Accelerating Infrastructure Through Innovative Finance Tools

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Presentation Outline

- A Perfect Storm in Surface Transportation
- Solutions for Accelerating Infrastructure Projects
  - Credit Tools: GARVEEs, SIBs, TIFIA
  - Value Capture Revenue Sources: Tolling, Congestion Pricing, Alternative Revenues
- Public Private Partnerships: Highway and Transit
- Case Studies
- Summary
The Perfect Storm

- **Federal** – Highway trust fund will go into deficit by 2009
- **State** – Infrastructure aging and deteriorating and are mostly unwilling to raise taxes

**User Fees:**

- **Transit** – Fares cover 35 – 40% of operating costs
- **Highway** – Offers most potential on leveraging access to private capital but require significant transition period before big impact on revenue (meanwhile the market is deflating)

**Innovative Finance Tools** – Useful, but need to understand the implementation of each tool and all implications
Underinvestment Crisis

This dump truck was carrying asphalt when the pavement under it gave way, at 14th and Spring Streets, Atlanta.

Minnesota I 35W Bridge collapses
Increasing Freight Movements

Modal and Directional Splits by Weight for Virginia

Modal Split (tonnage)

- Truck: 74%
- Air: 0%
- Rail: 6%
- Water: 20%

Federal Highway Administration-National Resource Center
Census Region Population Forecast
2005 - 2030
Increasing Congestion

The financial cost of congestion:
- 3.7B hours of delay and 2.3B gallons of wasted fuel annually*
- Almost $200B after accounting for unreliability, inventory, and environmental costs across all modes**

Congestion hurts family and civic life, impacting:
- Where people live and work
- Where they shop
- How much they pay for goods and services

* Texas Transportation Institute, 2005 Urban Mobility Report
** USDOT internal analysis

VA - Vehicle travel up 78%; road miles increased 1% and lane miles 2% in last 20 years
Impact of Inflation


Year


Percentage

0 10 20 30 40 50 60 70 80

8.4 17.9 29.9 47.8 57.7 70
National Funding Gap

Average Gap to Improve (2007-2017) = $119 billion
Average Gap to Maintain (2010-2017) = $58 billion

Estimated Highway and Transit Program Levels and HTF Account Balances through 2015*

* Based on 2008 Treasury revenue estimates; Projected spending for 2010-2015 based on current services baseline for discretionary / "other" (non-defense and non-security) outlays assumed to grow 1.15% annually after 2009.
Federal Financing/ Leveraging Incentives

- Regulatory Incentives
  - Liberalized Tolling
  - Environmental Streamlining

- Credit Incentives
  - TIFIA Program
  - RRIF Program

- Grant Incentives
  - State Infrastructure Banks
  - GARVEE Bonds

- Tax Code Incentives
  - Private Activity Bonds for Highway and Intermodal
  - Tax Credit Bonds – future?
  - Investment Tax Credits?

Source: Mercator Advisors.
GARVEEs - Flow of Funds

- Tax-Exempt Debt Investors
- Federal Highway Administration
- Matching Source
- Federal Apportionments (80%)
- Non-federal Match (20%)

Proceeds of Debt -> Debt Service

Federal-aid Eligible Project Costs

Project(s)
Direct GARVEE Bonds
Total $15 Billion Issued To Date
Products Available:
• Direct Loans
• Loan Guarantees
• Interest Rate Buydowns
• Other

As of June 30, 2007, 33 states have entered into 596 loan agreements with a total value just over $6.2 billion
TIFIA Instruments – Co-Investment Tool

- Direct federal credit assistance in the form of loans, loan guarantees and lines of credit
- Designed to provide supplemental and subordinate capital for large project financings
- Limited to 33% of eligible project costs
- Project must cost $50 million
- Project’s senior debt must be investment grade (“BBB-” or higher)
- Flexible payment structures including deferrals and prepayments
- Substantial co-investment by private sector helps ensure fiscal discipline
TIFIA Projects
(TIFIA Instruments in Millions)

<table>
<thead>
<tr>
<th>Project Location</th>
<th>Intermodal Projects in Green</th>
<th>Highway Projects in Blue</th>
<th>Transit Projects in Yellow</th>
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<tr>
<td>US 183-A Turnpike</td>
<td>Retired – paid in full</td>
<td>$66</td>
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<td>Rental Car Facility</td>
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<td>FDOT Program Elements</td>
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<td>Warrick Intermodal Station</td>
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<td>Cooper River Bridge</td>
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<td>$215</td>
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<tr>
<td>Tren Urbano</td>
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<td>Reno Rail Corridor</td>
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Total TIFIA Assistance: $4.3 Billion
Total Project Investment: $17.2 Billion
Private Activity Bonds (PABs)

- Section 11143 of SAFETEA-LU cap at $15 Billion
- Authorizes certain highway, transit, rail and intermodal projects with ongoing private participation to issue tax-exempt PABs (exempt from state volume caps)
- Tax-exempt debt is cheaper (20-25% interest savings in PV terms)
- Levels the playing field by providing the same tax incentives for all modes of transportation
- Permits two (2) advance refundings for revenue bond-financed project (versus one or none under current law)
Flow Chart of Private Activity Bonds

Tax-Exempt Debt
Investors

Debt Service

Issuer

Bond Proceeds

Project

Project Costs

Net Operating Revenues

Operating Concession

Private Sector Operator

Agreement (Lease, etc.)

