



PUBLIC-PRIVATE PARTNERSHIPS EAST TRACKING

FAST TRACKING INFRASTRUCTURE WITH INNOVATION

THOUGHT LEADERSHIP THAT ADDRESSES The Big Issues of Today and Tomorrow



INTRODUCTION AND OVERVIEW WHAT WE ARE TRYING TO SOLVE

Budgets are tighter while infrastructure needs are greater than ever.

hile public sector budgets are more constrained than ever, the nation's infrastructure — from roads and rail, to schools and courthouses — is in dire need of billions of dollars in improvements. Many public entities are considering public-private partnerships (P3), an innovative project delivery method pioneered outside the U.S. and proven within, to address pressing infrastructure needs with constrained budgets.

Traditional design-bid-build delivery increases cost and schedule on major projects, and it:

/ Lacks accountability among the designers and contractors, often resulting in change orders, delays and cost overruns

- Offers little consideration of long-term operation and maintenance costs
- Provides no built-in performance requirements to ensure a guaranteed asset condition
- Advances the work sequentially — requiring at least five steps to deliver a project
- Awards construction using low bid procurement
- Does not incentivize performance or allow much private sector innovation
- Places most of the risk on the government, leading to claims, disputes, delays and cost overruns
- Adversely affects quality because the project participants are working at cross purposes and do not share a common vision and process.



Needed just to bring our nation's crumbling transportation infrastructure to adequate condition.

Source: American Society of Civil Engineers



Required for education facilities.

Source: American Council for Education

\$**940**B

Required for wastewater and drinking water investments over the next 20 years, and more than \$1 trillion in operations and maintenance spending is required.

Source: Water Infrastructure Network analysis

TRADITIONAL INFRASTRUCTURE PROCUREMENT IS NOT WORKING



VETERANS AFFAIRS HOSPITAL IN AURORA, COLORADO

This hospital has exceeded costs by *five times the initial \$328M estimate*, has taken 9 years to build, and is still not finished (estimated completion is in 2018).



CAPITOL VISITOR CENTER, WASHINGTON, D.C.

Originally estimated at \$265 million, by the time construction started the cost had increased to \$368 million. *Three years behind schedule*, the project ultimately cost \$621 million.



BIG DIG, MASSACHUSETTS

Delivered nine years behind schedule, with a cost overrun of about 190%, the project will cost an estimated \$24 billion. Currently, the state pays over \$100 million annually in debt service for the project, and this is likely to continue until 2038.



CALIFORNIA HIGH Speed Rail

The project will **cost taxpayers 50% more than originally estimated** just for the first 118 miles through the Central Valley, which was supposed to be the easiest part of the route between Los Angeles and San Francisco. A SIX-YEAR DELAY IN STARTING CONSTRUCTION ON PUBLIC PROJECTS COSTS THE NATION OVER \$3.7 TRILLION.

AECOM ESTIMATES THAT THE U.S. SPENDS ABOUT \$100B A YEAR ON TRANSPORTATION PROJECTS. IN 2016, ONLY 5% OF THAT SPENDING LEVERAGED PRIVATE INVESTMENT. 10.20

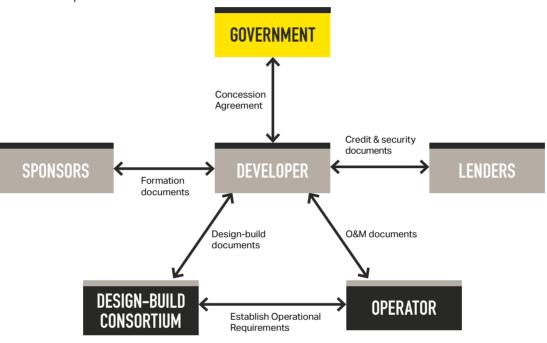
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Port of Miami Tunnel, Florida

WHAT NEEDS TO HAPPEN: PERFORMANCE-BASED INFRASTRUCTURE IS A SOLUTION

Design-build-financeoperate-maintain (DBFOM) or Public-Private Partnerships



Public projects are delivered

differently: private sector expertise and financing are structured to achieve public agency objectives:

- / Partnering to share the risks and rewards of services traditionally delivered by the public sector
- / Cost savings
- / Accelerated delivery of critical infrastructure
- / Managed risk with contract guarantees of quality and performance standards
- / Asset ownership and control retained by public agency
- / Single point of accountability between the developer and the government.

THE BENEFITS OF PERFORMANCE-BASED INFRASTRUCTURE

- Brings construction forward
- Spreads the cost of infrastructure investment over the lifetime of the asset.
- On-Time & On-budget delivery

Payments are aligned to the delivery of project objectives.

Ensures that assets are properly maintained

Well designed P3s help maintain infrastructure by transferring maintenance obligations for a facility to the private partner. P3s require the public sector to invest in the full life-cycle of a project. **Cost savings through quality** The P3 contract is focused on construction quality, as it is responsible for those costs many years down the road.

Strong customer service orientation

Private-sector infrastructure providers sometimes rely on user fees from customers for revenue and thus have a strong incentive to provide superior customer service.

/ Enables public sector to focus on outcomes

Properly structured P3s enable governments to focus on outcomes rather than inputs.

U.S. P3 TRACK RECORD

PORT OF MIAMI TUNNEL

The P3 approach delivered this project at **50% less** than the original estimate and at least **20 years faster**.

\$350_M P3 cost





The P3 delivered this project **27 years sooner** and at **35% less** than the original owner's estimate.

FLORIDA I-595

The use of a P3 helped deliver this project **46% below** the owner's original estimate and **15 years sooner**.





DENVER FAST TRACKS

This project was delivered **one year ahead of schedule** and **14% was saved** due to the P3 approach.

LONG BEACH COURTHOUSE PROJECT

This project was delivered **33** months ahead of schedule and at a **cost savings of 15%** by using a P3 approach. \$**52**_M P3 cost savings

WHY PRIVATE FINANCING?

Value for money

Accountability, innovation, and competitive tension are hallmarks of P3 contracts, driving significant cost savings for taxpayers.

Cash flow management

A P3 helps governments manage cash flow more efficiently by matching a project's cost to available resources over time. Since contracts are usually over 30 years, costs can be spread over a longer period of time than using traditional procurement.

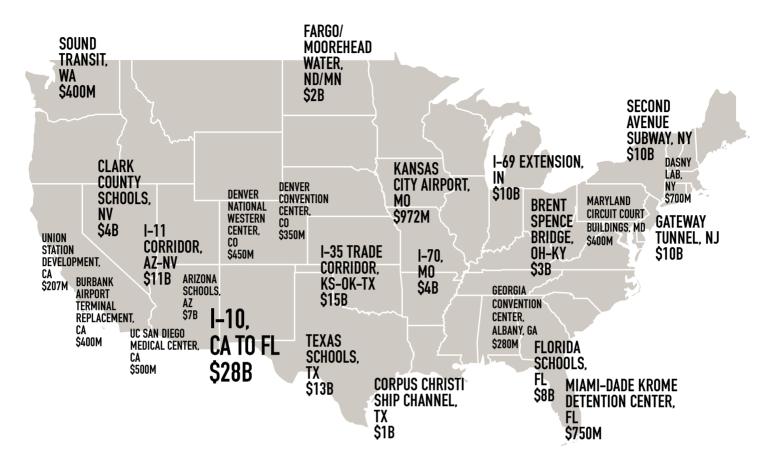
Performance is incentivized

Private finance means skin in the game. Payment is contingent on performance: on-time and on-budget delivery and long-term performance of the asset.

Cost overruns and schedule delays are significantly minimized (in most cases eliminated)

In a P3 approach, the private sector—not the public sector—absorbs the risks of short- and long-term cost overruns and schedule delays.

40+ PROJECTS OF MAJOR NATIONAL SIGNIFICANCE WORTH \$300B CAN BE ADVANCED NOW



THE FEDERAL HIGHWAY ADMINISTRATION ESTIMATED THAT THE AVERAGE TIME FOR APPROVAL OF MAJOR HIGHWAY PROJECTS WAS OVER SIX YEARS

FACT VS FICTION

J INNACCURATE STATEMENTS REGARDING THE TRUMP INFRASTRUCTURE PLAN

"This proposal would work only if you have projects that generate cash flows such as tolls, congestion charges or user fees that can be used to generate the return on equity." Douglas Holtz-Eakin, President of the American Action Forum

MEDIA CLAIM: P3 IS JUST FOR TOLL ROADS

"Desperately needed infrastructure projects that are not attractive to private investors municipal water-system overhauls, repairs of existing roads, replacement of bridges that do not charge tolls — get no help from Trump's plan." **Ron Klain, Washington Post,** 11/18/16

THE FACTS:

U.S. P3 investors are interested in projects across all sectors—water, transportation, energy and buildings. Numerous P3 projects are under construction where the private sector does not retain any control over tolling and where projects have no inherent revenue stream. A few recent examples include:

- / The Gov. George Dukemejian Superior Court Building, Long Beach, CA—\$500M
- Pennsylvania Rapid Bridge
 Replacement Program (replacement of 500 shortspan deficient bridges)—\$18
- / University of California at Merced Campus Expansion—\$1B
- / Fargo Moorehead Area Flood
 Diversion Program, North Dakota
 \$800M

D2/ MEDIA CLAIM: P3 IS ENRICHING INVESTORS AT THE EXPENSE OF TAXPAYERS

"[Trump's plan] would enrich a few well-connected people at taxpayers' expense while doing very little to cure our investment shortfall [in infrastructure]. Progressives should not associate themselves with this exercise in crony capitalism."

Paul Krugman, New York Times

Trump's plan is "relying on tax breaks to entice the private sector into opening up its wallet."

Kathryn A. Wolfe, Politico, 11/11/16

THE FACTS:

The private sector is eager and willing to invest in projects. It does not need tax credits to entice them. Billions of private capital is sitting on the sidelines waiting for opportunities to invest in U.S. infrastructure.

The public sector benefits from these tax credits, because they enable a more effective and inexpensive partnership with the private sector, transferring risk, ensuring accountability, and incentivizing innovation. Without such tax credits the public sector is forced to decide between using 100% private finance or using tax exempt financingin other words, a traditional, inefficient approach to delivery vs. a P3-a tough political decision for cities and states without these tax credits. Tax exempt financing has been a major detriment to encouraging private investment in public infrastructure.

DEVELOPERS CAN ACCESS TAX CREDITS WITH NO ACCOUNTABILITY TO TAXPAYERS

"Trump's plan isn't as simple as encouraging new P3s. It is instead (at least in its embryonic form), simply a way to transfer money to developers with no guarantee at all that net new investments are made." Economic Policy Institute, 11/22/16

THE FACTS:

- P3 agreements include strict performance requirements and impose costly penalties if the asset is not properly maintained.
- 7 The private sector finances the P3 projects upfront at their own risk so they are on the hook—not taxpayers.

If the private sector decides to cut and run they, not the government, will lose money and suffer penalties.

MEDIA CLAIM: TOLL RATES AND USER FEES WILL INCREASE EXCESSIVELY AND THE PRIVATE SECTOR WILL DERIVE UNREASONABLE

PROFITS

"For these sorts of projects to be worthwhile to private businesses, they'd need to make their money back over time by charging the people who use those new roads and bridges and ports and utilities. So what Americans would save on the front end, they'd have to pay on the back end anyway, in the form of higher tolls and usage fees."

Jeff Spross, The Week, 11/8/16

THE FACTS:

If a P3 project transfers toll revenue risk to the private sector the government has the ability to ensure that the toll rates are reasonable from the perspectives of both the consumer and the private partner.

- / If a P3 is used in connection with a toll facility, the project agreement will establish an initial toll rate and the maximum allowable rate of toll increase during the term of the P3 contract.
- / Project agreements are structured to provide for sharing of "windfall profits" with the government, including windfalls arising from re-financing, through a formula based on an agreed upon baseline assumption for traffic volume or total revenue.

D5/ MEDIA CLAIM: P3S COST MORE

"it's not clear why state or local governments would pay higher returns to private investors when they can just issue bonds at historically low interest rates." Paul Davidson, USA Today, 11/16/16

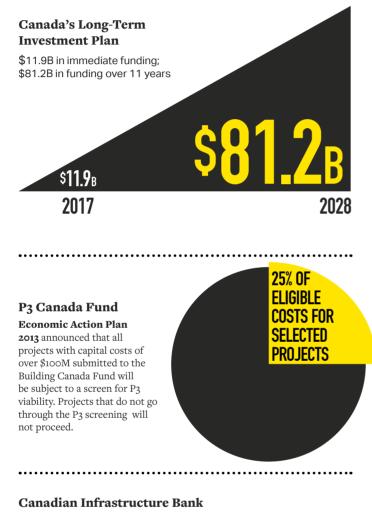
THE FACTS:

P3 projects have saved U.S. taxpayers more than \$9B, an average of 25%, while generating \$36B in transportation investment since 2010. Projects that would never have moved forward but for a P3, such as the Port of Miami Tunnel, are a reality thanks to private finance and innovation.

A P3 will deliver a given project at a significantly lower cost because the private sector consortium is required to deliver on time, within budget and with fixed performance specifications over the long-term. In short, there is significant accountability in a P3 that ensures the government is not on the hook for delays and cost overruns. This ensures projects get done faster and much lower cost.

WHAT HAS WORKED IN OTHER COUNTRIES? GLOBAL MODELS OF FEDERAL INVOLVEMENT IN P3

Canada's Federal Government focused on generating private investment in infrastructure



- / \$35B in government funding
- / \$4-\$5 in private investment for every \$1 of government investment
- 1. Attract institutional capital to gain greater impact per taxpayer dollar and meaningfully reduce the infrastructure gap; and
- 2. Act as a center of expertise to structure and deliver projects in the most cost-efficient way, minimizing the tax dollars required.

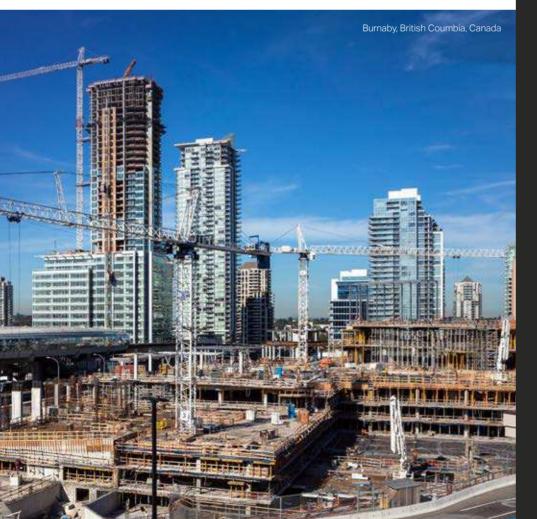
\$35B Government Funding

- / 25-year history, more than 250 projects, valued at over \$120B
- / Started with project-specific P3s, which then evolved into provincial programs
- / Partnerships BC created in 2002-03, followed by Infrastructure Ontario. Now SaskBuilds exists as a P3 procurement agency as well
- In 2007, the Canadian government announced creation of PPP Canada, a federal Crown Corporation to assist provinces, municipalities, and native communities bring projects to market.

\$140B-\$175B PRIVATE INVESTMENT CANADA RECENTLY OVERHAULED ITS REGULATORY RULES, WITH A CLEAR PATH TO A TWO-YEAR PROCESS FOR CERTAIN FEDERAL PROJECTS, AND DELEGATION TO PROVINCES FOR MOST OTHERS.







AUSTRALIA

More than \$42B of private finance has been invested in Australia's infrastructure market since 2006.

- / Infrastructure Australia: An independent statutory body with a mandate to prioritize and advance nationally significant infrastructure. The entity provides research and advice to governments and the community on the projects and reforms Australia needs to fill the infrastructure gap.
- National PPP Policy Framework: These guidelines mandate that the Australian, State and Territorial governments consider a P3 for any project with a capital cost in excess of \$50 million. This National P3 Policy provides a framework for the public and private sectors to work together to secure private sector involvement in finance and delivery of public infrastructure and services.
- **Incentivizing P3 with federal investment:** The federal government of Australia is set to invest a record \$50B in world class infrastructure that will leverage over \$125B of public and private investment over the next decade.

Federal Asset Recycling Program:

A \$5B program to provide a 15% bonus to State and Territorial governments that recycle capital gained from the privatization of state-owned entities.

CATALYZING U.S. P3s: FEDERAL Government Model For Implementation

Creating a National InfrastructureFinance & InnovationOffice (NIFIO) he Administration could develop an entity within the U.S. Treasury Department that centralizes and leverages federal infrastructure priorities, lending, and spending through a dedicated fund. In addition, this new entity could be charged with streamlining regulations, working closely with Office of Management and Budget to ensure that interagency

regulatory disputes are resolved quickly. Similar to the P3 Canada Fund and Canadian Infrastructure Bank, NIFIO would also act as a center of expertise to structure and deliver projects in the most cost efficient way, minimizing the tax dollars required. Housing NIFIO within the Treasury Department would avoid creating a new bureaucracy. Further, while some responsibilities of this entity would need Congressional approval, many could be undertaken immediately, and a general organizational structure could be enabled while awaiting legislative authority. It would be much easier to get specific authority granted to an existing entity than to have Congress enable a new agency.

