

# Governor Malloy Transportation Finance Panel

June 23, 2015



# About AECOM

AECOM is a premier, fully integrated professional and technical services firm positioned to design, build, finance and operate infrastructure assets around the world for public- and private-sector clients. With nearly 100,000 employees — including architects, engineers, designers, planners, scientists and management and construction services professionals — serving clients in over 150 countries around the world, AECOM is ranked as the #1 engineering design firm by revenue in *Engineering News-Record* magazine's annual industry rankings, and has been recognized by *Fortune* magazine as a World's Most Admired Company.

The firm is a leader in all of the key markets that it serves, including transportation, facilities, environmental, energy, oil and gas, water, high-rise buildings and government. AECOM provides a blend of global reach, local knowledge, innovation and technical excellence in delivering customized and creative solutions that meet the needs of clients' projects.

A *Fortune* 500 firm, AECOM companies, including URS Corporation and Hunt Construction Group, have annual revenue of approximately \$19 billion.

More information on AECOM and its services can be found at [www.aecom.com](http://www.aecom.com).

#1 Top 150 Global Design Firms  
#1 Top 500 Design Firms  
#1 Pure Design  
#1 Transportation  
#1 General Building



AECOM Recognized by *Fortune* magazine as a World's Most Admired Company

**FORTUNE**  
**WORLD'S MOST**  
**ADMIRED**  
**COMPANIES® 2015**

# AECOM's Connecticut Presence

---

- AECOM has been working in Connecticut for over 50 years
- Currently have 396 employees in 20 offices across the state
  - Locations include Groton, New Haven, Rocky Hill, Bridgeport, Raipur, Honiara City, Titlagarh, Westport, Greenwich, Southport and Hartford.
- Sample of AECOM's current transportation work in Connecticut:
  1. Q-Bridge replacement, New Haven
  2. Moses Wheeler Bridge replacement, Stratford
  3. New Haven-Hartford-Springfield Rail Line
  4. I-84 AETNA Viaduct
  5. I-84 Interchanges
  6. I-84/Waterbury Widening

# What is a Public-Private Partnership (P3)?

---

Public-Private Partnerships are a method of achieving efficient allocation of risk and reward between the public and private sectors to deliver and finance a service or facility for the benefit of citizens.

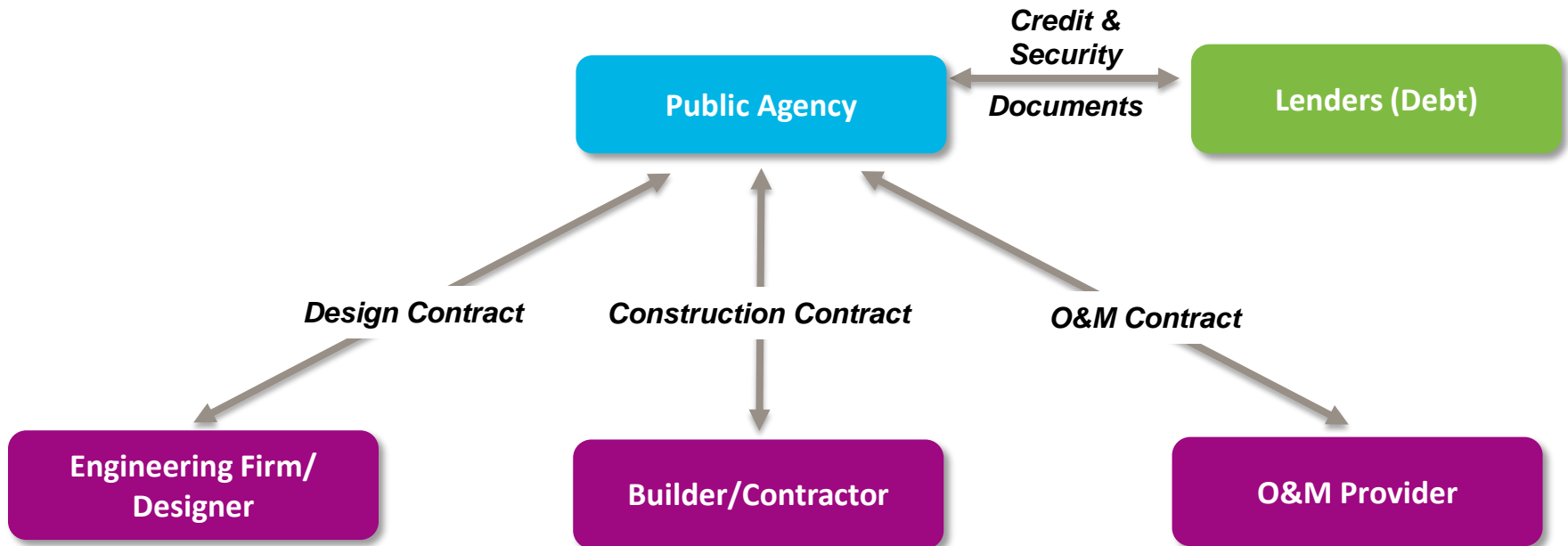
- Public agency procures a private partner to design, construct, finance, operate and maintain new or existing infrastructure
- P3s can be structured to meet public agency objectives:
- Public agency retains asset ownership and control, through specification of minimum performance requirements and standards
- Agreement will provide for termination at significant financial loss to the private partner if these standards are not met

## **Examples of Infrastructure delivered as P3s:**

- Transit
- Railroads
- Water, wastewater, power
- Highways/Bridges/Tunnels
- Universities and university accommodation
- Public housing
- Healthcare
- Sports facilities
- Municipal Facilities
- Schools
- Prisons

# Traditional Comparator (for reference)

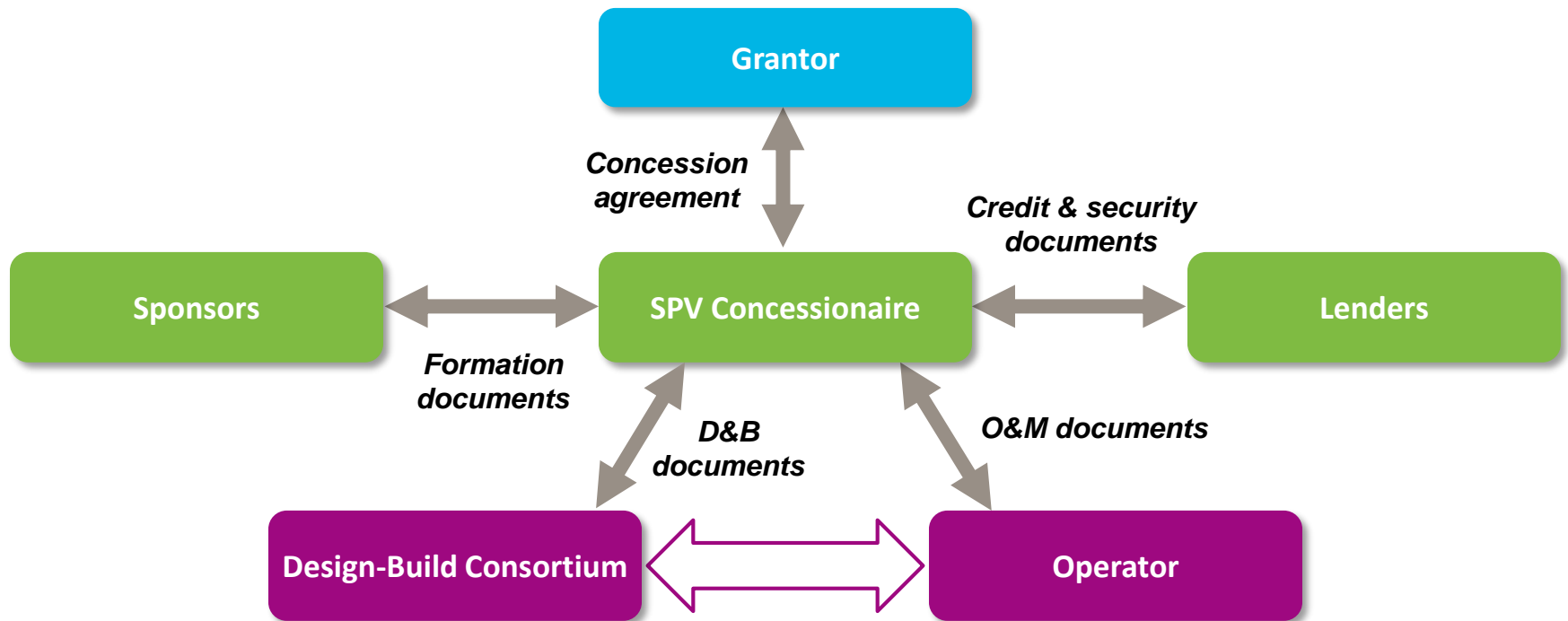
## Conventional Design-Bid-Build Model Structure



1. Process is segmented: parties are less able to realize innovation or efficiencies.
2. Public Sector manages each segment of the process independently.
3. Public Sector assumes budget and schedule accountability throughout.
4. No private sector incentive for asset quality or timely delivery.

# Basic P3 Model Structure

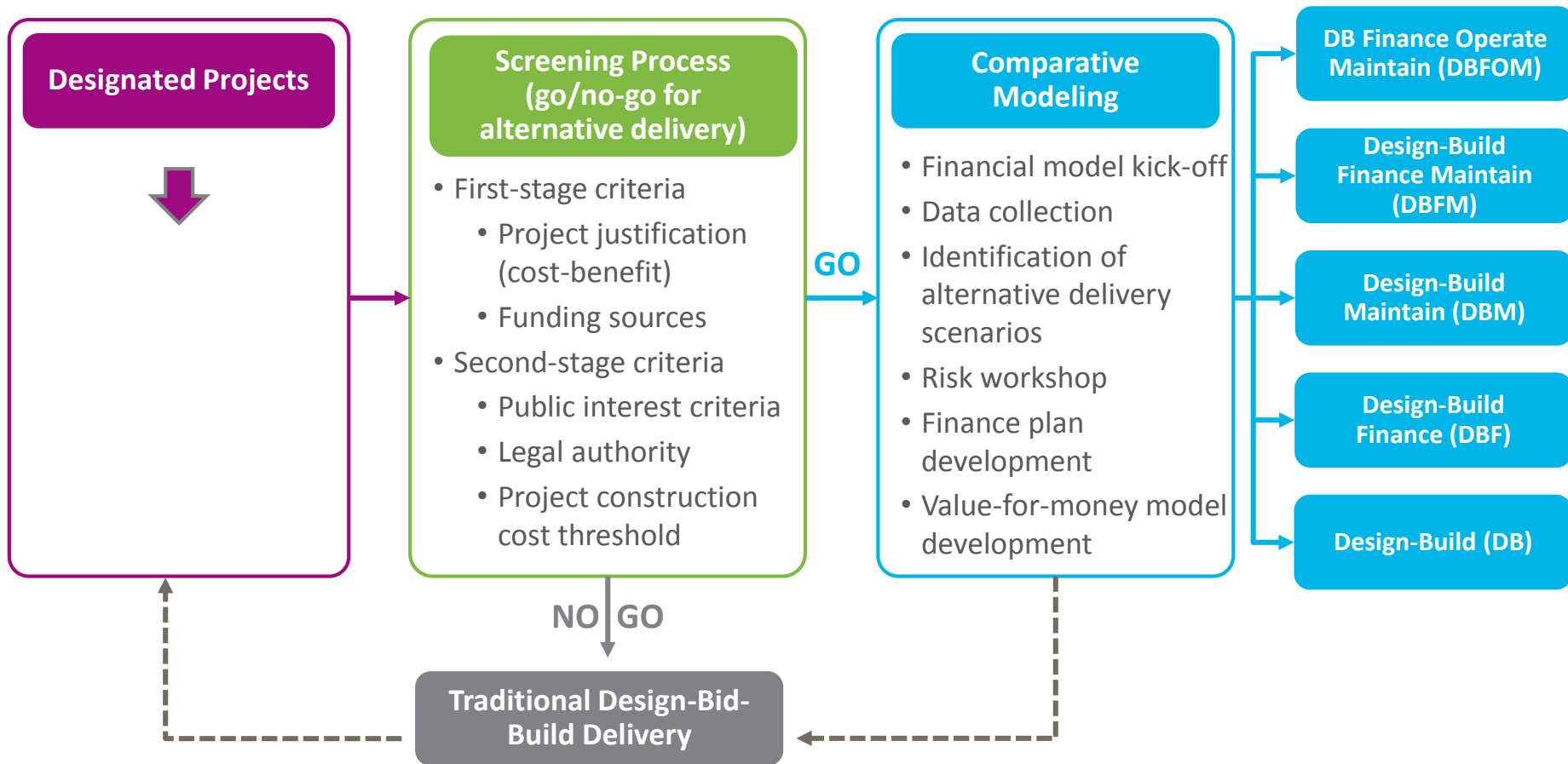
A typical P3 is structured as a long-term agreement / concession in which the public sector assigns to a private sector company the right to design, build, finance and/or operate the infrastructure asset for a defined period of time and per a financial arrangement.



1. One contract awarded to a private design, construction, O&M consortium to operate for a specified time
2. P3 consortium is motivated to provide the best value, whole-life solution
3. Private sector assumes more risk in both the short and long term
4. Greater incentive and reward for private sector innovation and efficiencies
5. Often higher cost of finance (mitigated if access to PABs and TIFIA)

# Procurement Strategy

## Develop Project Screening Tool



# Screening Considerations

---

## Spending Need + Cost Savings

- Part of capital plan/demonstrable need
- Technical innovation
- Affordability
- Provides Value for Money
- Economies of scale
- Risk transfer
- Timing benefit
- Whole life costing

## Private Sector Ability to Partner

- Current market liquidity
- Private interest
- Return justifies risk
- Suitable size
- Risk tolerance
- Complex construction
- Ability to attract PABs

## Regulatory, Legal, and Political Feasibility

- Regulatory risks, issues, or flexibility
- Need for new or change in legislation
- Environmental issues
- Political risks or issues
- Accounting and tax treatment
- Land ownership issues

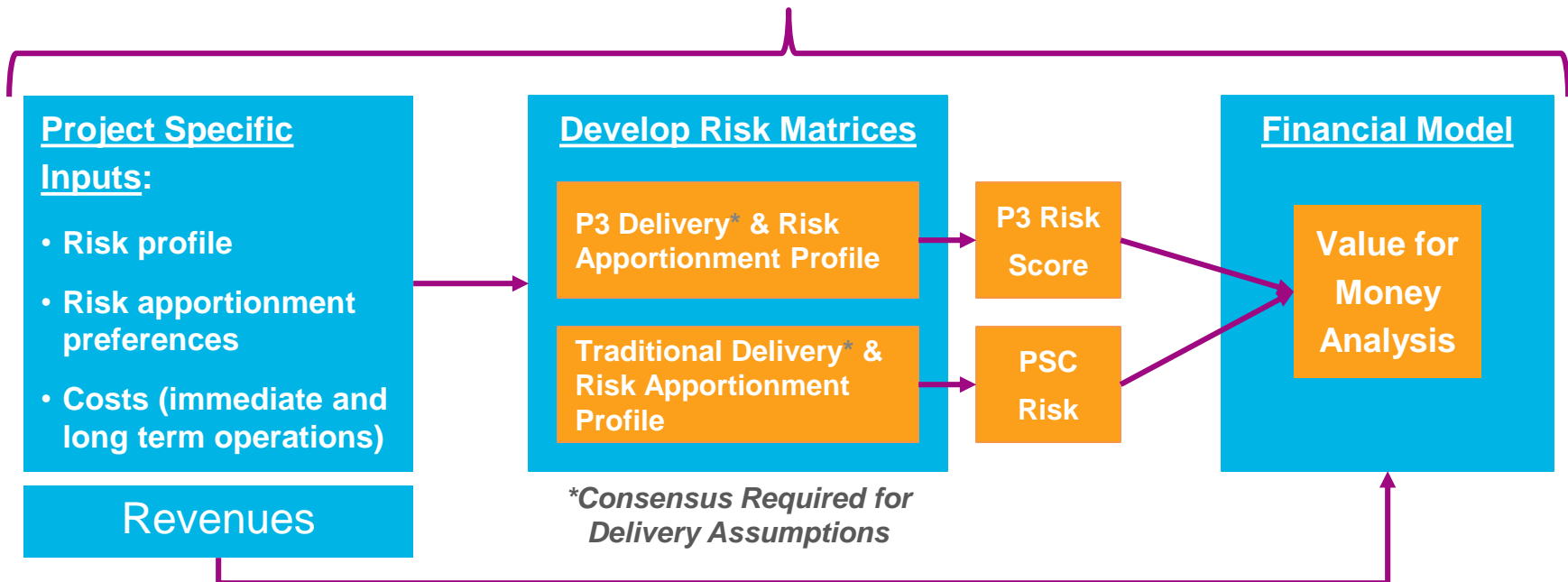


# Ensure Value for Money

VFM is specifically designed to provide a comprehensive and unbiased metric for upholding the Public Interest at all times

- VFM Analysis enables transparent consideration of project specific issues under both P3 and Traditional Delivery scenarios

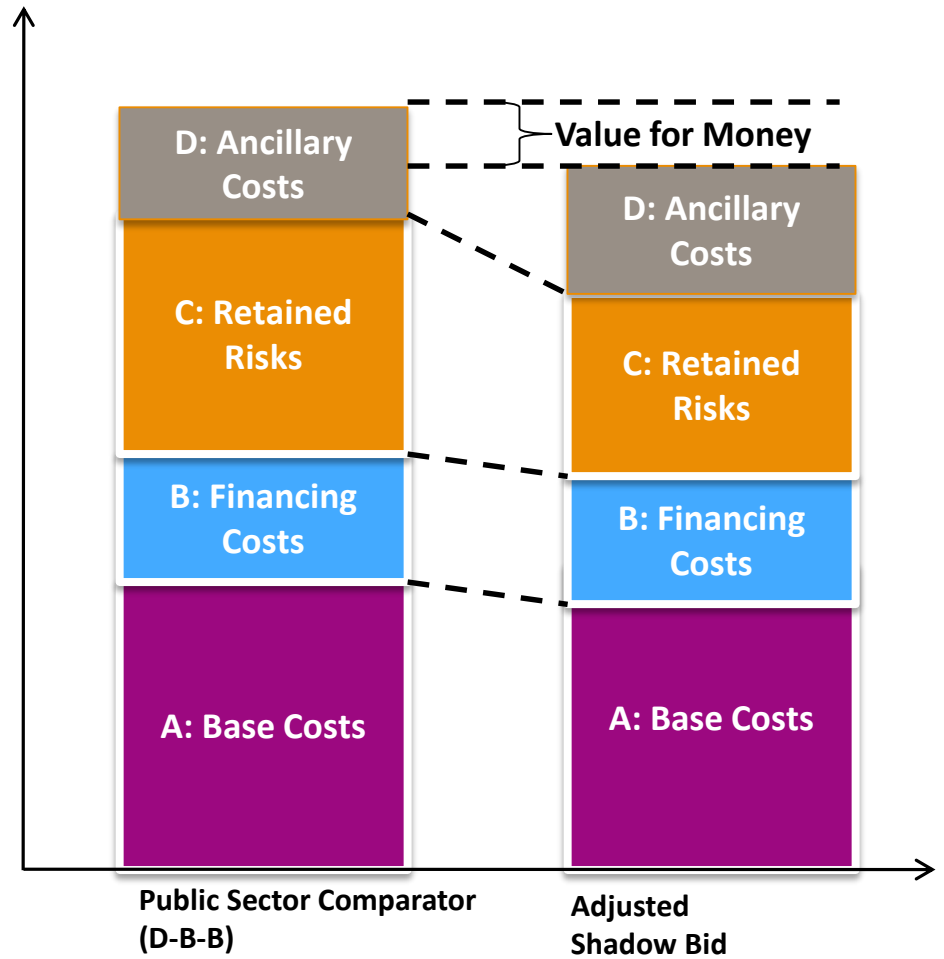
## VFM Inputs and Process (for each project)



# Where is Value for Money Generated?

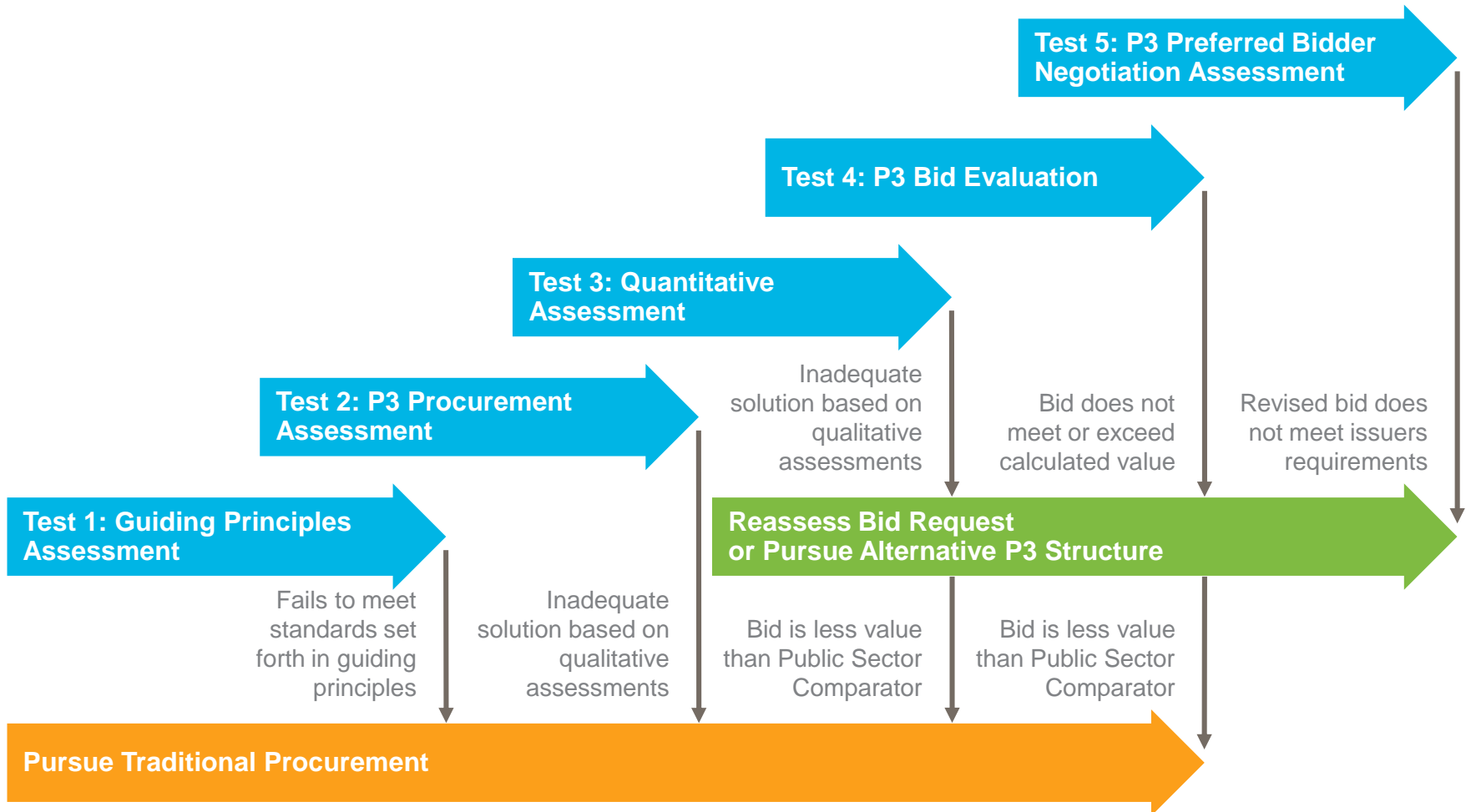
## Drivers of Savings:

- Optimal allocation of risks
- Design and construction efficiencies
- Focus on whole life cycle costs
- Integrated planning and design
- Private sector management and control

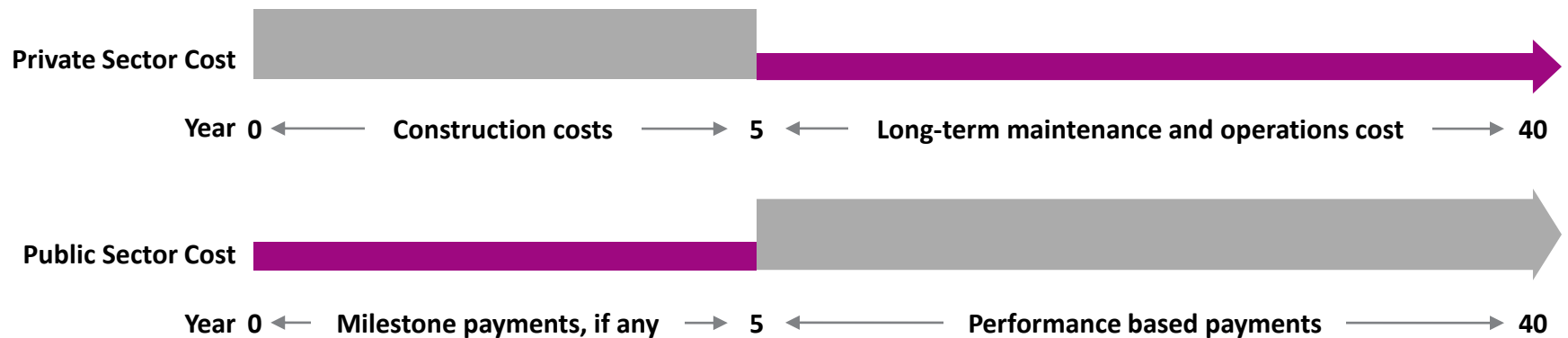
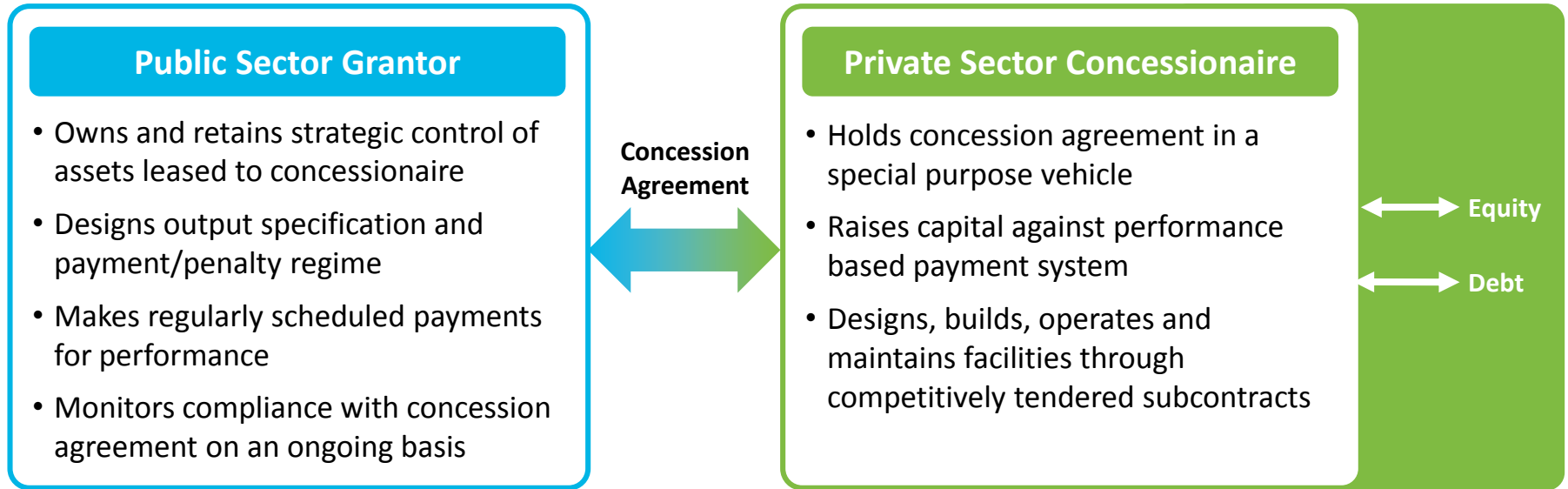


# Develop Comprehensive P3 Framework

## Assessing Value for Money



# Availability Payment Model



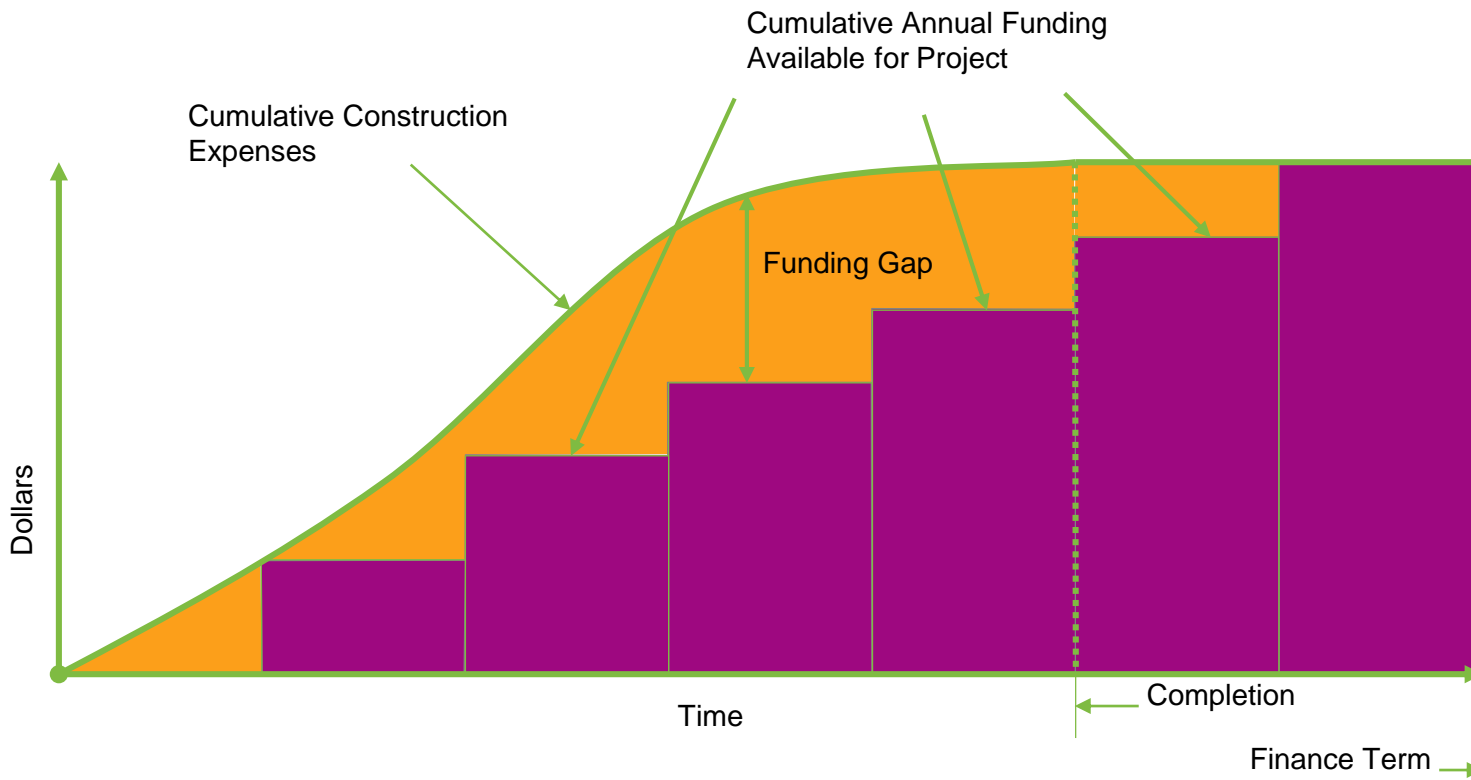
# Revenue Concession

---

- **Lifecycle risk transfer to the private sector**
  - Comprehensive risks of design, construction, revenue, finance, operations, maintenance and capital renewal
  - May include capacity expansion responsibility
- **Public Sector retains control through contract structure**
  - Rate setting
  - Operational and performance standards
- **Potential financial benefits to public sponsor:**
  1. Upfront payment
  2. Revenue sharing
  3. Unplanned refinancing
  4. Excess revenue

# Availability Payment vs. Revenue Concession

- The Availability Payment Model provides more control to the public sector and is effective for projects lacking standalone financial feasibility, often where traffic or ridership counts are uncertain.
- The Revenue Concession Model allows the private sector to optimize the use of private financing. For projects in which traffic or ridership counts are more certain, the Revenue Concession Model is more effective in closing funding gaps.



# Performance Based P3s Delivery Time & Cost Savings

Project	Accelerated Delivery	Cost Savings	Job Creation/Economic Impact	Project Status
<b>Denver FasTracks EAGLE, Colorado</b>	Expected completion date 11 months earlier than under traditional procurement methods.	\$300 million (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 \$3 billion will be added into the economy over the next decade.	Commercial & Financial close reached August 2010; scheduled to open in 2016.
<b>I-595, Florida</b>	Provided capacity improvements 15 years earlier than traditional pay-as-you-go funding approach.	\$500 million (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 \$17 million in monthly construction expenditures"	Commercial & Financial close reached March 2009; opened to traffic March 2014, and accepted final acceptance by summer 2014.
<b>Port of Miami Tunnel, Florida</b>	Undetermined – likely would not have moved forward without a P3 approach.	\$750 million (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 companies are Miami-Dade County businesses that have shared in over \$300 million in local contracts.	Commercial/Financial close October 2009; expected final acceptance by August 2014.
<b>Ohio River Bridges (East End Crossing), Indiana/Kentucky</b>	Expected completion 242 days earlier than under traditional procurement methods.	Approximately \$228 million (22.7% below Owner's original estimate)	More than 15,000 jobs over a 30-year period.  Economic impact of \$87 billion.	Commercial close reached December 2012; substantial completion expected by October 2016.
<b>Long Beach Courthouse, California</b>	Completed 30 months earlier than under traditional procurement methods.	\$52 million (15% below Owner's original estimate)	450 construction jobs and between 50 and 100 management positions created.  Over 6.1 million construction man-hours employed.	Commercial & Financial close reached December 2010; occupancy readiness achieved August 2013.
<b>Goethals Bridge, New York</b>	Expected completion 6 months earlier than under traditional procurement methods.	\$150 million (10% below Owner's original estimate)	More than 2,250 direct construction jobs (\$224 million in wages).  \$872 million in economic activity.	Financial close reached November 2013; substantial completion expected in 2018.