Debt Service

Commercial Risks, Incentivized Compensation
PABs Have Been Allocated for Transportation Projects

- Bridge Project
- Intermodal Centers
- MO Safe & Sound Bridges
- Port of Miami
- Knik Arm Crossing
- Oakland Airport Connector
- Las Vegas Airport Extension
- Denver Light Rail System
- Northwest Parkway
- Intermodal Centers
- Port of Miami
- Aviation Projects in Green
- Highway Projects in Blue
- Transit Projects in Yellow
**Tolling - Six Programs**

1. Express Lanes Demonstration Program
2. High Occupancy Vehicle Facilities
3. Value Pricing Pilot Program
4. Interstate System Construction Toll Pilot Program
5. Interstate System Reconstruction & Rehabilitation Pilot Program
6. Section 129 Toll Agreements

Tolling Website

Congestion Pricing – Benefits to Transit

- Congestion pricing
- Increased price for peak period highway use
- Higher transit ridership
- Less highway congestion
- Higher transit speeds & more reliable transit service
- Higher transit ridership; lower costs for transit providers
- More frequent service & lower fares

Opportunities for New Capacity

Expanded mobility

The Virtuous Cycle
Future - Area wide Pricing Technology Test: Oregon

Successes
- Zones
- Mileage counting accuracy
- Integration with gas tax
- Pump data transmission
- User acceptance

Further Development
- Transaction speed
- Data transfer at pump

Lessons Learned
- Vehicle standardization
- Fuel station assistance
Changing Landscape of Infrastructure Finance

PPPs - Why Now?

- Better understanding of private sector capacities and advanced technology
- Competing budgetary priorities: New roads, health, education, welfare, pension, etc.
- Increasing congestion: Impedes economic growth, environmental impact, air toxics, etc.
- Growing realization that status quo may have limitations
  - Gas tax increase a difficult option politically
  - Taxation a blunt instrument – does not allow for congestion pricing, less equitable
- State legislative changes (31 states have or are considering P3 legislation)
States Using Public-Private-Partnerships to Help Address Transportation Capital Needs

Note: Partial List of Financed Projects. Source: Public Works Financing
Types of PPPs Used in Surface Transportation

- Asset Sale/Lease
- Long Term Lease Agreement/Concession
- Transit Oriented Development (TOD)/Joint Development
- Multi-Modal Partnerships
- Build-Own-Operate (BOO)
- Build-Transfer-Operate (BTO)
- Design-Build-Finance-Operate (DBFO)
- Design-Build-Operate-Maintain (DBOM)
- Design-Build (DB)
- Private Contract Fee Services
# PPP Leveraged Models Use for Revenue Generating and Subsidized Assets

## Concession Model

**Revenue Generating Assets**
- New Tolled Facilities
- Existing Tolled Facilities

Concessionaire will pay an up-front amount in exchange for future net revenue

## Availability Payment Model

**Subsidized Assets**
- Transit
- Non-Tolled Facilities

Concessionaire will build and/or operate an asset in exchange for a payment stream from the public sponsor

## PPP Availability Concession Structure Can:
- Transfer Risk
- Reduce Costs
- Increase Certainty
- Accelerate Funding
- On Schedule
- On Budget
Benefits of a Concession

- More efficient financing results in
  - Concession payment use to advance other projects
  - Lower user fees – Market and pricing driven

- Improved operating efficiencies – Electronic Toll Technology, example
  - Skyway was able to reduce waits by up to 30 minutes
  - Truck usage of Skyway increased 47% from September 2005 to March 2006 due to ETC and other operation improvements

- Better maintenance – Expenditures are investments not costs or burdens

- Customer Support – Free gas or tow for cars broken down
Successful Examples Have Shown PPPs Are A Reality

Leveraging Leases

- **Highway** - Long-term Lease of Existing Toll Facilities
  - Chicago Skyway, Illinois - $1.83 bn PV benefits
  - Indiana Toll Road, Indiana - $3.85 bn PV benefits
  - Pocahontas Parkway – If project return >6.5%, revenue share starts @ 40% (proxy IRR)

- **Transit** (prior to 2004) - Monetize the tax benefits of sunk cost - Sales/ Lease Back, Lease/Service Contracts, etc.
  - BART, Boston MBTA, Caltrans, CTA, Dallas DART, Denver RTD, MARTA, New Jersey Transit, New York MTA, etc.
SAFETEA-LU PPP Pilot Program (Penta-P)

- Authorized by SAFETEA-LU, Penta-P is sponsored by the US DOT to study PPP projects in transit.
- Three projects were selected in 2007:
  - Oakland, California Airport Connector
  - Denver, Colorado Gold Line Rail Corridor
  - Houston, Texas North & Southeast Corridor High Capacity Transit Extension Projects
Public Private Financing