Immediate actions of NIFIO:

Streamlined regulations **NIFIO** Project prioritization Project prioritization



- Development of a National P3 Policy Framework—a set of guidelines, similar to what has been done in Australia, that state and local governments accepting federal funds must consider before advancing a project delivery approach.
- As part of the implementation of this P3 Policy Framework NIFIO could leverage the \$2.8B in USDOT discretionary spending available until 2020. NIFIO could be responsible for overseeing this funding and ensuring it is properly used.
- / Before federal funding is granted, require agencies, states, counties, and cities do a Value for Money analysis of all projects over \$100M to determine suitability for P3.
- / Work closely with federal agencies, governors and industry partners to identify a prioritized list of critical infrastructure projects that could be fast tracked with private investment.

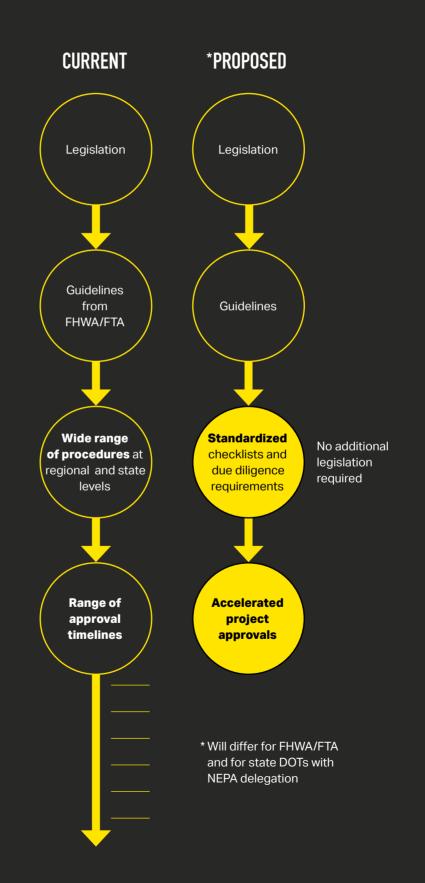
STREAMLINING THE FEDERAL PROCUREMENT PROCESS

CATEGORICAL EXCLUSIONS

- Meets the definition in 40 CFR 1508 4: Based on past experience does not raise significant environmetal issues
- Should be considered routine and not subject to lengthy environmental reviews

LEGISLATION 23 CFR 771

<pre>\$c Actions:</pre>	Normally no
	additional review
\$d Actions:	May require additional
	reviewandadministrativeaction



U.S. P3 TRACK RECORD: FASTER, CHEAPER AND BETTER

Project	Accelerated Delivery	Cost Savings	Job Creation/Economic Impact	Project Status
Denver FasTracks EAGLE, Colorado	Expected completion date 11 months earlier than under traditional procurement methods	\$300M (14% below owner's original estimate)	More than 1,000 direct jobs and 1,500 indirect jobs created during construction, more than 300 permanent jobs, and 2,573 yearly O&M jobs More than \$3B will be added into the economy over the next decade.	Commercial/financial close reached August 2010; <i>opened in 2016</i>
I-595, Florida	Provided capacity improvements 15 years earlier than traditional pay-as- you-go funding approach	\$500M (46% below Owner's original estimate)	Over 275 local companies employed on the project and averaged over 2,000 employees per month working directly on the project Averaged over \$17M in monthly construction expenditures	Commercial/financial close reached March 2009; opened to traffic March 2014 , and accepted final acceptance by summer 2014
Port of Miami Tunnel, Florida	Undetermined – likely would not have moved forward without a P3 approach	\$750M (50% below Owner's original estimate)	 968 direct employees have been hired since the beginning of the tunnel project, 80% are Miami-Dade County residents. 6,728 people have worked on the tunnel project indirectly 831 companies (subs, vendors, suppliers) have done business with the tunnel, 442 local companies are Miami-Dade County businesses that have shared in over \$300M in local contracts 	Commercial/Financial close October 2009; expected final acceptance by August 2014
Ohio River Bridges (East End Crossing), Indiana/ Kentucky	Expected completion 242 days earlier than under traditional procurement methods	Approximately \$228M (22.7% below Owner's original estimate)	More than 15,000 jobs over a 30-year period Economic impact of \$87B	Commercial close reached December 2012; <i>substantial completion</i> <i>expected by October 2016</i>
George Dukemejian Superior Courthouse, Long Beach, California	Completed 30 months earlier than under traditional procurement methods	\$52M (15% below Owner's original estimate)	450 construction jobs and between 50 and 100 management positions created . Over 6.1M construction man-hours employed	Commercial/financial close reached December 2010; occupancy readiness achieved August 2013
Goethals Bridge, New York	Expected completion 6 months earlier than under traditional procurement methods	\$150M (10% below Owner's original estimate)	More than 2,250 direct construction jobs (\$224 million in wages) \$872M in economic activity	Financial close reached November 2013; <i>substantial completion</i> <i>expected in 2018</i>
I-4, Florida	Completed 27 <i>years sooner</i> than if waited for traditional funding to become available	\$1.3B-\$1.4B (34%—35% below Owner's original estimate)	Generating approximately 64,400 new jobs in the Central Florida area Local economy could be infused with more than \$13B in growth	Commercial/financial close reached September 2014; completion expected March 2021
PA Rapid Bridge Replacement Program	Being delivered 12 years earlier than if done traditionally	\$200M (18% below the original owner's estimate)	Significant job creation and community benefits , including mobility enhancement for commuters and goods movement	Commercial/financial close reached March 2015, completion expected in 2018

LAGUARDIA AIRPORT CENTRAL TERMINAL BUILDING (CTB) P3: THE FIRST AIRPORT P3 IN THE U.S., AND THE LARGEST U.S. P3 EVER UNDERTAKEN

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CASE STUDIES

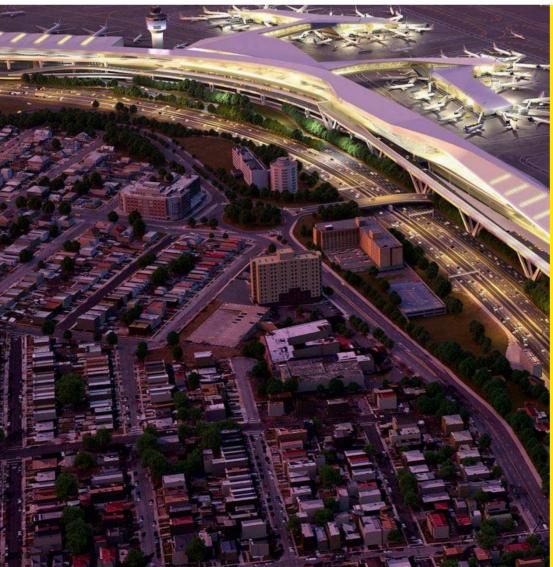
PORT OF MIAMI TUNNEL MIAMI, FLORIDA

This project entailed a 35-year P3 contract between the Florida Department of Transportation (FDOT) and the Miami Access Tunnel consortium to design, build, finance, maintain and operate three miles of tunnel and upgrade a linked causeway and feeder roads.

FDOT agreed to share the project's significant geotechnical risk with the private consortium, providing \$160M to cover technical challenges after the private consortium put forward the first \$10M. The preliminary cost estimate prepared by the state's

technical advisor was nearly \$1.2B. The winning consortium prevailed with a bid of \$657M. The expected annual availability payment was \$69M and the winning private bid was a \$31M annual availability payment. This project included the use of innovative financing mechanisms, such as federal TIFIA funding. AECOM is currently engaged in the design of the intelligent transportation systems and tunnel control systems on behalf of the design-build joint venture led by Bouygues.





LAGUARDIA AIRPORT Central terminal Building (CTB) P3 New York, New York

Project overview

- / One of three major NYC airports, closest to Manhattan
- 35-year DBFOM of a new CTB, demolish old CTB; construct landside improvements
- / 135% increase in commercial space with substantial majority post security
- / Project Value: \$4B of which \$2.8B is the P3's scope
- / \$1.2B direct client payment for new landside improvements
- / Construction duration: 74 months

Project financing

- / \$200M in private equity investment (Meridiam, Skanska, Vantage)
- / \$2.5B in bonds (\$2.35B in tax exempt special facilities bond)
- / \$1.4B in Port Authority of NY and NJ contributions
- / 80% of project revenue to come from airline terminal fees
- / 20% from retail/commercial concessions

FARLEY STATION NEW YORK, NEW YORK

A development concept promoted by industry and that will be embraced by the new federal administration involves the use of private funds for infrastructure improvements as part of commercial development deals. Both New York City (Farley Station) and Denver (Union Station) have used this model.

Farley Station, site of the first U.S. Post Office, was planned to be a new gateway for Amtrak, while the Long Island Rail Road (commuter rail) was going to continue to use Penn Station—a poor solution due to the Penn's size restrictions.

This flawed idea delayed a solution for 20 years. Finally, the use of private development for a multi-use facility at Farley Station (across the street from Penn Station) was negotiated and will allow both Amtrak and LIRR to use the site. The deal will provide \$1.8 billion of private investment, relieving the government from being a developer. The long-term revenue solution will be a major benefit to the area.





ELIZABETH RIVER TUNNELS P3 VIRGINIA

Project overview

- / Located in Norfolk & Portsmouth, Virginia
- / #1 congested roadway east of Mississippi River,
- #1 regional transportation priority for 10+ years
- / Limited state funding to finance design & construction
- / Virginia opted to procure as full DBFOM with traffic/toll risk transferred to private partner
- / 58-year concession

Project cost and benefits

- / Project Value: \$2.4B, 1.5B design build contract
- / About \$100M in upgrades to existing infrastructure
- / Shifts \$2B of long-term O&M costs from public to private
- / 750 jobs created and over \$300M in economic development benefits
- / Project is finishing ahead of schedule and within budget

Project financing

- Financial close achieved in 2012 Senior debt (private activity
- bonds)—\$675M
- TIFIA loan—\$422M Equity con<u>tributions—\$272M</u>
- Equity contributions—\$272
 Public funds—\$408M
- Toll revenues—\$268M
- TIFIA capitalized interest—\$43M

THE THIRD-Largest P3 in U.S. History

GOVERNOR GEORGE DEUKMEJIAN COURTHOUSE Long Beach, California

Project Overview

35-year DBFOM availability payment to replace outdated and overcrowded existing facility built in 1959

\$495M budget

- / 545,000 square foot (SF) building
- / L.A. County Superior Court occupies 415,000 SF that includes 31 civil and criminal courtrooms, a detention center, holding cells, a sally-port, and office space
- / L.A. County under a separate office lease agreement occupies 100,000 SF for five County departments
- / Retail and commercial space: 5,500 SF
- / Facility accommodates 800 workers and 3,500-4,500 visitors daily
- / 1,000 space parking structure renovation

FARGO-MOORHEAD METROPOLITAN AREA FLOOD RISK MANAGEMENT PROJECT FARGO, NORTH DAKOTA

Project Overview

- The general scope of work for the project includes:
- / the 30-mile Diversion Channel
- / the Diversion Channel outlet
- / the Inflow Design Flood Line of Protection ("IDF Line of Protection")
- / two pair of interstate bridges (east and west-bound I-94 and north and south-bound I-29)
- / 10 to 12 county road bridges or crossings

- / three or four railroad bridges
- two aqueducts (Sheyenne River and Maple River)
- / six drain inlets
- / two drop structures that direct the flow of the Lower Rush River and the Rush River into the Diversion Channel
- recreation features and mitigation of environmental impacts

\$760M project construction value

The project is expected to be funded through a combination of sources, including local, state funding and private investment. The private investment is likely to include:

- / Debt (including PABs or loans from the US DOT's TIFIA program that are non-recourse to the Authority or other state agencies)
- / Equity investments

THE GOVERNOR GEORGE DEUKMEJIAN COURTHOUSE, COMPLETED IN 2013 UNDER BUDGET AND AHEAD OF SCHEDULE IN 32 MONTHS, WAS THE FIRST CIVIC BUILDING P3 IN THE U.S.

WITHOUT LIMITS Imagine it. Delivered.

About AECOM

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A *Fortune 500* firm, AECOM companies have annual revenue of approximately US\$18 billion. See how we deliver what others can only imagine at aecom.com and @AECOM.

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