INNOVATION WAVE:

AN UPDATE ON THE BURGEONING PRIVATE SECTOR ROLE IN U.S. HIGHWAY AND TRANSIT INFRASTRUCTURE

UNITED STATES DEPARTMENT OF TRANSPORTATION

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I. EXECUTIVE SUMMARY

Since 2005, more public-private partnerships ("PPPs")[1] for surface transportation facilities have reached commercial and financial close than during any comparable period in U.S. history. Among the most prominent of these PPPs have been the $3.8 billion Indiana Toll Road PPP, the $1.8 billion Chicago Skyway PPP and the approximately $1.8 billion Capital Beltway HOT Lanes PPP. In addition, there are currently more than 20 major highway and transit PPP projects at various stages of procurement in the United States.[2]

In the Indiana Toll Road and Chicago Skyway PPPs, long-term concessions for the operation and maintenance of existing toll road facilities enabled the public sector to realize significant upfront value. These landmark deals were followed by PPPs for the operation and maintenance of the Pocahontas Parkway outside Richmond, Virginia, and the Northwest Parkway outside Denver, Colorado, two relatively new toll roads then struggling to make debt payments. Building on the momentum of these four projects, public authorities in a number of other states are also considering innovative PPPs for existing toll road facilities.

In addition to existing toll facilities, several states have adopted PPPs as a preferred approach for delivery of new transportation capacity and capital improvements. Texas is currently considering PPPs for five highway projects.[3] Florida is using innovative PPP structures for three new surface transportation projects.[4] Georgia has four highway PPP projects in various stages of procurement.[5] Virginia reached commercial and financial close on the Capital Beltways HOT Lanes project in December 2007 and has three active procurements for long-term, concession-based, highway PPPs.[6] PPP projects are also being procured in Missouri, California, Alaska, North Carolina, Mississippi, South Carolina and Colorado.[7]

Since 2005, eight states have enacted legislation authorizing public authorities to enter into PPPs for highway and/or transit projects.[8] A total of 25 states now have P3 authority. Elsewhere, state and local authorities in the United States are increasingly considering PPPs for transportation infrastructure. The Federal government has continued to encourage PPPs through new and innovative programs, including the Private Activity Bonds program, the

[1] PPPs are essentially contractual arrangements between the public and private sectors that allow a single private entity to assume significant control of, and risk for, multiple elements of a project, including design, construction, financing, operation and maintenance. A detailed definition is provided in Section III.
[2] The growing use of PPPs in the United States is detailed in Section IV.
[3] The I-635 Managed Lanes project, the North Tarrant Express, the DFW Connector, the I-69/TTC project, and portions of the TTC-35 project.
[4] The Port of Miami Tunnel project, the I-595 Improvements project, and the First Coast Outer Beltway.
[5] The Northwest Corridor project, the I-285 Northwest TOT Lanes project, the GA-400 Crossroads Region project, and the I-20 Managed Lanes project.
[6] The I-95/I-395 HOT Lanes project, the US Route 460 project, and the Midtown Corridor Tunnel project, which is expected to proceed with procurement upon receipt of authorization from the Virginia Department of Transportation's Chief Engineer.
[7] The Missouri Safe & Sound Bridge Improvement Project, in Missouri, the BART Oakland Airport Connector, in California, the Knik Arm Bridge, in Alaska, the Mid-Currituck Bridge, in North Carolina, the Airport Parkway, in Mississippi, the Greenville Southern Connector, in South Carolina, and the Denver RTD FasTracks Capital Program, in Colorado.
[8] State authorizing legislation is described in greater detail in Section IV.

TIFIA program (which was updated in 2005), Interstate Tolling programs, the SEP-15 program, the Corridors of the Future Program, and FTA's PPP Pilot Program.

There is a growing recognition in the United States that traditional approaches to funding and procuring highway and transit projects are failing.[9] We spend record amounts on highways and transit, yet congestion and system unreliability continue to increase, as they have for decades. Governments across the country are having a difficult time keeping up with the demand for transportation investment. Scarce transportation resources are increasingly misallocated for political or special purpose spending. We rely on fuel taxes to fund transportation despite national, bipartisan efforts to promote energy independence, improved fuel economy, reduced emissions and alternative fuel development. Advancing a major project from concept to completion often takes well in excess of ten years, making it extremely difficult for the public sector to respond to transportation priorities.[10]

PPPs have been widely recognized over the last several years as an innovative approach to transportation funding and procurement that can reduce project costs, accelerate project delivery, transfer project risks to the private sector, and provide valuable, high-quality projects; but these benefits alone do not explain the growing number of PPPs that are being procured in the United States. PPPs are being utilized at a record pace because:

- PPPs respond to congestion and system unreliability by providing high-quality, well managed projects and better performance;

- PPPs address the demand for transportation investment by providing access to a vast amount of private capital available for investment in transportation;

- PPPs reduce the wasteful effects of political and special purpose spending by incorporating financial accountability for investment decisions into the transportation funding process;

- PPPs help align the Nation's transportation funding policy with critical energy and environmental policies by substituting private capital for fuel tax revenue; and

- PPPs can significantly accelerate project delivery by providing upfront private capital for a project's full cost.

While there are risks that the public sector needs to be aware of in PPPs, there is no evidence that PPPs are inherently more risky than traditional procurement approaches. Moreover, it is important to recognize that PPP risks are manageable and that properly structured PPPs can meaningfully reduce public sector exposure, as compared to traditional procurement

[9] In January 2007, for example, the U.S. Government Accountability Office ("GAO") added transportation finance to its "high risk" program, which identifies serious weaknesses in areas that involve substantial resources and provide critical services to the public. GAO highlighted increasing congestion, funding shortfalls and the un-sustainability of the fuel tax, as important factors in its decision. In making its determination, GAO suggested that Congress and the U.S. Department of Transportation consider alternative sources of revenue and stimulate private investment. *High Risk Series: An Update*, U.S. Government Accountability Office (GAO-07-310), January 2007, pp. 16-20.

[10] These failures of traditional transportation policy, and how PPPs respond to these failures, are the subject of Section V of this report.

approaches.[11] The public sector can mitigate risks within the framework of a PPP by taking prudent and reasonable steps to ensure that they are creating well-balanced PPP programs, by doing necessary due diligence before committing to projects, and by negotiating well structured concession agreements.

For example, in a PPP structure, private concessionaires can be bound by contractual requirements to operate and maintain facilities in accordance with high standards of performance, which can be specified in detail by the public sector. In fact, private concessionaires can be more accountable than public authorities for the operation and maintenance of facilities because private concessionaires have significant financial incentives to comply with concession agreements and provide high levels of customer service.[12]

In other countries, and in innovative states and local jurisdictions, the risks of PPPs have been considered and addressed in the context of well-balanced PPP programs and carefully negotiated concession agreements. Best practices will continue to be developed as more PPPs are procured and states and local jurisdictions explore and implement innovative solutions that manage these risks. Also, while PPPs require vigilance from public officials, they respond to the pressing failures of status quo approaches to transportation funding and procurement noted above and can only be properly evaluated in that context.

A staggering amount of private capital has been raised over the last two years for investment in global infrastructure and state and local governments have a window of opportunity to attract this money to the United States through the implementation of PPPs for transportation projects. *The Financial Times* reported at the end of 2007 that estimates of equity raised for investment in global infrastructure run from $50 billion to $150 billion.[13] *The McKinsey Quarterly* in February 2008 reported that the world's 20 largest infrastructure funds now have nearly $130 billion under management, 77 percent of which was raised in 2006 and 2007.[14] *The McKinsey Quarterly* noted that in some situations $1 billion of equity could be leveraged to pay for as much as $10 billion in projects. Even assuming more conservative leveraging, the equity available for investment could help pay for several hundred billion dollars worth of infrastructure projects.

Given the vast amounts of private capital raised over the last two years for investment in infrastructure and the PPP expertise and best practices that have been developed and continue to evolve both in the United States and around the world, the ability of states and local governments to attract private capital and implement successful PPPs has never been better.

[11] Managing risks in PPPs is the subject of Section VI of this report.
[12] GAO recently reported that the concessionaires for the Indiana Toll Road and Chicago Skyway are actually held to higher standards of performance than the public operators of such roads were before them. *Highway Public-Private Partnerships: More Rigorous Up-front Analysis Could Better Secure Potential Benefits and Protect the Public Interest*, United States Government Accountability Office (GAO-08-44), February 2008, pp. 41-42.
[13] *Infrastructure M&A*, The Financial Times, December 30, 2007.
[14] Palter, Robert N., Walder, Jay, and Westlake, Stian, *How investors can get more out of infrastructure*: *Opportunities to invest in public infrastructure will increase during the next few years, but so will competition for deals*, The McKinsey Quarterly, February 2008.

II. INTRODUCTION

This report describes the unprecedented use of PPPs by state and local transportation authorities over the last three years and provides an update of USDOT's 2004 Report to Congress on PPPs (the "2004 Report").[15] The primary purposes of this report are: (i) to explore the growing use of PPPs by state and local transportation authorities, and (ii) to identify the advantages and disadvantages of PPPs as an alternative to traditional approaches to transportation funding and procurement.

The substance of this report is set forth in Sections III through VI. Section III defines PPPs and describes their benefits. While the 2004 Report provided a broad definition of PPPs, this report refines and focuses that definition to reflect the increasing utilization in the United States of long-term, concession-based PPPs, a subset of PPPs which have become significantly more prevalent since the 2004 Report was delivered. This section of the report then briefly describes the benefits of PPPs that have been used in the United States and abroad, which were described in greater detail in the 2004 Report.

Section IV explores the unprecedented use of long-term, concession-based PPPs in the United States since the 2004 Report. The increasing utilization of these types of PPPs is demonstrated by (i) the execution of long-term concessions to operate and maintain existing toll facilities, (ii) the procurement of concessions to design, build, finance, operate and/or maintain new highway and transit capacity and capital improvements, and (iii) state and Federal action to remove impediments to PPPs and facilitate their implementation. While PPP structures are being utilized in other industries, this report focuses exclusively on highways and transit, which were the subject of the 2004 Report.

Section V describes the advantages of PPPs as an alternative to the failings of traditional approaches to project funding and delivery. While the benefits of PPPs described in Section III reflect U.S. and international experience generally, this section of the report focuses specifically on how PPPs respond to the increasingly evident failings of traditional approaches to transportation funding and procurement in the United States.

Section VI identifies certain risks commonly attributed to PPPs, explains how prudent public sector authorities manage such risks, and indicates that PPPs and their risks must be evaluated in the context of status quo approaches to transportation funding and procurement.

[15] House Report 108-243 (2003) accompanying the FY 2004 Department of Transportation Appropriations Act requested that USDOT: (i) prepare a report identifying the impediments to the formation of large, capital-intensive highway and transit projects involving PPPs, and (ii) work with states and local entities to identify and eliminate existing impediments. In December 2004, USDOT provided a report to Congress that answered the questions posed by Congress and attempted to provide a resource document for states interested in using PPPs.

III: DEFINING PPPS AND THEIR BENEFITS

A. Defining PPPs

PPPs are contractual arrangements between public and private sector entities pursuant to which the private sector is involved in multiple elements of public infrastructure projects. Unlike conventional methods of contracting for a project, in which discrete functions are divided and procured through separate solicitations,[16] PPPs contemplate a single private entity being responsible and financially liable for performing all or a significant number of functions in connection with a project. The "private partner" is typically a consortium of private companies with expertise in the different functions to be performed (design, construction, financing, operation and/or maintenance). In transferring responsibility and risk for multiple project elements to the private partner, the procuring agency shifts certain risks to the private partner and focuses on desired outcomes instead of detailed project specifications. The private partner receives the opportunity to earn a financial return commensurate with the risks it assumes. Structured in multiple forms, PPPs vary generally according to the scope of responsibility and degree of risk assumed by the private partner with respect to the project. In each case the private partner assumes financial risk in some form – for example, through an equity investment, liability for indebtedness, a fixed priced contract, or a combination thereof – and risks related to project design, construction, operation and maintenance, as applicable.

The 2004 Report provided a broader definition of PPPs which included any approach to project delivery that allowed more private sector participation than is traditional. For that report, the term "PPP" encompassed an expansive set of relationships – from agreements for a limited number of project elements, e.g., contracts where the private sector is responsible for designing and constructing a facility ("Design-Build"), to agreements for several project elements that can be very complicated and technical, e.g. contracts under which the private sector is responsible for the design, construction, financing, operation and maintenance of a facility.

The more focused definition in this report reflects the success of an increasingly utilized subset of PPPs. Long-term, concession-based PPPs were rarely considered, let alone implemented, in the United States prior to 2005. Over the last three years, however, long-term, concession-based PPPs have become more prevalent. In long-term, concession-based PPPs, the private sector generally assumes a significant portion of the financial risk of the project, risks associated with the operation and maintenance of the project, and, in the case of new capacity and capital improvements, risks associated with the project's design and construction. Whether the private sector assumes a significant portion of the risk that the project will not generate enough traffic and revenue to pay for the project's costs is an important component of the structure of a long-term, concession-based PPP. While most of the PPPs in the United States have been for toll road projects in which the concessionaire

[16] The dominant form of procurement in the United States since the creation of the modern transportation system has been the design-bid-build ("DBB") approach. Under the DBB approach, the design and construction of a facility are procured separately. The public agency either performs, or contracts with an engineering firm to perform, the design work, and then separately contracts with a private construction firm through a competitive, low bid process to perform the construction work. In a DBB procurement, the public agency assumes the risk that the design work is accurate and complete. Typically, the public sponsor also assumes the risk and responsibility for the operation and maintenance of the facility and for funding or financing the project.

assumes the traffic risk, some states have begun procuring PPPs utilizing toll free structures in which the concessionaire does not assume any traffic risk, but does assume risks inherent in the facility's design, construction, financing, operation and maintenance.

There are currently more than 20 long-term, concession-based PPP projects at various stages of procurement in the United States. Generally, the value of each of these PPPs ranges from a few hundred million dollars to a few billion dollars, and the total value should all of these projects be delivered can be expected to exceed several billion dollars. Long-term, concession-based PPPs for highway projects have been implemented over the last three years, and the tangible benefits that these projects provide are becoming increasingly clear, especially as the PPP structures utilized by these projects are compared with traditional approaches to project funding and procurement.

B. The Benefits of PPPs

Many of the benefits of PPPs were described in the 2004 Report, including the efficiencies gained from PPPs in project delivery, operations and maintenance.[17] These and similar benefits have been documented by multiple studies over the last few years[18] and are identified below. As PPPs are increasingly utilized in the United States, the value of many of these benefits becomes increasingly clear, including the following:

- ***PPPs can result in significant cost savings***. The 2004 Report indicated that PPPs can save from 6 to 40 percent of the cost of construction and significantly limit the potential for cost overruns through innovative contracting.[19] Consolidating responsibility for multiple project elements, including design, construction, and operation, in one private entity can result in cost saving efficiencies that are not possible with the traditional DBB approach. In addition, because cost savings benefit the private partner, and because the private partner is responsible for cost overruns through fixed-price contracts, the private partner has direct incentives to limit costs.[20] By raising private capital rather than public debt, PPPs can also ease public debt burdens and release public funds for other purposes.

  The Miami Port Tunnel project provides a good example of the cost savings that can be achieved by a PPP. While planners projected that the Florida Department of Transportation ("FDOT") would need to make annual payments of $68 million to the concessionaire for the design, construction, operation and maintenance of the project, each of the three private sector proposals received by FDOT contemplated significantly

[17] The benefits of PPPs were described in Chapter III of the 2004 Report.
[18] See, for example, (i) *Current Practices for Public-Private Partnerships for Highways, Draft Report*, submitted by KCI Technologies, Inc., in cooperation with the Maryland Transportation Authority, the Maryland Department of Transportation, and the Maryland State Highway Administration, June 22, 2005 (the "Maryland Report"), (ii) *Surface Transportation Funding Options for States*, National Conference of State Legislatures, May 2006 (the "NCSL Report"), (iii) *Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects*, USDOT, November 2007 ("USDOT Transit PPP Report"), (iv) *PFI: Construction Performance*, UK National Audit Office, Report by the Comptroller and Auditor General, HC 371 Session 2002-2003, February 5, 2003 ("UK NAO Report"), and (v) *Performance of PPPs and Traditional Procurement in Australia: Final Report*, The Allen Consulting Group, November 30, 2007 ("Australia PPP Report").
[19] 2004 Report, pg. 2.
[20] See the NCSL Report, pg. 49, which states that "[b]ecause the private entity wants to make a profit, it has greater incentive to reduce costs, improve efficiency and shorten completion time."

lower costs, with the bidder selected by FDOT requiring an annual payment less than half that amount, only $33 million.[21]

- ***PPPs can shorten project delivery by several years***. By providing access to immediately available private sources of capital, PPPs can accelerate the construction of projects that might otherwise be delayed for years or not be built at all.[22] In addition, the same efficiencies that produce cost savings often enable PPP projects to be constructed faster than traditional projects.[23]

  The concession for the Missouri Safe & Sound Bridge Improvement Program is expected to accelerate significantly the repair or replacement of more than 800 bridges in Missouri through an innovative PPP. The PPP will assign responsibility for completing the work on all of the bridges to one private partner. According to a State Representative, "[w]ith this innovative new approach to transportation we will do in five years what would have taken us 20 before."[24]

- ***PPPs allow for the allocation of risk to the party best able to manage risk***. Traditionally, virtually all of the risk associated with the design, construction, financing, operation and maintenance of a transportation project is borne by the public sector. PPPs allow for a significant portion of the project risk to be transferred to the private sector, reducing taxpayer costs.[25] Proper allocation of project risks to the parties (public or private) best able to manage the risks can result in lower overall risk for the project, reduced project costs and accelerated project delivery. Proper risk allocation can also increase the public sector's ability to manage a large number of projects simultaneously.

  A PPP structure is enabling the Virginia Department of Transportation to provide a dynamic solution to traffic on one of the most congested corridors in the country, the I-95/Capital Beltway corridor south and west of Washington, DC. Under a PPP structure the concessionaire is assuming the financial, technological and operational risks of implementing a complicated, variable rate, congestion pricing mechanism for the corridor. The concessionaire is willing to assume these risks because it will earn a return on its investment if the project is successful.

- ***PPPs can encourage innovations and the incorporation of life-cycle costs***. PPPs can encourage the incorporation of life-cycle costs in the design and construction of a facility which often leads to delivery of a higher quality transportation project.[26] PPPs can also encourage the private sector to come forward with creative ideas for improving the quality of public transportation infrastructure.

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[21] *Miami Port Tunnel, Maximum Availability Payment Opened*, Port of Miami Tunnel Project, Media Advisory, Revised April 12, 2007.
[22] 2004 Report, pg. 48. See also the Maryland Report, pg. 22. The Maryland Report explains that using traditional funding sources States are often forced to choose between funding an expensive mega-project and funding smaller urgent projects. Using non-traditional sources of funds made available through PPPs, expensive mega-projects and smaller urgent projects can be completed simultaneously.
[23] See Note 20 above.
[24] *Gov. Blunt Signs Bill to Dramatically Improve 153 Bridges in St. Joseph Area*, Missouri Governor Matt Blunt, Press Release, September 5, 2007.
[25] 2004 Report, pg. 59. See also the Maryland Report, pg. 32.
[26] 2004 Report, pg. 62. USDOT Transit PPP Report, pp. 9-10.

A survey of 37 PPP projects in the United Kingdom concluded that private partners in PPPs build higher quality facilities in order to reduce the long term costs of operation and maintenance.[27] In the Design-Build arrangements for the Largo Metrorail Extension in Washington, DC, the Design-Build contractor utilized a jet van tunnel ventilation system rather than the vent shaft system that the procuring agency had used for other tunnels because the jet van system is easier to maintain and more efficient to operate. This innovation saved an estimated $10 million in project costs.[28]

These examples demonstrate that state and local authorities are using PPPs to reduce costs, accelerate project delivery, allocate risk more effectively and encourage innovation.

[27] The UK NAO Report, pp. 7-8, which asserts that "[b]y designing and building the asset to a standard that will reduce maintenance costs throughout the contract period the consortium can reduce its long term costs while ensuring that it meets the department's service requirements."

[28] USDOT Transit PPP Report, pg. 19. The Largo Metrorail Extension was a Design-Build project, not a long-term concession, but this project demonstrates the cost savings and innovations that result from the combination of multiple project elements in one entity, a key component of the PPP structure.

IV: THE GROWING USE OF PPPS IN THE UNITED STATES

Since December 2004, when USDOT delivered the 2004 Report, there has been a dramatic increase of activity in the U.S. PPP market. This increase is primarily evident in (i) the execution of long-term concessions for the operation and maintenance of existing toll facilities, (ii) the procurement of new transportation capacity and capital improvements through long-term concessions for the design, construction, financing, operation and maintenance of such facilities, and (iii) developments at the state and Federal level to remove impediments to PPPs and promote their use. All levels of government in the United States are looking for innovative and creative ways to reform the traditional approaches to transportation funding and procurement and PPPs are an increasingly preferred alternative.

A. Long Term Concessions of Existing Assets

1. Chicago Skyway

In January 2005, after a competitive bidding process, the City of Chicago and a private consortium reached financial close on a $1.8 billion concession to operate and maintain the Chicago Skyway. The Chicago Skyway is a 7.8 mile toll road connecting the Dan Ryan Expressway on the South Side of Chicago with the Indiana Toll Road. The private consortium is made up of Cintra Concesiones de Infraestructuras de Transporte S.A., a Spanish toll road developer ("Cintra"), and Macquarie Infrastructure Group, an Australian toll road developer and operator ("Macquarie"). The Chicago Skyway PPP was the first long-term concession of an existing toll road in the United States.

The concessionaire paid the City of Chicago the full $1.8 billion upfront and will operate and maintain the toll road for 99 years. In exchange, the concessionaire was granted the right to collect all toll revenue during the 99-year term. The concessionaire will use the toll revenue to pay for operations and maintenance, to repay the debt that financed the $1.8 billion upfront payment, and to provide a reasonable return on its members' contribution of equity. The concessionaire assumed the risk that toll revenues will be insufficient for these purposes. Annual toll rate increases are fixed through 2017 and are capped thereafter at the greater of (i) 2 percent, (ii) the consumer price index, or (iii) per capita gross domestic product.

The City of Chicago used the $1.8 billion concession payment for a variety of purposes. It used $465 million to redeem outstanding indebtedness on the Skyway, $390 million to redeem other City of Chicago debt, $500 million to fund a long-term reserve account, $375 million to fund a mid-term annuity account, and $100 million to fund various City of Chicago programs, such as home heating assistance and assistance for the disabled to make home modifications. According to Mayor Richard M. Daley, transferring the responsibilities and risks of operating and maintaining the Chicago Skyway was a great benefit to the City because "running a toll road is not a core function of City government."

The large upfront payment made by the private consortium highlights the significant amount of private capital available for investment in U.S. transportation infrastructure. The deal also demonstrates that by permitting the private sector to leverage existing and potentially underperforming public assets, public authorities may be able to realize significant returns.

2. Indiana Toll Road

Following the successful financial close of the Chicago Skyway transaction, the Indiana Finance Authority launched a competitive bidding process in the fall of 2005 for a concession to operate and maintain the Indiana Toll Road (the "ITR"). The ITR runs east-west for 157 miles in northern Indiana between the Chicago Skyway and the Ohio Turnpike. A private consortium made up of Cintra and Macquarie won this concession as well, and in June 2006 the concessionaire made an upfront payment for the concession of $3.8 billion. As with the Chicago Skyway, the concessionaire will operate and maintain the ITR for the full term of the concession, in this case 75 years, and has the right to collect all toll revenue during the term. The concessionaire will use the toll revenues for similar purposes, and the toll rates have similar maximum limits.

Unlike the City of Chicago, however, Indiana is reinvesting the full amount of the upfront payment in the State's transportation program. The ITR concession was an important part of Governor Mitch Daniels' plan to address the State's $1.8 billion transportation funding gap from 2006 to 2015. The ITR was an underperforming asset that consistently lost money – the ITR lost money in three of the last five years it was publicly operated, and in 2005, the ITR lost $16 million.[29] The $3.8 billion upfront payment fully funded Indiana's 10-year road improvement plan. In addition, the upfront payment provided funding to each county in Indiana, and the counties where the ITR is located received one time payments of between $40 million and $120 million for local transportation projects. According to the Indiana Department of Transportation, interest on the upfront payment currently earns about $500,000 each day. [30]

The Chicago Skyway and ITR concessions drew attention to the significant amount of private capital that can be raised upfront through long-term concessions of existing assets. The Chicago Skyway and ITR are both mature facilities with existing traffic, which provides comfort to the private sector that there is a group of customers who will continue to use the road and pay tolls. These conditions facilitate a bidding process aimed at leveraging the full value of the facility. However, other long-term concessions for existing toll road facilities have employed a very different model.

Some existing facilities have been in operation for only a few years and do not have a proven customer base that bidders can rely on for toll revenue. These facilities may be having difficulty attracting customers and may not be collecting enough toll revenue to make required debt service payments. Bidders in these circumstances have less comfort that toll revenue will be sufficient to repay the facility's debt and pay for the road's operation and maintenance, let alone provide a reasonable return on investment. As a result, the project owner may explore a PPP not for a large upfront payment, but to help bridge a gap in the project's financing. The long-term concessions for the operation and maintenance of the Pocahontas Parkway and the Northwest Parkway are good examples of this type of PPP.

[29] http://www.in.gov/indot/2276.htm (last visited July 7, 2008)
[30] http://www.in.gov/indot/2276.htm (last visited July 7, 2008)

3. Pocahontas Parkway

The Pocahontas Parkway is a 9-mile toll road bypassing the southeast side of Richmond, Virginia, connecting I-95 south of the city with I-295 to the east. Virginia planned, constructed and financed the Pocahontas Parkway through the Pocahontas Parkway Association ("PPA"), a non-profit entity created to issue and repay construction bonds. The Pocahontas Parkway opened in 2002, but traffic volumes did not generate sufficient toll revenues to service the PPA's debt. As a result, Virginia decided to convert the project from a non-profit structure to a long-term, concession-based PPP.

In 2006, Virginia entered into an innovative 99-year concession for the operation and maintenance of the Pocahontas Parkway with Transurban, a private toll road operator from Australia. The purchase price paid by Transurban for the concession was used to pay off all of the existing PPA debt and to pay for all of the accrued expenses paid by the Virginia Department of Transportation ("VDOT") for the maintenance and repair of the facility. The concessionaire also paid all of PPA's and VDOT's costs associated with the transaction. Transurban assumed the risk that the toll revenues generated by the Pocahontas Parkway, which are capped by the concession agreement, would be sufficient to provide the necessary returns on its investment. To the extent Transurban does realize returns, excess revenues are subject to a revenue sharing arrangement with Virginia.

Transurban also agreed to construct a 1.6-mile toll road (the "Richmond Airport Connector" or "RAC") connecting the Pocahontas Parkway to the Richmond International Airport. Transurban will use a $150 million loan from USDOT's TIFIA program to finance the RAC's approximately $50 million construction. TIFIA, The Transportation Infrastructure Finance and Innovation Act of 1998, established a Federal credit program under which USDOT may provide secured loans, loan guarantees, and standby lines of credit for eligible transportation projects. Approximately $92.5 million of the TIFIA loan is being used to refinance a portion of the bank debt extended to Transurban for the concession of the facility and defeasance of the PPA bonds. Construction of the RAC is expected to begin in early 2008 and to be complete by 2010.

Virginia is accruing significant benefits from this PPP, which reached financial close on the same day as the ITR concession, June 29, 2006. The RAC is being financed and built by Transurban, all of the PPA's debt was repaid, and the costs and responsibilities for operation and maintenance of the Pocahontas Parkway were transferred to the private sector. This deal demonstrates that PPPs are an innovative way to tackle a variety of transportation challenges, not just a tool for attracting private capital.

4. Northwest Parkway

The PPP for the Northwest Parkway illustrates similar advantages. The Northwest Parkway is a 9-mile toll road northwest of Denver, Colorado. The toll road extends the E-470 toll road west and south to 96th Street in Broomfield and is the most recently constructed portion of an incomplete beltway around the Denver area. The Northwest Parkway was developed by a public authority (the "NWP Authority") consisting of three member jurisdictions, the City and County of Broomfield, the City of Lafayette, and Weld County. Ex-officio members are Jefferson County, the City of Arvada, the Regional Transportation District, the Interlocken Metropolitan District, and the Colorado Department of Transportation. The NWP Authority

financed the project with non-recourse toll revenue bonds to be repaid with toll revenues. The road opened to traffic in 2003. As with the Pocahontas Parkway, toll revenues on the Northwest Parkway were less than originally forecast and the NWP Authority decided to convert the project to a long-term, concession-based PPP.

After a competitive bidding process in which the NWP Authority qualified 11 private sector groups to submit proposals, the NWP Authority entered into a 99-year concession on August 29, 2007, with a consortium made up of Brisa Auto-Estradas de Portugal, S.A., a Portuguese toll road operator, and Compania de Concessoes Rodoviarias, a Brazilian toll road operator ("Brisa/CCR"). Like the concession for the Pocahontas Parkway and its refinancing, this PPP incorporated innovative features that addressed local needs. The NWP Authority did not "simply accept the highest bid," but rather provided "strong final values for [its] multiple member jurisdictions."[31]

The total price of the concession paid by Brisa/CCR was $543 million. The majority of this money was used to pay off existing NWP Authority debt and to make a $50 million upfront rent payment to the NWP Authority. In addition, to facilitate the further extension of the Northwest Parkway, the price included $40 million to be placed in escrow and released to the NWP Authority if the Northwest Parkway is extended within a specified period of time. Brisa/CCR also promised to pay an additional $60 million towards the extension of the Northwest Parkway if the extension is completed on time. Brisa/CCR is required to share revenue with the NWP Authority after certain revenue levels are reached.[32]

By committing to local transportation improvements that benefit the region, the private partners in both the Pocahontas Parkway and the Northwest Parkway transactions demonstrated the ability of PPPs not only to shore up the financial status of struggling facilities, but also to facilitate local solutions that benefit both the public and private sectors.

5. Greenville Southern Connector

The public benefit corporation that developed the Greenville Southern Connector toll road with the cooperation of the South Carolina Department of Transportation recently issued a request for qualifications for the private sector to operate and maintain the 16-mile toll road pursuant to a long-term concession. Like the Pocahontas Parkway and the Northwest Parkway, the Greenville Southern Connector has struggled with toll revenues that have been lower than originally forecasted. While traffic has been improving on the Connector, the Connector recently indicated its expectation that "a private sector Concessionaire may be best able to maximize the financial performance of the [Connector] over the long term, while providing economic value and high quality service for patrons of the road."[33] The Connector's board is currently having an investment grade traffic and revenue study prepared to inform its decision regarding any potential concession.[34]

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[31] *Northwest Parkway and Brisa/CCR Sign Final $603 million, 99-year Leasing Concession Agreement*, Northwest Parkway Public Highway Authority, News Release, August 29, 2007.
[32] *Summary of Northwest Parkway Concession and Lease Agreement*, Northwest Parkway Public Highway Authority.
[33] *Southern Connector Toll Road: Request for Toll Road Concessionaire Qualifications*, September 27, 2007, available at: http://www.southernconnector.com/pdfs/SCTR_RFQ2.pdf (last visited July 7, 2008)
[34] *Connector 2000 Association Seeks Firm to Prepare Investment Grade Traffic and Revenue Study*, Southern Connector, Press Release, May 7, 2008.

It is noteworthy that the Greenville Southern Connector was originally financed through a 63-20 not-for-profit corporation. These corporations are named for the requirements of IRS Rev. Rul. 63-20 and Rev. Proc. 82-26. In the context of transportation finance, a 63-20 not-for-profit corporation is a non-stock corporation formed to issue tax-exempt debt on behalf of a public authority, the proceeds of which are used to pay for a private developer to design, construct and/or operate a transportation facility. The governing structure typically includes representatives from both the public sector and the private sector and members of the 63-20 are generally insulated from financial risk. The corporation may not be formed for pecuniary profit and may not provide dividends or distributions to its members so the financing structure does not include any equity investments by the private sector.

Not-for-profit 63-20 corporations received a lot of attention when the Pocahontas Parkway, the Northwest Parkway and the Greenville Southern Connector were originally financed because they allow a project to be developed, designed, constructed, and/or operated by the private sector using tax-exempt debt (tax-exempt debt is typically only available for public projects). Of the handful of projects financed through a 63-20 corporation, however, a number have struggled to reach forecasted traffic and revenue. While it is difficult to say with certainty why these financings struggled, some have argued that 63-20 financings have failed because neither the public nor the private sector has financial liability if the facility cannot repay its debt, only the single-purpose 63-20 corporation does.[35] By contrast, in PPPs, the private sector assumes financial liability for the project through debt financing, long-term warranties and equity investments.

6. Pennsylvania Turnpike and Alligator Alley

As more concessions for the operation and maintenance of existing toll roads reach commercial and financial close[36], more public authorities are considering PPPs.

On May 15, 2008, Pennsylvania Governor Ed Rendell announced that the Commonwealth had selected a $12.8 billion proposal for a concession of the 531-mile Pennsylvania Turnpike. The proposal was submitted by a consortium made up of Citi Infrastructure Investors, Abertis Infraestructuras, a Spanish toll road operator, and Criteria CaixaCorp, a major shareholder of Abertis. The consortium agreed to pay the $12.8 billion upfront for Pennsylvania to invest in a long term fund that would generate significant annual payments to be used for Pennsylvania roads, bridges and transit. Approval of the State legislature is required before Governor Rendell can accept the bid and enter into the concession. In 2007, Pennsylvania's legislature authorized an alternative plan for the public Pennsylvania Turnpike Commission to seek Federal approval to toll I-80, an Interstate highway which runs parallel to the Pennsylvania Turnpike to the north, to raise additional revenue. According to Governor Rendell, the payments from the private concession "would average 13 percent

[35] See *The 63-20 Not-for-Profit Contrivance*, TOLLROADSnews, originally posted December 8, 1997 (http://www.tollroadsnews.com/node/2326 (last visited July 7, 2008)).

[36] Countries around the world are entering into similar transactions. For example, France accepted bids in 2005 worth $17.7 billion for the sale to private companies of controlling stakes in its three major toll road operators. Vinci, a French construction company, purchased Autoroutes du Sud de la France (ASF), which operates toll roads in the south of France, for $10.9 billion. Eiffage, a French construction company, and Macquarie, an Australian toll road operator, purchased Autoroutes Paris-Rhin-Rhone (APRR), which operates toll roads around Paris and the west, for $8.3 billion. Abertis, a Spanish toll road operator, purchased Societe des Autoroutes du Nord et de l'Est de la France (Sanef), which operates toll roads in northern France, for $6.3 billion.

higher than the maximum available under the I-80 tolling plan, assuming investment returns equal to the average earnings of the Pennsylvania State Employee Retirement System over the past 20 years."[37]

On May 5, 2008, the Florida Department of Transportation released a Request for Qualifications for a concession to lease, maintain, operate and receive toll revenue from the 78-mile Alligator Alley toll road on I-75 in South Florida. The RFQ was reissued on June 25, 2008, and the deadline for submitting Statements of Qualification is July 23, 2008. The concession will run for 50-75 years and will include an upfront payment and revenue sharing, as required by State statute. Florida also reportedly may be considering concessions for the Beachline Expressway on FL-527 and the Sunshine Skyway Bridge on I-275.[38]

While it is not clear which, if any, of these proposed PPPs will close, the concessions for the Chicago Skyway, ITR, Pocahontas Parkway and Northwest Parkway establish long-term concessions of existing toll roads as a model for addressing transportation needs and improving operational accountability with respect to existing facilities.

PPPs for the Operation and Maintenance of Existing Toll Facilities in the United States (January 2005 – May 2008)

Project	Location	Status	Type of PPP
Chicago Skyway	Illinois	Closed	Long-term concession to operate and maintain 7.8-mile toll road in Chicago
Indiana Toll Road	Indiana	Closed	Long-term concession to operate and maintain 157-mile toll road in northern Indiana
Pocahontas Parkway	Virginia	Closed	Long-term concession to operate and maintain 14-mile toll road outside of Richmond and to build Richmond Airport Connector
Northwest Parkway	Colorado	Closed	Long-term concession to operate and maintain 11-mile toll road outside of Denver and funding commitment for future expansions
Dulles Greenway	Virginia	Closed	Refinancing long-term concession to operate and maintain 14-mile toll road between Leesburg and the Dulles International Airport
Pennsylvania Turnpike	Pennsylvania	RFQ Issued	Long-term concession to operate and maintain 531-mile turnpike (requires legislative approval)
Greenville Southern Connector	South Carolina	RFQ Issued	Long-term concession to operate and maintain 16-mile toll road in Greenville, South Carolina
Alligator Alley	Florida	RFQ Issued	Long-term concession to operate and maintain 78-mile toll road in South Florida

[37] *Pennsylvania Turnpike Lease Would Boost Funding For Roads, Bridges, Transit; $12.8 Billion Payment Would Produce More Funding at Lower Cost to Drivers; Cancel Need for I-80 Tolls*, Governor Rendell, Press Release, May 19, 2008.
[38] *Florida Governor Crist Considering Toll Concessions on Three State TRs and Bridge*, TOLLROADSnews.com, September 22, 2007.

B. PPPs for New Capacity and Capital Improvements

While some state and local authorities are considering PPPs for the operation and maintenance of existing toll roads, many are turning to the private sector to develop, design, construct, finance, operate and maintain new transportation capacity and capital improvements. Some states, such as Texas, Virginia and Florida, are farther along than other states in developing programmatic approaches to using PPPs for these projects, but the variety of states that are currently considering PPPs, and the variety of structures that these states are considering, demonstrate that PPPs have become, in some places, a preferred approach for funding and delivering new capacity and capital improvements.

1. Texas

Texas is considered to be among the leaders in using PPPs for new transportation capacity and capital improvements, in large part because of the many projects that the Texas Department of Transportation ("TxDOT") is in the process of procuring.[39] TxDOT began procuring PPP projects six years ago. In 2002, TxDOT entered into a Design-Build agreement (TxDOT refers to PPP/concession agreements as "Comprehensive Development Agreements" or "CDAs") with a consortium made up of Fluor Corporation, Balfour Beatty Construction and T.J. Lambrecht for the approximately $1.5 billion Central Texas Turnpike (SH-130) toll road project. In 2004, TxDOT entered into a Design-Build CDA with Zachry Construction Corporation for the $167 million SH-45 East toll road project. After executing these two Design-Build CDAs, TxDOT turned to long-term, concession-based PPPs for the design, construction, financing, operation and maintenance of new capacity and capital improvements, including the landmark Trans-Texas Corridor ("TTC") projects.

The TTC is a proposed network of super-highway corridors in Texas that could include separate lanes for passenger vehicles and large trucks, freight and high-speed commuter railways, infrastructure for water lines, and oil and gas pipelines, and transmission lines for electricity, broadband and other telecommunications services.[40] Specific corridors will be determined in line with Texas' transportation priorities and will be completed over the next 50 years. While TxDOT will oversee planning, construction and ongoing maintenance, two of the guiding principles for the TTC are: (i) "The Trans-Texas Corridor must be built with public/private partnerships in order to minimize costs to taxpayers," and (ii) "Government does not have all the answers to the transportation challenges facing Texas and needs the innovation of the private sector."[41] TTC facilities will be delivered using innovative, long-term, concession-based PPPs which include significant private sector responsibility for design, construction, financing, operation and maintenance of the facilities.

On March 11, 2005, TxDOT signed a CDA for the first TTC corridor, TTC-35, with a private consortium made up of Cintra and Zachry Construction Corporation (the "CZ Consortium"). The TTC-35 corridor is a proposed tolled highway running more than 600 miles from the Oklahoma border through Dallas, Austin and San Antonio to Mexico or the Gulf Coast, depending on final alignment. The proposal submitted by the CZ Consortium specified that

[39] TxDOT's PPP website is: http://www.dot.state.tx.us/services/texas_turnpike_authority/pub_priv_partnerships.htm (last visited July 7, 2008)
[40] The TTC website is: http://ttc.keeptexasmoving.com/default.aspx (last visited July 7, 2008)
[41] The TTC website, at: http://ttc.keeptexasmoving.com/about/guiding_principles.aspx (last visited July 7, 2008)

it would invest $6 billion to design, construct and operate for up to 50 years the portion of TTC-35 between Dallas and San Antonio and that it would make a payment of approximately $1.2 billion to TxDOT for the right to build and operate this segment as a toll facility.

The CDA required the CZ Consortium to produce a $3.5 million master development and financial plan. The CDA also provides the framework for the CZ Consortium to collaborate with TxDOT for the planning of a combination of facilities making up the TTC-35 corridor, and to be responsible for some or all of the development, design, construction, financing, operation and/or maintenance of such facilities. The corridor is to be built in segments and the CDA specified that before any individual segment of the corridor proceeds to development, a "Facility Agreement" would need to be entered into with TxDOT for that particular segment.

The first Facility Agreement entered into by TxDOT for the TTC-35 corridor granted the CZ Consortium a 50-year concession to design, build, finance, operate and maintain Segments 5 & 6 of SH-130. The $1.36 billion, 40-mile project provides two segments of SH-130, an alternative route between San Antonio and Austin, and is a critical connecting facility of the TTC-35 corridor. The deal included a $25.8 million upfront concession payment from the CZ Consortium to pay for other projects in the region and a revenue sharing provision pursuant to which Texas will receive a yearly share in the toll revenues. As discussed in Section IV(D), the project's financing, which includes private equity and a senior bank debt facility, also includes a $430 million secured loan from the USDOT's TIFIA program. The project reached financial close in March 2008 and demonstrates the private sector's readiness to invest in U.S. transportation infrastructure, including major capacity improvements.

The second TTC corridor being developed is the I-69/TTC corridor running approximately 650 miles from the Texarkana/Shreveport area in northeast Texas through Houston to Mexico. A competitive bidding process was launched by TxDOT for this corridor on April 7, 2006, and two private sector teams were shortlisted to compete on September 28, 2006. On June 26, 2008, TxDOT announced that it had selected a consortium of Zachry American Infrastructure and ACS Infrastructure for the project. As with the TTC-35 corridor, the CDA for this corridor will require the consortium to develop a master development plan and master financial plan for the corridor and will include the right of first negotiation for the consortium to perform work on certain projects. US-77 in the southern portion of the corridor will be the first facility to be developed under the CDA pursuant to a separate Facility Agreement.

TxDOT intends to develop the I-69/TTC corridor using existing highway facilities wherever possible, including US-59, US-77, US-281 and SH-44. TxDOT indicated that the preliminary basis for this decision was its review of nearly 28,000 public comments submitted in connection with the environmental process. This decision is consistent with guiding principles recently adopted by the Texas Transportation Commission, which also reaffirmed that only new lanes added to an existing highway will be tolled. The consortium plans to coordinate with local authorities along the corridor to develop new toll roads to help finance the work required to develop the existing portions of the I-69/TTC corridor to interstate standards.[42]

[42] *Transportation Commission Picks Developer for Texas Portion of I-69*, Press Release, Texas Department of Transportation, June 26, 2008

In addition to the TTC corridors, several additional projects for which TxDOT is considering PPPs are at various stages of procurement. These projects demonstrate TxDOT's commitment to PPPs as a preferred approach to project funding and procurement.

1. I-635 Managed Lanes: Construct, operate and maintain a corridor of tolled managed lanes from east of Luna Road to north of I-30 in the Dallas-Fort Worth area through a concession-based PPP.
2. North Tarrant Express: Design, construct, finance, operate and maintain tolled managed lanes, general purpose lanes and related facilities in North Tarrant County through a concession-based PPP.
3. DFW Connector: Develop, design and construct (and at TxDOT's sole option maintain) tolled managed lanes on the SH-114/SH-121 corridor in the Dallas-Fort Worth area.

While these PPPs are moving forward, the enthusiasm for PPPs in Texas has been tested recently by two separate occurrences. The first, which is discussed in more detail in Section IV(C), was legislation passed in June 2007 that, among other things, (i) gives local authorities additional rights to develop toll roads before they can be procured as PPPs, and (ii) enacts a two-year moratorium on developing new PPP projects (the projects that were already identified for procurement as PPPs were exempted from the moratorium). The second occurrence was the cancelled PPP procurement for the SH-121 project.

Upon completion, the SH-121 project will be a 25.9-mile, all electronic toll road in Collin, Dallas, and Denton counties. In August 2006, despite previously having expressed interest in participating, the North Texas Tollway Authority ("NTTA", a public tollway authority serving the Dallas-Fort Worth area) signed an agreement that it would not bid on the SH-121 project, which was being procured as a PPP by TxDOT. Nevertheless, following TxDOT's approval of a private proposal worth more than $5 billion submitted by a consortium made up of Cintra and JP Morgan Asset Management, the Texas State Legislature enacted legislation directing TxDOT to waive the existing agreement with NTTA and allow the public authority to submit a competing proposal for the SH-121 project. In June 2007, the Texas Transportation Commission, acting at the recommendation of the Regional Transportation Council ("RTC"), approved the award of the SH-121 project to NTTA instead of the competitively selected private consortium.

Following the award to NTTA, the Federal Highway Administration ("FHWA") sent a letter to TxDOT advising them that this procurement process violated two Federal laws.[43] First, allowing NTTA to submit a proposal after the selection process had been completed was a violation of the Federal requirement to conduct a fair and open competitive process. Having had the benefit of analyzing the Cintra-led consortium's publicly disclosed submission the NTTA was given an unfair advantage in the procurement process. Second, Federal regulations specifically prohibit a public entity, such as the NTTA, from bidding against a private entity. While TxDOT and FHWA subsequently agreed to a resolution of these violations whereby TxDOT cancelled the procurement and its approval of the RTC recommendation[44], the SH-121 procurement process raised concerns about the integrity of

[43] Letter from J. Richard Capka, Administrator of FHWA, to Michael W. Behrens, P.E., Executive Director of TxDOT, dated August 16, 2007.
[44] See letter from Janice W. Brown, Division Administrator, to Amadeo Saenz, Jr., P.E., Assistant Executive Director of TxDOT, dated August 21, 2007.

TxDOT's PPP procurement process. When introducing private sector involvement in transportation projects through PPPs, state and local entities need to be vigilant to ensure that the procurement process is, and is perceived to be, fair and competitive.

2. Virginia

Virginia is another state considered to be at the forefront of states using PPPs as a preferred approach to project delivery.[45] While a number of the early PPP projects procured by VDOT did not include significant private financing or private involvement in long-term operations and maintenance, recent PPP procurements have increasingly been for long-term, concession-based PPPs. In addition to the 2006 concession of the Pocahontas Parkway, which was discussed in Section IV(A), VDOT is in the process of procuring the Route 460 Improvements Project. Three private sector consortia are competing to design, construct, finance, operate and maintain approximately $1 billion to $2 billion improvements to Route 460 between I-295 in Prince George County and the Suffolk Bypass (US 58) in Suffolk. Route 460 is considered to be a vital shipping, commuting and emergency-response route for southeastern Virginia.

Virginia also expects to procure the Midtown Corridor Tunnel Project and the Southeastern Parkway and Greenbelt Project as PPPs. The Midtown Corridor Tunnel Project involves (i) modifications to the existing tunnel linking Portsmouth and Norfolk, (ii) construction of a new parallel tunnel and (iii) freeway extensions. Three private sector consortia expressed interest in 2005 for the Midtown Corridor Tunnel Project and VDOT issued a Solicitation for Conceptual Proposals for the project on May 30, 2008. The procurement for the Southeastern Parkway and Greenbelt Project is expected to get started after the Record of Decision is finalized. The corridor being studied for this project runs east-west from Chesapeake to the Oceana Naval Air Station in Virginia Beach.

Perhaps Virginia's most innovative PPP effort is a proposed network of high-occupancy toll lanes ("HOT lanes")[46] in northern Virginia south and west of Washington, DC. On December 20, 2007, VDOT and a private sector consortium reached commercial and financial close for a concession to design, build, finance, operate and maintain two HOT lanes on an approximately 14-mile portion of the Capital Beltway (I-495) around southwest Washington, DC (the concessionaire will construct two new general purpose lanes and convert the two innermost existing general purpose lanes into HOT lanes). This portion of the Beltway connects Springfield, Virginia, and I-95 with Tyson's Corner. The private sector consortium is led by Transurban, an Australian toll road operator, and Fluor Enterprises, an American contractor and developer. The concessionaire is using toll revenues to be collected on the HOT lanes to finance approximately $1.4 billion of the project's expected cost of approximately $1.8 billion. The financing includes a $588 million loan from the USDOT's

[45] VDOT's PPP website is: http://www.virginiadot.org/business/ppta-default.asp (last visited July 7, 2008)

[46] High-occupancy toll lanes, or "HOT lanes", are lanes that are open to buses and high-occupancy vehicles, just like traditional high-occupancy vehicle and carpool lanes, or "HOV lanes", but which are also available to single-occupant vehicles that pay a toll. Tolls charged in HOT lanes can be variable, meaning they are reduced when there is little or no traffic and they are increased when there is more traffic. Variable tolls encourage people to travel when there is less traffic and ensure that a reliable travel time is always available for drivers willing to pay a toll. HOT lanes implemented in the U.S. include the 91 Express Lanes in Orange County, California, the I-15 HOT Lanes in San Diego, California, the I-394 HOT Lanes in Minneapolis, Minnesota, and the I-25 HOV/Express Toll Lanes in Denver, Colorado.

TIFIA program, $589 million of private activity bonds ("PABs") authorized by the USDOT and issued on June 12, 2008, and private equity contributions totaling $350 million from the members of the concessionaire (the TIFIA and PABs programs are described in Section IV(D) with other Federal programs that facilitate PPPs). Approximately $409 million will be funded from Federal-aid and State sources.

Virginia is also pursuing a PPP with the same private sector companies for a 56-mile HOT lanes corridor along I-95 and I-395 south of Washington, DC. This is a heavily congested commuter corridor that links up with the Capital Beltway HOT Lanes Project in Springfield. For this project, the concessionaire will expand the two existing high occupancy vehicle lanes on I-95 and I-395 and construct two new lanes heading further south on I-95, to Massaponax, Virginia. All of these lanes will be converted to HOT lanes. These lanes will also incorporate facilities for bus rapid transit, park-and-rides and bus stations. VDOT expects these HOT lanes to provide an innovative solution to serious congestion problems and to provide new alternatives for carpoolers, vanpoolers, transit riders, motorists, slugs, businesses and communities throughout the northern Virginia area. Taken together, the I-95/I-395 and Capital Beltways HOT Lanes Projects will not only demonstrate the value of PPPs and private sector innovation, but will also demonstrate the value of congestion pricing for traffic management in one of the Nation's busiest commuter corridors.

3. Missouri

PPPs provide substantial benefits for facilities that are not congested as well. Private sector participation is possible on projects for which tolls don't cover all costs and even on projects that do not generate revenue. In these circumstances, bidders can compete on the basis of the lowest level of subsidy they will accept from the public sector to carry out the project.

This approach is being used by the Missouri Department of Transportation ("MoDOT") for the Missouri Safe & Sound Bridge Improvement Project.[47] The project contemplates a private partner bringing more than 800 of Missouri's lowest rated bridges up to satisfactory condition and keeping them in that condition for 25 years. Many of the bridges to be upgraded are in rural areas where there is not enough traffic to support tolls. The project, which has an estimated capital cost of $600 million to $800 million, will be privately financed and bidders competed largely on the basis of the lowest level of availability payments[48] needed from MoDOT to do the work and repay the financing. MoDOT is only required to make the availability payments if the private partner completes the bridge upgrades on time and keeps them in satisfactory condition during the term of the concession.

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[47] The Safe & Sound Bridge Improvement Project's website is: http://www.modot.org/safeandsound/ (last visited July 7, 2008)

[48] An availability payment is a periodic payment made to a concessionaire by a public authority for providing an available facility. Payments are reduced if the facility is not available for a period of time or not being maintained in satisfactory condition. Using an availability payment structure eliminates the need for the concessionaire to assume any traffic risk and protects the interests of the public by giving the concessionaire a financial incentive to maintain the facility in satisfactory condition and operating at a specified level of performance.

While an availability payment structure eliminates traffic risk, it does create some risk that increasing costs of operation and maintenance will partially erode the concessionaire's financial margins. See *Global Toll Road Rating Guidelines*, Fitch Ratings, Global Infrastructure and Project Finance, Criteria Report, March 6, 2007, pp. 2-3.

Missouri expects to dedicate federal bridge replacement funds during the term of the concession to make the availability payments. USDOT approved a PABs allocation of up to $700 million to finance the project.

MoDOT selected a winning bidder on December 20, 2007, made up of Zachry American Infrastructure, Parsons Transportation Group, Fred Weber, Inc., Clarkson Construction, HNTB and Infrastructure Corporation of America. On June 5, 2008, the Director of MoDOT told Congress that despite the difficulty of finalizing the deal in the current credit markets, he is optimistic that Missouri will have an agreement soon and work can begin around the State. This project demonstrates that the public sector can utilize PPPs to save money, accelerate project delivery, transfer risk, and provide innovative solutions to pressing infrastructure problems even if projects are not self-sufficient toll facilities.

4. BART Oakland Airport Connector

The San Francisco Bay Area Rapid Transit Commission ("BART") Oakland Airport Connector project is utilizing a hybrid availability payment structure.[49] Teams were shortlisted to bid on a concession to design, build, finance, operate and maintain a 3-mile rail connection between the existing Coliseum Station of the BART rail system and the Oakland Airport. According to the request for qualifications issued to prospective bidders, BART expects that the private concessionaire will be paid with a combination of (i) availability payments, (ii) performance-related payments and (iii) a small percentage of ridership incentive payments, which are payments directly related to actual ridership. BART is generally assuming the risk that the facility will not generate forecasted revenue, and BART will make payments to the concessionaire based on the project's availability and the concessionaire's performance. Nevertheless, in order to align the concessionaire's interests with BART's interests, BART is making a portion of the concessionaire's compensation dependent on actual ridership.

5. Denver RTD

Another major transit PPP procurement currently being developed will be for a portion (or portions) of the FasTracks capital program being developed by the Regional Transportation District ("RTD") in Denver, Colorado. FasTracks is an ambitious 12-year, $6.1 billion plan to improve transit in the Denver area by developing 119 miles of new commuter rail and light rail, transit stations, bus rapid transit, an enhanced bus feeder system, park-and-rides and other parking capacity. RTD is considering using a PPP structure for the development, design, construction, financing, operation and maintenance of two or more of the rail corridors that will make up the project. RTD has selected a financial advisor to help it examine its innovative financing options and to help establish a procurement process for these PPP projects. RTD expects to get public input on a draft Request for Proposals for the PPP procurement of the East, Gold Line and Commuter Rail Maintenance Facility by the summer of 2008.[50] Among the benefits of a PPP structure for RTD is that it would "allow a

[49] The BART OAC website is: http://www.bart.gov/about/projects/oac/ (last visited July 7, 2008)
[50] Draft Procurement Schedule available at: http://www.rtd-fastracks.com/main_91 (last visited July 7, 2008)

private entity to borrow funds and repay costs over time, enabling RTD to spread out large upfront costs and preserve cash in the early years of FasTracks implementation."[51]

6. Florida

The Florida Department of Transportation ("FDOT") is using an availability payment structure to deliver the Port of Miami Tunnel project.[52] The project, which will cost more than $1 billion, is a concession-based PPP for the design, construction, financing, operation and maintenance of a tunnel connecting the Port of Miami on Dodge Island with Watson Island and I-95 on the mainland. Port traffic currently uses local streets in downtown Miami to access I-95. Tolls will not be used to finance this project and the concessionaire will not assume traffic risk. Instead, availability payments will be made to the private concessionaire by FDOT once the tunnel opens and will continue throughout the concession. If the concessionaire does not perform in accordance with the standards specified by FDOT in the concession agreement, the concessionaire will not be entitled to a full availability payment. The PPP structure for this project, which will take advantage of a USDOT PABs allocation of up to $980 million, is designed to transfer the risk of construction cost overruns and overruns in the long-term cost of operations and maintenance to the private sector. The availability payment mechanism aligns the interests of the concessionaire with those of the public: efficiency and high-quality construction, upkeep and user services.

In addition to the Port of Miami Tunnel, FDOT has two more PPP projects for new road capacity that it is in the process of procuring. First, on December 7, 2007, FDOT shortlisted four of the six teams that submitted qualifications to compete on the approximately $1.5 billion I-595 Project.[53] The bidders are competing for a 35-year concession to design, build, finance, operate and maintain improvements on the I-595 corridor between the I-595/I-75/Sawgrass Expressway interchange and the I-595/I-95 interchange in Broward County. The improvements include reversible express lanes in the median of I-595 which will be variably priced. Toll rates will be controlled by FDOT. Second, on December 4, 2007, FDOT issued a request for potential bidders to submit qualifications to bid on a long-term concession to develop, design, construct, finance, operate, maintain and toll the First Coast Outer Beltway.[54] The First Coast Outer Beltway will be a limited access toll facility outside of Jacksonville that includes the St. Johns River Crossing Corridor in St. Johns and Clay Counties and the Branan Field-Chaffee Road (SR 23) project in Clay and Duval Counties.

With these three projects, PPPs are becoming a mainstream approach to project delivery in Florida. Florida also recently passed legislation enabling long-term concessions for the operation and maintenance of existing toll road facilities (other than those owned by the Florida Turnpike Enterprise). As noted in Section IV(A), on May 5, 2008, FDOT released a Request for Qualifications for a concession to lease, maintain, operate and receive toll revenue from the 78-mile Alligator Alley toll road on I-75 in South Florida (the RFQ was reissued on June 25, 2008 and the deadline for submitting Statements of Qualification is July

[51] *FasTracks Focus: Public-Private Partnerships*, Fall 2007 Public-Private Partnership Brochure available at: http://www.rtd-fastracks.com/media/uploads/main/FTfocusPPPweb_2.pdf (last visited July 7, 2008)
[52] The Port of Miami Tunnel website is: http://www.portofmiamitunnel.com/ (last visited July 7, 2008)
[53] The I-595 Project website is: http://www.i-595.com/default.aspx (last visited July 7, 2008)
[54] The First Coast Outer Beltway website is: http://www.fdotfirstcoastouterbeltway.com/index.asp (last visited July 7, 2008)

23, 2008), and Florida is also reportedly considering concessions for the Beachline Expressway and the Sunshine Skyway Bridge.[55]

7. Georgia

Georgia is also beginning to develop a PPP program, with four PPP projects in various stages of procurement.[56] The first two projects being developed by the Georgia Department of Transportation ("GDOT") as PPPs do not include significant assumption of risk by the private sector in the financing and/or long-term operations and maintenance of the projects. The second two projects being procured by GDOT would be long-term, concession-based PPPs similar to the long-term, concession-based PPPs that are becoming more prevalent in other parts of the United States.

On May 18, 2006, Georgia signed its first PPP agreement with a consortium made up of Bechtel Infrastructure Corporation and Kiewit Southern Co. The agreement is a Developer Services Agreement for the Northwest Corridor (I-75/I-575) Project. The agreement provides the procedural framework for the consortium to examine the development of new, fully electronic, express toll lanes on I-75 and I-575 northwest of Atlanta. The consortium is also analyzing the development of bus rapid transit lanes ("BRT lanes") for the corridor and may also examine truck-only toll lanes ("TOT lanes") on I-75, which trucks would be required to use. When these services are complete, Georgia expects to enter into a Design-Build contract with the consortium. In its press release from May 2006 GDOT indicated that using a Design-Build approach rather than traditional procurement approaches will reduce the time it takes to complete the design and construction of the facility from an anticipated 15 to 20 years to as few as 6 years.[57]

The second PPP project GDOT is considering is the GA-400 HOT Lanes Project. GDOT received a revised unsolicited proposal for this project from a consortium led by Washington Group International on November 21, 2005, but has not yet voted to approve the proposal. The project involves the design, construction, operation and maintenance of HOT lanes on GA-400 to compliment improvements to I-285 to be undertaken by GDOT. The project will also include increased usage of bus rapid transit. As with the Northwest Corridor Project, the consortium is proposing to accelerate construction with a Design-Build arrangement and is also proposing to operate and maintain the completed toll facility. While the consortium is not proposing to invest private equity or to assume the risks of the financing, the consortium would guarantee the cost and opening date through the Design-Build arrangements.

GDOT is also currently evaluating proposals for what could be its first long-term, concession-based PPP, the I-285 Northwest TOT Lanes. GDOT received an unsolicited proposal to develop this project from a Goldman Sachs-led consortium on May 18, 2006. While the initial proposal was subsequently withdrawn, GDOT received four competing proposals from interested private consortia. The proposals contemplate a PPP for the design, construction, financing, operation and maintenance of TOT lanes on I-285 to complement the

[55] *Florida Governor Crist Considering Toll Concessions on Three State TRs and Bridge*, TOLLROADSnews.com, September 22, 2007.
[56] GDOT's PPP website is: http://wwwb.dot.ga.gov/ppi07/html/all/home.htm (last visited July 7, 2008)
[57] *GDOT signs first-ever Public Private Initiative Developer Services Agreement for Northwest Corridor*, Georgia Department of Transportation, Press Release, May 18, 2006.

TOT lanes which may be constructed as part of the Northwest Corridor Project. The TOT lanes on I-285, which is the beltway around Atlanta, would begin immediately south of where the proposed Northwest Corridor TOT lanes would empty into I-285.

On July 19, 2007, GDOT announced its first Notice of Intent to Solicit a PPP. The proposed I-20 Managed Lanes Corridor would add two managed lanes along the I-20 Corridor from east of I-285 to Turner Hill Road, approximately nine miles. The notice also contemplates the maintenance of three general purpose lanes along the corridor. The solicitation followed shortly after the Georgia State Transportation Board decided on May 18, 2007, to temporarily postpone its acceptance of unsolicited proposals beginning June 1, 2007. Each of the three projects described above, and one project which was cancelled, the SR-316 toll road project, were the result of unsolicited proposals. The Transportation Board resolution and the solicitation for the I-20 Corridor signal a shift in Georgia's policy away from unsolicited proposals (the projects already under procurement are not affected by the resolution).

8. Alaska, Mississippi and North Carolina

While Alaska has not created a statewide PPP program, it has authorized the use of a PPP structure for the delivery of the Knik Arm Crossing Project. The State passed legislation authorizing the Knik Arm Bridge and Tolling Authority ("KABATA") to utilize a PPP to finance, design, construct, operate and maintain the Knik Arm Bridge.[58] KABATA issued a request for qualifications on December 13, 2006, and shortlisted two consortia to compete for the project on March 15, 2007. The RFQ contemplates the design, construction, financing, operation, and maintenance of the Knik Arm Bridge through a 55-year concession. The Knik Arm Bridge would connect Anchorage with the Mat-Su Borough over the Knik Arm of the Cook Inlet. On October 29, 2007, USDOT conditionally approved KABATA's application for a $600 million allocation of PABs to be used by the winning bidder for the financing of the project. KABATA would act as the conduit issuer of the tax-exempt PABs which the concessionaire would be obligated to repay from toll revenues.

Mississippi released a request for qualifications on June 2, 2008, for its first PPP, a new 12-mile toll road called the Airport Parkway which will connect the east side of downtown Jackson with the eastern suburbs of Jackson and the Jackson International Airport. Also in June 2008, the North Carolina Turnpike Authority released a request for qualifications to enter into a pre-development agreement for the Mid-Currituck Bridge, which will be North Carolina's first PPP. The proposed new bridge over Currituck Sound will connect Currituck County on the mainland with the Outer Banks.

PPPs for New Build Highway and Transit Facilities in the United States (January 2005 – May 2008)

Project	Location	Status	Type of PPP
TTC-35	Texas	Concession Awarded	Concessionaire responsible for preparation of master development plan and for some or all of the development, design, construction, financing, operation and/or maintenance of an approximately 600-mile corridor from Mexico to Oklahoma

[58] KABATA's website is: http://www.knikarmbridge.com/ (last visited July 7, 2008)

Project	Location	Status	Type of PPP
SH-130 Segments 5&6	Texas	Closed	Concession to design, build, finance, operate and maintain approximately $1.3 billion facility as first segment of TTC-35 project
I-69/TTC	Texas	Preferred Bidder Selected	Concessionaire responsible for preparation of master development plan and for some or all of the development, design, construction, financing, operation and/or maintenance of an approximately 650-mile corridor from Mexico to Texarkana/Shreveport
I-635	Texas	RFP Issued	Concession to design, build, finance, operate and maintain tolled managed lanes in Dallas/Fort Worth area
North Tarrant Express	Texas	Bidders Shortlisted	Concession to design, build, finance, operate and maintain tolled managed lanes and general lanes in North Tarrant County
DFW Connector	Texas	Bidders Shortlisted	Concession to develop, design, construct (and at TxDOT's sole option maintain) tolled managed lanes on the SH-114/SH-121 corridor in Dallas/Fort Worth area
Capital Beltway HOT Lanes	Virginia	Closed	Concession to design, build, finance, operate and maintain HOT lanes on a 14-mile stretch of I-495 in northern Virginia
I-95/I-395 HOT Lanes	Virginia	Interim Agreement Executed	Concession to design, build, finance, operate and maintain HOT lanes on a 56-mile stretch of I-95/I-395 in northern Virginia
US Route 460	Virginia	Bidders Shortlisted	Concession to design, build, finance, operate and maintain $1 billion to $2 billion improvements to Route 460 in southeastern Virginia
Midtown Corridor Tunnel	Virginia	Solicitation Issued	Concession to modify the existing tunnel linking Portsmouth and Norfolk, construct a new parallel tunnel and extend freeway
Port of Miami Tunnel Project	Florida	Preferred Bidder Selected	Concession to design, build, finance, operate and maintain a tunnel providing access from the Port of Miami to the Florida mainland
I-595 Improvements	Florida	Bidders Shortlisted	Concession to design, build, finance, operate and maintain improvements on the I-595 corridor between I-75 and I-95
First Coast Outer Beltway	Florida	RFQ Issued	Concession to design, build, finance, operate and maintain a limited access toll facility outside of Jacksonville
Northwest Corridor	Georgia	Development Agreement Executed	Concession to develop, design and construct express toll lanes, BRT lanes and possibly TOT lanes on I-75 and I-575 northwest of Atlanta
I-285 Northwest TOT Lanes	Georgia	Evaluation of Proposers	Concession to design, build, finance, operate and maintain TOT lanes on I-285 and I-20 northwest and west of Atlanta
GA-400 Crossroads Region	Georgia	Evaluation of Proposal	Concession to design, construct, operate and maintain HOT lanes on GA-400 north of Atlanta
I-20 Managed Lanes	Georgia	Pre-Solicitation	Concession to design, build, finance, operate and maintain two managed lanes on the I-20 corridor east of Atlanta
Missouri Safe & Sound Bridge Program	Missouri	Preferred Bidder Selected	Concession to upgrade, finance, operate and maintain more than 800 bridges in Missouri

Project	Location	Status	Type of PPP
Knik Arm Crossing Project	Alaska	Bidders Shortlisted	Concession to design, build, finance, operate and maintain a bridge connecting Anchorage with Mat-Su borough
The Airport Parkway	Mississippi	RFQ Issued	Concession to develop, build, finance, operate and maintain a parkway from downtown Jackson to the airport
Oakland Airport Connector	California	RFP Issued	Concession to design, build, finance, operate and maintain the Oakland Airport Connector
Denver RTD	Colorado	RFQ Expected	Concession to design, build, finance, operate and maintain the East, Gold Line and Commuter Line Maintenance Facility in the Denver area
Metro Solutions Phase II	Texas	Bidders Shortlisted	Facility Provider will be responsible for design and construction of civil works; furnishing and installation of equipment; initial operations and maintenance; and financing services for Light Rail projects in Houston
I-73	South Carolina	Request for Conceptual Proposals	Concession to design, build, finance, operate and maintain the 80-mile portion of I-73 connecting Myrtle Beach with the North Carolina border
Mid-Currituck Bridge	North Carolina	Bidders Shortlisted	Concession for new 7-mile bridge over Currituck Sound connecting mainland and the Currituck County outer Banks south of Corolla

In addition to the projects identified above, PPPs have been considered for several other projects. For some of these projects decisions were made not to proceed with a PPP, or not to proceed at all with the project. For others, the procuring agency is still considering a PPP and may solicit proposals. These projects include, among others:

- Mississippi River Bridge: In 2007, Missouri announced that a team led by Zachry American Infrastructure submitted an unsolicited proposal for a PPP to develop a new 6-lane toll bridge over the Mississippi River between St. Louis, Missouri, and Illinois. While Missouri has legislation authorizing a PPP for this bridge, Illinois has recommended instead that the States build a companion bridge next to the existing Martin Luther King Bridge, which would cost less and would not be tolled.

- Maryland I-270/I-495 Project: In 2006, the Maryland State Highway Administration, the Maryland Transit Administration and the Maryland Transportation Authority issued a request for expressions of interest in a long-term, concession-based PPP for transit improvements and managed lanes on the I-270/I-495 corridor from I-70 at Frederick in the north to the Virginia State line at the American Legion Bridge in the south.

- Oregon PPP Projects: Oregon has been in the process of considering innovative solutions, including long-term, concession-based PPPs, for three projects in the Portland area: the Newburg-Dundee Bypass, the Sunrise Corridor, and the South I-205 Corridor.

C. State and Federal Encouragement

Under the federal system of government in the United States, the Federal government provides funding for highway and transit projects, but these projects are owned and operated

at the state or local level.[59] For this reason, express authorization to engage in a PPP for a particular transportation project has to be provided by the relevant state and/or local legislative authority. Since the 2004 Report eight states have enacted legislation authorizing PPPs for highways and transit projects.

While the Federal government's role is generally limited to providing funding for surface transportation projects, the Federal government has been actively encouraging and facilitating PPPs through Federal programs, including credit assistance programs. The Federal government has provided this support from programs that existed prior to the 2004 Report, but also from programs that were enacted in the most recent surface transportation reauthorization bill, the 2005 Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users ("SAFETEA-LU").

1. State Legislation Authorizing PPPs

There have been several developments at the state legislative level since the 2004 Report. These developments include passage of new legislation authorizing PPPs in states where PPPs were not previously authorized and the refinement of existing legislation in States that already had PPP programs. Currently, 25 states have statutory authority to enter into highway or transit PPPs. It is important to note that the extent and type of legislation enacted varies widely from state to state, among other things, in the types and amounts of projects that are authorized and in the breadth of the authorization delegated by the legislature to state or local transportation agencies.[60]

a. Creating New PPP Programs

Since the 2004 Report, five states that did not previously authorize PPPs for transportation projects enacted authorizing legislation. The legislation passed by two of these states provides fairly broad authorization to use PPPs for roads and other toll facilities while the legislation passed by the other three states only authorizes specific projects or is limited to PPPs that are specifically approved by the legislature.

Mississippi enacted authorizing legislation in April 2007.[61] Mississippi's legislation provides a good example of the types of issues that states consider when authorizing PPPs. Like most states with PPP programs, Mississippi did not limit its authorization to Design-Build projects, but extended authorization for private involvement to all major components of project delivery, authorizing concession-based PPPs for design, construction, financing, operation and maintenance of toll roads or toll bridges. To insure that PPP facilities are just as well built and maintained as public facilities, the law requires that any facilities built through PPPs must be built and maintained in accordance with the minimum highway design, construction and maintenance standards established by the contracting government entity for such facilities, and facilities are subject to inspection during the term of the concession. Failure to

[59] 23 U.S.C. 145

[60] USDOT has prepared model PPP legislation to provide States with an example of what basic elements to address in PPP legislation. The model legislation should not be considered a recommendation by USDOT that States include particular provisions in their PPP legislation. Rather, the model legislation highlights the types of issues that a State should consider when pursuing PPPs for transportation projects. The model legislation is available at: http://www.fhwa.dot.gov/PPP/legis_model.htm (last visited July 7, 2008).

[61] Mississippi Code, Section 65-43-3.

comply with the required standards may result in termination of the contract. When a contract terminates or expires all of the concessionaire's interests revert to the State and the collection of tolls ceases.

Mississippi's law authorizes the solicitation of proposals for PPPs from the private sector or the acceptance of unsolicited proposals. The procurement process must be competitive and the project must be awarded to the bidder offering the best value to the contracting government entity. To protect the users of the facilities from monopolistic pricing, PPPs are only authorized if other, toll-free transportation options exist and increases in toll rates are subject to government approval after public notice and hearings. The law also indicates that concessionaires may be required to share excess revenue, and the law limits the length of concessions to a maximum of 30 years. Tolls are not permitted on existing roads.

Some of these provisions are more restrictive than similar provisions in other states. For example, in other states the term of the concession may be 50 years or more, toll rates may be increased pursuant to a negotiated schedule, and PPPs may be allowed in areas where there are no competing transportation facilities. Nevertheless, as is evident from the recent legislative amendments passed in Texas and Florida (see below), determining best practices is an evolving process and is dependent on the circumstances of particular states. A state like Mississippi, which has never had toll roads, is likely to take a different approach than states like Texas and Florida which have more extensive experience with toll roads.

Utah enacted legislation in March 2006 authorizing the State to enter into PPP road projects.[62] Like Mississippi, Utah's legislation provides broad authorization for private concessionaires to design, build, finance, maintain and operate toll roads and to impose and collect tolls pursuant to concession agreements. Utah may solicit proposals and accept unsolicited proposals. Utah's legislation relies on the Utah Department of Transportation ("UDOT") to negotiate several important provisions for each facility, including the private sector's profit and any revenue sharing arrangements, toll rates or other user fees, safety and policing standards, and other applicable engineering, construction, operation and maintenance standards. Concession agreements must give UDOT a right to repurchase the facility from the concessionaire at an agreed price. If the agreement is terminated, the facility must be returned to UDOT in satisfactory condition. The legislation requires UDOT to engage outside consultants and counsel to provide guidance, assist with the evaluation of risks and benefits, and help negotiate the terms of the concession agreement.

Before any concession agreement is executed (or amended or modified) it must be approved by the Utah Transportation Commission, an independent advisory committee appointed by the Governor. Also, UDOT may only toll an existing State highway with the approval of the Transportation Commission and the State legislature. To develop HOT lanes on existing State highways or to develop toll lanes on new State highways or on any added capacity, UDOT needs the approval of the Transportation Commission, but not the State legislature.

Neither Utah nor Mississippi identified any particular projects in their legislation as projects that would be developed as PPPs. Other states, rather than passing broad legislation authorizing PPPs for transportation projects generally, have passed limited legislation authorizing only specific projects to be developed or operated as PPPs.

[62] Utah Code, Section 72-6-201 (Public-Private Partnerships for Tollways Act).

Indiana Governor Mitch Daniels obtained statutory authority in 2006 to enter into a long-term concession for the operation and maintenance of the Indiana Toll Road after receiving binding proposals from private sector bidders. The enabling legislation also included authorization for the Indiana Department of Transportation to enter into a PPP for the construction, financing, operation and maintenance of an extension of I-69 from Indianapolis to Evansville, Indiana (the I-69 extension project has not been developed as a PPP).[63] The legislation did not include authorization for any other PPP projects. In late 2006/early 2007, Governor Daniels tried to get legislation authorizing two more PPP projects, the Indiana Commerce Connector and the Illiana Expressway, but was unsuccessful. The Indiana Commerce Connector was a proposed 75-mile bypass south and east of Indianapolis and the Illiana Expressway would connect Indiana with Illinois south of Chicago.

Missouri is taking the same approach, authorizing PPPs on a project by project basis. Missouri Governor Matt Blunt signed legislation on September 5, 2007 enabling the Missouri Department of Transportation to enter into a PPP for the Safe & Sound Bridge Improvement Program.[64] While not directly authorizing the bridge program, the legislation authorized the Missouri Highways and Transportation Commission to modify bonding requirements for "design-build-finance-maintain" PPP projects with a concession period expected to exceed 25 years. The bonding requirements that were modified by this legislation would have prevented the bridge program from moving forward. As noted in Section IV(B), the concessionaire for the bridge program will repair or replace more than 800 bridges in Missouri within five years and maintain these bridges in satisfactory condition for 25 years.

Missouri also passed legislation in 2006 authorizing a PPP for the proposed Mississippi River Bridge connecting St. Louis with Illinois.[65] The legislation authorizes the Missouri Department of Transportation ("MoDOT") to solicit proposals or accept unsolicited proposals for the bridge. In February 2007, MoDOT announced that it had received an unsolicited proposal from Zachry American Infrastructure and ACS Infrastructure Development to design, build, finance, operate and maintain the bridge and to collect variable tolls, which would be higher for trucks and during peak congestion periods.

In March 2008, West Virginia enacted PPP enabling legislation providing authorization for private concessionaires to design, build, finance, maintain and operate toll roads and to impose and collect tolls pursuant to concession agreements.[66] Each concessionaire is required to perform its responsibilities in accordance with the engineering standards applicable to other projects operated or maintained by the Division of Highways and its performance is subject to monitoring by the Division of Highways. Concession agreements must specify a reasonable maximum rate of return on the concessionaire's investment and may include a schedule of the initial user fees, if applicable. Increases in user fees must be approved by the Commissioner of the Division of Highways. The authority granted by West Virginia's legislation has certain limits, however. Concession agreements must be entered into prior to June 30, 2013 and concession agreements must be approved by the legislature through the adoption of concurrent resolutions and must be approved by the Governor.

[63] Indiana Code, Sections 8-15, 8-15.5, 8-15.7, 8-23-7-22 through 25.
[64] Missouri Code, Section 227.107.
[65] Missouri Code, Sections 227.600 through .669 (Missouri Public-Private Partnership Transportation Act).
[66] West Virginia Code, Section 17-27-1 through 17-27-18 (Public-Private Transportation Facilities Act).

b. California

California has a new pilot program for PPPs. California was one of the first states to authorize PPPs in the late 1980s but California allowed its legislation to lapse in 2003. Before the legislation lapsed, California developed two projects as PPPs. First, California completed the privately financed 91 Express Lanes project as a PPP. The project involved building, financing and operating 10 miles of express lanes in the median of SR-91 in southern California. The project was the first fully automated toll facility in the world and the first application of value pricing in America. The concession for the 91 Express Lanes was subsequently purchased from the concessionaire by the Orange County Transportation Authority because a non-compete provision prevented the construction of competing capacity, but under public ownership the project is still a success with toll revenue exceeding expectations. Second, California granted a concession for a private concessionaire to design, build, finance, operate and maintain the 10-mile South Bay Expressway toll road in San Diego as a PPP. The South Bay Expressway opened to traffic in November 2007.

California passed new enabling legislation in May 2006.[67] As with its earlier law, the new California law did not provide broad authorization for PPPs, but rather limited authority for certain pilot projects. The new law permits the development of four projects as PPPs, two in southern California and two in northern California. Each of the authorized PPPs must be for a project that improves the movement of goods in California. Commercial vehicles may be tolled, but non-commercial vehicles may not be tolled. Toll rates must be fixed in the concession agreement and increases must be approved by Caltrans following a public hearing. Concession agreements must be submitted to the State legislature for approval and at least one public hearing must be conducted before the legislature provides approval.

California's new legislation also provides specific rules with respect to competing facilities. Non-compete provisions, which prevent the construction of any transportation alternatives that would compete with the toll facility, are prohibited. A concession agreement may entitle a concessionaire to compensation for lost toll revenue if a competing facility is constructed, but this provision would not apply if a competing facility is part of a regional transportation plan, is a safety project, is an improvement providing only incidental increases in capacity, is a HOV lane project, or is a project located outside the boundaries of the PPP project, as defined in the concession agreement.

c. Texas

Texas has had specific statutory authority to enter into PPPs for toll roads since 2003.[68] On June 11, 2007, Texas Governor Rick Perry signed legislation enacting a two-year moratorium on new toll road PPPs.[69] The legislation allows all of the toll road PPPs currently being procured to proceed, but prohibits the development of new toll road PPPs during the two-year moratorium period. A more restrictive version of the legislation had been passed by the legislature earlier in 2007, but Governor Perry vetoed that legislation and threatened to call a special session of the legislature if it was passed over his veto. In addition to establishing the

[67] California Streets and Highways Code, Section 143.
[68] Texas Code, Section 223.201.
[69] The moratorium took effect immediately and ends on September 1, 2009.

moratorium, the legislation that was eventually passed refined Texas' PPP program in two important ways. First, the legislation codified certain terms pursuant to which TxDOT can enter into long-term concession agreements. Second, the legislation gave local toll road authorities a first option to develop new toll roads.

With respect to long-term concession agreements (TxDOT refers to PPP/concession agreements as "Comprehensive Development Agreements" or "CDAs"), the legislation requires that CDAs entered into with the private sector be limited to terms of no more than 50 years. The term of the concession is important to the private sector because investors need sufficient time to recoup their investments. In addition, the length of a concession also affects the concessionaire's ability to depreciate the value of the facility for income tax purposes, which can reduce the concessionaire's cost of capital. On the other hand, the interests of the private sector need to be balanced with the public sector's interest in reclaiming its asset. The new legislation also requires that CDAs specify the State's future buyback cost, should the State buy back the facility during the term of the concession. Under the new rules CDAs must clarify that competing roads may not be built within four miles on either side of the subject toll road, and CDAs must require that revenue generated for the State through the CDA be used only in the region in which it was generated.

The legislation also gives local toll road agencies the first option to build and operate any new toll roads. Before TxDOT develops any new toll road as a PPP, TxDOT and the local toll road authority must agree to certain business terms, including toll rates, and a market valuation study must be performed to determine the toll road's value. Only if the local toll road authority is unwilling to pay the market value determined pursuant to the valuation study may TxDOT open the project to bidding by the private sector as a PPP. Local toll authorities were also given the authority to propose that State roads be built as toll roads.

d. Florida

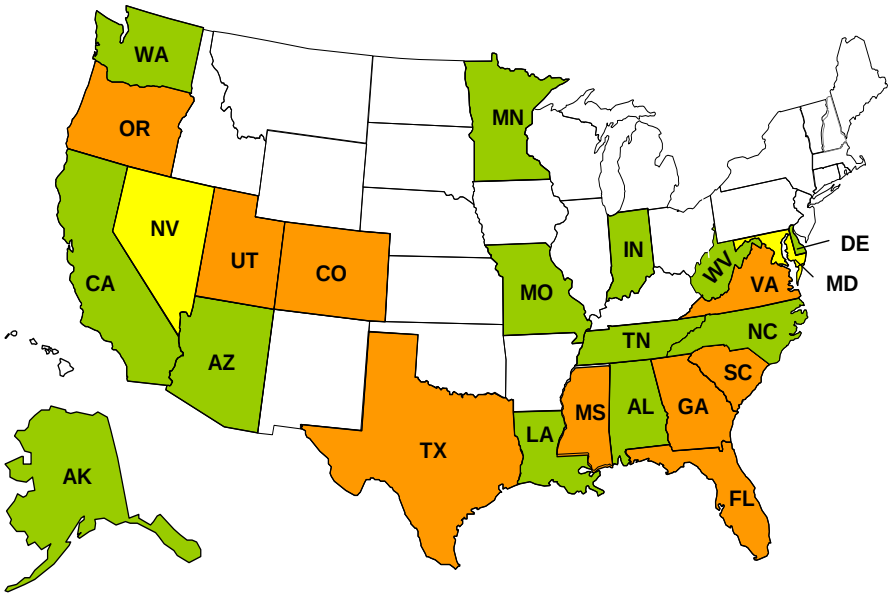
Florida broadened its legislation in 2007 to authorize long-term concessions for existing assets, and to refine certain aspects of its PPP program.[70] Florida has had statutory authority to enter into PPPs at the State and local level since 2002. The new legislation authorizes FDOT to enter into long-term concessions for existing toll roads.[71] The legislation requires upfront payments at closing and revenue sharing during the term of any such concession. PPPs are permitted to develop new facilities or to increase capacity on existing facilities.

Pursuant to Florida's amended legislation, regulations governing toll rate increases and provisions requiring revenue sharing need to be included in the concession agreement. PPPs in Florida must comply with all requirements of (i) Federal, State, and local laws, (ii) State, regional, and local comprehensive plans, (iii) FDOT rules, policies, procedures, and standards for transportation facilities, and (iv) any other conditions which FDOT determines to be in the public's best interest. FDOT is also specifically authorized under the legislation to enter into PPPs that utilize a payment structure based on the availability of the facility or based on the level of traffic using the facility. Concessions are limited to terms not exceeding 50 years, unless the secretary of FDOT authorizes a term of up to 75 years. Any term in excess of 75 years must be specifically approved by the Legislature.

[70] Florida Code, Section 334.30.
[71] Florida Turnpike Enterprise toll roads are excluded from this legislation.

The following exhibit highlights the states that have legislation enabling PPPs and describes the legislation in these states.

States with Legislation Enabling PPPs



Broad authorization to use PPPs for toll roads and other toll facilities

Authorization to use PPPs is limited to specific projects, pilot programs, projects approved by the legislature, or otherwise

Authorization to use PPPs for certain transportation projects, but not for toll roads

States with Broad Legislation Enabling PPPs

1. Colorado	Authorizes solicited and unsolicited proposals for PPPs and provides PPP authority to CDOT for specific projects including turnpikes and HOT lanes.
2. Georgia	Authorizes GDOT to both receive and solicit proposals for PPPs.
3. Florida	Authorizes solicited and unsolicited proposals for PPP toll roads at the State and county levels and authorizes FDOT to lease or increase capacity on existing toll facilities through PPPs.
4. Mississippi	Authorizes solicited and unsolicited proposals for PPP toll road and bridge projects.
5. Oregon	Authorizes ODOT to solicit and accept unsolicited proposals for PPP tollway projects.
6. South Carolina	Authorizes SCDOT to enter into PPPs for turnpike facilities.
7. Texas	Authorizes TxDOT and regional mobility authorities to accept solicited and unsolicited proposals for PPPs.

8. Utah	Authorizes UDOT to accept solicited and unsolicited proposals for PPPs involving tollway facilities.
9. Virginia	Authorizes solicited and unsolicited proposals for PPPs at the Commonwealth and local levels.

States with Limited Legislation Enabling PPPs

10. Alabama	Authorizes ADOT and county commissions to license private entities to construct, own and operate toll roads, toll bridges, ferries or causeways.
11. Alaska	Authorizes the Knik Arm Bridge and Tolling Authority to utilize a PPP to finance, design, construct, operate and maintain the Knik Arm bridge.
12. Arizona	Two pilot programs each allow up to two solicited and unsolicited proposals for PPPs.
13. California	Authorizes four PPPs, two for northern California and two for southern California, each of which must improve goods movement – authorization expires on January 1, 2012.
14. Delaware	Authorizes PPP projects, including highways and bridges – specific legislative approval required for each project.
15. Indiana	Authorizes the Indiana Toll Road lease transaction and a PPP for the extension of I-69 – specifically prohibits the State from entering into PPPs for any other road or project without further legislative approval.
16. Louisiana	Authorizes PPPs for toll roads and bridges – any proposal would need the approval of the State legislature.
17. Minnesota	Authorizes solicited and unsolicited PPPs for toll facilities – PPP agreements are subject to local veto.
18. Missouri	Authorizes PPP for Mississippi River Bridge and for Safe & Sound Bridge Improvement Program.
19. North Carolina	Authorizes the North Carolina Turnpike Authority to use PPPs for up to nine toll facilities, including a toll bridge.
20. Puerto Rico	Establishes a toll transportation facility authority with broad powers to authorize private participation in public highway projects.
21. Tennessee	Authorizes two pilot toll road projects.
22. Washington	Authorizes solicited PPPs for eligible transportation projects – requires the State finance committee or the governing board of a public benefit corporation to approve the financing of any public project.
23. West Virginia	Authorizes public entities to acquire, construct or improve transportation facilities – requires the State legislature and Governor to approve the concession agreement

States with Legislation Authorizing Non-Highway PPPs

24. Maryland	Highway projects are not currently authorized under Maryland's PPP law, but a highway PPP program has been established by regulation.
25. Nevada	Authorizes PPPs for transportation facilities, but toll bridge and toll road projects are excluded.

2. Federal Programs Encouraging PPPs

Recognizing the substantial benefits of PPPs, the Federal government has undertaken a number of initiatives to increase the role of the private sector in highway and transit projects.

a. Private Activity Bonds

SAFETEA-LU amended Section 142 of the Internal Revenue Code to permit the issuance of private activity bonds ("PABs") to finance privately developed and operated highway and freight transfer facilities. This change to the Internal Revenue Code allows highway and freight transfer facilities to be developed, designed, financed, constructed, operated and maintained by the private sector as PPPs, while maintaining the tax-exempt status of the bonds. PABs are issued by a public entity, which acts as a conduit issuer for the private developer. The private developer is deemed the borrower and responsible for repayment. The law limits the total amount of PABs that may be issued for highway and freight transfer facilities to $15 billion and gives the Secretary of Transportation responsibility to allocate the $15 billion among qualified facilities. These PABs are not subject to the state volume caps that typically apply to other types of private activity bonds.

The authorization of PABs in SAFETEA-LU reflects the desire of Congress to increase private sector investment in U.S. transportation infrastructure. Providing the private sector with access to tax-exempt interest rates helps level the playing the field between public and private sector sources of capital. Increasing the involvement of private investors in highway and freight transfer facilities generates new sources of money, ideas, and efficiency. By encouraging private investment, the PABs program also reduces state and local reliance on Federal transportation grants and fuel taxes, providing new capacity and capital improvements to existing infrastructure at significantly less cost to the taxpayer.

The PABs program for highway and freight transfer facilities has proven to be a valuable investment resource for innovative transportation capital projects. USDOT awarded an allocation of up to $700 million for a private firm to bring more than 800 of Missouri's lowest-rated bridges to satisfactory condition and keep them in that condition for 25 years. A $980 million PABs allocation was awarded by USDOT to a group of private companies that is going to build the Port of Miami Tunnel project, a new tunnel connecting the Port of Miami on Dodge Island with Watson Island and I-95 on the Florida mainland. USDOT also allocated $600 million for the concessionaire that will build and operate the Knik Arm Crossing Project in Anchorage, Alaska, a proposed bridge that will connect Anchorage with the Matanuska-Susitna Borough on the far side of the Knik Arm of the Cook Inlet.

A group of private companies used PABs authority allocated by USDOT to issue $589 million of PABs for the Capital Beltway HOT Lanes Project. This project will introduce congestion pricing to one of the busiest corridors in the Nation. USDOT also allocated $288 million of PABs authority to TxDOT to make available to the winning bidder on the IH-635 managed lanes PPP project. With these and other innovative projects moving forward with PABs, USDOT expects the $15 billion national volume cap to be exhausted by 2009. This expectation is based on the applications that are currently being reviewed and on preliminary discussions with applicants that expect to submit applications. An increased national

limitation of PABs authority in the next surface transportation reauthorization bill would help to ensure that PABs continue to play a vital role in providing for transportation infrastructure.

PABs Allocations as of June 2008

Approved Allocations	Amount of Allocation
Port of Miami Tunnel, Florida	$980,000,000
Safe & Sound Bridge Improvement Program, Missouri	$700,000,000
Knik Arm Crossing, Alaska	$600,000,000
Capital Beltway HOT Lanes, Virginia (*issued 6-12-08*)	$589,000,000
IH-635 (LBJ Freeway), Texas	$288,000,000
Pennsylvania Turnpike Capital Improvements	$2,000,000,000
Ambassador Bridge Gateway Project – Phase I	$212,600,000
Total Approved Allocations	**$5,369,600,000**

b. TIFIA

As discussed in the 2004 Report, the Transportation Infrastructure Finance and Innovation Act of 1998 ("TIFIA") is another Federal program that provides significant support for PPPs. TIFIA authorizes USDOT to provide Federal credit assistance to major transportation investments of national importance. TIFIA credit assistance is flexible, subordinated to senior debt and may be provided in the form of a direct loan, a loan guarantee or a line of credit. TIFIA credit assistance can be provided for as much as 33 percent of total project costs. Since the passage of SAFETEA-LU, a project can be eligible for credit assistance if it costs more $50 million or 33 percent of the state's annual apportionment of Federal-aid funds, whichever is less. Eligible projects must be supported in whole or in part from user charges or other non-Federal dedicated funding sources.

For direct loans, scheduled repayments may commence up to five years after the date of substantial completion of the project. Final maturity of the loan may be up to 35 years after the date of substantial completion of the project. In the event revenues are insufficient to meet scheduled TIFIA loan payments, USDOT may allow payment deferrals. The flexible repayment and subordination terms of TIFIA credit assistance make it easier and less costly for the private sector to obtain senior debt and to invest in transportation infrastructure. Recently, the private sector has begun to combine TIFIA credit assistance with PABs to obtain favorable senior and subordinated debt packages for complicated PPP transactions.

TIFIA credit assistance has been used for four innovative PPP projects. First, as noted in the 2004 Report, TIFIA credit assistance was used to supplement the financing of the concession to design, build, finance, operate and maintain the 10-mile South Bay Expressway toll road in

San Diego, which opened to traffic in November 2007. TIFIA provided $140 million in subordinated debt for the South Bay Expressway.

Since the 2004 Report, TIFIA has provided credit assistance for two PPP projects in Virginia, the Pocahontas Parkway refinancing and the Capital Beltway HOT Lanes project, which are discussed in Sections IV(A) and IV(B), respectively. The Pocahontas Parkway refinancing included a $150 million TIFIA loan to finance the 1.5-mile Richmond Airport Connector and refinance a portion of the outstanding project debt. The Capital Beltway HOT Lanes Project included a $588 million TIFIA loan which is subordinate to $589 million of PABs. Between the TIFIA loan and the PABs allocation USDOT approved a significant portion of the financing for the HOT lanes project. In March 2008, TIFIA closed a $430 million loan with the private concessionaire for the $1.36 billion SH-130 Segments 5&6 project in central Texas. As noted in Section IV(B), this project will provide a new north-south alternative to the congested I-35 corridor between Austin and San Antonio.

c. Tolling Programs for Interstate Highways

SAFETEA-LU created a variety of programs authorizing the implementation of tolling on Interstate highways. While these programs do not require that tolling projects be PPPs, they do facilitate the use of PPPs to implement tolling on Interstate highways and the potential involvement of the private sector in these projects is contemplated by the legislation.

Generally, the imposition of tolls on highways that have received Federal-aid, including Interstate highways, is prohibited by Federal law.[72] By way of background, Federal highway laws typically apply only to highways that have received Federal-aid. The total highway system in the United States consists of about 4 million miles of roadway, but only a portion of this mileage is subject to Federal law, including laws regulating the use of tolls. The major categories of highways in the United States and their relative mileage are as follows:

Category of Highway	Approximate Mileage
Total U.S. Roadways:	4,000,000 miles
Federal-aid Highway System ("FHS"):	1,000,000 miles
National Highway System ("NHS"):	162,000 miles
Interstate Highway System ("IHS"):	47,000 miles

Many Federal laws apply to the entire NHS, of which nearly all 47,000 miles of the IHS is a subset. Some laws apply only to the IHS components, and still others may apply to the entire FHS. As a general matter, Federal highway law does not apply to the 3 million miles of non-Federal-aid roadway. For these roadways, authority to implement tolling is a matter of state and local law.

[72] Title 23 U.S. Code, Section 301. Non-Interstate highways that receive Federal-aid may be tolled as part of a construction project pursuant to Section 129 of Title 23 if revenues are used for debt service, a reasonable return on private investment and O&M costs. Excess revenues can then be used for any purpose eligible for Federal aid under the Federal highway laws.

SAFETEA-LU's programs authorizing tolling on Interstate highways are more significant than the relative proportion of mileage classified as IHS would suggest because Interstate highways have heavier traffic than any of the other functional classification of roads in the United States.[73] This is important for two reasons. First, tolling is most viable for projects in which the tolls are expected to provide sufficient revenue to repay project costs. Second, the highways that have the most traffic will benefit the most from the use of tolling and pricing to manage congestion.

Prior to SAFETEA-LU there were exceptions to the general rule that tolling is prohibited on Federal-aid highways, but SAFETEA-LU created three new programs for tolling and expanded a fourth. With the SAFETEA-LU programs there are currently six exceptions to the general prohibition of tolling on the IHS: (i) the Interstate System Construction Toll Pilot Program, (ii) the Interstate System Reconstruction & Rehabilitation Pilot Program, (iii) the Value Pricing Program, (iv) the High Occupancy Toll (HOT) Lanes program, (v) the Express Lanes Demonstration Program, and (vi) Section 129 Toll Agreements.

Interstate System Construction Toll Pilot Program: This program, which was created by SAFETEA-LU, authorizes tolling on up to three IHS facilities to finance construction of new Interstate highways. Applicant states must demonstrate that tolling is the most efficient and economical way to finance construction of the facility. If tolling is implemented pursuant to this program through a PPP, the state(s) may not agree to prevent improvements or expansions of nearby public roads through a non-compete provision.[74] On August 16, 2007, USDOT announced that South Carolina was awarded a slot in this program to use tolling to build an 80-mile stretch of I-73 connecting Myrtle Beach to North Carolina.[75] The South Carolina Department of Transportation posted a notice on its website requesting conceptual proposals to design, build, finance and operate I-73 using a PPP.[76] The notice indicates that the project will be totally or substantially privately financed.

The allocation of a slot to a facility under this program is not limited to the state in which the facility is located. Thus, USDOT's award of a slot to I-73 would make any state constructing a portion of I-73 eligible to apply and receive authority to toll its portion of I-73.

Interstate System Reconstruction and Rehabilitation Pilot Program: SAFETEA-LU continued this TEA-21 program by authorizing tolling on up to three existing IHS facilities to finance needed reconstruction or rehabilitation of IHS corridors that could not otherwise be adequately maintained or improved. Each of the three facilities must be in a different state and only one slot currently remains open.[77] The key limiting factor of this pilot program is

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[73] *2006 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance*, USDOT, Federal Highway Administration, Federal Transit Administration, 2006, pg. 3-8. The report indicates that roads classified as "Interstate" have the largest percentage of vehicle miles traveled ("VMT") per lane mile.
[74] *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); Opportunities for State and Other Qualifying Agencies To Gain Authority to Toll Facilities Constructed Using Federal Funds*, Federal Register, Vol. 71, No.4, January 6, 2006 ("Tolling and Pricing FR Notice").
[75] *South Carolina to Begin Plans to Build I-73 Under A New Pilot Program for Tolling Interstates*, USDOT, August 16, 2007.
[76] *Notice to Parties Interested in Public-Private Partnerships for Design/Build Development and Financing of an Interstate Highway* (http://www.dot.state.sc.us/doing/pdfs/I73_Announce.pdf (last visited July 7, 2008)).
[77] Tolling and Pricing FR Notice.

that toll revenues must be used only for re-investment in the facility being tolled, operations and maintenance costs, debt service, or to provide a reasonable return for a private investor.

Value Pricing Pilot Program: Enacted in ISTEA and amended in TEA-21 and SAFETEA-LU, this program authorizes the imposition of tolls as part of any value pricing project and provides grants ($59 million during the SAFETEA-LU reauthorization period) for the implementation and evaluation of value pricing pilot projects that manage congestion using tolling and pricing. The program has 15 slots for individual states and only two slots currently remain open.[78]

High Occupancy Toll (HOT) Lanes Program: SAFETEA-LU authorized the conversion of high occupancy vehicle (HOV) lanes into high occupancy toll (HOT) lanes.[79]

Express Lanes Demonstration Program: This program, which was created by SAFETEA-LU, authorizes public or private entities to implement variably-priced tolls for demonstration projects on selected IHS facilities. The purpose of the demonstration projects must be to manage high levels of congestion, reduce emissions in a nonattainment or maintenance air quality area, or finance additional lanes to reduce congestion. SAFETEA-LU authorizes fifteen projects from 2005 through 2009.[80]

Section 129 Toll Agreements: Tolling is allowed for five types of highway construction activities, including reconstruction of Interstate bridges and tunnels, pursuant to 23 U.S.C. 129. These activities include:

- Initial construction of non-Interstate toll facilities and approaches to these facilities;
- Reconstruction of existing toll facilities;
- Reconstruction of free bridges or tunnels and conversion to toll facilities;
- Reconstruction of a free non-Interstate highway and conversion to a toll facility; and
- Preliminary feasibility studies for any of the above.

For each of these activities the project sponsor must enter into a toll agreement with FHWA and toll revenue must be used for debt service, a reasonable return on private investment, and the costs of operation and maintenance. Excess revenues may be used for highway and transit purposes authorized under Title 23 if the State certifies annually that the toll facility is being adequately maintained.[81]

While the focus of these programs is tolling and pricing, not PPPs, these programs can be expected to facilitate PPPs because of the ability and willingness of the private sector to assume significant financing, traffic and technological risk on tolling and pricing projects. A number of the tolling and pricing projects that are currently underway around the United States were implemented with a PPP structure because of the benefits that PPPs provide for these types of projects. For example, the SR-91 Express Lanes in southern California was

[78] *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); Value Pricing Pilot Program Participation*, Federal Register, Vol. 71, No.4, January 6, 2006
[79] 23 U.S.C. 166.
[80] Tolling and Pricing FR Notice.
[81] *Title 23 United States Code (23 U.S.C.) Section 129 Toll Agreements*, available on the FHWA website at: http://www.ops.fhwa.dot.gov/tolling_pricing/toll_agreements.htm (last visited July 7, 2008)

implemented as a PPP and the Capital Beltway HOT Lanes project in northern Virginia is being implemented as a PPP.

d. SEP-15

Special Experimental Project Number 15 ("SEP-15") advances the use of PPPs by allowing states to identify impediments to their use in the statutes, regulations, and policies that govern the Federal-aid highway program and to request exceptions to these requirements in order to test alternative project delivery methods. Experiments may be undertaken in any area of project development governed by Federal highway laws, regulations or policies including contracting, right-of-way acquisition, project finance or compliance with environmental requirements.[82] The purpose of SEP-15 is to permit state and local transportation agencies and the FHWA to identify legal requirements that impede the broader utilization of PPPs and experiment with solutions that could remove, or mitigate, these impediments. The SEP-15 program is administered by the FHWA through an application process that leads to the execution of an "Early Development Agreement," which specifies the scope of any approved experimental features. Several notable PPP projects that are currently in various stages of procurement have benefited from the SEP-15 program.

For example, the SEP-15 program has allowed FHWA to experiment with certain provisions of the TIFIA statute to facilitate a more efficient PPP procurement process. The TIFIA statute requires that applications for TIFIA credit assistance include detailed information about the borrower, the plan of finance, the sources and uses of funds, and other information which is available only after the winning bidder for the project is selected. Requiring that this detailed information be included in the TIFIA application makes it more difficult to use TIFIA credit assistance for PPP projects. Because PPPs aim to achieve financial close as soon as possible after the winning bidder is selected, if the winning bidder did not apply for TIFIA credit assistance during the bidding phase, the winning bidder may choose to forego TIFIA credit assistance because the application process will delay financial close. Alternatively, multiple bidders may apply for TIFIA credit assistance for the same project before any of them are selected as the winning bidder.

To determine whether the TIFIA application process is an impediment to PPP procurement processes, under SEP-15, FHWA authorized a limited number of experiments in which TIFIA applicants may deviate from the requirement that the detailed information be submitted with the initial application. Under the experiment, the procuring agency submits an initial application during the bidding process which contains all of the information about the project that is then available. FHWA can then provide a preliminary approval of TIFIA credit assistance, which is conditioned on the winning bidder submitting the necessary information to complete the application after the selection of the winning bidder is made. Instead of multiple bidders submitting applications for the same project, the procuring agency provides the conditional approval of TIFIA credit assistance, together with a provisional

[82] FHWA's SEP-15 authority is derived from Section 502 of Title 23 of the U.S. Code, which allows the Secretary of Transportation to test any process thereunder to identify impediments in current statutory and regulatory procedures that impede the development and implementation of innovative project delivery methods for financing, constructing, operating and maintaining Federal-aid facilities. FHWA may permit States to deviate from the legal requirements under title 23 on a case-by-case basis. FHWA may not authorize States to deviate from legal requirements under other portions of the U.S. Code (for example, a portion codifying environmental laws).

TIFIA term sheet, to all of the bidders for their use in preparing bids. Once the procuring agency selects a winning bidder, that bidder can then finalize the TIFIA application process and loan documentation with FHWA in an expeditious and timely fashion without delaying financial close. FHWA has approved a conditional approval process for TIFIA credit assistance for three projects being procured by TxDOT and for the Knik Arm Crossing Project in Alaska being procured by the Knik Arm Bridge and Toll Authority.

e. Corridors of the Future

On September 10, 2007, USDOT announced six interstate routes to participate in the Corridors of the Future program, a Federal initiative to reduce congestion and improve freight movement across the country.[83] One of the primary objectives of the program is to illustrate the benefits of alternative financial models that involve private sector capital. The selected corridors include: I-95 from Florida to the Canadian border; I-70 in Missouri, Illinois, Indiana, and Ohio; I-15 in Arizona, Utah, Nevada, and California; I-5 in California, Oregon, and Washington; I-10 from California to Florida; and I-69 from Texas to Michigan.

The proposals were selected for their potential to use PPPs, among other innovations, to reduce traffic congestion. The proposals contemplate building new roads and adding lanes to existing roads, building truck-only lanes and bypasses, and integrating real time traffic technology like lane management that can match available capacity on roads to changing traffic demands. USDOT is working with the states to finalize formal agreements that will detail the commitments of the Federal, state, and local governments involved. These agreements will outline the anticipated role of the private sector as well as how the partners will handle the financing, planning, design, construction, and maintenance of the corridors.

f. Penta-P

On January 19, 2007, the Federal Transit Administration ("FTA") published a notice in the Federal Register containing the definitive terms of the Public-Private Partnership Pilot Program ("Penta-P") authorized by SAFETEA-LU to demonstrate the advantages of PPPs for certain new fixed guideway capital projects funded by FTA.[84] The Secretary was authorized to select up to three projects to participate in Penta-P and has selected the BART Oakland Airport Connector and the Denver RTD projects, which are discussed in Section IV(B), and the North Corridor and Southeast Corridor Bus Rapid Transit project in Houston, Texas.

Penta-P is intended to study whether, in comparison to conventional procurements, PPPs achieve any of the following benefits:

- Reducing and allocating risks associated with new construction;
- Accelerating project delivery;
- Improving the reliability of projections of project costs and benefits; and
- Enhancing project performance.

[83] *U.S. Department of Transportation Names Six Interstate Routes as "Corridors of the Future" to Help Fight Traffic Congestion*, USDOT, Press Release, September 10, 2007.
[84] This summary of Penta-P was adapted from the summary included in Appendix A to USDOT's *Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects* released as of November 2007.

Penta-P was authorized to study projects that, among other things, utilize methods of procurement that integrate risk-sharing and streamline project development, engineering, construction, operation, and maintenance. The amount and terms of private investment to be made were significant considerations in selecting Penta-P projects. The benefits of the program include eligibility for a simplified and accelerated review process that is intended to substantially reduce the time and cost to the sponsors of New Starts reviews.

PPPs utilized in the transit industry have primarily taken the form of design-build and design-build-operate-maintain ("DBOM") procurements, which typically do not involve a significant long-term equity investment by the private partner or require the private partner to take ridership or revenue risk. Design-Build transit projects funded by FTA include five New Starts projects (Denver RTD's T-Rex project; the South Florida Commuter Rail Upgrades; the Minneapolis Hiawatha LRT Line; the BART Extension to the San Francisco International Airport; and the Washington Metro's Largo Metrorail Extension), and one project outside of the New Starts program (the Portland MAX Airport Extension). DBOM projects funded by FTA include the New Jersey Transit Hudson-Bergen LRT and the Port Authority of New York and New Jersey's JFK Airtrain.

The Las Vegas Monorail Project, completed in 2004, is the only urban rail transit project since the 1920s with a significant portion of the financing based on projected farebox revenues. Penta-P is designed to encourage more private risk-taking and investment in fixed guideway transit projects than is found in typical Design-Build and DBOM procurements.

Los Angeles County Metropolitan Transportation Authority ("Metro") is developing a PPP program to identify specific highway or transit projects that could be constructed through PPPs. Metro's program could potentially provide funding for currently unfunded transportation projects or accelerate funded projects. Projects identified in the 2008 Long Range Transportation Plan Tier 1 Strategic (Unfunded) highway and transit lists are high-priority candidates for PPPs. On April 24, 2008, on a motion made by Los Angeles Mayor Antonio R. Villaraigosa, Metro's Board of Directors approved the issuance of a Request for Information from the private sector with respect to PPP solutions for 18 projects, and on May 12, 2008, Metro issued the Request for Information.[85] As of July 14, 2008, Metro has received 12 responses to the Request for Information.[86]

[85] *Request for Information Regarding Public-Private Partnerships for LACMTA Transportation Projects*, available at http://www.metro.net/projects_studies/ppp/images/ppp_rfi.pdf (last visited on July 18, 2008).
[86] *LA Receives 12 Presentations for P3s*, *P3Americas.com*, July 14, 2008, at http://www.p3americas.com/newsdetails.asp?iNID=11949&TempID=5 (last visited on July 18, 2008).

V: PPPs Respond to Transportation Policy Failures

Section III of this report explained that state and local authorities use PPPs to reduce costs, accelerate project delivery, allocate risk more effectively and encourage innovation. These benefits alone, however, do not explain why state and local authorities have been turning to PPPs with greater frequency over the last few years.

The unprecedented use of PPPs described in Section IV is also, in large part, a response to the failings of traditional approaches to transportation funding and procurement. The primary failings include continuous growth in congestion and system unreliability over the last three decades and the difficulty that all levels of government are having satisfying the demand for transportation investment. These failings are exacerbated by the misallocation of transportation resources for political or special purpose spending; by a steadfast reliance on fuel taxes to fund transportation infrastructure despite bipartisan efforts to promote fuel economy, energy independence and reduced emissions; and by lengthy project development cycles which increase costs and make it tougher to respond to priorities.

Recently, for example, a special Transportation Finance Commission established by Massachusetts issued "a call to action," which recommended, among other things, that Massachusetts consider PPPs as an alternative to status quo funding approaches.[87] Explaining the necessity for reform and new sources of revenue, the commission declared that the current system is "frighteningly underfunded and ill prepared to meet the needs of the Commonwealth." The Commonwealth's funding gap was conservatively estimated at $15 billion to $19 billion over the next 20 years. The commission declared that: (i) Massachusetts transportation agencies are running deficits and resorting to quick fixes that hide systemic financial problems; (ii) the condition of Massachusetts' roads, bridges and transit is in broad decline; (iii) revenue is being squeezed from all sides; and (iv) there is no money for improvements without sacrificing existing systems and exacerbating the Commonwealth's problems.[88]

In Idaho, the Idaho Forum on Transportation Investment[89] released a report in January 2006 which identified a $20 billion funding gap over the next 30 years.[90] The group concluded that: "Idaho's current transportation revenue structure will not meet the pressing transportation funding needs over the next 30 years;" that "[i]ncreased transportation funding must be addressed now;" that "[s]olutions to Idaho's transportation funding challenge will require innovative and non-traditional revenue sources and means of collection;" and that "Idaho must recognize the eventual transition from motor fuel (gasoline, diesel, etc.) to alternative fuel vehicles and prepare accordingly."[91] One of the policy recommendations made by the report is to promote partnership opportunities, including PPPs, and remove the legal barriers to PPPs wherever possible.[92] As did the Massachusetts Transportation Finance

[87] *Transportation Finance in Massachusetts: Volume 2, Building a Sustainable Transportation Financing System, Recommendations of the Massachusetts Transportation Finance Commission*, Massachusetts Transportation Finance Commission, September 17, 2007 (the "Massachusetts Report").
[88] The Massachusetts Report, pg. 1.
[89] A group of 57 individuals convened by the Idaho Transportation Board consisting of representatives from public agencies, transportation service providers, stakeholders, elected officials and citizens.
[90] *A Forum on Transportation Investment, Report & Recommendations*, January 2006, pg. 3.
[91] *A Forum on Transportation Investment, Report & Recommendations*, January 2006, pp. 9-13.
[92] *A Forum on Transportation Investment, Report & Recommendations*, January 2006, pg. 16.

Commission, the Idaho Forum specifically contrasted its recommendations to explore non-traditional solutions to filling the looming transportation funding gap with the State's current reliance on traditional fuel taxes and a variety of vehicle-related fees to fund its transportation needs, which is not sustainable.

Michigan is the most recent state to launch an investigation exploring alternatives to the current transportation funding system. On December 27, 2007, Michigan Governor Jennifer Granholm approved legislation creating a task force and a citizen's advisory committee to explore alternatives to the current system of funding transportation in Michigan.[93] The task force will consider replacing or supplementing the State's 19-cent gas tax with alternative strategies for funding transportation, including direct user fees. The task force will issue a preliminary report by October 31, 2008 and a final report by April 1, 2009.

The failings of the traditional transportation funding system, which are leading Massachusetts, Idaho and Michigan to search for alternatives, are evident across the United States at all levels of government.[94] PPPs are a preferred alternative because they address these failings.

(1) Poor System Performance: Transportation networks in the United States should provide efficient traffic flow conditions to facilitate the movement of people and goods. The current system for funding transportation, however, does little to directly address congestion and system unreliability, which have steadily gotten worse in urban areas in the United States over the last 25 years. According to the Texas Transportation Institute, the hours of delay per traveler on urban U.S. highways from 1982 to 2005 increased by 171.4 percent, the total hours of delay increased by 425 percent, the total fuel wasted increased by 480 percent, and the total cost of congestion increased by 382.7 percent.[95] At the same time, the total amount spent on highways and transit by all levels of government, Federal, state and local, almost doubled in real terms. For highways, spending increased from approximately $79 billion in 1982 to approximately $134 billion in 2004, and for transit, spending increased from approximately $25 billion in 1982 to approximately $48 billion in 2004.[96] Despite massive investment of public funds, performance continues to deteriorate.

PPPs respond to the poor performance of U.S. transportation systems by providing high-quality, well managed projects that reduce congestion. A recent GAO report indicated that transportation agencies are developing partnerships with the private sector to help fund congestion mitigation techniques, and that "working with private companies can offer a number of benefits for the transportation agency, such as expediting the project schedule, reducing costs, and providing access to private funding sources."[97] The report also asserted

[93] State of Michigan, 94th Legislature, Regular Session of 2007, Act No. 221.
[94] See Maryland Report, pg. 19, which asserts that "States around the country face serious funding gaps between the level of highway service demanded by citizens and businesses and the funding available to finance, construct, operate, and maintain the highway system."
[95] *The 2007 Urban Mobility Report*, Texas Transportation Institute, The Texas A&M University System, September 2007, Exhibit 3.
[96] *Trends in Public Spending on Transportation and Water Infrastructure, 1956 to 2004*, Congressional Budget Office, August 2007, Supplementary Table W-7 (Total Public Infrastructure Spending by Federal, State, and Local Governments, 1956-2004 (in millions of 2006 dollars)).
[97] *Surface Transportation: Strategies Are Available for Making Existing Road Infrastructure Perform Better*, United States Government Accountability Office, Report to the Ranking Member, Committee on Environment and Public Works, U.S. Senate, July 2007 (GAO-07-920) (the "GAO Congestion Report"), pg. 28.

that "[p]rivate companies, driven by the need to make a return on investment, are incentivized to manage assets and provide services in efficient ways" and that specific performance standards can be included in concession agreements to ensure that roads are maintained to a specific standard.[98]

PPPs have been trailblazers in the innovative use of direct user fees and variable pricing to reduce congestion. Because direct user fees can be varied to reflect different traffic conditions, pricing can expand capacity by encouraging drivers to use facilities during non-peak periods and to use transit and other transportation alternatives during peak periods.

The first application of variable pricing in the United States, California's SR-91 Express Lanes, was privately financed and designed and constructed through a PPP structure and has been providing a congestion free alternative in Orange County, California, since the project opened in 1995. In a 2004 report to Congress, USDOT stated that during peak-traffic periods each of the two variably priced express lanes in the median of SR-91 was providing throughput for twice as many cars (almost 25 percent of the cars on the road) as each of the four non-priced lanes on SR-91 was providing for (approximately 12 percent of the cars on the road). The report indicated that not only does pricing allow "twice as many vehicles to be served on a lane in the peak hour than the same lane without pricing," but also, "it does so at three to four times the speed on the unpriced lane."[99]

Similarly, the Capital Beltway HOT Lanes project in northern Virginia, which will implement variable pricing on two lanes of an expanded Capital Beltway (I-495), is being financed, designed and constructed and will be operated and maintained, by the private sector through a PPP. In these and other examples private sector innovation and willingness to assume a significant amount of technological, operational and traffic risk reduces congestion and improves system performance.

PPPs are a good fit in congested areas because existing traffic provides comfort that revenues generated by the PPP facility will support the costs of construction, operation and maintenance of the facility and provide a reasonable return on investment. This allows the private sector to finance and assume the risks associated with the development, deployment and operation of traffic-management technology in congested areas, including the risk that variable tolls will maintain a free flow of traffic. Under a traditional approach to project delivery the public sector would have to assume these risks and may have difficulty funding these projects, which can be expensive, even it was willing to do so. From a policy perspective, another important link between PPPs and congestion mitigation is that the public sector stands to gain significantly from the private sector's focus on underperforming facilities. The private sector can gather and analyze large amounts of data with respect to the performance of the Nation's transportation facilities, and this information can help the public sector steer investment towards the facilities that need it most.

(2) Growing Resource Scarcity: In 1956, when the Federal government established the Interstate Highway System and a fuel tax mechanism to fund construction it could hardly have foreseen the difficulties that this funding system would be facing more than a half century later. Following the completion of the Interstate Highway System in the 1970's,

[98] GAO Congestion Report, pp. 33-34.
[99] *Report on the Value Pricing Pilot Program Through March 2004*, USDOT, FHWA, March 2004, pg. 32.

political spending and special purpose programs flourished making it more difficult to fund priorities. The fuel tax has come under increasing pressure over the last few decades and non-fuel tax revenues are growing much faster than fuel tax revenues. Today, revenues generated from taxes on fuel represent a minority of all revenues generated for highways and transit-related expenditures. Funding for the operation and maintenance of the transportation system has suffered under a political spending process which struggles to capitalize transportation assets and balance transportation spending with competing needs.

Today, as a result of these and other developments, all levels of government in the United States are having a difficult time keeping up with the demand for transportation investment[100] and are increasingly using transportation related revenues to pay for system preservation and maintenance, with little or nothing left over for new capacity and capital improvements.[101] As noted at the beginning of this Section, individual states are forecasting ominous funding shortfalls. In addition to the funding gaps identified for Massachusetts and Idaho, a report considered by Iowa lawmakers, for example, estimated a $27.7 billion funding gap over the next 20 years,[102] and Texas estimates that it has a funding gap through 2030 of $86 billion.[103] At the Federal level, the U.S. Office of Management and Budget estimated in 2007 that the Highway Account of the Highway Trust Fund would likely see a deficit of $4 billion in 2009.[104]

While transportation investment needs can and should be reduced through more effective pricing[105], better management of the existing system and better investment decision-making, it is increasingly clear that the current model for funding transportation is incapable of adequately responding to the demand for transportation investment.

PPPs provide access to a vast amount of private capital available for investment in transportation. As noted in Section IV(A), a private sector consortium paid an upfront concession payment of $3.8 billion to the Indiana Finance Authority on June 29, 2006, for a concession to operate and maintain the Indiana Toll Road ("ITR") and Indiana used this money to fully fund a 10-year road improvement plan. Similarly, the private sector paid an

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[100] See *Performance and Accountability: Transportation Challenges Facing Congress and the Department of Transportation*, United States Government Accountability Office, Statement of Patricia A. Dalton, Managing Director Physical Infrastructure Issues, March 6, 2007, pg. 4, which states that "[f]inancing mechanisms for the nation's transportation system are under stress" and that "[r]evenues to support the Highway Trust Fund […] are eroding."

[101] See (i) GAO Congestion Report, pg. 7, which states that an "increasing proportion of available funds is being spent to preserve existing infrastructure, and (ii) the Massachusetts Report, pg. 1, in which the Massachusetts Transportation Finance Commission "conservatively" estimates that Massachusetts has a $15 billion to $19 billion funding gap over the next 20 years, "which only includes maintaining the present system without enhancements or expansion."

[102] *Transportation Investment Moves the Economy in the 21st Century*, Iowa Department of Transportation, http://www.iowadot.gov/time21/images/RUTF_booklet.pdf (last visited July 7, 2008).

[103] *Meeting The Texas Transportation Challenge*, Texas Department of Transportation, pg. 5, http://www.dot.state.tx.us/publications/government_and_public_affairs/state_agenda.pdf (last visited July 7, 2008).

[104] *Mid-Session Review, Budget of the U.S. Government, Fiscal Year 2008*, Office of Management and Budget, July 11, 2007, Page 5.

[105] In 2006, USDOT estimated that if optimal congestion pricing were imposed on congested roads in the United States the cost to maintain those roads could be reduced by $21.6 billion per year from $78.8 billion to $57.2 billion. *2006 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance*, USDOT, FHWA, FTA, 2006, pp. 10-5 and 10-6.

upfront concession payment of $1.8 billion to the City of Chicago on January 25, 2005, for a concession to operate and maintain the Chicago Skyway. These and other PPPs demonstrate the ability of the private sector to invest significant amounts of private capital in transportation projects. Since 1985, $415 billion worth of transportation PPP projects have been put under construction or completed around the world, and transportation PPP projects worth $572 billion were in a pre-construction phase as of October 1, 2007.[106] The two companies that invested equity in the Chicago Skyway and the ITR, Macquarie Group and Ferrovial-Cintra, had approximately $44 billion and $38 billion invested in transportation infrastructure around the world, respectively, as of October 2007.[107] In addition to the Chicago Skyway and ITR, Macquarie has made investments in the Dulles Greenway in Virginia and the South Bay Expressway in California, and Cintra recently closed a concession for the $1.36 billion SH-130 Segments 5&6 Project in Texas.

A significant portion of the capital that is available for investment in transportation projects is managed by private infrastructure funds and pension funds. Private infrastructure funds looking to invest in U.S. transportation infrastructure include funds managed by Goldman Sachs, the Carlyle Group, JP Morgan, Citigroup, GE and Credit Suisse, Morgan Stanley, Merrill Lynch, Babcock & Brown, Macquarie and others.[108] CalPERS, the largest public pension fund in the United States, approved a $2.5 billion pilot infrastructure investment program in 2007.[109] Funds have raised billions of dollars for investment in infrastructure projects, and a significant amount is expected to be invested in stable western countries like the United States. Infrastructure projects are attractive because the steady, long-term earnings generated by these projects, while lower than that of other private equity investments, match the liabilities of long-term, low-risk investors.

The Financial Times reported at the end of 2007 that "estimates of equity already raised for infrastructure investment but not yet invested range from $50 billion to $150 billion."[110] *The McKinsey Quarterly* in February 2008 reported that the world's 20 largest infrastructure funds now have nearly $130 billion under management, 77 percent of which was raised in 2006 and 2007.[111] *The McKinsey Quarterly* noted that in some situations $1 billion of equity could be leveraged to pay for as much as $10 billion in projects. Even assuming more conservative leveraging, the equity available for investment could help pay for several hundred billion dollars worth of infrastructure projects. The ability of the private sector to invest large amounts of private capital in transportation projects can provide significant relief to the public sector in its efforts to keep up with the demand for transportation investment in the United States.

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[106] *2007 International Survey of Public-Private Partnerships*, Public Works Financing, Volume 220, October 2007 ("PWF International Survey"), pg. 4.
[107] PWF International Survey, pg. 6.
[108] See *The Rise of Infra Funds*, Project Finance International, Global Infrastructure Report 2007.
[109] *CalPERS Approves Infrastructure Investment Program and Pilot Inflation-Linked Asset Class*, CalPERS Press Release, September 10, 2007. The CalPERS Investment Committee Chair said that "CalPERS could become a major player in solving some pressing public policy problems related mainly to energy and transportation."
[110] *Infrastructure M&A*, The Financial Times, December 30, 2007.
[111] Palter, Robert N., Walder, Jay, and Westlake, Stian, *How investors can get more out of infrastructure*: *Opportunities to invest in public infrastructure will increase during the next few years, but so will competition for deals*, The McKinsey Quarterly, February 2008.

(3) Poor Investment Decision-Making: The difficulty that the current transportation funding system has responding to the demand for transportation investment is aggravated by the political processes that dictate how transportation investments are made. Ideally, transportation revenue should be allocated to high priority projects for which research indicates that benefits outweigh costs and that the public sector is going to get a valuable return for every dollar invested. Revenues from transportation-related taxes and fees, however, are often deposited in public trust funds and allocated to particular projects through a political process, without any analysis of the projects' underlying economic merits or adequate consideration of the taxpayers' potential exposure.

Political earmarks exemplify the misallocation of resources under the current system of transportation funding. The number of earmarks in Federal highway and transit authorization bills exploded from 10 in the 1982 bill to more than 6,000 in the 2005 bill.[112] Not all earmarks are wasteful. Some, like transportation funding generally, are used for necessary projects that are included in state or local transportation plans. Nevertheless, there is no mechanism in place to ensure that all or even a substantial number of earmarks are based on a project's underlying merits, economic or otherwise. In addition, because Federal earmarks are often inconsistent with state or local transportation plans, many earmarks languish, unspent, while high-priority projects may be delayed or cancelled for lack of funding.[113]

Unfortunately, the lack of economic analysis is not limited to the earmarking process; it pervades many parts of the current transportation funding system. A recent report from the GAO indicated "that many state and local transportation agencies are not consistently using formal economic analysis as part of their investment decision-making process to evaluate project alternatives."[114] GAO noted that "political concerns" play a role in limiting the expansion of formal economic analysis of investment decision making[115], but also leveled responsibility on the current system of formulas used to allocate Federal highway funding, which does not include any requirements that a project have economic merits.[116] GAO also reported that the actual outcome of a project is rarely assessed to determine whether an investment was in fact valuable or whether it failed to provide economically justifiable benefits.[117] This lack of economic analysis helps explain why rates of return on public highway investments have plummeted in recent years; according to one estimate, from more than 15 percent in the 1970's to less than 5 percent in the 1990's.[118]

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[112] STAA: Surface Transportation Assistance Act of 1982; ISTEA: Intermodal Surface Transportation Efficiency Act of 1991; TEA-21: Transportation Equity Act for the 21st Century; SAFETEA-LU: Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users.

[113] Wall Street Journal, "*Bridges to Somewhere"*, August 4, 2007, Page A6. This article reported that in 1992 64 percent of the money earmarked in the 1987 reauthorization bill remained unspent, and that in 1997 55 percent of the money earmarked in the 1991 reauthorization bill remained unspent. The Wall Street Journal did not report comparable numbers for the 1998 and 2005 highway bills "because the federal Transportation Department stopped disclosing the figures, lest it embarrass Members of Congress."

[114] *Highway and Transit Investments: Options for Improving Information on Projects' Benefits and Costs and Increasing Accountability for Results*, United States Government Accountability Office, Report to Congressional Committees, January 2005 (GAO-05-172) ("GAO Accountability Report"), pg. 23.

[115] GAO Accountability Report, pg. 27, stated that "[t]hirty-four state DOTs said that political support and public opinion are factors of great or very great importance in the decision to recommend a highway project, whereas only eight said that the ratio of benefits to costs was a factor of great or very great importance."

[116] GAO Accountability Report, pg. 25.

[117] GAO Accountability Report, pg. 35.

[118] Shirley, Chad and Winston, Clifford, *Firm Inventory Behavior and the Returns from Highway Infrastructure Investments*, Journal of Urban Economics, Volume 55, Issue 2, March 2004, pp. 398-415. The authors conclude

PPPs can reduce the wasteful effects of political and special purpose spending because private investment is research-based and follows demand, not political influence. Because private investors typically look to the revenues generated by a project to repay debt and equity investments, they have significant incentive to ensure that the cost and performance forecasts for projects, on which the build-decision is based, have a high probability of accuracy. In addition, as noted in Section III, because private companies are accountable to their shareholders and financially liable to counterparties and financiers they have significant incentive to avoid cost overruns. A decision to invest funds in a PPP is only made by the private sector after a careful consideration of the project's underlying value and expected costs and benefits.

The substantial incentive for the private sector to understand and control a project's costs and benefits compares favorably with the past performance of many government grant recipients. For example, in 2003 the Federal Transit Administration ("FTA") studied the predicted and actual costs and benefits of several major transit projects implemented in the past two decades using Federal funds. The actual as-built capital costs of 16 of the 21 projects studied were greater than the forecasted costs by an average of 20.9 percent.[119] Only three of the 19 projects studied had achieved their forecasted ridership at the time of the study. In a report prepared for FTA in 1990, none of the ten projects studied had achieved forecasted ridership and only one was carrying more than 50 percent of forecasted ridership.[120]

FTA implemented its Public-Private Partnership Pilot Program ("Penta-P") in January 2007 to "study the proposition that when risks associated with new construction are appropriately allocated between a project sponsor and its private partner, FTA may rely on the commercial due diligence, financial incentives, and potential liabilities of the private partner to control for such risks."[121] Through the Penta-P, FTA is studying whether commercial due diligence of proposed transit mega projects clarifies their costs and benefits better than conventional due diligence, and thereby improves the build-decisions. A business-oriented investment model can reduce the wasteful effects of political and special purpose spending and help ensure that the traveling public gets cost-effective and valuable projects.

A recent report comparing the performance in Australia of 21 PPP projects and 33 traditional projects concluded that PPPs demonstrate "clearly superior cost-efficiency" over traditional procurement methods.[122] The report indicated that for $4 billion of traditional projects the net cost over-run was $602 million, while for $4.4 billion of PPP projects the net cost over-run was only $52 million, which was not considered statistically different from zero. The

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that large investments in a mature highway system during the 1980s and 1990s may have generated low returns because they were, in part, undermined by inefficient highway pricing and investment policies, and that if these inefficiencies are inevitable for public investments, "the time may have come to investigate the benefits of greater involvement of the private sector in highway provision."

[119] *Contractor Performance Assessment Report*, FTA, September 2007. Forecasted costs refers to costs forecasted at the completion of the Alternatives Analysis and Draft Environmental Impact Statement.

[120] Pickrell, Don H., *Urban Rail Transit Projects: Forecast Versus Actual Ridership and Costs*, DOT-T-91-04, Office of Grants Management, Urban Mass Transportation Administration, Washington DC, October 1990.

[121] Federal Register, January 19, 2007, Volume 72, Number 12, pg. 2583-2591

[122] Australia PPP Report, pg. 1.

report also indicated that while traditional procurements were completed 23.5 percent behind schedule, PPPs were completed, on average, 3.4 percent ahead of schedule.

A survey of 37 PPP projects in the United Kingdom confirmed that the private sector is more reliable than the public sector when it comes to completing projects on time and on budget. The report revealed that while 73 percent of traditional public sector projects resulted in construction costs exceeding the price agreed at time of contract, only 22 percent of the projects procured as PPPs resulted in construction costs exceeding the price agreed at time of contract, and that in these cases the price increase was due to changes requested by the public sector not through the fault of the concessionaire.[123] The report also revealed that while 24 percent of the projects procured as PPPs were delivered late, only 8 percent of these projects were delivered more than 2 months late, which compared favorably with traditional public sector projects which were delivered late 70 percent of the time.[124]

(4) Contradictory Policy Goals: A highway funding model that relies on fuel tax revenues becomes increasingly untenable as the United States moves towards increased energy independence, greater fuel economy in automobiles, development of alternative fuels, and reduced emissions. Trends show that hybrid vehicles are becoming increasingly popular based on concerns about oil supply, fuel prices and emissions[125] and that consumers are driving fewer miles.[126] On December 19, 2007, President Bush signed legislation requiring new auto fleets to average 35 miles a gallon by 2020, a 40 percent increase from today's 25-mile average.[127] These trends presage reductions in the amount of fuel tax revenue available for investment in transportation, which will make it more difficult to respond to the demand for investment. As the United States strives to reduce its dependence on foreign oil and to encourage greater use of alternative energy sources, a transportation funding system that relies primarily on fuel taxes undoubtedly contradicts the Nation's overall policy objectives.

PPPs address concerns that fuel taxes are not a viable revenue source by substituting private capital and direct user fees for fuel tax revenue. Over the next few years, infusions of private capital can supplement efforts to shore up the uncertain balances of the Federal Highway Trust Fund so that transportation projects can be funded. Perhaps more importantly, private capital and direct user fees are not subject to the same political and market forces that are expected to deteriorate the value of fuel taxes over the next several years.

Political and public sentiment increasingly supports the use of tolls and other direct user fees rather than fuel taxes. A May 2007 report from the Reason Foundation reported that polls conducted around the United States clearly demonstrate that a majority find it preferable and more fair to fund transportation with tolls rather than with increases in fuel taxes.[128] For example, a recent survey conducted by the American Automobile Association found that more than half of the respondents favor tolls while only 21 percent favor fuel taxes.

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[123] UK NAO Report, pg. 3.
[124] UK NAO Report, pg. 3.
[125] *Annual Energy Outlook 2007,* Energy Information Administration, February 2007
[126] *Highway Statistics 2005,* Federal Highway Administration, Table VM-1: Annual Vehicle Distance Traveled in Miles and Related Data.
[127] Energy Independence and Security Act of 2007, Public Law No: 110-140.
[128] *The Role of Tolls in Financing 21st Century Highways*, Reason Foundation, May 2007, pp. 14-15.

As questions about the short- and long-term viability of fuel taxes intensify, private capital and direct user fees are proving to be advantageous alternatives.

(5) Lengthy Development Cycles: It often takes more than 13 years to advance a major project from concept to completion.[129] The *New York Times* recently highlighted this problem by reporting that a project to widen a congestion-burdened bridge in New Haven, Connecticut, will take 14 years to complete and that after six years of work the first pilings for the bridge improvements have yet to be sunk.[130] Project delays increase overall costs and project sponsors are forced to either spend more money to complete the project or to abandon the project. Delays are only made worse by the precipitous increase in construction costs that the United States has experienced over the last few years. From 2003 to 2006, the Federal Highway Administration Bid Price Index increased 47.7 percent and the Bureau of Labor Statistics bridge and highway producer price index increased 35.3 percent, in each case more than 3 times greater than the largest increase over any other 3-year span since 1990. During the same period, CPI increased by only 9.6 percent and the producer price index for all commodities increased by 19.3 percent.[131] In this cost environment speed of delivery is critical. The total cost of the Louisville/Southern Indiana Ohio River Bridges Project, for example, increased from approximately $2.5 billion in 2003 to $4.1 billion in 2007, in large part because the costs of construction increased from approximately $2.0 billion to $3.6 billion during this time period.

While lengthy development cycles are caused by multiple factors, not just funding gaps, PPPs can help accelerate project delivery. As noted in Section III, the efficiencies created by combining multiple project elements in one private partner accelerate project delivery. PPPs can also speed up a project by providing upfront capital to cover all of a project's costs. Fuel taxes and other traditional sources of revenue are spent on a pay as you go basis as they are collected and allocated. This process can cause delays if funds aren't available as needed. Tax-exempt government debt allows the public sector to borrow the full cost of a project upfront, but states and local entities typically have limited capacity to issue debt and can only leverage so many projects at one time. PPPs enable the private sector to issue project debt and assume the financing risks, which allows the public sector to reap the benefits of a leveraged project without burdening its balance sheets.

The problem of lengthy project schedules is especially acute for large, expensive projects that will require several years to complete even if all of the funding is available upfront. These projects can be difficult to finance with public debt because they chew up too much of the public sector's debt capacity. These projects are also difficult to undertake on a pay as you go basis because of concerns about cost and schedule overruns. While the private sector can help make these projects viable by providing upfront capital and assuming the debt, the

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[129] *Evaluating the Performance of Environmental Streamlining: Development of a NEPA Baseline for Measuring Continuous Performance*, Federal Highway Administration, 5.1 Conclusions. According to this study prepared for FHWA, in a sample of projects over the course of 30 years the mean length of time it took to get a road from planning stages to completion was 13.1 years.

[130] *Private Cash Sets Agenda for Urban Infrastructure*, The New York Times, January 6, 2008, by Louis Uchitelle.

[131] *Growth in Highway Construction and Maintenance Costs*, Federal Highway Administration, Report Number CR-2007-079, September 26, 2007, Figure 5. See also, the GAO Congestion Report, pg. 8, which states that rising diesel and asphalt prices have caused the significant increase in the price of construction materials over the last few years.

private sector also facilitates these projects by assuming the risk of cost and schedule overruns. Outside of certain circumstances (such as design changes requested by the public agency) the private sector typically assumes the risks of cost and schedule overruns in a PPP. Price and schedule predictability gives the public sector comfort that it will not need to contribute more funding to an expensive project that is experiencing cost overruns or delays, and also allows the public sector to use other resources more effectively.

VI: MANAGING RISK IN PPPS

In the United States, PPPs are a new, innovative approach to transportation funding and project delivery. While there are risks with PPPs that public officials need to be aware of,[132] it is important to recognize that these risks are manageable and that public officials can mitigate these risks if they take prudent and reasonable steps to ensure that they are creating well balanced PPP programs, performing necessary due diligence before committing to projects, and negotiating well structured concession agreements. In addition, the risks associated with PPPs need to be evaluated in the context of the failings of traditional approaches to project funding and delivery. Policymakers should pursue approaches that improve upon the status quo, recognizing that all approaches to procuring, financing and operating infrastructure assets will entail risks. This section describes some of the risks that have been raised in the context of PPPs, and explains how these risks may be managed.

1. Will private operators take good care of transportation facilities?

Private operators are bound by contractual requirements and market incentives to be good stewards of transportation facilities for which they have assumed a long-term financial risk. In a PPP, a private entity is authorized to operate facilities through carefully negotiated concession agreements with the public authority. These agreements specify performance standards with which the operator must comply relating to facility conditions, safety measures, levels of service and maintenance obligations, among other things (these standards can exceed the standards to which other publicly maintained facilities are subject). Failure by the private operator to meet these performance standards can lead to operating control of the facility and the right to collect further revenues reverting from the operator to the public authority. In addition, where the operator's revenues are made up of tolls or other direct user fees, if the operator is not responding to the concerns of users or otherwise adequately maintaining the facility, the public may choose not to use the facility, thereby reducing revenue and forcing the operator to make changes.

A private operator has incentives to capitalize, operate and maintain a facility as efficiently as possible because many of the costs of poorly maintaining or capitalizing the asset are borne by the operator. A primary purpose of the concession agreement is to make sure to align these incentives with the interests or concerns of the public sector.[133]

2. Aren't public authorities just as good at operating and managing facilities as private operators?

Contractual requirements and market forces often hold a private concessionaire to a greater level of accountability for the operation and maintenance of a facility than would otherwise

[132] A recent report by Jeffrey N. Buxbaum and Iris N. Ortiz of Cambridge Systematics, Inc. explores many of the policy concerns that have been raised with respect to PPPs and discusses potential strategies for protecting the public interest. Buxbaum, Jeffrey N. and Ortiz, Iris N., *Protecting the Public Interest: The Role of Long-Term Concession Agreements for Providing Transportation Infrastructure*, U.S.C. Keston Institute for Public Finance and Infrastructure Policy, Research Paper 07-02, June 2007.

[133] *Global Toll Road Rating Guidelines*, Fitch Ratings, Global Infrastructure and Project Finance, Criteria Report, March 6, 2007 ("Fitch Report"), pg. 9, which asserts that "[w]hile Fitch believes the profit motive provides private [operators] an incentive to keep the road in good operating condition, it is important that legal documents adequately align those incentives."

be required of public authorities. For example, a recent GAO report noted with respect to the Indiana Toll Road that "[a]ccording to a Deputy Commissioner with the Indiana DOT, the standards [of the Indiana Toll Road concession] actually hold the [concessionaire] to a higher level of performance than when the state operated the highway, because the state did not have the funding to maintain the Indiana Toll Road to its own standards."[134] The report also indicated that in the case of the Chicago Skyway, there is greater accountability for its operation and maintenance under the concession, which specifies detailed operations and maintenance standards based on industry best practices, than there had been under public control when there were no formal standards.

For a private operator, accountability to the public authority that granted the concession and to the users of the facility is of primary importance because the concession is the operator's source of revenue. To the extent performance lags and revenues suffer (either through a contractual mechanism or through market forces) the operator bears the risk of defaulting on debt service payments, reporting losses to its shareholders and potentially losing the concession.

Furthermore, while public transportation budgets typically compete for funding with other public programs (education, health care, etc.) and are subject to cuts when funds are not available, private operators have incentive to fully capitalize a facility upfront and to make necessary investments as soon as they are needed in order to reduce costs in the long run.

3. Do public-public partnerships provide the same benefits as PPPs without the risks?

Some states have considered public-public models of procurement in an attempt to capture the benefits of a leveraged toll facility without the potential risks of a private concession. In Texas, for example, after selecting a private concessionaire for the SH-121 toll road project, Texas cancelled the procurement and awarded the project to the North Texas Tollway Authority, a political subdivision of the State (this procurement is described in Section IV). In New Jersey, in early 2008, the State suggested leveraging the value of its major toll roads, the New Jersey Turnpike, the Garden State Parkway and the Atlantic City Expressway, through a public-public partnership, rather than a PPP.[135] The plan would grant a concession for the toll roads to a public benefit corporation created specifically for this purpose. The corporation would borrow money to make a significant upfront payment and would be entitled to collect tolls. Tolls would be increased in accordance with an open and predictable schedule agreed to in the concession agreement. While the debt would be public debt, New Jersey taxpayers would arguably not be responsible for this debt.

Supporters argue that public-public transactions are less expensive than PPPs because they can be fully financed with tax-exempt debt, which is cheaper than taxable debt raised by the private sector (this argument is not applicable in the context of private activity bonds), and because public benefit corporations do not make equity investments which are repaid at a higher rate of return than debt. In addition, they argue that the other risks created by PPPs,

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[134] *Highway Public-Private Partnerships: More Rigorous Up-front Analysis Could Better Secure Potential Benefits and Protect the Public Interest*, United States Government Accountability Office (GAO-08-44), February 2008, pp. 41-42.

[135] *Save Our State: Financial Restructuring and Debt Reduction*, Town Hall Presentation, February 2008, available at: http://www.state.nj.us/frdr/facts/index.html (last visited July 7, 2008)

such as monopolistic pricing, are avoided. While it is true that a given amount of tax-exempt debt may be cheaper than an identical amount of private debt and equity, the comparison is not so simple.

Preliminarily, it is important to note that public entities do not have unlimited authority to issue debt for all projects. Even if public debt is cheaper than private financing, the choice is often between private financing and not doing the project because public debt is unavailable. PPPs allow the public sector to advance projects without running up against the same debt limitations that make it difficult for the public sector to borrow large amounts of money. States can avoid this problem for some projects by creating non-profit, public benefit corporations, but these types of structures come with additional risks because they are fully leveraged and do not include an equity investment.

Equity is important for at least two primary reasons. First, including equity in the financing package increases the proceeds available for a given project by adding another level of investment on top of the project's debt capacity. Because equity investors can take a more optimistic approach to valuing growth than debt providers this equity investment cannot simply be replaced with more tax-exempt debt. An optimistic approach increases the risk in the investment, but this risk is borne by the private investors in a PPP, not the public sector. The opportunity cost of foregoing an equity investment can be significant. While the opportunity cost may be especially apparent in greenfield projects for which the anticipated toll revenues are uncertain and the debt capacity is commensurately constrained, the opportunity cost is also significant in brownfield projects which rely on valuations of growth in traffic and toll revenue to be generated by the project.

Second, much of the success of PPPs can be attributed to the incentives that are created for the private sector to innovate and provide superior service and accountability for its customers. These incentives are powerful because the private sector's equity investment affords it the opportunity to earn a reward for its innovation. There are no similar incentives in a public-public partnership where there are no equity investments. In these types of deals, the public has incentive to perform at the level required to make necessary payments and may have no incentive to perform any better. In contrast, private operators in PPPs have direct financial incentives to implement additional innovations throughout the term of the concession to attract new customers and enhance speed and throughput.

Private bidders for PPPs must also incorporate cost and service innovations in their proposals if they hope to win the project. A well-crafted, competitive bidding process forces multiple bidders to compete with one another to provide the best deal for the procuring agency. In contrast, in a public-public partnership where there is no competition, a procuring agency has no assurances that the public received the best deal that it could get. While the procuring agency could rely on independent valuations of what a concession is worth, the true value of a concession cannot be ascertained without opening up the process to competitive bids.

Recognizing the benefits that come with private sector equity investments, Congress enacted the PABs program in SAFETEA-LU to help level the playing the field between public and private sector debt. As described in Section IV, PABs permit the issuance by the private sector of tax-exempt bonds to finance highway and freight transfer facilities that are developed, designed, constructed, operated and maintained by the private sector, while maintaining the tax-exempt status of the bonds. By providing the private sector with access

to tax-exempt interest rates, PABs make it less expensive for the public sector to access the benefits provided by private sector equity investments.

4. Will private investors only invest in profitable routes, leaving others to crumble?

Investments of private capital free up existing sources of revenue and debt capacity for investment in other transportation priorities. Furthermore, while it is important to recognize that the private sector has an incentive to invest in profitable facilities, this business-oriented investment model can provide significant benefits for underperforming public facilities.

There are also opportunities in PPP procurements to package multiple projects with different risk and return profiles in one concession. In these transactions, the private sector assumes responsibilities for lower return, higher risk projects in exchange for a concession for higher return, lower risk projects. This model is being employed by Mexico for various toll roads and bridges held by FARAC (Fideicomiso de Apoyo al Rescate de Autopistas Concesionadas), a federal agency created to assume control of several Mexican toll roads in the mid-1990s. FARAC expects to offer concessions for as many as 13 different packages of toll roads and bridges, and each package is expected to group highly desirable with less desirable assets. A concession for the first FARAC package, four toll roads in central Mexico with a total length of 548 kilometers, was awarded to Goldman Sachs Infrastructure Partners and Empresas ICA, S.A., a Mexican construction company, on July 18, 2007.

PPPs can also be effective on "non-profitable" routes where tolls won't cover all of the facility's costs and even on projects that do not generate any revenue. In these situations, private bidders can compete on the basis of the lowest level of subsidy they will need to carry out the project. This approach is widely used in Europe and, as indicated in Section IV, is beginning to be utilized on various projects in the United States. For example, the availability payments that will be used to finance the Missouri Safe & Sound Bridge Improvement Program, the Port of Miami Tunnel, the Oakland Airport Connector, and other projects that are in early stages of procurement, are structured to force the bidders to compete on the lowest level of subsidy that they will accept to design, construct and operate the facility.

5. Will toll facilities be too expensive if they are operated by the private sector?

Concession agreements for toll facilities typically provide that the private operator may not raise toll rates above certain amounts. Toll rate limits can be based on changes in inflation-related indexes, changes in gross domestic product per capita, a fixed percentage rate or any other factor that the public authority deems relevant or useful. (In the context of congestion pricing, maximum toll rates are not efficient; instead, toll rate limits need to provide operators with flexibility to vary tolls based on demand in order to reduce congestion.[136]) Concession agreements typically provide that failure by the private operator to comply with toll rate provisions ultimately leads to control of the facility and the right to collect tolls reverting to the public authority. In addition, if the operator raises toll levels too high, the

[136] For example, on the Capital Beltway HOT Lanes project in Virginia, which is described in Section IV, the toll rate is not capped. Rather the concessionaire is charged with implementing congestion pricing in order to maintain free flow conditions of traffic. The toll rate reflects traffic conditions.

public may avoid using the facility, forcing the operator to make the facility more affordable. The private operator's revenue is directly dependent on the affordability of the facility.

Setting proper toll rates is especially important if a toll facility is located in a potentially constrained market, or if the public authority is giving the private operator protection from competition. In these situations there may be a risk of monopoly pricing; the operator could conceivably charge prices well in excess of the marginal social cost for use of the facility because users have limited alternatives. To the extent monopoly pricing is a risk, the public authority needs to be vigilant to make sure that the toll rates it negotiates with the private operator reflect the risk and underlying economic reality of the project, recognizing that every facility has unique characteristics. The public authority should also be aware that to the extent it expects to receive revenue from the concession the toll rate structure needs to reflect this revenue.

While monopoly pricing is a risk in constrained markets, the risk can be managed through negotiated toll rates. Another option is to use a shadow toll or availability payment structure, which can provide some of the benefits of PPPs without creating a tolling structure. With shadow tolls and availability payments, the concessionaire has incentive to construct and operate the facility so that it will perform optimally because the concessionaire's revenue is directly related to facility performance, but the risk of monopolistic pricing is eliminated because the concessionaire's revenue is not collected from the users of the facility.

Another option is to create a public commission with power to approve the rates charged by the private operator. For example, the Virginia State Corporation Commission (the "SCC") regulates the toll rates that the private operator is entitled to charge on the Dulles Greenway, the 14-mile northern Virginia toll road connecting Leesburg with the Dulles International Airport. On April 14, 2008, Virginia adopted a law directing the SCC to approve requests for toll rate increases during the period from 2013 to 2020 that are equal to the greater of (i) the increase in the consumer price index from the last toll rate increase, plus one percent, (ii) the increase in the real gross domestic product from the last toll rate increase, or (iii) 2.8 percent.

Some public authorities have used revenue sharing mechanisms to regulate the private partner's return on its investment. Revenue sharing, however, also limits the private partner's incentive to develop and deploy innovations that are in the public's best interest because the private partner may not reap the full benefit of these innovations if their implementation would trigger the revenue sharing mechanism. Regulating the private partner's rate of return also creates incentives for the private partner to "overcapitalize" the project in order to increase revenues without reaching the maximum rate of return. In contrast, toll rate regulations protect users from monopolistic pricing without limiting the private partner's incentive to develop and deploy innovations. For this reason, in similar industries with more extensive experience regulating private operators, economists largely prefer price regulation to rate of return regulation.[137]

[137] For example, there has been a significant shift in the U.S. telecommunications industry away from rate or return regulation towards regulation that focuses more on controlling the prices charged by the regulated firm. See *Price Regulation*, by D.E.M. Sappington, Chapter 7 of *The Handbook of Telecommunications Economics, Volume I: Structure, Regulation, and Competition*, edited by M. Cave, S. Majumdar, and I. Vogelsang, Elsevier Science Publishers, 2002, pp. 225-293.

6. Is tolling and pricing unfair to low-income drivers?

The impact of tolling and pricing on people with low incomes must be compared with the impact of traditional transportation funding policies on people with low incomes, which is often regressive. For example, low income drivers pay just as much tax on a gallon of gas as high income drivers do even though this tax has a significantly more detrimental effect on the mobility of low income drivers. Another example of current transportation policies that have an adverse effect on people with low incomes are transit policies that are increasingly targeted at developing rail transit options for suburban, middle and upper class commuters. These rail systems may be built at the expense of bus services for lower income neighborhoods.

In addition, people with lower incomes often support tolling and pricing. A recent Federal Highway Administration primer on congestion pricing reports that while low income drivers do not use toll facilities every day, they support having the option to avoid traffic when they need to – for example, to avoid paying a penalty for being late to work, or for picking up a child late from a daycare facility.[138] The primer indicates that on San Diego's I-15 HOT Lanes a high level of support (70 percent) comes from the lowest income users.

FHWA recently prepared a white paper on the equity issues of pricing as it relates to low-income drivers and reported, among other positive conclusions, the following:[139]

- In evaluations of the variably priced 91 Express Lanes in California, it has been stated that low-income drivers use the express lanes and are as likely to approve of the lanes as drivers with higher incomes. In fact, over half of commuters with household incomes under $25,000 a year approved of providing toll lanes.
- In a 2006 survey of users of the I-394 HOT Lanes in Minneapolis, Minnesota, usage was reported across all income levels, including by 79 percent of higher income respondents, 70 percent of middle income respondents, and 55 percent of lower-income respondents. Support for the lanes was also found to be high across income levels, including by 71 percent of higher income respondents, 61 percent of middle income respondents, and 64 percent of lower-income respondents.
- The research paper, "Lexus Lanes or Corolla Lanes? Spatial Use and Equity Patterns of the I-394 MnPASS Lanes," cited some specific equity benefits of managed lanes, including: (i) vehicle shifts away from the general-purpose lanes improving travel conditions on such lanes; (ii) a high quality transit alternative is generally part of a managed-lanes project; (iii) even unused transponders may be considered to provide high-value travel-time insurance to their owners; and (iv) when the social benefits are paid for by those choosing to drive, situational equity is generally improved.

Tolling and pricing is also supported by people with low incomes if portions of the revenue are used to pay for transit improvements. These types of subsidies can be targeted at relieving any unfair burden that the tolling or pricing creates. A significant portion of the revenue from the congestion pricing plan that was proposed for downtown New York City,

[138] *Congestion Pricing, A Primer*, Federal Highway Administration, Office of Transportation Management, December 2006 (http://ops.fhwa.dot.gov/publications/congestionpricing/index.htm (last visited July 7, 2008)).
[139] The white paper is available at: http://www.upa.dot.gov/resources/lwincequityrpi/index.htm (last visited July 7, 2008)

for example, would have been used to pay for transit improvements.[140] The FHWA white paper excerpts portions of New York City Councilwoman Melissa Mark-Viverito's blog posting on January 30, 2008:

> *"So it is with congestion pricing. For months, some suburban elected officials from wealthy areas, as well as a coalition backed primarily by the American Automobile Association and Manhattan garage owners, have tried their best to cloak themselves as guardians of New York's poor and middle-class residents…The truth is that just 5 percent of commuters in Brooklyn, Queens, Staten Island and the Bronx travel to Manhattan by private car. People who drive their cars to work also earn 30 percent more a year than those of us who use mass transit. It is our poor and middle-class families who would benefit from congestion pricing — as the fees charged to drivers would be used to improve the bus and subway system…Unlike those who falsely claim to speak for the best interests of my constituents, the commission ought to recognize it would be irresponsible not to pursue a policy that could provide immediate and measurable relief of traffic congestion while improving the air that all of my constituents breathe and the buses and subways that they ride daily."*

Furthermore, technology makes it possible for tolling and pricing programs to include protections for low-income individuals. Where tolls are collected electronically, credits or discounts may be provided to low-income drivers through their transponder accounts. A monthly quota of toll credits could be deposited into these accounts or tolls charged to these accounts could be billed at a discounted rate. The New York City congestion pricing bill that was proposed for consideration in the state's legislature included tax credits for low-income individuals for any fees paid in excess of the round-trip fare for a transit trip.

There is also evidence that the net distributional effects of congestion pricing do not adversely affect low-income groups. The Metropolitan Washington Council of Governments recently evaluated the impact of congestion pricing on the amounts of jobs and/or households accessible to low-income groups (and others) from various traffic analysis zones in the Washington, DC, metropolitan area. In each of the three pricing scenarios studied, the pattern of losses and gains were very similar, with no one population group receiving a large share of the benefit and no one population group shouldering a disproportionate share of the losses. The first scenario, which involved pricing of new lanes and all existing HOV lanes in the region, resulted in no losses in accessibility, so no population group experienced losses.[141]

7. Will toll roads divert traffic to other facilities that are less able to deal with it?

According to Fitch Ratings, based on its experience with a variety of toll roads around the world, it is their "best judgment that in most developed countries with high motorization rates, regularly scheduled toll increases that are pegged at or close to inflationary levels will

[140] *Recommendation of the Traffic Congestion Mitigation Commission*, New York City Traffic Congestion Mitigation Commission, January 31, 2008, which indicates that "[t]he vast majority of City residents of limited income will benefit from short and long-term transit improvements that revenues generated by the plan will make possible."

[141] *Evaluating Alternative Scenarios for a Network of Variably Priced Highway Lanes in the Metropolitan Washington Region*, Metropolitan Washington Council of Governments, Final Report, February 2008.

likely have minimal adverse traffic effect." For toll roads with toll rates that have historically not kept pace with inflation, rates can be raised steeply to catch up to inflation without materially affecting demand.[142] Fitch's experience confirms that toll rate increases that are pegged to inflation or some other reasonable indicator, and which are reasonably well phased in to avoid sharp increases, should not cause adverse traffic effects. Nevertheless, it is important to recognize that each facility presents unique circumstances and the problem of traffic diversion needs to be evaluated. To the extent traffic diversion is expected to pose a serious problem, then alternative PPP structures, such as shadow tolls or availability payments, could be considered.

The risk of diversion also highlights the benefits of congestion pricing. Appropriately structured congestion pricing may encourage drivers to drive at off-peak hours, when the toll rates are less expensive, rather than to drive on other roads. In urban areas, congestion pricing also provides a congestion-free alternative which actually encourages drivers using alternative routes to use the priced facility instead in order to get the benefits of faster and more predictable travel times. Various studies conducted by FHWA and others have shown that vehicle throughput on freeways drops by 10 percent to 25 percent when traffic flow breaks down, in addition to causing delays to motorists that do get through. This lost throughput can be regained when traffic flow on freeways is managed with pricing so that flow breakdown is prevented. Thus, managing demand on freeways with pricing during peak periods can actually increase freeway vehicle throughput and thereby increase the total volume of traffic that can be served in a priced freeway corridor, with the freeway attracting some traffic from other facilities in the corridor. Additionally, congestion pricing can divert traffic to transit, which provides a net benefit in congestion reduction.

8. Is it fair to toll existing roads? Didn't taxpayers already pay for these roads?

The misperception that tolls on existing roads are a form of "double taxation" is closely linked to the misperception that existing roads are "free." In fact, a huge amount of tax money is currently spent every year on the operation and maintenance of existing highways and bridges. According to USDOT's most recent Conditions and Performance report, American taxpayers spent $36.3 billion in 2004 on system maintenance and services alone, which includes routine and regular expenditures required to keep the highway surface, shoulders, roadsides, structures, and traffic control devices in usable condition.[143] As the Massachusetts Transportation Finance Commission recently argued in its recommendations for building a sustainable transportation financing system "[i]t has long been accepted that there is no such thing as a free lunch; it is time for people to acknowledge that there is no such thing as a freeway either."[144]

Tolling is a more equitable revenue raising mechanism than fuel taxes and is also more effective for managing congestion. As a direct fee paid by the users of a facility, tolls are a more efficient source of revenue than taxes and help ensure that the people who use the facility pay a fair share of the facility's costs. Tolls can also be varied by time of day to

[142] See Fitch Report, pg. 7

[143] *2006 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance*, USDOT, FHWA, FTA, 2006, pp. 6-11 and 6-12.

[144] *Transportation Finance in Massachusetts: Volume 2, Building a Sustainable Transportation Financing System, Recommendations of the Massachusetts Transportation Finance Commission*, Massachusetts Transportation Finance Commission, September 17, 2007.

reduce congestion. Congestion pricing may mean that users of a facility pay more to use the facility during congested periods than they would have under the traditional fuel tax model, but they can also choose to use the facility during off-peak hours when the costs of the trip are less, or they can choose to use transit. The idea is not simply to raise more revenue, but to inform drivers about the true costs of their trip so they can make better decisions about when and how to travel.

All five of the agreements that USDOT signed with urban partners as part of the Urban Partnership Program included provisions for pricing existing roads or highways. At the state and local level, where important highway and transit decisions are made, the "double taxation" argument is not persuasive. Instead, pricing existing roads is being utilized to manage severe and worsening congestion.

As the traditional funding model struggles to respond to the demand for capital investment in transportation infrastructure, whether for new capacity or for improvements to existing facilities, tolling is providing for an increasingly significant portion of capital highway investments. A 2006 study prepared for FHWA indicates that, "[d]uring the last 10 years, an average of 50 to 75 miles a year of new access-controlled expressways has been constructed as toll roads out of an overall average of 150 to 175 miles of urban expressways opened annually. Toll roads, therefore, have been responsible for 30 to 40 percent of new 'high end' road mileage over the past decade."[145]

9. Do PPPs limit the public sector's ability to construct competing facilities next to a privately operated toll facility?

In certain jurisdictions, including California and Texas, the legislation authorizing PPPs provides guidance with respect to the construction of new facilities in the vicinity of the privately operated toll facility, but in most jurisdictions the public sector's ability to construct new, competing facilities is negotiated as part of the concession agreement. One way to negotiate this point is to permit the public sector to provide competing facilities as long as the public sector compensates the private sector for any loss of toll revenue that results from the provision of the competing facilities (with exceptions for facilities that were planned at the time the parties entered into the concession agreement). By assuming the risk that it will need to construct competing facilities, the public sector retains the right to construct these facilities and also realizes better value from the concession – if the private partner had to assume this risk the value of the concession, and any related payments made by the private partner, would be reduced.

This is the approach that California took in its PPP legislation, which mandates State flexibility to provide competing roads as long as compensation is provided to the concessionaire (with certain exceptions where compensation is not provided).[146] In Texas, the legislature chose to deal with this risk by mandating a fixed amount of mileage from the PPP facility at which a competing facility can be built by the public sector. Whether mandated by legislation or negotiated in a concession agreement, the key is to ensure that an outcome acceptable to both the public and the private sector is agreed to before the

[145] "Current Toll Road Activity in the U.S.: A Survey and Analysis", August 2006, page 2, available at: http://www.fhwa.dot.gov/ppp/toll_survey_0906.pdf.
[146] California's legislation is discussed in Section IV(C).

concession commences so that disputes can be avoided or expeditiously resolved during the term of the concession.

It is important to acknowledge that publicly financed toll facilities are often protected through similar provisions in favor of the public operator and its bondholders. In these deals, state transportation agencies have agreed to use their best efforts to avoid creating any competing facility which could have an adverse impact on the economic viability of the tolled facility or its operation.[147] These transactions may include exceptions similar to the exceptions included in a PPP. For example, projects that are required for safety or for maintaining existing capacity, or projects included in long-range transportation plans, may not violate the covenant. Nevertheless, it is clear that incentives to protect a project's cash flow from competing facilities exist whether the project is publicly or privately financed.

10. Do PPP programs frustrate state and local planning processes by allowing the private sector to submit unsolicited proposals?

Unsolicited proposals allow the private sector to initiate the PPP process for a particular project by proposing that a state or local authority procure the project as a PPP. Alternatively, a PPP procurement process can be initiated by the state or local authority soliciting proposals from the private sector. While states have very different attitudes towards unsolicited proposals, the public sector should be comfortable that unsolicited proposals will not frustrate planning processes because the decision whether or not to consider unsolicited proposals is made by the public sector, in its sole discretion. Unsolicited proposals provide an opportunity for public agencies to supplement traditional planning processes with private sector concepts for how best to improve transportation systems.

In some states, such as Texas, unsolicited proposals from the private sector have been an important feature of the PPP program.[148] Other states have been more wary of unsolicited proposals because they can distract resources from projects that are included in the state and local plans and from projects that are of high priority. Some states have legislation that only authorizes the use of PPPs for specific projects. Indiana's PPP legislation, for example, only authorizes PPPs for the ITR concession and the I-69 expansion project. Other states only authorize PPPs that result from solicited proposals, not from unsolicited proposals. The North Carolina Turnpike Authority can solicit proposals, but is not authorized to accept unsolicited proposals. In Georgia, the first four PPP projects procured by the Georgia Department of Transportation were the result of unsolicited proposals, but the State Transportation Board recently voted to stop accepting unsolicited proposals and begin soliciting proposals for projects that Georgia wants to prioritize.

Still other states deal with the challenges presented by unsolicited proposals by limiting the types of projects that they might be submitted for. The Florida Department of Transportation

[147] For example, the Project Agreement for the SH-121 Toll Project between the Texas Department of Transportation and the North Texas Tollway Authority, dated as of October 18, 2007, states that TxDOT, in its consideration of any project that might affect the SH-121 project, "shall make best efforts to minimize or avoid any adverse impact on the [SH-121] Project and its operation." The agreement includes exceptions for projects with safety, maintenance or operational purposes and certain other identified projects, including those on long-range transportation plans.

[148] In Texas, each of the TTC-35, SH-121, US-281/Loop 1604, and SH-161 projects was initiated through an unsolicited proposal.

("FDOT") is authorized to accept unsolicited proposals, but only for projects that have legislative approval, as evidenced by prior inclusion of the project in FDOT's work program. California allows unsolicited proposals, but only authorizes two PPP projects in northern California and two PPP projects in southern California and each of the projects must be primarily for good movement and may not rely on tolls charged to noncommercial vehicles.

Each state considering PPPs should decide whether it wants to allow unsolicited proposals or not. From a national perspective, the experiences of other states will help inform states going forward as to what is the best practice with respect to unsolicited proposals.

11. Is it unfair to future generations of toll payers for a public authority to maximize the value of the upfront payment it gets from a concessionaire?

Some argue that it is unfair to leverage toll facilities to provide short-term benefits while future generations of drivers are left to pick up the tab. Ultimately, the veracity of this argument depends on how the proceeds of the PPP are used by the public authority. Like any public revenues, concession payments can be used for short-term benefits, but they can also be used for sound investments that provide benefits for future generations. Indiana used the proceeds of the Indiana Toll Road concession to fully fund a 10-year transportation work program. Not only does this help ensure that the next generation in Indiana will enjoy the benefits of a robust transportation system, including all of the indirect economic benefits provided thereby[149], but also it helps ensure that the next generation in Indiana will not face transportation funding shortfalls that slow project delivery, expose projects to increased costs, and stifle the State's ability to compete in the global economy.

A large percentage of the money raised by Chicago in the Chicago Skyway concession was used to fund a long-term reserve account, which is earning interest and will not be used in the short-term. The City's use of proceeds improved its credit ratings[150] which makes it easier and less expensive to fund important projects – savings that will benefit future generations at least as much as they benefit the current generation, if not more. The direct and indirect benefits that residents of Indiana and Chicago will receive from these concessions in future years (and the long-term benefits of other, similar PPPs) should not be lightly discounted.

This argument also fails to take into account the inequities of the current transportation funding model in which the public sector collects and spends taxes on a "pay as you go" basis. In this model, current taxpayers pay for a facility's upfront capital costs while future generations enjoy the benefits without paying any share of the capital costs. With toll facilities, anyone paying to use the facility, now or in the future, is doing so because the benefits of that use outweigh the costs, and as long as increases in toll rates are subject to an equitable cap, such as inflation, there should be no inter-generational inequities.

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[149] In July 2006, shortly after the Indiana Toll Road concession closed, Honda Motor Company announced that it would build a $500 million plant employing nearly 4000 Indiana residents in Greensburg, Indiana. Honda cited Indiana's commitment to infrastructure as a deciding factor in locating its plant. See www.in.gov/indot/2276.htm (last visited July 7, 2008).

[150] See *Daley's Way, Not Skyway: Money From Lease Won't go for Bailout*, Chicago-Tribune.com, October 25, 2007, which reported that "[r]educing debt and creating the long-term reserve prompted all three major credit rating firms -- Moody's Investors Service, Standard & Poor's and Fitch Ratings -- to improve the city's bond rating. The result has been lower interest rates and cost savings on borrowings."

12. Will private operation of portions of the Nation's transportation network disrupt the integrity of the network as a whole?

Some have argued that interstate traffic will be disrupted by the decentralized operations of multiple private concessionaires. By specifying detailed design, construction and operation standards which the concessionaire must achieve, concession agreements can ensure that services are provided using the same standards and specifications that apply to traditional highway projects. (In fact, PPP agreements give the public sector the opportunity to require that private operators actually design, build and operate the facility using more stringent standards and specifications than might otherwise apply.) The Georgia Department of Transportation indicated with respect to its PPP program that "roads constructed under [concession] contracts will be designed and built to GDOT approved design standards and specifications comparable to other projects in the state. Although there may be new transportation choices for drivers such as managed lanes, the roads will be appropriately signed, user friendly, and easy to navigate."[151]

The argument that PPPs will somehow compromise the integrity of the Nation's transportation networks also fails to take into account how dispersed operations are on our current transportation facilities, which are owned and operated by 50 different states (or political subdivisions of states). Without credible evidence that private operation of transportation facilities is more detrimental to the integrity of the Nation's transportation system than operation by state or local authorities, the suggestion that private operators degrade the connectivity of the system is unwarranted.

[151] http://wwwb.dot.ga.gov/ppi07/html/ppi_overview/faqs.htm (last visited July 7, 2008)

VII: CONCLUSION

This report describes the growing use of PPPs for highway and transit projects in the United States. The report indicates that PPPs reduce costs, accelerate project delivery, provide high-quality projects and transfer risks to the private sector, but also explains that PPPs address failings of the traditional approaches to transportation funding and procurement. The report points to the vast amount of private capital that is available for investment in transportation projects and to the incentives and contractual structures that ensure that private investment will benefit the public sector. Perhaps most importantly, however, this report provides details about the PPP projects that have reached commercial and financial close over the last few years, and the many PPP projects that are currently being procured in the United States. Ultimately, it is this unprecedented use of PPPs which demonstrates that PPPs are becoming a preferred approach for providing transportation infrastructure in the United States.

VIII: GLOSSARY OF TERMS

2004 Report – The U.S. Department of Transportation Report to Congress on Public-Private Partnerships, 2004.

Australia PPP Report – *Performance of PPPs and Traditional Procurement in Australia: Final Report*, The Allen Consulting Group, November 30, 2007.

BRT or Bus Rapid Transit – BRT generally refers to public transit systems in which buses have access to managed lanes or dedicated routes to provide greater travel time predictability to bus passengers.

Availability Payment – An availability payment is a periodic payment made to a concessionaire by a public authority for providing an available facility. Payments are reduced if the facility is not available for a period of time, or not being maintained in satisfactory condition. Using an availability payment structure eliminates the need for the concessionaire to assume any traffic risk and protects the interests of the public by giving the concessionaire a financial incentive to maintain the facility in satisfactory condition and operating at a specified level of performance.

DBB or Design-Bid-Build – DBB has been the dominant form of procurement in the U.S. since the creation of the modern transportation system. Under the DBB approach, the design and construction of a facility are procured separately. The public agency either performs, or contracts with an engineering firm to perform, the design work, and then separately contracts with a private construction firm through a competitive, low bid process to perform the construction work. In a DBB procurement, the public agency assumes the risk that the design work is accurate and complete. Typically, the public agency sponsor also assumes the risk and responsibility for the operation and maintenance of the facility. Under the DBB approach, the public sector is responsible for funding the project.

DB or Design-Build – Contractual arrangements pursuant to which the private sector is responsible for designing and constructing a facility for a fixed price and by a date certain. This arrangement allows for greater private sector involvement in the design and construction of new capacity than has traditionally been permitted, but does not transfer any of the risks of financing, operating and/or maintaining a facility to the private sector.

GAO – The U.S. Government Accountability Office.

HOT Lanes or High-Occupancy Toll Lanes – HOT lanes are lanes that are open to buses and high-occupancy vehicles, just like traditional high-occupancy vehicle and carpool lanes, or "HOV lanes", but which are also available to single-occupant vehicles that pay a toll. Tolls charged in HOT lanes can be variable, meaning they are reduced when there is little or no traffic and they are increased when there is more traffic. Variable tolls encourage people to travel when there is less traffic and ensure that a reliable travel time is always available for drivers willing to pay a toll. HOT lanes implemented in the U.S. include the 91 Express Lanes in Orange County, California, the I-15 HOT Lanes in San Diego, California, the I-394 HOT Lanes in Minneapolis, Minnesota, and the I-25 HOV/Express Toll Lanes in Denver, Colorado.

Long-Term, Concession-Based PPPs – In long-term, concession-based PPPs, the private sector generally assumes a significant portion of the financial risk of the project, risks associated with the operation and maintenance of the project, and, in the case of new capacity and capital improvements, risks associated with the project's design and construction. Whether the private sector assumes a significant portion of the risk that the project will not generate enough traffic and revenue to pay for the project's costs is an important component of the structure of a long-term, concession-based PPP.

Maryland Report – *Current Practices for Public-Private Partnerships for Highways, Draft Report*, submitted by KCI Technologies, Inc., in cooperation with the Maryland Transportation Authority, the Maryland Department of Transportation, and the Maryland State Highway Administration, June 22, 2005.

Managed Lanes – Generally, managed lanes use pricing or eligibility requirements to manage demand and increase freeway efficiency. Managed lanes can include HOV lanes, HOT lanes, express toll lanes, bus rapid transit lanes, or TOT lanes.

NCSL Report – *Surface Transportation Funding Options for States*, National Conference of State Legislatures, May 2006.

PABs or Private Activity Bonds – Tax-exempt bonds authorized to finance privately developed and operated highway and freight transfer facilities. PABs allow highway and freight transfer facilities to be developed, designed, financed, constructed, operated and maintained by the private sector as PPPs, while maintaining the tax-exempt status of the bonds. PABs are issued by a public, conduit issuer on behalf of a private entity. The private entity is the obligor on the PABs.

Penta-P – The Public-Private Partnership Pilot Program authorized by SAFETEA-LU to demonstrate the advantages of PPPs for certain new fixed guideway capital projects funded by the Federal Transit Administration.

PPPs – PPPs are essentially contractual arrangements between the public and private sectors that allow a single private entity to assume significant control of, and risk for, multiple elements of a project, including design, construction, financing, operation and maintenance. A detailed definition is provided in Section III of this report.

Private Partner or Concessionaire – In a PPP, the single private entity responsible and financially liable for performing all or a significant number of functions in connection with a project is called the private partner or concessionaire. The private partner is typically a consortium of private companies with expertise in the different functions to be performed (design, construction, financing, operation and/or maintenance).

RFP or Request for Proposals – An RFP is an invitation from a procuring agency for private companies to submit detailed proposals on a particular PPP project. In a PPP, the RFP is often part of a two step procurement process and is only issued by a procuring agency to private companies that have been shortlisted in a preliminary qualifications process.

RFQ or Request for Qualifications – An RFQ is an invitation from a procuring agency for private companies to submit their qualifications to carry out a particular PPP project. In a PPP, the RFQ is often the first part of a two step procurement process and helps the procuring agency shortlist qualified companies to submit detailed proposals in response to a subsequent RFP.

SAFETEA-LU – The Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users ("SAFETEA-LU").

Shadow Tolls – Shadow tolls are per vehicle amounts paid to a private toll road operator by the procuring agency or another public entity in lieu of collecting tolls directly from the users of the facility. The users of the facility do not pay tolls. Shadow tolls may be based on types of vehicles and distances traveled on the facility.

TIFIA – The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) established a Federal credit program for eligible transportation projects authorizing USDOT to provide three forms of credit assistance – secured (direct) loans, loan guarantees, and standby lines of credit. TIFIA's fundamental goal is to leverage Federal funds by attracting substantial private and other non-Federal co-investment.

TOT Lanes or Truck Only Toll Lanes – TOT lanes are lanes that are open exclusively to heavy or commercial trucks that pay a toll and not to any other type of vehicle. TOT lanes separate truck traffic from passenger car lanes and are considered to enhance safety and efficiency for both trucks and passenger cars and to generate revenue.

USDOT – United States Department of Transportation.

USDOT Transit PPP Report – *Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects*, USDOT, November 2007.

UK NAO Report – *PFI: Construction Performance*, UK National Audit Office, Report by the Comptroller and Auditor General, HC 371 Session 2002-2003, February 5, 2003.