Case Studies
TOD - Lindbergh Center - Atlanta

- 47 acres at MARTA
  - Development offering
  - Long term lease
- $750m TOD
- $107m public investment
- Two 14-story BellSouth Office Towers
- 330,000 sq ft of retail and dining options
- 2.6 8 million square feet of office space
- 916 rental residential units (Post Property)
- 190-room hotel
- 382 condominium units (Post Property)
MARTA - TODs

- Art Center Station – 3.08 acres; $1.1m annual lease
- Lenox Station – 1.35 acres; $0.2m annual air right lease
- Lindbergh Center Station – 47 acres, $1.5m annual ground lease plus profit sharing
- Medical Center Station – 2.22 acres, $0.4m annual lease
- Bellsouth Satellite Parking Facilities (four stations) - $0.3m
- Chamblee Station – sold 1.46 acre to investor, 25 town homes and additional developments
- Abernathy Road Park and Ride – 11.03 acres, $0.8m annual lease and 15% of net cash flow from project
- Future Projects – Avondale, King Memorial, Lakewood-Fort McPherson Stations, and Abernathy Park and Ride Lot
Penta-P1 - BART Oakland Airport Connector

- 3.2 mile light rail, 2 stations elevated Automatic Guideway Transit (AGT) System
- PPP Structure – DBFO, 35-yr Concession
- Project Cost - $435 million
- Revenue Service – 2012
- Status: Proposal due 5/22/2008
Penta-P2 - Gold Line/East Corridor

- Commuter rail system; 34.8 mile with 13 stations
- Cost: $1.5 billion
- Open: 2015
- Project Status:
  - Environmental process and basic engineering underway
  - RFQ and RFP being prepared
  - MOU with FTA in Summer 2008
Penta P3 - Houston METRO Light Rail System DBOM

- 30 miles Light Rail Transit (LRT) system
- Cost: $1.8 billion; Open: 2013
- 3 responses to RFQ; 3 teams short listed
- Selected P3 contractor to perform PE and negotiate price for DBOM
  - Washington Group

Innovative Structure

- Facility Operator
- Facility Provider LLC
- D/B Contractor
- O&M Payment
- True Sale Of D/B Payments
- $ Upfront
- Tax-Exempt Conduit
- Lump Sums Over First 5 years
- Warranty
- Senior Debt
- Sub Debt With Extended Warranty Exposure

- Houston Metro
- D/B Payment - Long-term 30-40 years

Warranty Lump Sums Over First 5 years
Creative Financing Case Study

T495: Capital Beltway HOT Lanes

- 14 mile segment of beltway
- Two HOT lanes each direction
- Variable tolls HOV-3 free
- Replacement of aging infrastructure (50 bridges)
## Sources & Use of Funds

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount ($000s)</th>
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<tbody>
<tr>
<td>PABs</td>
<td>530,943</td>
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<tr>
<td>TIFIA*</td>
<td>526,939</td>
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<tr>
<td>VDOT Contribution</td>
<td>408,895</td>
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<tr>
<td>Equity**</td>
<td>339,440</td>
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<td><strong>Total Sources</strong></td>
<td>1,806,217</td>
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</table>

Debt to Equity Ratio (VDOT considered equity) 1.41

*Includes $19.2 M Contingency Used
**Includes $45.8 M Contingency Used

<table>
<thead>
<tr>
<th>Uses</th>
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<td><strong>Construction Costs</strong></td>
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<td>Construction Drawdown***</td>
<td>1,493,572</td>
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<td>TIFIA/FHWA Transaction Costs</td>
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<tr>
<td>Operations Start Up Costs</td>
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<td>SPV Cost during Construction</td>
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<td>Development Costs</td>
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<td>Due Diligence &amp; Advisory Fees</td>
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<td><strong>Total Construction Costs</strong></td>
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<td><strong>Net Financing Costs</strong></td>
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<td>Ramp up Reserve</td>
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<td>General Project Reserve</td>
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<tr>
<td><strong>Total Uses</strong></td>
<td>1,806,217</td>
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Funded 5 yrs. Post Construction

***Includes $65M Contingency Used from TIFIA and Equity
Missouri Safe & Sound Bridge Program

- Public Private Partnership
  - Replacement or rehabilitation of 802 bridges, 30 year DBFOM
  - 25 year availability payments
    - MoDOT Federal-aid bridge funds
    - Up to $700 M Private Activity Bonds

- Missouri Bridge Partners
  - Zachry American Infrastructure
  - Parsons Transportation Group
  - Fred Weber Inc.
  - Clarkson Construction
  - HNTB
  - Infrastructure Corporation of America
SR 125 - South Bay Express

Traditional Procurement of Greenfield Project

PPP - California: SR 125

- State incurred capital outlays and operating and maintenance costs
- State bears all risks

- Private sector funds itself using large portion of debt and shareholder equity; Private sector bears all risks
- Funding: Senior bank loans: $328.0; TIFIA loan: 140.0; Equity contribution: 120.0; Donated right of way: 47.8
In Summary.... USDOT Brings to the Table

Potential Financial Assistance

- