all retained public liabilities in P3 contracts to manage the public fiscal risks and reach successful outcomes in P3 projects.

A thorough understanding of public liabilities is essential to proper public management and can also prevent delays and confusion in later project phases. Sharing an assessment of public liabilities can also improve transparency and accountability. However, valuation can be difficult due to the long-term nature of P3 contracts, which are subject to known and unknown technological, financial, commercial, and political uncertainties.

Conventional public fiscal analysis methods may not address all long-term liabilities in P3s. Agencies can develop tailored fiscal risk management and monitoring frameworks to fit their circumstances, helping

⁴⁶ <https://www.codot.gov/programs/high-performance-transportation-enterprise-hpte/projects/i-70/i-70-east-1/i-70-east-documents/projectschedule.pdf> (accessed September 18, 2015).

them to assess risk both at the project level and the portfolio level. Key elements of this framework should include:

1. Rigorous identification of risks and uncertainties.
2. Reasonable valuation of risks and uncertainties.
3. Continuous monitoring and – if applicable – mitigation of risks and uncertainties.

Depending on the public agency's fiscal regime, this could also lead to the establishment of budgets, reserves, or funds to cover any contingent liabilities. The FHWA *Guidebook on P3 Risk Assessment* provides additional background and tools.

Key Points:

1. Agencies can develop tailored fiscal risk management and monitoring frameworks, addressing both financial obligations and contingent liabilities.
2. Continuous monitoring of the public agency's liabilities is needed.

Example: Contingent Liabilities Assessment in the I-4 Ultimate Project

Interstate 4 (I-4) is often called the backbone of transportation in Central Florida. I-4 provides a crucial link between Tampa on the west coast and Daytona Beach on the east coast. The I-4 Ultimate Project involves the complete reconstruction of 21 miles of I-4 from west of Kirkman Road in Orange County to east of State Road 434 in Seminole County. The project includes: reconstructing 15 major interchanges, constructing more than 145 bridges, adding four variable priced toll Express Lanes in the median, and completely rebuilding general use lanes along the entire corridor. The \$2.3 billion project has a 40-year availability payment P3 concession and reached financial close in September 2014.

FDOT selected I-4 Mobility Partners as the Best Value Proposer. Beyond the direct liabilities resulting from the acceptance of the I-4 Mobility Partners bid, FDOT is well aware that this project involves contingent liabilities for the agency. To assess all liabilities, FDOT has been developing risk-based cost estimates throughout the preparation and procurement of the project. Qualitative and quantitative risk analyses and probabilistic analysis of the cost estimates were part of this exercise, as well as a comprehensive risk analysis and review of the I-4 ultimate cost estimate, carried out by an independent expert.

3.3 Public and Industry Outreach

A successful P3 project requires public support and private sector interest. Public involvement and industry outreach during the project development phase can help State agencies determine which projects are desirable, defuse politically controversial issues, and lead to a smoother procurement process in later stages.

3.3.1 Use a Proactive Public Outreach Strategy

As expensive projects with concepts and arrangements that differ from traditional project delivery, P3 projects can be controversial and garner negative public attention. For successful P3 implementation, public outreach is important: it facilitates open communication and minimizes misconceptions among all parties. Public agencies that have been successful at implementing P3s are proactive in their outreach and continuously involve the public across many media, providing credible, accurate, and easy-to-understand information. Therefore, using a proactive outreach strategy to gain and maintain public support is an important success factor for P3s.

P3 public outreach methods should not differ substantially from those used for conventional procurements. Concerns expressed by the public regarding a P3 project may be the same as for its conventionally delivered alternative, such as construction impacts and the use of tolling. However, additional attention should be paid to addressing issues specific to P3s such as early termination payments, non-compete clauses, toll rate setting (in toll concessions), and compensation events. Public outreach is an opportunity to clarify that many compensation events (such as those for undisclosed archaeological sites or endangered species) are identical to the protections that a public agency would provide under a standard construction contract, albeit under a different title.

Proactive public outreach strategies—scheduling regular public comment periods, allowing submission of written comments, including publicly available project data on an easy-to-use website, and announcing public meetings well in advance—are all beneficial to P3 projects. For States relatively new to P3s, proactive outreach is even more important. In this situation, public outreach can be used as an additional opportunity to educate the public and explain the principal benefits of this project delivery approach. Additionally, a large volume of information is typically generated for P3s as part of the project screening process. By making preliminary documentation, such as multi-level project screening results, available to the public, the government agency increases public education and transparency.

Key Points:

1. Proactive public outreach can facilitate dialogue and minimize misconceptions.
2. Agencies can use public outreach as an opportunity to educate the public and explain the principal benefits of P3s.

Example: Extensive Electronic Media Outreach in 495 Express Lanes Project in Virginia

The 495 Express Lanes project consists of four High-Occupancy Toll (HOT) lanes on the Capital Beltway between the Springfield Interchange and just north of the Dulles Toll Road, a distance of 14 miles each way. The \$2 billion project is financed, constructed, and operated as a P3 under Virginia's Public-Private Transportation Act of 1995 through an 85-year concession (five years of construction and 80 years of operation) between VDOT and the concessionaire, Capital Beltway Express Lanes LLC. Construction began in the spring of 2008 and reached substantial completion on November 8, 2012. The facility opened to traffic on November 17, 2012.⁴⁷

VDOT and the concessionaire used extensive public outreach through digital media including email blasts, radio podcasts, websites, and cell-phone apps. Both the VDOT's and the project's websites included information on how the P3 is structured, how HOT lanes function, and how to pay. The websites contained the project's concession agreement, public presentations, public hearing announcements, minutes/notes from public hearing meetings, descriptions of environmental and safety issues, construction and maintenance notifications, etc.

During the construction, the concessionaire actively engaged with the public to address traffic disruptions and safety issues.

Construction of the 495 Express Lanes required the demolition and reconstruction of the Idylwood Bridge – a two-lane bridge that served as a major artery for a large residential community. Closing the bridge and detouring traffic allowed crews to substantially accelerate the delivery of the new bridge, but would be

⁴⁷ FHWA Project Profile: http://www.fhwa.dot.gov/ipd/project_profiles/va_capital_beltway.aspx (accessed September 20, 2015).

inconvenient for local residents. The project team knew that closing the bridge would be met with significant community opposition, so the construction team chose to engage the community in the decision-making process. The project team hosted informal sessions with community leaders in local homes, sought input from local officials, hosted community-wide workshops and conducted a survey of residents. Eventually, local residents accepted the closing of the bridge – willing to put up with an inconvenient detour in exchange for a shorter construction period. As a result, the concessionaire completed the new Idylwood Road Bridge nearly a year-and-a-half ahead of schedule and strengthened a strong cooperative partnership with the surrounding community and elected officials.

The project team also used public outreach to promote safety for travelers, communities, and workers during construction. The 495 Express Lanes project team identified distracted driving as a priority safety concern, as crews worked to demolish and rebuild more than 50 bridges and overpasses along the congested roadways. The project team launched the “Orange Cones. No Phones.” public safety campaign to encourage drivers to avoid distractions in the work zone. The team recruited local and State law enforcement officers, public officials, and safety advocates as partners on a comprehensive public education program, including driver surveys, on-road signage, digital advertising, social media, press conferences, a high school education program, and other special events. Additionally, when survey research revealed that more than half of local drivers were using a phone on the road to address a work-related issue, the project team launched the “Orange Cones. No Phones. Employer Safety Pledge,” campaign through which they recruited more than 100 of the region’s largest employers in an effort to encourage employees to stop driving distracted. The campaign has generated more than 26 million impressions, and 2011 research showed that 64% of Beltway drivers have changed their use of cell phones in construction zones.

3.3.2 Further Develop Projects with Industry Input

Industry feedback can help public agencies refine projects as they are developed for P3 delivery, allowing for a better understanding of private sector capabilities and interests. Public agencies that incorporate industry feedback can structure more commercially attractive projects, potentially increasing competition. However, it is important to have a well-defined project prior to reaching out to the industry. This requires having the necessary P3 legislation in place, internal consensus regarding the project scope, and sufficient financial resources, if needed, for the public contribution. In addition, political support should be secured prior to initiating industry outreach.

Developers want as much certainty in a project as possible. Industry outreach can inform developers about a project, instill confidence about the capability and commitment of the public sector, and test the market’s appetite for the project. Industry outreach is also a way to inform local contractors about the P3 process and the nature of the transaction. This helps overcome local contractors’ concerns about P3s and opens up the market to new participants.

Public agencies can carry out industry outreach in many ways including:

- Issuing a Request for Information (RFI)
- Holding Industry forums
- Sending email or distributing website updates.

While RFIs are not needed for every P3 project, they can be especially helpful where the project has novel features. In these situations, RFIs are important for gauging market interest and receiving comments from potential bidders. Inputs from this process may be used to structure procurement documents and demonstrate strong private sector interest to public stakeholders. RFIs often allow for one-on-one

meetings between the public agency and bidders, and this informal exchange of comments can be handled in a confidential manner. Confidentiality of comments and responses can lead potential bidders to share their true views on the project. Before initiating an RFI, the public agency should be able to clearly communicate key project elements including project scope, funding availability, legislative issues, and political support. RFIs are an opportunity to gain industry confidence, and conducting a professional RFI process with an appropriate amount of information demonstrates public competence in structuring a P3.

Key Points:

1. Feedback from private industry can help public agencies refine projects as they are developed for P3 delivery.
2. RFIs are particularly useful for gaining industry feedback on the commercial viability of new types of projects and project structures, but may not be needed for all projects.
3. Before engaging the private sector, key project elements, including scoping, funding, legislation, and political support should be determined.

Example: Rapid Bridge Replacement Project Used Industry Outreach to Better Structure the Project

The Rapid Bridge Replacement project marks the first time that bridges have been bundled together under a P3 in the U.S. It will replace 558 of the Commonwealth of Pennsylvania's more than 4,000 structurally-deficient bridges in three years. The concessionaire, Plenary Walsh Keystone Partners, will be paid through availability payments and will have a 25-year maintenance term. The project reached financial close in March 2015.⁴⁸ It is the first P3 project for Pennsylvania. Given the unique nature of the project, PennDOT's interaction with the industry was instrumental in improving the attractiveness of the project. In the project planning and development phase, industry outreach and feedback helped to structure the project and the RFP. The Office of Policy and P3s initially wanted to propose its financial budget/limit and then ask bidders to submit the number of bridges they could build within that limit. After feedback from the private sector, including an industry forum, this criterion was made more traditional. The Office of Policy and P3s specified the number of bridges to be included and then evaluated the responses to the RFP on a cost basis. PennDOT also developed a website for the project to provide updates on important developments in the procurement of the project including basic information on the project, information on the industry forum, as well as updates on the RFP process and FAQs. A secure non-public (SharePoint) site was then created for shortlisted teams to access information and updates associated with the RFP.

⁴⁸ Public Works Finance, March 2015.

3.4 Unsolicited Proposals

A private party submits an unsolicited proposal with the intent of securing a contract. Unsolicited proposals can contain ideas either for new projects or new ways to deliver projects already developed. Public agencies may consider using concepts in the unsolicited proposals to gather private sector ideas about commercially viable projects. Typically, such projects may not have been identified within the government's current budget or plans.

Allowing unsolicited proposals for new projects can trigger significant private sector input. However, managing and responding to unsolicited proposals can lead to pitfalls, including poor proposal quality, constrained resources for adequate review, a lack of competition, and a lack of transparency, which could lead to allegations of abuse. Inserting an unsolicited proposal into a State's project pipeline could lead to the perception that unsolicited proposals receive undue priority over established public projects.

If accepted, an unsolicited proposal is typically subject to a competitive procurement, where other potential concessionaires are given an opportunity to propose their project approach. However, in this situation, creating a level playing field and true competition can be challenging. As always, the interest of the government is to develop projects that achieve economic and social benefits while meeting standards for quality, price, and timeliness. Public agencies that decide to allow unsolicited proposals can develop various processes to increase competition and transparency while ensuring that the public benefits from the project. This section presents a discussion on successful practices for managing unsolicited proposals.

3.4.1 Accept Only Those Proposals that Support Stated Transportation Goals

While unsolicited proposals are useful for attracting innovative ideas from private entities, they can also distract public agencies from their stated priorities and divert limited resources. To maintain focus, public agencies can limit consideration of unsolicited proposals by specifying minimum requirements in order to be considered for further review. Reasonable minimum requirements help reduce frivolous suggestions that can divert a public agency's limited resources. In this context, for two principal reasons, it is a successful practice for public agencies to allow only unsolicited proposals that further long-range transportation goals.

First, P3 projects often require significant public financial support. Consistency with the public agency's long-range transportation plans ensures that these scarce public resources meet stated public needs.

Second, most public agencies in the U.S. have limited experience and capacity—both in terms of skills and resources—in carrying out P3 projects. Past experience suggests that unsolicited proposals initiated by private entities can divert focus away from their stated plans/priorities; this can lead to delays, inefficiencies, and high transaction costs. Additionally, when a project is included in the statewide transportation plan or the TIP, the public agency may have already carried out initial studies on the project. As a result, public agencies can more easily review and evaluate unsolicited proposals that are consistent with the State's long-range transportation goals.

Key Points:

1. Unsolicited proposals may require public financial support and could limit competition.
2. Unsolicited proposals may divert resources from public agencies' stated priorities.
3. Public agencies may not have sufficient understanding of the fundamentals of unsolicited proposals to adequately evaluate them.

4. Unsolicited proposals should be limited to projects that are consistent with a public agency's transportation goals.

Example: Arizona Department of Transportation (ADOT) Requires Unsolicited Proposals to Address Statewide Transportation Plan and Network Continuity Considerations

The ADOT adopted and published its P3 Program Guidelines in 2011 pursuant to a provision in Arizona's P3-enabling legislation, HB 2396. As part of its general evaluation criteria for projects, ADOT requires unsolicited proposals to be consistent with its statewide transportation plan and relevant MPO plans. ADOT essentially "considers whether a project is included in an adopted statewide transportation plan and, if so, what the project's ranking is in the plan." In case the project proposed in the unsolicited proposals is not included in the adopted statewide transportation plan, ADOT's assessment considers whether the project is a potentially viable alternative to a project in the adopted statewide transportation plan. Additionally, it also considers whether the project is included in any local or regional transportation plan. The overall objective of this criterion is to test if the project meets the State's transportation needs, and is consistent with the goals and objectives of the adopted statewide transportation plans and other relevant issues.

In addition to seeking consistency with the statewide transportation plan, ADOT's evaluation also seeks to determine how well a project fits within the existing and planned transportation network. Network continuity considerations for a project include its potential to function as an integral element of an overall network, including its potential to enhance multimodal aspects of a transportation network. If a project is not an integral element of an overall network, network continuity considerations include its potential to operate reasonably in isolation, to improve mobility, to enhance the performance and/or viability of an adjacent facility, and other similar considerations.⁴⁹

3.4.2 Provide a Dedicated Timeframe for Submission of Unsolicited Proposals

While unsolicited proposals can be useful for attracting innovative ideas, they can distract the public agency's officials from their priorities, particularly when the agency has capacity and resource constraints. To encourage innovative ideas from the private sector—while simultaneously limiting the potential drain on public resources—a successful practice is to establish a dedicated time window for submission of unsolicited proposals.

If a public agency has capacity constraints in dealing with unsolicited proposals, a dedicated time window allows the public agency to plan for spending additional resources without distracting its staff from priority projects. While limiting resource expenditures, the time window must be sufficient to determine whether a project should be considered further.

Key Points:

1. Establishing a dedicated time window for unsolicited proposals allows public agencies to plan for the necessary resources required to evaluate unsolicited proposals.

⁴⁹ Arizona Department of Transportation's Website 2014. P3 Initiatives. [http://www.azdot.gov/business/programs-and-partnerships/Public-PrivatePartnerships\(P3\)/project-evaluation-criteria](http://www.azdot.gov/business/programs-and-partnerships/Public-PrivatePartnerships(P3)/project-evaluation-criteria) (accessed on September 22, 2015). And 2011 ADOT P3 Program Guidelines. <http://azdot.gov/docs/default-source/business/p3-program-guidelines.pdf> (accessed on September 22, 2015).

2. If a public agency has capacity constraints, a dedicated time window avoids the problem of distracting public agencies' attention from other priority projects.

Example: Pennsylvania's Dedicated Timeframe for Submission of Unsolicited Proposals

PennDOT has designed a mechanism to handle unsolicited proposals. Twice during the calendar year, PennDOT welcomes unsolicited proposals and allocates time and resources to evaluate these proposals. According to PennDOT's Implementation Manual and Guidelines, "such period will begin no later than six months following the beginning of the immediately prior period and will last at least 30 days."

Specific dates and duration for the acceptance of unsolicited proposals are determined by the P3 Office. They are published in the Pennsylvania Bulletin and on the P3 Office's website. The proposals are accepted and considered by the P3 Office and the P3 Transportation Board.⁵⁰

3.4.3 Institute an Unsolicited Proposal Review Fee

Private entities submitting unsolicited proposals may not always understand or care about the time and resources that public agencies spend to evaluate unsolicited proposals. Additionally, such proposals may be poorly developed or poorly presented. Instituting a proposal review fee is considered a successful practice for deterring poor quality proposals and encouraging those that are submitted to meet the requirements set forth by public agencies. The review fee can also defray a public agency's cost to review and evaluate an unsolicited proposal.

Key Points:

1. Evaluating unsolicited proposals could involve significant costs for the public agency.
2. A proposal review fee can deter private entities from submitting poor quality bids and defray some review costs for the public agency.

Example: Initial Evaluation Cost and Detailed Review Fee for Unsolicited Proposals Instituted by the Arizona Department of Transportation (ADOT)

P3 projects in Arizona are administered through the Office of P3 Initiatives, which is housed in ADOT. ADOT is authorized to initiate procurements that arise from unsolicited proposals if it determines that the proposal has sufficient merit and that a reasonable opportunity is afforded to other entities to submit a competing proposal. ADOT's P3 program guidelines state clearly that all costs of preparing and submitting an unsolicited proposal is borne solely and completely by the private party. Potential proposers of unsolicited proposals are encouraged to request one-on-one meetings with ADOT to have preliminary discussions before the development of a formal proposal. The discussions are intended to provide ADOT with the opportunity to understand the proposer's concept and provide initial feedback. ADOT's P3 program guidelines state clearly the required contents of the unsolicited proposal, including executive summary, qualifications, project description, schedule, O&M plan, finance plan, and financial feasibility. The guidelines also include guidance on the required contents of an unsolicited proposal if it is submitted as a pre-development agreement proposal.

Unsolicited proposals are generally subject to a three-step evaluation process comprising 1) Pass/Fail, 2) Initial Evaluation, and 3) Detailed Evaluation. Additionally, if ADOT determines that evidence of support

⁵⁰ Pennsylvania Department of Transportation. 2014 Implementation Manual and Guidelines.

<http://www.dot.state.pa.us/public/Bureaus/press/P3/P3ImplementationManual&Guidelines.pdf> (accessed September 15, 2015).

by the public or elected officials is needed to further advance an unsolicited proposal, then costs of seeking public input will be borne by the proposer.

All proposers of unsolicited proposals are required to submit two certified checks when submitting the proposal. The first, for \$15,000, is used to cover the initial evaluation costs and will only be deposited by ADOT once it is determined that the unsolicited proposal passes the Pass/Fail test. The second check goes towards “Estimated Detailed Review Fee” for the detailed evaluation of the unsolicited proposal. If an unsolicited proposal fails the initial pass/fail test, both checks will be returned to the submitter of unsolicited proposal. If the proposal passes through initial evaluation then the detailed review fee is based on a schedule that is commensurate with the estimated capital cost of the project in the unsolicited proposal and follows the schedule in Table 3-2 below.⁵¹

Table 3-2: ADOT Estimated Detailed Review Fee Table

Estimated Capital Cost	Estimated Detailed Review Fee
<\$50 Million	\$20,000
\$50 Million to \$100 Million	\$35,000
\$100 Million to \$250 Million	\$60,000
\$250 Million to \$500 Million	\$85,000
\$500 Million to \$1 Billion	\$110,000
>\$1 Billion	\$135,000

However, ADOT at its sole discretion, may waive the administration fee(s) for an unsolicited proposal, in whole or in part, if it determines that its costs have been substantially covered by a portion of the fee or if it is otherwise determined to be reasonable and in the best interest of the state.

In July 2013, ADOT announced that it received an unsolicited P3 proposal for the construction of the South Mountain Freeway, a \$1.9 billion, 22-mile project that will link the Maricopa Freeway to the Papago Freeway. In early February 2014, ADOT issued an RFI for the project, and on February 27, 2014, 55 companies attended ADOT’s project briefing. ADOT issued a RFQ in October 2014, prior to issuing an RFP and selecting a preferred bidder in subsequent procurement phases.⁵²

3.4.4 Initiate a Competitive Procurement after Approval of an Unsolicited Proposal

Unsolicited proposals can be a useful way to incorporate private ideas for projects, but can sometimes be used to circumvent a competitive procurement process. It is considered a successful practice for public agencies to initiate a competitive procurement process once an unsolicited proposal is accepted. In this situation, other companies are invited to bid on a project resulting from an unsolicited proposal.

Governments have developed multiple methods of procurement for projects that were initiated as unsolicited proposals, including:

1. Swiss Challenge (open procurement with the right-to-match by the initial proponent).

⁵¹ Arizona Department of Transportation. *ADOT P3 Program Guidelines*. August 2011. <http://www.azdot.gov/docs/default-source/business/p3-program-guidelines.pdf> (accessed September 22, 2015).

⁵² Barbara P. Alonso, Gregory R. Daniels and Roderick Devlin, Squire Sanders LLP. “Market Update: US Public Private Partnership (P3) Sector. April 14, 2014. http://www.squirepattonboggs.com/~media/files/insights/publications/2015/01/market-update-a-review-of-the-us-public-private-partnership-sector-in-2014/market-updatejanuary_2015.pdf (accessed September 25, 2015).

2. Bonus System (open procurement with a bonus for the initial proponent in the evaluation).
3. Automatic Short-Listing (open procurement with admission of initial proponent to RFP-phase and possible reimbursement of preparation costs for initial proponent).
4. Full Competition (open procurement with possible reimbursement of preparation costs for initial proponent).

The first two mechanisms reward the initial proponent within the procurement process, which does not create a level playing field. For this reason, the latter two mechanisms are used to make the procurement process more competitive.

Other factors go into creating a level playing field. For example, if the initial proponent has worked on the project for two years and competitors only have six weeks to develop their competing proposals—without access to the project information—even a fully competitive procedure will not result in a level playing field. Therefore, two other key factors for ensuring competition are 1) sufficient time for competitors to prepare a bid, and 2) access to all relevant project information to develop competing proposals.

In a competitive environment, the initial proponent may not be awarded a contract. In this scenario, they can be rewarded for their initial efforts in a different way—most likely by direct compensation. If a government does not have sufficient resources to reimburse the initial proponent, one solution is to let the winning bidder pay this compensation (the costs of which may be included in its financial bid) as allowable by law. For highly innovative concepts, the public agency can protect intellectual property while still providing a competitive process. The service to be delivered can be specified in functional terms without disclosing the intellectual products or property.

Key Points:

1. Agencies typically require a competitive procedure following acceptance of an unsolicited proposal.
2. Agencies can use different procedures after approval of the unsolicited proposal.
3. To create a level playing field, the procurement should allow sufficient time for competitors to prepare a bid and provide them with access to all relevant project information.
4. Initial proponents that do not ultimately win the work can be compensated.

Example: Ohio Follows a Competitive Process for Unsolicited Proposals

In 2011, Ohio's General Assembly authorized the ODOT to develop, operate, and maintain transportation facilities through public-private initiatives. Pursuant to Sections 5501.70 through 5501.83 of the Ohio Revised Code, ODOT is authorized to solicit, receive, consider, evaluate, and accept bids and proposals for public-private initiatives. Furthermore, Ohio's P3 policy provides explanation for the manner in which ODOT is to implement P3s.

Ohio's P3 law permits ODOT to receive, consider, evaluate, and accept unsolicited proposals for a P3. If ODOT determines to proceed with the P3 project that was proposed, it may either 1) solicit competing proposals under the unsolicited proposal process, or 2) terminate the unsolicited proposal process and procure the proposed P3 through its regular solicited proposals process.

In case ODOT chooses the first option it may, after evaluating the unsolicited proposal and any comparable competing proposals, do any of the following:

1. Accept the unsolicited proposal and reject any competing proposals.
2. Reject the unsolicited proposal and accept a comparable competing proposal if ODOT determines that the comparable competing proposal is the most advantageous to the State.
3. Accept both an unsolicited proposal and a competing proposal if accepting both proposals is advantageous to the State.
4. Reject the unsolicited proposal and any competing proposals.

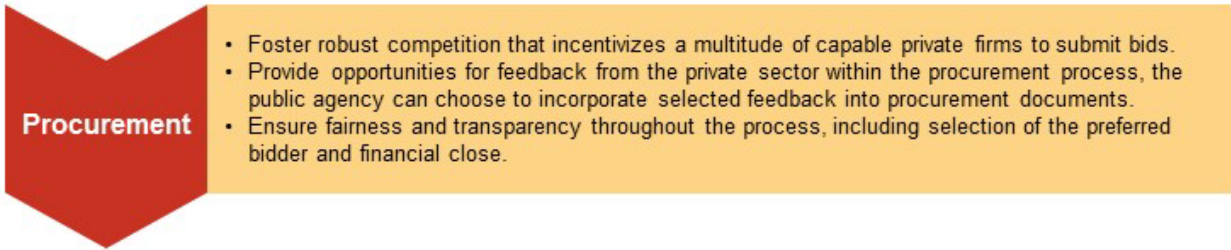
Alternatively, ODOT may choose the second option of following the regular solicited proposals process if it determines that that is in the best interest of the State, to ensure that all proposals are responsive to the needs of the State. In this regard, ODOT may use components of the unsolicited proposal as the basis for forming a solicitation for proposals.

The solicited proposals process can be a single-stage or multi-stage competitive process wherein ODOT is required to advertise the opportunity through appropriate channels in order to maximize interest among potential bidders or proposers.⁵³

⁵³ Policy No. 34-001(P). Effective Date: November 11, 2012.

[http://www.dot.state.oh.us/Divisions/InnovativeDelivery/DID%20Policy/ODOT%20PPP%20Policy%2011-15-2012%20\(703457999_1\)%20-%20Signed.pdf](http://www.dot.state.oh.us/Divisions/InnovativeDelivery/DID%20Policy/ODOT%20PPP%20Policy%2011-15-2012%20(703457999_1)%20-%20Signed.pdf) (accessed September 25, 2015).

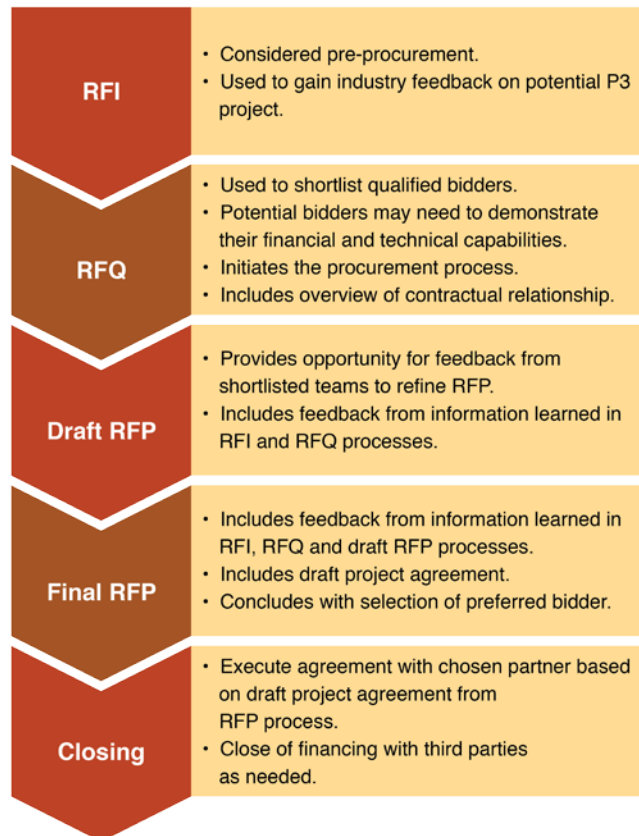
4 P3 Procurement



A public agency will initiate a P3 procurement process after it has determined a project’s suitability for P3 delivery through screening and analysis, and solicited feedback from the public and private industry. A P3 procurement differs from the traditional procurement of other large-scale projects because of the transfer of project risks and responsibilities to the private partner, such as securing the financing and operating and maintaining the project. The long-term nature of P3 projects also adds to their complexity. All of these factors result in the need for a competitive procurement environment that is transparent and protects the public interest, while addressing private bidders’ needs for predictability, confidentiality, and fair competition. This can be achieved through P3 procurement processes that foster interaction between the public and private parties and transparent bid evaluations.

Figure 4-1 below shows the steps involved in a typical P3 procurement, including opportunities for industry input.

Figure 4-1: P3 Procurement Process



As discussed in Section 3.3.2, many agencies use an RFI process to solicit input from potential bidders. Input gleaned from the RFI process typically informs subsequent procurement documents. Although the RFI is considered to be pre-procurement, it is included in Figure 4-1 to illustrate how industry input during the project development process can inform the subsequent procurement processes, such as the RFQ and draft RFP, that can be used as opportunities for the public and private parties to jointly refine the project until it fully achieves: 1) public policy goals, 2) an optimal allocation of project risks and 3) value creation for both sides.⁵⁴

Interaction with bidders during the P3 procurement process provides an opportunity for bidders to offer inputs that could improve the project and refine the final RFP. Typically, allowing bidders' inputs helps make the P3 project commercially attractive and likely to receive multiple competitive bids. However, all communications with bidders should be transparent in order for the procurement process to be fair to all bidders and to protect public interest.

4.1 Competitive Environment

Creating quality competition during the procurement phase is vital. Public agencies benefit the most when multiple bidders submit quality proposals generating robust competition between the most capable private firms. This increases the likelihood that the winning bid will be the best choice for delivering a project that achieves public goals.

4.1.1 Shortlist Qualified Bidders

Public agencies use an RFQ process to identify a select group of bidders based on predefined technical and financial qualifications. Respondents with little or no relevant experience are excluded from the RFP stage, increasing the overall quality of the final proposals received. Given the time and resources required for the public agency to conduct a multi-step procurement, it is important that the agency selectively identify bidders for advancement. The shortlisting of qualified bidders is considered standard practice for any complex procurement and is particularly important for P3 procurements.

Only having a small group of pre-qualified bidders allows the public agency to: 1) conduct the RFP process in a consultative manner, which can refine the project, 2) focus its resources on responding to a smaller number of bidders, and 3) limit the procurement costs if it decides to reimburse unsuccessful teams who submitted compliant bids (see Section 4.1.4 for a discussion of stipends).

From the bidders' perspective, since the cost of developing a detailed proposal during the RFP stage is significant, they too typically prefer to compete among a handful of shortlisted teams. A smaller pool of competitors increases the probability of succeeding at the RFP stage, which motivates bidders to invest resources in developing a high-quality bid. Normally a pool of 3-4 bidders is sufficient to ensure a competitive process. As such, the presence of an RFQ stage—which is relatively inexpensive—attracts private sector companies to participate in what can be a lengthy process.

Key Points:

1. Limit the number of bidders to those most qualified for the particular project.
2. Shortlisting bidders can limit procurement costs for the public agency.

⁵⁴ USDOT Federal Highway Administration. Conducting Procurement for Public-Private Partnerships (P3s). 2013. https://www.fhwa.dot.gov/ipd/pdfs/p3/factsheet_06_conductingprocurement.pdf accessed on August 18, 2014).

3. Limiting the number of bidders may increase the quality of their bids.

Example: PennDOT Shortlisted Bidders for the Rapid Bridge Replacement project

Like many public agencies, PennDOT conducts an RFQ process before the RFP stage to pre-qualify bidders. PennDOT launched an RFQ for the Rapid Bridge Replacement project in December 2013. Five teams submitted a statement of qualifications by the deadline of February 2014.⁵⁵ The following month, PennDOT announced that four of the five bidding teams were shortlisted. As this was the first time that bridge bundling has been attempted as a P3, PennDOT wanted to ensure competition in case one or more bidders dropped out of the process. If this were a less novel project, PennDOT may have been comfortable with shortlisting three teams.⁵⁶ By conducting the RFP with four pre-qualified bidders from the RFQ stage, PennDOT not only kept its transaction costs down, but also ensured a competitive procurement.

4.1.2 Use a Draft RFP with a Consultative Process to Reach the Final RFP

The goal of the P3 procurement process is to execute a contract that outlines how the project will be delivered. Similar to a traditional procurement process, public agencies issue an RFP to seek competitive proposals. RFPs will include basic information such as requirements for submitting proposals, evaluation and post-selection procedures, award and execution procedures, and contract dispute procedures. The RFP also covers project information that bidders will need to generate a high-quality proposal including: general provisions, project scope, anticipated revenue mechanisms, anticipated P3 delivery method, preliminary project schedule, Federal and State requirements, output-based performance metrics and whether alternative technical concepts (ATC) will be considered.⁵⁷

The RFP reflects the public agency's vision for the P3 project. Since all P3s are partnerships that involve a long-term transfer of risks and responsibilities, the final P3 agreement should meet the needs of both partners. To that end, the public agency can use a draft RFP to solicit input from the pre-qualified bidders. This consultative process allows the public agency to incorporate selected feedback and refine the RFP. This process decreases the likelihood of major last-minute amendments to the final RFP, which could distort the competitive process and increase transaction costs. Therefore, public agencies benefit from using a draft RFP process to solicit feedback from bidders before issuing a final RFP.

Incorporating feedback from pre-qualified bidders on the draft RFP can help the public agency clarify its needs and objectives and ensure an optimal allocation of project risks and responsibilities. Comments on a draft RFP can range from requests for simple clarifications to fundamental changes. The public agency decides which comments, if any, to accept.

This consultative process can build upon the communication established during initial industry outreach (Section 3.3.2). Agencies and bidders generally find it helpful to organize one-on-one meetings to discuss clarifications and comments on the draft RFP. In order to keep this process efficient, it is ideal to have separate consultations for technical, financial, and legal issues. Sometimes agencies increase efficiency by scheduling parallel sessions with the different disciplines of the same bidding team.

In this phase of the procurement, a well-defined process for dealing with comments, questions, and answers is necessary. For the public agency, staying on schedule makes the process more predictable and helps to control transaction costs for all parties. This can also lead to a more favorable perception of the

⁵⁵ "How Pennsylvania is building bridges," *Infrastructure Investor*, March 2014.

⁵⁶ "PA Rapid Bridges PAB Promised." *Public Works Financing*. June 2014.

⁵⁷ Alternative technical concepts are described at length in Section 4.1.3.

public agency's ability to execute the contract successfully.

Key Points:

1. A draft RFP process allows for one-on-one consultation with bidders prior to issuing a final RFP.
2. A draft RFP process can include meetings and written exchanges between public agency and pre-qualified bidders.
3. The public agency determines which comments it will respond to and which suggestions it will accept.

Example: ODOT Used a Transparent and Consultative Draft RFP Process for the Portsmouth Bypass Project

The Portsmouth Bypass is a 16-mile, four-lane, divided, limited-access highway around the City of Portsmouth in Scioto County, Ohio. It is part of the Appalachian Development Highway System, a 3,000-mile network from Mississippi to New York. The ODOT evaluated the use of a P3 procurement approach compared to a traditional DBB approach, selecting a DBFOM with availability payments.

After an RFI in April 2013, ODOT started the procurement on June 7, 2013 with the release of the RFQ documents. In August 2013, ODOT received four statements of qualifications; three teams were subsequently invited to submit technical and financial proposals. The RFP phase started with the release of the draft Instructions to Proposers in January 2014.

The Instructions to Proposers described the procedures for 1) changes to the RFP, 2) questions, requests for clarification, and comments regarding the Draft and Final RFPs and 3) one-on-one meetings. The Draft RFP process was built into the schedule, and did not cause delays to the project. ODOT proved receptive to the suggestions put forward by the bidders. For example, the response time to repair deficiencies triggering penalties under the payment mechanism was lengthened, as parties agreed that longer response times could materially reduce O&M costs without significantly decreasing the quality of service. ODOT's prioritization of issues raised by bidders and its practice of providing written responses to comments prior to the one-on-one meetings further contributed to an efficient and satisfying process for both the department and the bidders.

4.1.3 Allow for Alternative Technical Concepts

A successful P3 procurement encourages bidder creativity to increase the value from P3 delivery. Ideas that emerge can improve service quality and lower life-cycle costs. The use of an alternative technical concepts (ATCs) process enables and encourages bidders to provide such creative ideas.

ATCs are suggested changes to the technical specifications developed by the procuring agency. In general, contracting agencies require ATCs to maintain or improve project quality compared to the original specifications (often referred to as "equal or better"). If higher quality delivers higher value to the agency, ATCs should lead to higher scoring on the non-financial bid evaluation criteria. Formally, ATC proposals that reduce scope, quality, performance, or reliability are not considered. In practice however, the ATC process appears to allow technical concepts that reduce the quality, and that are submitted by bidders solely as a way to gain competitive advantage and lower their bid price. In such a case, a lower score on non-financial criteria would be appropriate, in order to ensure fair competition.

If the agency accepts the proposed ATC, it typically makes a bidder-specific change to the RFP's technical specifications. This is what differentiates ATCs from value engineering conducted after contract award. The more prescriptive and input-based the RFP specifications are, the more need there is for ATCs to accommodate bidder solutions. However, if the specifications are non-prescriptive and output-based,

bidders can respond with innovative solutions within those specifications, without requiring ATCs. In mature P3 markets with a practice of developing truly output-based specifications, suggestions by bidders typically do not lead to individual changes in the RFP. Most innovative solutions fit within the specifications; if they do not, public agencies typically decide to make generic changes to their specifications without disclosing the innovative solutions.

ATCs present several challenges, including the need to maintain confidentiality, ownership of the intellectual property, procurement fairness, and liabilities arising from the implementation of an ATC⁵⁸.

Public agencies typically want to acquire the intellectual property associated with ATCs. A common approach is to grant a stipend to all bidders, with a clause in the RFP stipulating that the agency gets full ownership rights to the entire content of the proposal. In the absence of a stipend agreement in the RFP, ownership issues are less clear and need to be resolved by State law.

Provisions in the RFP can also resolve the liability issue by stating that the execution of all design and construction work is the sole responsibility of the successful bidder and that the agency consequently bears no responsibility.

Public agencies typically incorporate ATCs as *individual* changes in the RFP. In other words, the public agency approves the ATC for an individual bidder, but keeps it confidential from others. Although this practice can lead to challenges in terms of bid comparability and procurement fairness, it gives bidders comfort with respect to confidentiality. Without such confidentiality, proponents lose incentive to invest in researching innovative and cost saving ATC ideas. Another approach for incorporating ATCs into the RFP is to allow for *generic* changes whereby the public agency changes the language of the baseline RFP specifications for all bidders. This mitigates fairness issues yet may lead to confidentiality challenges, which is why agencies using this procedure make sure changes in specifications do not disclose specific solutions. Because of the complexity of handling ATCs, certain agencies choose to wait until after the RFP process to adjust the specifications in order to accommodate accepted ATCs.

Table 4-1, below, details the pros and cons of the three approaches to incorporating ATCs.

⁵⁸ NCHRP Synthesis 455, "Alternative Technical Concepts for Contract Delivery Methods", 2014.

Table 4-1: Approaches to Incorporating ATCs

Approach	Description	Pros	Cons
ATCs lead to individual changes in the RFP	<ul style="list-style-type: none"> The public agency keeps all ATC submissions confidential with few exceptions, prior to the selection of the preferred bidder. ATCs meeting the requirements set out in the RFP lead to individual changes to the specifications. Exceptions to the individualized treatment of ATCs are typically listed by the contracting agency in the RFP and, if requiring an adjustment of the RFP, lead to a generic addendum. Prior to approving ATCs that would result in the issuance of an RFP addendum, the bidder is given the option to withdraw the proposals. 	<ul style="list-style-type: none"> Confidentiality is guaranteed 	<ul style="list-style-type: none"> Bidders are not bidding on the exact same scope and specifications, can lead to fairness issues during evaluation. Depending on the evaluation criteria, the benefits of the ATC may not be rewarded in the scoring.
ATCs lead to generic changes in the RFP	<ul style="list-style-type: none"> The public agency keeps all ATC submissions confidential prior to the selection of the preferred bidder. If the agency concludes that the written specifications are too narrow to accommodate a beneficial ATC, the agency changes the language of the baseline specifications to make them more flexible to accommodate the ATC. Adjustments to specifications are typically communicated through an addendum to the RFP. Prior to issuing the addendum, the bidder is given the option to review. 	<ul style="list-style-type: none"> All are bidding on the exact same scope and specifications. Reduces distortion of competition. 	<ul style="list-style-type: none"> Bidders may hesitate to share their ATCs, fearing that the RFP addendum may reveal their solution to competitors.
ATCs are incorporated after award	<ul style="list-style-type: none"> The public agency keeps all ATC submissions confidential prior to the selection of the preferred bidder. ATCs submitted by the preferred bidder are evaluated, but are only incorporated into the P3 Agreement after award. 	<ul style="list-style-type: none"> Lower transaction costs. 	<ul style="list-style-type: none"> Negotiations with preferred bidders are more extensive and complex.

Dialogue on ATCs early in the procurement process allows the public agency to indicate its interest in such proposals while bidders are reviewing specifications. If the public agency is unenthusiastic about ATCs, bidders can avoid spending valuable time and resources developing a concept that could ultimately be rejected. Providing clear guidance for when ATCs will be considered and the time in which the public agency will respond can decrease transaction cost and wasted time and effort.

Key Points:

1. ATCs can create time and cost savings while improving value to the public.

2. Consider ATCs early in the procurement process, preferably at the draft RFP stage.
3. The RFP process provides a forum for considering ATCs.

Example: Indiana Department of Transportation (INDOT) Successfully Implemented a Large Number of ATCs in the Ohio River Bridge East End Crossing Procurement Process

The East End Crossing project consists of a new bridge across the Ohio River, and associated roadway, tunnel, and facilities. The bridge connects Clark County, Indiana with Jefferson County, Kentucky, approximately eight miles east of Louisville. The State of Indiana is leading the project, and the Indiana Finance Authority (IFA) led the procurement. The project is being delivered as an availability payment DBFOM contract with a four-year construction period and a 35-year operation term.

ATCs were allowed during the procurement phase, and led to individual changes to the RFP that were incorporated after selection of the preferred bidder (similar to the third approach outlined in Table 4-1 above).

During the procurement, IFA guaranteed full confidentiality of ATC proposals. ATCs approved by IFA involved full transfer of the risks related to the implementation of those ATCs to the bidders, but the authority agreed to support the implementation of the ATCs to the extent possible. IFA followed a formalized process and format for accepting ATCs, resulting in a large number of alternative concepts, half of which were accepted.

4.1.4 Pay a Stipend to Unsuccessful Bidders that Submit a Compliant Bid

Developing P3 proposals will almost always be more expensive than developing proposals for traditional procurements. The cost to develop compliant bids can exceed \$10 million per bidder for a large and complex P3 project. The bidders' willingness to invest in high-quality bids depends on the expected return. As such, a public agency that reimburses unsuccessful bidders reduces bidding costs and thereby encourages high-quality proposals. Paying a stipend to reimburse at least a portion of the cost of unsuccessful, yet compliant, bids is therefore an effective way of fostering robust competition.

The typical stipend provided by a public agency does not fully cover the cost of an unsuccessful bid. It does, however, increase the interest of the private sector because it demonstrates the agency's commitment to the procurement process. A partial reimbursement also ensures that bidders are committed to the process, and do not submit bids merely to earn the stipend. The amount of the stipend is typically fixed, but can vary due to the size and complexity of the project. The stipend is also a way for public agencies to compensate bidders for the intellectual property they are getting ownership of through the procurement process.

In addition to paying a stipend to unsuccessful bidders, public agencies may promise a stipend to all bidders in the event it cancels or suspends the procurement. Such a promise provides a significant disincentive to the public agency to cancel the procurement process, increasing bidder confidence and participation. The amount paid due to cancellation or suspension typically varies based on the stage of the procurement process.

Key Points:

1. Stipends help foster competition.
2. Stipends demonstrate a public agency's commitment to a P3 project.
3. Stipends defray a portion of the bidding costs.

4. An unsuccessful bidder must submit a compliant bid to receive the stipend.
5. Agencies may offer to pay a stipend to all bidders in the event of cancellation or suspension of the procurement.

Example: The State of Maryland’s Approach to P3s Include Offering to Pay a Stipend to Unsuccessful Bidders

The State of Maryland passed House Bill 560⁵⁹, a legislative framework for P3s in Maryland. This legislative framework is then translated into regulations that establish Maryland Department of Transportation’s (MDOT) Public-Private Partnership Program. MDOT’s “Public-Private Partnership Program Regulations,”⁶⁰ became effective in a final action in October 2013. The P3 program regulations describe and provide a process for the development, solicitation, evaluation, award and delivery of P3s within MDOT—and include specifics on how unsuccessful shortlisted bidders can be compensated.

According to the P3 program regulations, a shortlisted private entity may be reimbursed up to \$3 million for costs incurred in responding to a P3 solicitation. The stipend is paid if a bidder submits a responsive and timely proposal in accordance with the requirements of solicitation documents. If the bidder agrees to accept the stipend, MDOT in return secures the rights to use concepts, ideas, and other information (including alternate technical concepts) contained in the proposal.

4.2 Bid Evaluation

Following issuance of the final RFP, proposal teams prepare and submit bids to the public agency. For most procurement evaluations, public agencies include pass/fail criteria that must be satisfied before any comparative factors are considered. If a bid receives a “pass” rating on each of the minimum requirements, it is then scored on other criteria such as: the dollar value of the offer, the least subsidy or availability payment required, the shortest proposed length of the concession term, or the least NPV of gross revenues required. The selection of the preferred partner can be based on the financial proposal in conjunction with qualitative factors, a combination often referred to as “best value.” In theory, it is possible to reflect all key public objectives in minimum, pass/fail, criteria. In practice, there are trade-offs between price and other consideration that cannot be captured in minimum requirements. Beyond the minimum requirements, the challenge is making the evaluation sufficiently objective and transparent.

4.2.1 Evaluate Based on “Best Value”

Because P3s are typically complex, long-term projects, the evaluation of proposals can be difficult. Bids should be evaluated on factors that represent public objectives, including cost, quality, required subsidy, design, etc. Evaluating bids solely on price fails to address the inherent complexities of large scale P3 projects. “Best value” procurements account for factors, such as quality and timing, other than price. Using “best value” criteria allows public agencies to pursue a range of objectives. “Best value” procurements also allow private bidders to differentiate themselves in ways other than price. Both public agencies and bidders benefit from using “best value.”

Evaluation criteria can be both objective and qualitative. The quality of the management plan, the long-term performance plan, and the outreach strategy are all examples of qualitative, potentially subjective

⁵⁹ http://mgaleg.maryland.gov/2013RS/Chapters_noln/CH_5_hb0560e.pdf (accessed September 25, 2015)

⁶⁰ Maryland Department of Transportation 2013. Public-Private Partnership Program Regulations. <http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=11.01.17> (accessed September 25, 2015).

criteria. If an agency chooses to use qualitative criteria, it is important to strive for fairness, transparency, and non-discrimination as guiding principles for the actual evaluation procedure. This typically results in detailed evaluation procedures with checks and balances, such as independent review panels and documentation of the award rationale. Some agencies provide training to the bid evaluation staff regarding the aspects that distinguish “best value” from more conventional considerations. To prevent price factors from influencing other considerations, technical scoring can be completed before reviewing the price proposals.

Providing clear parameters and scoring methods within the bid documents are important for achieving a positive result for both the public agency and the bidders. For the public agency, clear parameters and scoring methods provide strong guidance to bidders—which could increase the likelihood that the accepted bid will meet project objectives and goals. For bidders, clear scoring methods that explain how non-monetary objectives will be incorporated provide insight into how their proposals will be received. In practice, this requires defining clearly the evaluation criteria and scoring system, including the consideration of ATCs (if allowed).

Evaluation on the basis of clear parameters and scoring methods also helps the public agency provide feedback to unsuccessful bidders. Typically, unsuccessful bidders are extremely interested in such feedback in order to understand how to improve their proposals in future procurements.

Key Points:

1. “Best value” includes both objective and qualitative evaluation criteria.
2. “Best value” is the preferred evaluation criterion for P3 procurements because of their size and complexity.
3. The evaluation mechanism should be as predictable and transparent as possible.
4. Clear bid evaluation processes make it easier to provide feedback to unsuccessful bidders.

Example: TxDOT’s Evaluation Process Provides Procedures to Protect Objectivity

TxDOT uses both objective and qualitative criteria in its P3 procurements to select the proposal that offers the “best value.” The scoring mechanism and scoring procedures are communicated to bidders. Typically, the three main components are 1) minimum requirements (pass/fail), 2) technical criteria, and 3) price. Technical scoring is done in thematic subcommittees, evaluating technical solutions, the project management plan, and the quality management plan. Members of each subcommittee first determine their individual scores, and then meet to discuss each other’s findings and ultimately arrive at a consensus score per evaluation criteria per bid. The subcommittees then meet with the Evaluation Selection Recommendation Committee (ESRC) to present their recommended scoring for each criteria. During this meeting the ESRC discusses the scoring recommended by the subcommittees and ultimately decides whether to accept or modify the subcommittee’s scoring recommendations. The ESRC then combines scoring on the technical criteria and price.

4.2.2 Minimize Negotiations after Selection of the Preferred Bidder

Draft P3 contracts are typically introduced along with the RFP. Contract changes are typically negotiated with preferred bidders. A basic procurement principle holds that any negotiated change to the contract must not be material to the procurement. “Material,” in this case, means that another bidder could have been selected or could have submitted a different offer had the amended term been proposed in the original procurement documents. For example, substantive changes in risk allocation would likely go

beyond what is followed under good procurement practice and permitted under most procurement laws. By not allowing for material changes after the selection of the preferred bidder, the public agency limits the possibilities for strategic bidding and maintains a level playing field among competitors. Typically, revisions to the draft P3 contract with the preferred bidder are limited to clarifications and confirmation of commitments. Therefore, it is desirable to finalize P3 contract terms as much as possible before the submission of bids to minimize post-selection negotiations with the preferred bidder. An exception is the case of States where ATCs are handled after the selection of the preferred bidder, in which case negotiations on how to incorporate the ATCs in the P3 Agreement are unavoidable.

Finalizing the commercial contract terms is often completed prior to finalizing financing arrangements. Neither party wants to renegotiate commercial terms due to financial negotiations between the preferred bidder and its lenders. Therefore, bidders are typically required to secure financing commitments to the reasonable extent possible. In the U.S. market, the frequent participation of two Federal financing programs—Private Activity Bonds (PABs) and TIFIA loans—leads to separate execution of project documents (the commercial closing) and financing documents (the financial closing) for each P3 transaction. These programs, which can significantly reduce financing costs, make their initial—conditional—commitments to the project itself, allowing each competing bidder to factor the value of these programs, using common assumptions provided in the RFP, into its price proposal. For TIFIA, financial negotiations then occur between the USDOT and the preferred bidder. The interest rates for both PABs and TIFIA loans are fixed at financial close, which may occur several months after commercial close. This extends the interest rate risk for all bidders, who must in every case make assumptions on the interest rates and credit terms used to prepare their price proposals.

Public agencies can create a process to address risks associated with finalizing project financing, which will reduce the need for contract changes during negotiations. In the case of interest rate risk, the public agency can, first, level the playing field by providing guidance in the RFP on an assumed interest rate. Then, after submission of bids, the agency can share in the interest rate risk, or bear it in full, protecting the bidders from potential interest rate changes. Typically, an agency will assume interest rate risk up to a certain cap, rather than assuming unlimited risk.

In addition to interest rate concerns, final negotiations between the preferred bidder and its lenders (including non-Federal lenders) can materially change the cost assumptions used to construct the bid. This risk is difficult for all bidders to price, as it is difficult to distinguish between the effect of changes in interest rates and the effect of changes in financing structure. Public agencies can choose to share in the cost of these changes, requiring, for instance, that bidders cover only 25%-33% of the cost of financial changes between bid submission and financial close.

Key Points:

1. Finalizing the P3 contract as much as possible before selecting a preferred bidder levels the playing field for all bidders and improves competition.
2. Commercial negotiations with the preferred bidder should be limited to clarifications and confirmation of commitments (except in cases of ATCs that need to be incorporated after award).
3. Federal financing programs make their initial – conditional – commitments to the project, so that each bidder can incorporate them into their pricing proposals using common assumptions.
4. The RFP should provide common assumptions for proposers, including an assumed interest rate.

5. The time between bid submission, commercial close and financial close introduces interest rate and structuring risks that can affect final pricing.
6. Many agencies develop a clear cost sharing mechanism to account for the effects of financial changes between bid submission and financial close.

Example: Colorado DOT's (CDOT's) Mechanism to Share Changes in Financing Conditions in the U.S. 36 and I-25 Managed Lanes Project

The Colorado High Performance Transportation Enterprise (HPTE), a division within the CDOT, entered into a 50-year concession agreement with Plenary Roads Denver LLC (Plenary) to deliver the U.S. 36 and I-25 Managed Lanes project as a P3. The project included (i) design and construction of new express lanes, (ii) widening of existing general purpose lanes, (iii) design and construction of bus rapid transit improvements, and (iv) improvements to associated facilities and installation of an electronic toll collection system, within the existing four-lane U.S. 36. Additionally, Plenary was responsible for financing as well as O&M of the project. Given new design and construction on an existing road, this P3 was a unique blend of a "brownfield" and "greenfield" elements and CDOT's first P3.

As part of the financing structure under the June 2013 concession agreement, HPTE was required to make a capital payment (HPTE Capital Payment) of \$44.95M to Plenary. The concession agreement provided for a mechanism to adjust the HPTE Capital Payment at or prior to the financial close (Financial Close Adjustment), whereby the HPTE Capital Payment could be increased (to an amount not exceeding \$49.65M) or decreased. The purpose of the Financial Close Adjustment mechanism was to share the financial impact of certain changes between the submission of committed bids and financial close.

The potential changes that were contemplated included changes to the debt and equity structure, interest rate costs, certain costs incurred with respect to the project, and the amount and timing of toll revenues expected to be received by Plenary. The adjustment to the HPTE Capital Payment was calculated on the day of financial close by determining what HPTE Capital Payment amount would be necessary to achieve an agreed equity internal rate of return (IRR) for Plenary. Financial close was achieved on February 25, 2014 and the HPTE Capital Payment was agreed to as \$49.65M, the maximum possible amount under the concession agreement. HPTE bore 67% of the increase, and Plenary the remaining 33%, as stipulated in the Financial Close Adjustment clause of the concession agreement.

5 Monitoring and Oversight

Performance Monitoring & Oversight

- Both public agency and private partner plays a role in managing the project to performance standards set in the P3 agreement.
- Define performance measures, and monitor technical performance to ensure quality of service delivery.
- Ensure long-term partnership with all parties.

After achieving commercial close and financial close, focus shifts to project implementation. For the public agency, work transitions from developing and procuring the project to managing its implementation and operation. The focus of the monitoring and oversight phase is to see that the project is delivered and complies with the performance standards in the P3 agreement. The monitoring and oversight phase extends to both construction and operation of the facility.

Monitoring and oversight of a P3 requires a strong set of contract management skills and a significant level of proactive management, with a clear division of responsibilities between the public agency and the private operator. Key contract management issues include monitoring technical and financial performance, assessing payments and penalties for performance, resolving disputes, and promoting an effective, long-term partnership. As described in earlier chapters, the foundations for monitoring and oversight are laid during preparation and procurement, when the key documents are drafted and finalized.

The public agency's capacity to monitor technical performance during construction and operations is critical for success.⁶¹ Responsibility typically belongs to a special contract management team within the agency. Specific arrangements and processes are needed to manage the contract, and these institutional arrangements should be in place before the contract commences. The personnel involved in monitoring and oversight should have detailed knowledge of the project and the contract terms.

In practice, post-construction monitoring can differ between user fee P3s and availability payment P3s. For a toll-based concession, it is assumed the private partner has an incentive to meet the performance standards, because the project revenues depend, in part, on performance. As a result, most toll-based concession agreements lack detailed performance monitoring systems or financial mechanisms to enforce performance standards. For availability payment P3s, such performance-based monitoring and incentive systems are needed to align public and private interests for the duration of the partnership, and are thus considered central to the P3 agreement. This obligation also incentivizes the private partner to deliver a high quality infrastructure project as they will also be held accountable for the asset's long-term performance and any maintenance required to meet performance standards.

Successful implementation not only requires a well-structured agreement and management expertise, but also an open and collaborative approach to the partnership. This can be challenging to achieve over the long duration of a P3 contract, as staff turnover will inevitably occur. P3 projects that succeed have

⁶¹ Federal Highway Administration. *Key Considerations in Implementing a Public-Private Partnership (P3) Program*. 2014. http://www.fhwa.dot.gov/ipd/pdfs/fact_sheets/factsheet_key_considerations_impementing_p3s_072314.pdf (accessed on August 18, 2014) and Federal Highway Administration. *Monitoring and Oversight for Public-Private Partnerships (P3s)*. 2013. http://www.fhwa.dot.gov/ipd/pdfs/p3/factsheet_07_monitoringandoversight.pdf (accessed on September 25, 2015).

strong institutional processes that emphasize open communication and joint decision-making such that, even when key staff members change, the partnership is maintained.

Although gaining momentum, the use of P3s in the U.S. is still in the early stages. Most P3 projects are still under construction and few have begun operation. Consequently, experience with monitoring and oversight of P3 concessions in the U.S. is limited, and examples of successful practices are scarce.

5.1 Performance Monitoring

From the public agency perspective, ensuring that the private partner meets its contracted level of performance requires three main components: criteria, a monitoring system, and financial incentives. All three should function together as a system. For availability payment concessions, this system is the core of the agreement, as it aligns the public and private interest in the project. For user fee concessions, the contractor is already motivated to meet the performance standards, as they directly influence overall usage and revenue. Most U.S. toll-based P3s therefore have neither a detailed monitoring system nor financial incentive mechanisms to enforce performance standards.

5.1.1 Define Output-Based Performance Metrics

Output-based performance specifications focus on what a facility is intended to achieve, rather than the methods and materials used to achieve those goals. Output-based performance specifications allow the private partner to develop solutions that reduce overall life-cycle costs while delivering the intended level of service. In practice, public agencies in the U.S. often apply a combination of prescriptive construction requirements and output-based post-construction service requirements. Construction requirements are not necessarily redundant because the private partner will be responsible for the long-term performance of the road. Environmental processes and requests from project stakeholders often lead to specific requirements that need to be addressed and often are not defined in output-based terms. In addition, the expected life of some project components will exceed the contract term, which means that the interests of the public agency are not sufficiently protected by the O&M requirements in the contract.

One drawback of construction requirements is that they often refer to standard, state-wide, specifications, which are typically quite prescriptive and limit flexibility for bidders and opportunities for optimal life-cycle cost solutions. Circumventing these well-established standards specifications seldom is an option, although making project specific modifications can be.

Project goals and functional requirements are established by the contracting agency. The development of Key Performance Indicators (KPIs) and output-based specifications can be challenging, particularly for agencies that are used to prescribing detailed requirements—or even designs. Nevertheless, these specifications are at the heart of the P3 contract: because they will determine service standards for the contract duration, sufficient time should be spent to develop them and their linkage to the payment mechanism and monitoring system.

A public agency may already have experience developing performance standards and collecting test data in its traditional procurements. Furthermore, public agencies may be able to glean some helpful practices from international experience developing and using output-based specifications in P3 projects. However, as the perception of quality of service can vary depending on the agency and community needs, KPIs and output-based specifications should not simply reflect generic standards, but should instead be tailored to address project-specific concerns.

Applying quality standards can differ between P3s and traditional procurement—particularly when O&M is performed by the public agency. Often, the level of maintenance that public agencies wish to perform

will be constrained by limited budgets. P3 contracts however, commit the finances of the public agency and the performance of the private partner throughout the term of the contract—leading to higher and/or more consistent quality.

Key Points:

1. Output-based or functional performance specifications facilitate innovative solutions better than input-based or detailed performance specifications.
2. KPIs and output-based specifications should be tailored to project-specific circumstances and reflect agency and community objectives.

Example: I-4 Ultimate Project Technical Requirements Represent FDOT's Successful Practice

The most recent FDOT's availability payment P3, the I-4 Ultimate Project reflects the agency's latest thinking in terms of requirements and specifications. The RFP requires that bids comply with both project-specific requirements and FDOT's Standard Specifications for Road and Bridge Construction.

The 500-page RFP Volume II on Technical Requirements starts with the project description – including scope, objectives, and general standards and requirements (Sections 1 and 2) – then continues with design and construction criteria (Section 3), O&M requirements (Section 4), and hand-back requirements (Section 5).

The O&M requirements are generally less prescriptive and more performance-based than the design and construction criteria. Section 4 includes a set of tables that address four categories of performance failures: 1) construction availability faults, 2) construction O&M violations, 3) availability faults, and 4) O&M violations. The tables also specify minimum performance requirements, fault classifications and cure periods, which links the performance requirements to the payment mechanism. Table 5-1 and Table 5-2, below, are examples that highlight performance requirements related to availability faults and O&M violations.

Table 5-1: Example of Performance Failure Tables (Availability Faults) from I-4⁶²

TABLE 4.3 - AVAILABILITY FAULTS						
Element No.	Asset	Minimum Performance Requirements	Construction Availability Fault Classification	Cure Period		Interval of Recurrence
				FDOT Reported Event	Concessionaire Reported Event	
4.3.03	Roadway Surface Debris	Conduct the removal and disposal of debris from travel lanes, including at a minimum, large objects, dead animals and tires. Meet the temporary mitigation performance requirements set forth in Section 4-6.2.2 of the Technical Requirements and meet the requirements as detailed in the Contract Documents.	C	30 minutes	30 minutes	60 minutes
4.3.04	Flexible Pavement Pot Holes	Pavement shall meet the requirements set forth in Section 4-6.2.4 of the Technical Requirements.	B	30 minutes	60 minutes	60 minutes
4.3.05	Flexible Pavement Settlement and Depression	Pavement shall not exceed a depth of 0.5 inches and meet the requirements set forth in Section 4-6.2.4 of the Technical Requirements.	B	30 minutes	60 minutes	60 minutes
4.3.06	Flexible Pavement Rutting	Pavement shall not exceed a depth of 0.6 inches and meet the requirements set forth in Section 4-6.2.4 of the Technical Requirements.	B	30 minutes	60 minutes	60 minutes
4.3.07	Rigid Pavement Pot Holes/Spalling	Pavement shall not have a defect greater than 0.5 square feet in area and including any single measurement of 1.5 inches or greater in depth including any single area in the wheel path exceeding 3 inches in width measured longitudinally and 12 inches in length measured transversely. Pavement shall meet the temporary mitigation performance requirements set forth in Section 4-6.2.5 of the Technical Requirements.	B	30 minutes	60 minutes	60 minutes

62 Florida Department of Transportation, I-4 Ultimate Project, Contract # E5W13, Addendum No. 2: January 10, 2014, Volume II Technical Requirements, Section 4 – Operations and Maintenance Requirements, Table 4.3.

Table 5-2: Example of Performance Failure Tables (O&M Violations) from I-4⁶³

TABLE 4.4 – O&M VIOLATIONS						
Element No.	Element Category	Minimum Performance Requirements	Availability Fault Classification	Cure Period		Interval of Recurrence
				FDOT Reported Event	Concessionaire Reported Event	
4.4.05	All Flexible Pavement	Conduct a visual inspection of the affected area and provide a written recommendation for repairs to the FDOT.	A	24 hours	24 hours	24 hours
		Complete repairs identified in the inspection and meet the approved written recommendation.	C	24 hours	24 hours	24 hours
4.4.07	Fuel Spills/ Contamination	Provide Contamination Management Plan after a fuel spill/contamination event.	A	24 hours	24 hours	24 hours
		Comply with the FDOT approved Contamination Management Plan.	A	24 hours	24 hours	24 hours

5.1.2 Establish a System for Monitoring P3 Performance

Public agencies are heavily involved in monitoring the performance of contractors under conventional delivery methods, including DB. In a P3, although some of the monitoring roles will be carried out by the public agency, the private concessionaire will primarily monitor its own performance and report periodically to the public agency. Nonetheless, the public agency can ensure that the private partner is performing as promised by independently verifying the reports. Therefore, establishing a system for monitoring P3 performance that includes a role for both the public agency and the private partner is a factor of success for P3s.

Most P3 contracts obligate the private partner to implement quality assurance and quality control (QA/QC) procedures and a monitoring system, providing the agency with the results from both sources. Typically, the project lenders require similar protections. This arrangement allows the agency to transfer some monitoring costs to the private partner. However, the agency cannot solely rely on the private partner. It is in the public interest that the information it receives is reliable and correct; therefore, the concession agreement typically allows for audits on the monitoring system and actual service delivery. As both the public agency and the private partner have a financial interest in the outcome, the use of independent auditors and certifiers can prevent conflicts of interest. In addition, discovering potential quality or performance issues early through proactive monitoring allows more time to correct issues, rather than immediately be confronted with defaults and non-compliance events. In the early years of the concession it may be prudent for the agency to monitor and verify the private partner’s data on a more regular basis. Once the agency becomes comfortable with the accuracy of the data, it may be able to scale back the frequency of reviews.

63 Florida Department of Transportation, I-4 Ultimate Project, Contract # E5W13, Addendum No. 2: January 10, 2014, Volume II Technical Requirements, Section 4 – Operations and Maintenance Requirements, Table 4.4.

Key Points:

1. Whereas agencies tend to be heavily involved in monitoring in DBB and DB contract, the private partner will largely be monitoring its own performance in a P3 and reporting to the public agency.
2. It is in the agencies' best interest to be proactive in reviewing performance data from the private partner.

Example: Self-monitoring is used for the Port of Miami Tunnel, Florida

The Port of Miami Tunnel will connect the Port (located on an island in Biscayne Bay), via the MacArthur Causeway (State Road A1A - which connects Miami to Miami Beach) to I-395 on the mainland. The project includes a tunnel under the Main Channel, roadway work on both Dodge Island and Watson Island/MacArthur Causeway, and widening of the MacArthur Causeway Bridge. The project is structured as an availability payment P3, and the concessionaire is Miami Access Tunnel, LLC (MAT).

Under the P3 agreement, FDOT will provide MAT a total of \$100 million in milestone payments during the construction period between 2010 and 2013 and a \$350 million final acceptance payment upon the completion of construction. This will be followed by 30 years of availability payments during the operating period. The annual availability payment begins at \$33 million (2009\$), with adjustments for inflation. Payment deductions will be made if MAT's performance does not meet the standards set in the concession agreement.

FDOT applies a self-monitoring concept in this project, in which MAT is responsible for its own monitoring, and for notifying FDOT of noncompliance. During procurement, bidders were required to develop a Project Management Plan, Preliminary Quality Plan, and O&M Plan. The Preliminary Quality Plan had to meet a range of requirements, including QA/QC programs for design and construction as well as operations. The O&M Plan had to demonstrate effective self-monitoring processes and procedures to monitor compliance with minimum performance criteria and an effective method of tracking and reporting the following: noncompliance points, violations during construction, violations after completion, availability faults, and construction closures.

5.1.3 Provide Performance Incentives through a Payment Mechanism

Public agencies want to ensure that concessionaires perform their contractual duties. Payment mechanisms can provide incentives to comply with KPIs and output-based specifications, aligning the interests of the concessionaire, public agency and other stakeholders. Aligning performance incentives through a payment mechanism has proved successful in P3s.

Payment mechanisms generally include penalty points, which can lead to payment deductions or retentions. Agreements also typically have a mechanism for non-compliance or default points that, when they reach a specified level, can result in increased oversight, remedial work by the public agency at the concessionaire's expense, suspension or termination of the contract. Should the private partner underperform, the public agency's manager must enforce the obligations of the P3 contract.

The payment mechanism is typically developed in the project development phase and often refined, as a result of feedback from bidders, in the procurement phase. Determining the level of financial penalties can be a challenge: they must be large enough that the private partner makes decisions in the public interest. Often the "tickle-hurt-kill" principle is used when determining the appropriate level of penalties:

- If penalties are too low, the concessionaire may accept the penalty rather than pursue a remedy ("tickle").

- Therefore, the key is to set penalties that matter and motivate the private partner to pursue a remedy (“hurt”).
- If penalties are too high, the concessionaire can be unreasonably punished—even defaulting on the basis of minor breaches of the contract (“kill”).

Agencies may hesitate to apply the penalties in the P3 contract due to concern over harming their relationship with the concessionaire. Agencies need to strike a balance between being confident in fully following the terms of the concession contract and developing good professional relationships with the P3 concessionaire.

Key Points:

1. The payment mechanism—including financial penalties and deductions—should motivate the concessionaire to perform.
2. The “tickle-hurt-kill” principle is often used when developing the payment mechanism.

Example: Use of Financial Incentive Mechanisms on the I-595 Corridor Roadway Improvements Project

The Florida I-595 Corridor Roadway Improvements project consists of the reconstruction and widening of the I-595 mainline and all associated improvements of frontage roads and ramps from the I-75/Sawgrass Expressway interchange to the I-595/I-95 interchange, a total project length of 10.5 miles. A major project component is the construction of three reversible express toll lanes to be known as 595 Express, serving traffic between the I-75/Sawgrass Expressway and east of SR 7, with a direct connection to the median of Florida's Turnpike. These lanes were designed to be operated as managed lanes with variable tolls to optimize traffic flow.

The first transportation availability payment P3 in the U.S, the project features a 35-year agreement between FDOT and a private concessionaire, I-595 Express, to design, build, finance, operate, and maintain the roadway. The concessionaire received no compensation from FDOT until the facility was fully operational. Upon FDOT's final acceptance of the project construction, I-595 Express started receiving a series of annual lump sum final acceptance payments, including potential bonuses for completing a series of interim milestones (related to major construction activities) within established contractual deadlines.

Performance-based availability payments are made monthly during the operating period. The contract defines a maximum annual availability payment of \$65.9 million (in 2009 dollars) that escalates annually. If quality, performance, and/or availability requirements are not met, the availability payments are subject to downward adjustment. The contract specifies two main categories of adjustments: 1) availability adjustments (for unavailability of sections of the road), and 2) O&M violation adjustments (for violation of contractual obligations with respect to O&M). The Payment Mechanism (Appendix 6 of the I-595 P3 Agreement⁶⁴) includes the formulas that are used to calculate the adjustments and resulting monthly availability payments.

5.2 Long-Term Partnership

The P3 approach to project delivery is intended to provide high-quality, cost-effective, reliable, and timely service at an affordable price. The success of this approach is enabled by a good relationship between the public agency and the private entity. Partnering sessions and joint decision-making protocols help create

⁶⁴ All I-595 Express documents can be found at: <http://595express.info/documents.shtm> (accessed September 25, 2015).

and maintain these relationships, even when ownership of the private entity, or political leadership of the public agency, change.

5.2.1 Establish a Collaborative Working Relationship between the Public Agency and the Private Entity

The success of a P3 project depends on a strong and collaborative working relationship between the public and private partners. Frequent and open communication is essential in building this relationship. Obviously, this requires a collaborative attitude among the people involved, which cannot be formally enforced. However, certain approaches—including the use of "partnering sessions," working committees, and a clear dispute resolution process—can stimulate such collaboration and contribute to the long-term success of the P3.

Partnering sessions bring all relevant members of the public agency and concessionaire together to help establish a vision of partnership for the P3 project. The first session is typically held immediately after contract close, and can be most helpful in creating both formal and informal lines of communication. Subsequent sessions can be held periodically to strengthen those lines of communication and reinforce collaboration. The agendas of the partnering sessions vary among projects. Typically, a first partnering session includes an introduction to the entire public and private teams—and the roles of all the team members. Both partners explicitly describe their ambitions for the project and their vision for the partnership. Some aspects of these sessions may seem rather symbolic—a pledge to the project's key operating principles, for example, or to transparent communication between the public and the private partner—but are meaningful to the participants. Such aspects create awareness of formal rights and obligations while they help build informal relationships as well. There is no standard formula for subsequent partnering sessions, which are likely to address specific challenges and issues relevant at that particular time.

In addition to partnering sessions, structured public-private committees active during all project stages can stimulate open communication. Examples include a works committee during construction, a transition committee between construction and the operational phase, and an oversight committee during the operations. Typically, partner representation is broader and meeting frequency is higher during construction than after.

Some agencies have had very good experience with joint project offices where both public and private project team members work under the same roof, which facilitates easy and swift communication among team members. In combination with an overall project management team staffed by both the concessionaire and the public agency, this creates a single, on-site, point of decision-making.

Public-private committees and joint project offices can also contribute to swift and effective dispute resolution. Given the long-term and complex nature of P3 arrangements, it is likely that conflicts will arise throughout the life of the contract. P3s can involve a myriad of complex legal arrangements over service quality, customer satisfaction, tariff reviews, and other issues. The interpretation—or misinterpretation—of these arrangements can lead to conflict.

Well-defined dispute resolution mechanisms can help to provide a clear path for escalating and resolving conflicts without formal arbitration. Disputes should be resolved rapidly by an entity with the necessary expertise. Prior to mediation or arbitration, dispute-resolution processes often define tiered systems of problem identification and resolution through dialogue, encouraging the resolution of problems at the lowest levels. Establishing steering committees, management review boards, and dispute review boards can provide pathways for resolving issues. Policies that articulate how disputes are to be resolved can increase confidence from private partners and provide clarity for public agencies.

Key Points:

1. Partnering sessions can help create both formal and informal lines of communication early in project implementation.
2. Public-private committees and joint project offices can accommodate frequent and open communication; they help identify and resolve issues before they escalate into major disputes requiring a formal resolution process.
3. Establishing steering committees, management review boards, and/or dispute review boards can provide pathways for resolving issues without formal arbitration.

Example: 495 Express Lanes Project Used Partnering Sessions at Multiple Levels

For the 495 Express Lanes project in Virginia, partnering sessions were held on a regular basis during the construction phase using the same facilitator throughout. There were three levels of partnering:

1. **Team Partnering Sessions** were held annually to discuss challenges, accomplishments, and allow project executives to personally deliver the key messages to the team. About 150 team members attended these sessions.
2. **Principals Partnering Sessions** were held with senior managers and executives about quarterly. Key issues and challenges were discussed and prioritized, with subsequent action plans and champions put in place. These had about 20 participants.
3. **Executive Partnering Sessions** were held with project managers (senior to senior managers) and executives about quarterly. Critical items, overall performance, and paths to success were discussed, with most issues being either resolved or a given a clear path forward. The Executive partnering sessions initially had about 12-15 participants. In the last year of the construction phase, the Principals and Executive partnering sessions were combined.

A “Level 4 Escalation” team was also put into place, comprised of key executives from each partner, with responsibility to reach agreement on scope of work differences, disputed changes, and critical decisions to move the project forward without claims or delays by any parties.

6 Cross-Cutting Themes

State DOTs and other transportation agencies have found the practices identified in this document helpful in building successful P3 projects and programs. While each topic has been discussed in the context of a specific phase in the P3 lifecycle, in practice they are related to and often dependent on one another. Although certain topics may appear more prominent in one project phase—for example, VfM assessment during project evaluation—they are often present and significant during other phases of the project.

This concluding section highlights four major cross-cutting themes, which are particularly important to the overall success of a P3 program, and represent the core of successful P3 practices. These are:

1. Ensure the P3 option creates value for the public.
2. Maintain transparency and conduct outreach throughout the P3 process.
3. Foster fair competition and long-term partnership.
4. Build a strong P3 program with adequate resources.

6.1 Ensure the P3 Option Creates Value for the Public

The P3 option is attractive when it promises greater value for the public compared to conventional delivery. Assessing whether a P3 can create public value begins early in the process, when public agencies conduct multi-level project screening, compare delivery options, and assess retained public liabilities (Sections 3.2.1, 3.2.2, and 3.2.3). However, the VfM assessment is not merely a one-time effort; it should be periodically updated throughout the P3 project lifecycle in order to determine whether the public continues to receive the “best value.”

A principal factor in accomplishing this is aligning public and private interests, which requires active diligence by the public agency throughout the P3 lifecycle. During the P3 project’s procurement, the public agency should develop robust evaluation criteria, typically involving non-price factors such as quality, timing, and risk allocation (Section 4.2.1). The payment mechanism, performance metrics, and performance incentives laid out in the P3 contract are critical to aligning the private entity’s financial incentives with the public interest (Section 5.1.3, and 5.1.3).

6.2 Maintain Transparency and Conduct Outreach throughout the P3 Process

While transparency and outreach efforts are mandated by laws, regulations, and general principles of good governance, it is particularly important that P3 projects are clearly explained to all public stakeholders and that public input is solicited early and throughout the process (Sections 2.2.1, 2.2.2, and 3.3.1). Having upfront legislative involvement and approvals for P3 projects further creates transparency at the policy-making level and reduces surprises in a P3 procurement (Section 2.1.4).

In the project development and procurement phases, communicating the result of project analyses and bid evaluations and documenting that the P3 will create public value is necessary to engender trust in the process (Sections 3.2.1, 3.2.2 and 4.2.1). During procurement, a lack of transparency in interactions with the industry can be a source of criticism of P3s. Creating a transparent procurement process is critical (Sections 4.1 and 4.2) for developing and maintaining public support. As discussed below, these practices also foster healthy competition.

6.3 Foster Fair Competition and Long-term Partnership

In order to obtain the best value for the public, the public agency should create sufficient market interest for the project. During P3 project development, public agencies can stimulate market appetite by actively seeking industry input (Section 3.3.2). Additionally, as discussed above, openness in communication and transparency in all aspects of the P3 process, including the award criteria, provide legitimacy to the procurement process and thereby increase market appetite (Sections 2.2.1, 2.1.3, and 4.2.1).

One of the main challenges to creating market appetite is keeping transaction costs at an acceptable level. Developing competitive bids for a P3 project typically involves much more time and effort than for a conventional delivery option. When appropriate, public agencies can create a pipeline of P3 projects (Section 2.2.3) and pay stipends to unsuccessful bidders (Section 4.1.4). Furthermore, shortlisting qualified bidders increases bidder interest while still maintaining competitive pressure (Section 4.1.1), and can also reduce transaction costs. Experience shows that constructive dialogue often leads to better RFPs and better proposals (Section 4.1.2). In the case of unsolicited proposals, initiating a predictable competitive procurement after approval of an unsolicited proposal can result in more competition as well as fostering transparency (Section 3.4.4).

Minimizing negotiations after selection of the preferred bidder (Section 4.2.2.) compels bidders to submit realistic, yet competitive bids, and also enhances transparency in the procurement process.

Effective and professional contract management, monitoring, and oversight of P3 projects help to ensure that public value is realized. When the monitoring is accompanied by open and honest dialogue between the public agency and the developer, for example, through partnering sessions and establishing public-private committees (Section 5.2.1), this further encourages both parties to work in partnership and settle disputes and resolve issues quickly.

6.4 Build a Strong P3 Program with Adequate Resources

There are a number of successful practices related to governance, common to many complex public programs, which are especially relevant to P3 projects. These include providing clear legislative authority and flexibility within certain limits to professional public agency staff and allowing for a variety of P3 options in legislation, creating a centralized unit with specialized P3 skills, and enabling P3 authority to set policy and contract terms (Sections 2.1.1, 2.1.2, 2.1.3).

For unsolicited proposals, a dedicated timeframe for submission of proposals results in a more efficient process (Section 3.4.2). Similarly, measures such as instituting an unsolicited proposal review fee (Sections 3.4.3) create appropriate incentives and also help to defray the public agency's costs.

Whether a public agency chooses to deliver a single P3 project or a program of P3 projects, it will need to assemble a team with diverse skill sets (Section 2.1.2), often a combination of public agency staff and external advisors. While external advisors provide specific expertise, they cannot substitute for public agency staff in performing inherently governmental functions, such as selecting the preferred bidder and awarding the contract. Peer-to-peer exchange, capacity building and educational products developed by the U.S. DOT and other institutions – like this document – aim to strengthen the skills and expertise of these P3 professionals, eventually resulting in the development and implementation of P3s that generate best value for the public.

Appendix A. Participating Organizations

List of organizations interviewed for this report:

Allen and Overy

American Association of State Highway and Transportation Officials (AASHTO)

American Road and Transportation Builders Association (ARTBA)

Bechtel

Booz Allen Hamilton

Cintra

Colorado's High Performance Transportation Enterprise

Ernst & Young

Fitch Ratings

Florida DOT

Fluor

George Washington University

Hogan Lovells

Illinois DOT

IMG Rebel

KPMG

Los Angeles County Metropolitan Transportation Authority: Metro

Minnesota DOT

Missouri DOT

Nossaman, LLP

Ohio DOT

Parsons Brinckerhoff

Pennsylvania DOT

Plenary Group

Public Engineers in Government – California

Public Interest Research Group

Texas DOT

TIFIA

Transurban

United Nations Economic Commission for Europe (UNECE)

Vinci

Virginia DOT

Virginia Tech

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Appendix C. U.S. P3 Projects in Operation or Construction⁶⁵

	Notice to Proceed	Project Name	Public Sponsor	Agreement Type	Invested (current year \$M)	Private Partner (\$ capital invested / design-builder)
In operation						
	7/93	91 Express Lanes, CA	Caltrans	DBFOM (toll)	130	Level 3, Cofiroute, Granite (sold to government 1/03)
	9/93	Dulles Greenway, VA	Virginia DOT	DBFOM (toll)	350	TRIP II (\$150M/Brown & Root)
TF	5/03	SR 125 / South Bay Express, CA	Caltrans	DBFOM (toll)	773	PB, Macquarie (\$653M/Fluor-Washington)
TF	12/07	I-495 Express Lanes, WA	Virginia DOT	DBFOM (toll)	1,998	Transurban, Fluor (\$1.4B/Fluor-Lane)
TF	3/08	SH 130 Segments 5-6, TX	Texas DOT	DBFOM (toll)	1,358	Cintra, Zachry (\$968M/Ferrovial-Zachry)
TF	2/09	I-595 Managed Lanes, FL	Florida DOT	DBFOM (avail.)	1,814	ACS Infrastructure (\$1.2B/Dragados-Earth Tech)
TF	10/09	Port of Miami Tunnel, FL	Florida DOT	DBFOM (avail.)	914	Meridiam (\$607M/Bouygues-Jacobs)
TF	12/09	North Tarrant Express, Phase 1, TX	Texas DOT	DBFOM (toll)	2,047	Cintra, Meridiam (\$1.46B/Ferrovial)
TF	6/10	I-695 LBJ Managed Lanes, TX	Texas DOT	DBFOM (toll)	2,800	Cintra, Meridiam (\$2.1B/Ferrovial Agroman)
TF	8/12	I-95 Express Lanes, VA	Virginia DOT	DBFOM (toll)	940	Transurban, Fluor (\$618M/Fluor-Lane)
Under construction						
TF	8/10	Eagle P3, CO	Denver RTD	DBFOM (avail.)	2,100	Fluor, Laing, Uberior (\$1.27bn Fluor/BBRI)
TF	4/12	Midtown Tunnel, VA	Virginia DOT	DBFOM (toll)	2,100	Skanska, Macquarie (\$1.47B/Skanska-Kiewit-Weeks)
TF	6/12	Presidio Parkway, CA	Caltrans	DBFOM (avail.)	365	Hochtief, Meridiam (\$245M/Flatiron-Kiewit)
TF	3/13	East End Bridge, IN	Indiana Finance Authority	DBFOM (avail.)	1,180	Walsh, Vinci, Bilfinger (\$763M/Walsh-Vinci)
TF	9/13	North Tarrant Express, Phase 2, TX	Texas DOT	DBFOM (toll)	1,400	Cintra, Meridiam (Ferrovial-Webber)
TF	11/13	Goethals Bridge, NY-NJ	Port Authority NYNJ	DBFOM (avail.)	1,500	Macquarie, Kiewit (\$934M/ Kiewit-Weeks-Massman)
TF	2/14	US 36, Phase 2, CO	Colorado DOT/HPTE	DBFOM (toll)	113	Plenary (Ames/Granite)
TF	4/14	Portsmouth Bypass, OH	Ohio DOT	DBFOM (avail.)	550	ACS/InfraRed/Star (\$429M Dragados/Beaver)
	7/14	I-69 Upgrade, IN	Indiana DOT/IFA	DBFOM (avail.)	370	Isolux/PSP Investments (Corsan \$325M)
TF	9/14	I-4 Ultimate, FL	Florida DOT	DBFOM (avail.)	2,323	Skanska/Laing (Skanska/Lane/Granite)
	1/15	Pennsylvania Rapid Bridges, PA	PennDOT	DBFOM (avail.)	899	Plenary/Walsh (Walsh/Granite+HDR)
TF	6/15	I-77 Managed Lanes, NC	North Carolina DOT	DBFOM (toll)	648	Cintra (\$442M Ferrovial/W.C. English)

TF = Financing includes US TIFIA loans

⁶⁵ Public Works Financing, October, 2015.