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Presentation Overview

- Introduction and Definitions (Chapters 1 & 2)
- Federal Role (Chapter 3)
- Evolution of the U.S. P3 Market (Chapter 4)
- P3 Stories (Appendix)

This presentation will introduce Chapters 1-4.
Introduction and Definitions (Chapters 1 and 2)
Purpose

- Provide U.S. highway experience with highway public-private partnership (P3) concessions since 1992, including:
  - Evolution of the federal role
  - Trends and market developments
  - Case studies of all 28 U.S. P3 highway concession projects that have achieved financial close
U.S. P3 Concessions by Status

Colorado
- Northwest Parkway
- U.S. 36 Managed Lanes / BRT Project
- Eagle P3

California
- Presidio Parkway
- 91 Express Lanes*
- South Bay Expressway*

Texas
- North Tarrant Express Segments 1 & 2A
- IH 635 Managed Lanes
- North Tarrant Express Segments 3A & 3B
- SH 288 Toll Lanes
- SH 130 (Segments 5-6)

Illinois
- Chicago Skyway
- Indiana Toll Road
- I-69 Section 5
- Ohio River Bridges East End Crossing

Indiana
- Southern Indiana Veterans Memorial Highway

Ohio
- I-495 Capital Beltway HOT Lanes
- Dulles Greenway
- I-95 HOV/HOT Lanes
- Pocahontas Parkway / Richmond Airport Extension
- Elizabeth River Tunnels

Pennsylvania
- Rapid Bridge Replacement Project

New Jersey / New York
- Goethals Bridge Replacement

Virginia
- I-495 Capital Beltway HOT Lanes
- Dulles Greenway
- I-95 HOV/HOT Lanes
- Pocahontas Parkway / Richmond Airport Extension
- Elizabeth River Tunnels

North Carolina
- I-77 Express Lanes

Florida
- I-4 Ultimate
- I-595 Corridor Roadway Improvements
- Port of Miami Tunnel

Puerto Rico
- PR-22 and PR-5 Lease
- Teodoro Moscoso Bridge

Key
Operational
Under Construction/
Financial Close

*Facility now under public management and operation
Spectrum of Project Delivery Options

Private Sector Risk vs. Private Sector Involvement

- Government Owns & Operates
- Design-Build
- Design-Build-Finance
- Design-Build-Operate-Maintain
- Design-Build-Finance-Operate-Maintain
- Concession Model
DBFOM Concession Types

New Build Projects

• Real Toll Concessions
  • Greenfield Toll Roads
  • Fixed Crossings
  • Priced Managed Lanes
• Availability Payment Concessions

Existing Toll Roads

• Long-term Lease Concessions
**Typical Toll Concession P3 Structure**

- **Agency**
- **Bank/lenders**
- **Special Purpose Vehicle (SPV)**
- **Facility**
- **Project Sponsors/Equity Providers**

**Key Components**:
- Toll revenue
- Equity investments
- Bonds, Loans
- Debt Service
- Shared Revenue
- Subsidy
- Equity Investments
- Dividends
- Funds to build, maintain and operate
Real Toll Concessions

- Used to develop three types of projects:
  - Greenfield toll roads
  - Fixed crossings
  - Priced managed lanes
Typical Availability P3 Structure

Bank/lenders

Agency

Special Purpose Vehicle (SPV)

Project Sponsors / Equity Providers

Facility

Milestone and Availability Payment

Bonds, Loans

Debt Service

Equity Investments

Dividends

Funds to build, maintain, and operate

Toll and Other Revenue

U.S. Department of Transportation
Federal Highway Administration

Office of Innovative Program Delivery
Typical Long-term Lease Concession P3 Structure

1. **Agency**
   - **Up-front payment**
   - **Equity Investments**

2. **Bank/ Lenders**
   - **Bonds, Loans**
   - **Debt Service**

3. **Special Purpose Vehicle (SPV)**
   - **Toll revenue**
   - **Funds to build, maintain and operate**

4. **Project Sponsors / Equity Providers**
   - **Dividends**

5. **Facility**
Federal Role
(Chapter 3)
TE-045

- 1994: TE-045 – initiative to test and evaluate ideas from states on new financial strategies
  - Matching
  - Toll Credits
  - Advance Construction
GARVEE Bonds

- **1995**: Grant Anticipation Revenue Vehicle (GARVEE bond)
  - Allows states to leverage future Federal Aid Highway Program receipts in the municipal credit market
TIFIA

- 1998: Transportation Infrastructure Finance and Innovation Act (TIFIA)
  - Provides loans, guarantees and lines of credit for qualified revenue-generating projects
  - Covers up to one third of eligible costs
  - Attractive low interest rates tied to U.S. Treasury bonds
Private Activity Bonds

- **2005: Private Activity Bonds (PABs)**
  - Allows private developers of highways and freight transfer facilities to borrow funds in the tax-exempt municipal credit market
  - Total volume of PABs limited to $15 billion
SEP-15

- Special Experimental Program 15 (SEP-15)
  - An experimental process for FHWA to identify and test new P3 approaches
  - Provides states with the opportunity to gain exceptions from or changes to federal policies or procedures
Other USDOT Support

- Build America Bureau and FHWA Center for Innovative Finance Support
  - Analytical Tools
  - Educational Materials
  - Research
  - Peer Exchanges
  - Capacity Building
  - Technical Assistance
  - Environmental Streamlining
Evolution of the P3 Market (Chapter 4)
Key

- **Real Toll Concessions:** Greenfield Toll Roads
- **Real Toll Concessions:** Toll Crossing Projects
- **Real Toll Concessions:** Priced Managed Lanes
- **Availability Payment Concessions**
- **Long-Term Lease Concessions**
**Key**

- **Real Toll Concessions:** Greenfield Toll Roads
- **Real Toll Concessions:** Toll Crossing Projects
- **Real Toll Concessions:** Priced Managed Lanes
- **Availability Payment Concessions**
- **Long-Term Lease Concessions**

1992 1993
Key
- Real Toll Concessions: Greenfield Toll Roads
- Real Toll Concessions: Toll Crossing Projects
- Real Toll Concessions: Priced Managed Lanes
- Availability Payment Concessions
- Long-Term Lease Concessions
Key

- Real Toll Concessions: Greenfield Toll Roads
- Real Toll Concessions: Toll Crossing Projects
- Real Toll Concessions: Priced Managed Lanes
- Availability Payment Concessions
- Long-Term Lease Concessions
Key

- **Real Toll Concessions**: Greenfield Toll Roads
- **Real Toll Concessions**: Toll Crossing Projects
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- **Availability Payment Concessions**
- **Long-Term Lease Concessions**

**PR 22 and PR 5 Lease**
P3 Concessions in the U.S. by Type

Key
- Real Toll Concessions: Greenfield Toll Roads
- Real Toll Concessions: Toll Crossing Projects
- Real Toll Concessions: Priced Managed Lanes
- Availability Payment Concessions
- Long-Term Lease Concessions

Texas
- North Tarrant Express Segments 1 & 2A
- IH 635 Managed Lanes
- North Tarrant Express Segments 3A & 3B
- SH 288 Toll Lanes
- SH 130 (Segments 5-6)

Colorado
- Northwest Parkway
- U.S. 36 Managed Lanes / BRT Project

Illinois
- Indiana Toll Road
- I-69 Section 5
- Ohio River Bridges East End Crossing

Indiana
- Southern Ohio Veterans Memorial Highway

Ohio
- Goethals Bridge Replacement Project
- Rapid Bridge Replacement Project

Pennsylvania
- PR-22 and PR-5 Lease
- Teodoro Moscoso Bridge

California
- Presidio Parkway
- 91 Express Lanes*
- South Bay Expressway*

North Carolina
- I-77 HOT Lanes

Virginia
- I-95 HOT Lanes
- Pocahontas Parkway / Richmond Airport Extension
- Elizabeth River Tunnels

Florida
- I-4 Ultimate
- I-595 Corridor Roadway Improvements
- Port of Miami Tunnel

Texas
- North Tarrant Express Segments 1 & 2A
- IH 635 Managed Lanes
- North Tarrant Express Segments 3A & 3B
- SH 288 Toll Lanes
- SH 130 (Segments 5-6)

Puerto Rico
- PR-22 and PR-5 Lease
- Teodoro Moscoso Bridge

*Facility now under public management and operation
Questions?

Submit a question using the chat box
U.S. P3 Highway Concessions

- 14 Real Toll Concessions
  - 3 Greenfield Toll Roads
  - 2 Fixed Crossings
  - 9 Priced Managed Lanes
- 9 Availability Payment Concessions
- 5 Long-term Lease Concessions
Real Toll Concessions in the U.S.

Key
- Real Toll Concessions: Greenfield Toll Roads
- Real Toll Concessions: Toll Crossing Projects
- Real Toll Concessions: Priced Managed Lanes

**Colorado**
- U.S. 36 Managed Lanes / BRT Project

**California**
- 91 Express Lanes* (currently under public management and operation)
- South Bay Expressway*

**Texas**
- North Tarrant Express Segments 1 & 2A
- IH 635 Managed Lanes
- North Tarrant Express Segments 3A & 3B
- SH 288 Toll Lanes
- SH 130 (Segments 5-6)

**Virginia**
- I-495 Capital Beltway HOT Lanes
- Dulles Greenway
- I-95 HOV/HOT Lanes
- Elizabeth River Tunnels

**North Carolina**
- I-77 HOT Lanes

**Puerto Rico**
- Teodoro Moscoso Bridge
  - $127 million

*Facility now under public management and operation*
### Greenfield Toll Road Concessions

<table>
<thead>
<tr>
<th>State</th>
<th>Road/Project Description</th>
<th>Project Value (in millions)</th>
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<tbody>
<tr>
<td>California</td>
<td>South Bay Expressway*</td>
<td>$658 million</td>
</tr>
<tr>
<td>Texas</td>
<td>SH 130 (Segments 5-6)</td>
<td>$1.336 billion</td>
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<tr>
<td>Virginia</td>
<td>Dulles Greenway</td>
<td>$355 million</td>
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*Facility now under public management and operation*
Fixed Crossing Real Toll Concessions

Facility now under public management and operation

Virginia
Elizabeth River Tunnels
$2.088 billion

Puerto Rico
Teodoro Moscoso Bridge
$127 million

*Facility now under public management and operation
Managed Lane Toll Concessions

**Colorado**
- U.S. 36 Managed Lanes / BRT Project
  - $209 million

**California**
- 91 Express Lanes*
  - $119 million

**Texas**
- North Tarrant Express Segments 1 & 2A
  - $2.122 billion
- IH 635 Managed Lanes
  - $2.645 billion
- North Tarrant Express Segments 3A & 3B
  - $1.641 billion
- SH 288 Toll Lanes
  - $1.063 billion

**Virginia**
- I-495 Capital Beltway HOT Lanes
  - $2.069 billion
- I-95 HOV/HOT Lanes
  - $922 million

**North Carolina**
- I-77 HOT Lanes

*Facility now under public management and operation*
Availability Payment Concessions

California
- Presidio Parkway
  - $365 million

Indiana
- I-69 Section 5
  - $466 million
- Ohio River Bridges: East End Crossing
  - $1.319 billion

Ohio
- Southern Ohio Veterans Memorial Highway
  - $647 million
- Ohio River Bridges: East End Crossing
  - $1.319 billion

Pennsylvania
- Rapid Bridge Replacement Project
  - $1.117 billion

New Jersey / New York
- Goethals Bridge Replacement
  - $1.526 billion

Florida
- I-4 Ultimate
  - $2.878 billion
- I-595 Corridor Roadway Improvements
  - $1.834 billion
- Port of Miami Tunnel
  - $1.113 billion

Indiana
- I-69 Section 5
  - $466 million
- Ohio River Bridges: East End Crossing
  - $1.319 billion

Ohio
- Southern Ohio Veterans Memorial Highway
  - $647 million
- Ohio River Bridges: East End Crossing
  - $1.319 billion

Pennsylvania
- Rapid Bridge Replacement Project
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New Jersey / New York
- Goethals Bridge Replacement
  - $1.526 billion

Florida
- I-4 Ultimate
  - $2.878 billion
- I-595 Corridor Roadway Improvements
  - $1.834 billion
- Port of Miami Tunnel
  - $1.113 billion
Long-term Lease Concessions

- **Colorado**
  - Northwest Parkway
  - $726 million

- **Illinois**
  - Chicago Skyway
  - $1.83 billion

- **Indiana**
  - Indiana Toll Road
  - $3.948 billion

- **Virginia**
  - Pocahontas Parkway / Richmond Airport Extension
  - $766 million

- **Puerto Rico**
  - PR-22 and PR-5 Lease
  - $1.146 billion
Questions?

Submit a question using the chat box
Financing P3 Concessions (Chapter 4 contd.)
Financing P3 Concessions

- Debt
  - Commercial bank debt
  - TIFIA credit program introduced in 1998
  - PABs introduced in 2005

- Equity
  - Private partner equity

- Public sector grants
Financing Real Toll Concessions

South Bay Expressway, 2003
$658 million

First TIFA loan to a P3 project
Financing Real Toll Concessions

I-495 Capital Beltway HOT Lanes, 2007
$2.069 billion

First P3 project to use PABs
Financing Availability Payment Concessions

Port of Miami Tunnel, 2009
$1.113 billion

- TIFIA: 31%
- Commercial Debt: 31%
- Public Sector Payment: 19%
- Private Equity: 7%
- Interest: 3%
- Milestone Construction Payments: 9%

Project was “federalized” in order to use TIFIA financing.
Financing Availability Payment Concessions

Goethals Bridge Replacement, 2013
$1.526 billion

First availability payment financing to use TIFIA and PABs
Financing Availability Payment Concessions

PA Rapid Bridge Replacement Program, 2015

$1.117 billion

$721 million PAB – the largest PAB issue to date in the U.S.
Financing Long-Term Lease Concessions

Northwest Parkway, 2008
$726 million

- Commercial Debt: 63%
- Private Equity: 37%

Typical long-term lease financing package
Questions?

Submit a question using the chat box
Closing
Port of Miami Tunnel
MIAMI, FLORIDA

Project Overview

The Port of Miami Tunnel (POMT) has improved access to and from the Port of Miami, serving as a dedicated roadway connector linking the Port with the MacArthur Causeway and I-395. Previously the Port (located on an island in Biscayne Bay) was linked to the mainland only by the Port Bridge. The tunnel has improved access to the Port and traffic safety in downtown Miami by removing cargo trucks and cruise line buses from congested city streets, thereby facilitating ongoing and future development plans in and around downtown Miami. The project includes a tunnel under the Main Channel and related roadway work, including the widening of the MacArthur Causeway Bridge. Twin tubes, each 3,900 feet long and 41 feet in diameter, reach a depth of 120 feet below the water. The total capital cost of the project is $1,113 million.

The Port of Miami Tunnel was developed as a public-private partnership (P3) between the Florida Department of Transportation (FDOT) and Miami Access Tunnel, LLC (MAT). Following a five-year construction period, MAT will operate the tunnel for 30 years in exchange for an annual availability payment. The POMT was the second availability payment P3 project to reach financial close in the United States.

Project History
Highway P3 Project Pipeline

- Transform 66 – Outside the Beltway, VA – $2.5 to 4.0 billion real toll
- I-55 Managed Lanes, IL – $424 million real toll
- I-70 East Viaduct, CO – $1 billion availability payment
- Hampton Roads Bridge Tunnel Crossing, VA – $6 billion possible P3
Related P3 Project Information

- Center for Innovative Finance Support Project Profiles
  https://www.fhwa.dot.gov/ipd/project_profiles/

- Build America Bureau P3 Highlights
  https://www.transportation.gov/buildamerica/projects/project-highlights

FACT SHEETS
- Ten concise single-sheet discussions of key P3 concepts for a non-technical audience

PRIMERS
- P3 Concessions for Highway Projects
- Risk Assessment
- Value for Money
- Financial Structuring and Assessment
- Establishing a P3 Program

GUIDES
- How FHWA Reviews P3s
- Model Toll Concession Contracts
- Model Availability Payment Contracts
- P3 Project Financing
- Risk Assessment
- Value for Money
- Benefit–Cost Analysis

DISCUSSION PAPERS
- Revenue Risk Sharing
- Performance Requirements for Design and Construction in P3s

ANALYTICAL TOOLS
- P3-SCREEN
- P3-VALUE

INFORMATIONAL REPORTS
- Successful Practices for P3s
- Highway P3 Projects in the U.S
FHWA P3 Training

**INTRODUCTORY**

Introduction to P3s
- Overview
- Project Development
- Procurement
- Risk Assessment
- Value for Money
- Project Financing

Successful P3 Practices and Model Contracts
- Successful Practices Over Project Life Cycle
- Model Toll Concession Contracts
- Model Availability Payment Contracts

**ADVANCED ANALYSIS**

P3 Project Financing
- P3 Structuring
- Financial Viability
- Financial Models

Risk Assessments
- Risk Identification
- Risk Analysis and Valuation
- Risk Allocation

Value for Money
- Public Sector Comparator (PSC)
- P3 Option
- Evaluation

P3 Benefit-Cost Evaluation
- Estimating P3 Efficiency Impacts
- Estimating Public Benefits
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