# Transportation Infrastructure Finance and Innovation Act (TIFIA)

---

- TIFIA was originally authorized under the Transportation Equity Act for the 21st Century (TEA-21) to provide credit assistance (as opposed to grants) for qualified projects of regional and national significance.
  - TIFIA was reauthorized and amended in 2005 by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and again in 2012 under Moving Ahead for Progress in the 21st Century Act (MAP-21).
- The financial benefit provided by a TIFIA loan makes it highly sought after for Public-Private Partnerships (P3s) and non-P3 projects.
  - In addition to lower interest rates, TIFIA provides potential flexibility in debt amortization.
  - TIFIA takes on risks of a typical project finance lender.
  - By utilizing TIFIA, projects that would otherwise be non-investment grade (NIG) have the potential to reach investment grade (IG) through more favorable transaction terms.
- The maximum share of eligible TIFIA project costs is 49%.
- The repayment of the TIFIA loan is subordinate to repayment of senior lenders in the waterfall if the transaction is performing. However, in a bankruptcy-related event (as defined in the loan agreement), the U.S. Department of Transportation (USDOT) requires that its claim on a project's pledged revenues or other security spring to parity with other creditors.
- Repayment of a TIFIA loan must begin by five years after the substantial completion of the project, and the loan must be fully repaid within 35 years after the project's substantial completion or by the end of the useful life of the asset being financed, if the useful life is less than 35 years.



# Private Activity Bonds (PABs) for Transportation

- In 2005 transportation infrastructure became eligible for PAB financing with the passage of SAFETEA –LU; which amended Section 142(a) of the Internal Revenue Code to allow for highway and freight transfer facilities P3 projects.
- Provides private sector with access to tax-exempt bond financing.
- Government “conduit” bond issuer required.
- It is estimated that the Federal tax-exemption subsidy for PABs is approximately 15-20% of the amount borrowed.
- As of May 12, 2015, nearly \$5.8 billion in PABs have been issued to date for the 14 projects listed in the table.
- Additionally PAB allocations approved by U.S. DOT total \$5.3 billion supporting 6 projects.
- The law limits the total amount of such bonds to \$15 billion.

Project	PAB Allocation (\$ in thousands)
<b>Bonds Issued</b>	
Capital Beltway HOT Lanes, Northern Virginia	\$589,000
North Tarrant Express, Fort Worth, Texas	\$400,000
IH 635 Managed Lanes (LBJ Freeway), Dallas, Texas	\$615,000
Denver RTD Eagle Project (East Corridor & Gold Line), Denver, Colorado	\$397,835
CenterPoint Intermodal Center, Joliet, Illinois	\$150,000
CenterPoint Intermodal Center, Joliet, Illinois	\$75,000
Downtown Tunnel/Midtown Tunnel/MLK Extension, Norfolk, Virginia	\$675,004
I-95 HOV/HOT Lanes, Northern Virginia	\$252,648
Ohio River Bridges East End Crossing, Louisville, Kentucky	\$676,805
North Tarrant Express Segments 3A & 3B, Fort Worth, Texas	\$274,030
Goethals Bridge, Staten Island, New York	\$460,915
U.S.36 Managed Lanes/BRT Phase 2, Denver Metro Area, Colorado	\$20,360
I-69 Section 5, Bloomington to Martinsville, Indiana	\$243,845
Rapid Bridge Replacement Program, Pennsylvania	\$721,485
Southern Ohio Veterans Memorial Highway	\$227,355
<b>Subtotal</b>	<b>\$5,779,282</b>

# Success Factors for P3 Projects

---

- Meeting long term public policy objectives (ensuring that necessary environmental and labor protectors are preserved)
- Acceptability by internal and external stakeholders
- Well organized and committed public agency with a “political champion”
- Appropriate risk allocation and risk sharing
- Transparent and fair procurement process
- Maintenance of competitive tension throughout
- Good and clear governance procedures
- Public sector expertise (internal and external)
- P3 enabling legislation
- Technical feasibility and understanding of risks
- Strong bidding consortia
- Liquidity in financing markets

# What Gives the Private Sector Confidence to Pursue a P3 Project or Program?

---

- The project ‘makes sense’
- Public procurement is operated in a transparent manner
- Public sponsor is competent and capable of delivering on its requirements in a timely and adequate manner
- Credible advisors (across all disciplines) with knowledge of market conditions familiar to participants
- Approvals process clear prior to calling bids
- Return sufficient to justify risk
- Inter-agency, inter-regulatory and inter-municipal issues affecting project resolved with binding timeframes for any necessary agreements
- Legal issues resolved and clear in drafting/negotiation of concession agreements as well as dispute resolution mechanisms
- Financial issues - Government funding in place where needed

# Workforce Provisions in Public-Private Partnerships

---

- States have implemented a variety of policies to address the concerns of the building trades and public sector employees related to P3s. These include:
  1. Set-asides for small contractors, MBEs, DBEs and nonprofits
  2. Apprenticeship and job training requirements
  3. Prevailing wage requirements and/or project labor agreements
  4. Hiring preferences or mandates for displaced workers
  5. Preference to projects that support local industries
- A majority of states address these concerns in individual P3 Agreements (the P3 contract), while a minority of states address them directly in P3 legislation.

# Connecticut's PPP Workforce Provisions

---

- CT's HB #6801/ 2011 Conn. Acts, P.A. 11-01 (sunset on 1/1/15) provided that:
  - Each P3 project will be subject either to state prevailing wage requirements or a project labor agreement. The procuring agency will establish which requirement applies prior to soliciting bids.
  - State set-asides for small contractors, MBEs, DBEs and nonprofits also apply to P3s.
- Other examples of State Workforce Provisions in PPP laws:
  - Illinois: Specified Brownfield P3s must conform to the state Prevailing Wage Act. Greenfield P3s must feature a project labor agreement and adhere to MBE goals, prevailing wage laws, and local hiring preferences.
  - Virginia: There are no set requirements, but project evaluation criteria include the following:
    - The number, and level of pay and fringe, of jobs generated
    - The use of small, minority, and women-owned business enterprises
    - Job training opportunities offered through the life of the project, including apprenticeships

# Lessons Learned in P3 Procurement

---

- Effective stakeholder communication (approvals)
- Sound financial controls (affordability)
- Good market knowledge and procurement advice
- Adequate skills and resources
- Clearly defined roles and responsibilities
- Robust business case
- Benefits realization process
- Pre-agreed Critical Success Factors
- Ongoing risk management process

# Transportation Public-Private Partnerships

## Case Studies



# Port of Miami Tunnel, Florida

## Public Sector Cost Savings

### – Background

- DBFOM availability payment project with a 35 year term
- Construction of a tunnel connection to Watson Island, widening of the McArthur Causeway and access improvements in the Port of Miami
- Non-toll facility with private sector compensated through availability payments
- Developer is responsible for all routine and heavy maintenance with performance metrics throughout the lifetime and at handback
- Developer is also responsible for traffic management and control, traffic safety and ventilation
- Procurement process resulted in competition from 3 international bidding consortia

### – Approach

- Technically challenging project with construction and operation risks transferred to private sector
- Major geotechnical risk transferred to private sector
- Procurement resulted in significant cost savings over public sector estimate
- Total Investment: USD\$903m

- Private Equity: USD\$80m
  - Meridiam: USD\$72m ( 90%)
  - Bouygues: USD\$8m (10%)
- Total Debt: USD723m
  - Senior Bank Debt: USD\$340m
  - TIFIA: USD\$383m
- FDOT Payment: USD\$100m

Party	Availability Payment	% of Estimate
Public Sector Estimate	\$69M	100%
Bidder #3	\$65M	94%
Bidder #2	\$39M	56%
Bidder #1	\$34M	49%



# I-595, Florida

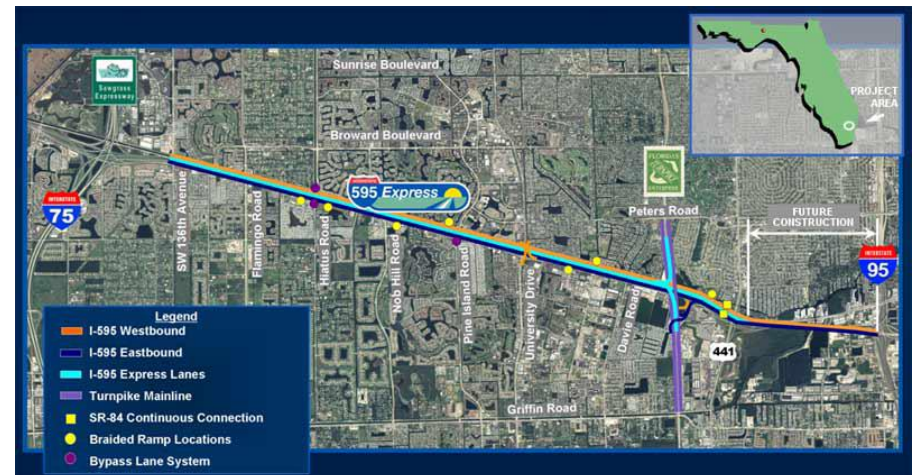
## Accelerated Delivery

### Overview

- Project consists of the reconstruction, widening and resurfacing of the I-595 mainline in Broward County from the I-75/Sawgrass Expressway interchange to the I-95/I-595 interchange, approximately 10.5 miles
- Due to a funding shortfall in the State's plan, other funding options were considered
- In 2007, the State held a PPP forum to evaluate potential funding options and gauge private sector interest in developing a solution
- On October 24, 2008, Florida DOT selected the ACS-Dragados Team as the best value proposer
- Project was procured as a 35-year design, build, finance, operate, and maintain contract with vendor receiving availability payments of approximately \$63 million annually in exchange for completing the planned improvements and maintaining the roads

### Objectives

- Accelerated schedule (10 years earlier than planned)
- Improved efficiency of design and construction
- Reduced potential for time and cost overruns
- Provision of finance mechanism for the project's funding shortfall
- *“To maximize the operational efficiency, the lanes are to be tolled at varying rates throughout the day to optimize traffic flow...”*



# SH 130 5&6, Texas

---

## Closing the Funding Gap

### – Background

- The 40-mile project entails the extension of northern segments of State Highway (SH) 130, extending from I-35 north of Georgetown to I-10 near Seguin. The southern half of SH 130 will be an all-electronic toll system and, upon commissioning in 2012, the complete SH 130 will be 91 miles long.
- Capital costs were approximately \$1.4 billion, but traditional procurement could only support \$800 million.

### – Approach

- 50-year concession awarded to Cintra/Zachry consortium in December 2005. Commercial close May 2007. Financial close March 2008.
- Total financing of approximately \$950M
  - \$685M of a 30-year senior debt facility
  - \$100M of a liquidity facility
  - \$430M of a 35-year TIFIA subordinate debt facility
  - \$197M of equity
- **Closed \$600 million funding gap.**

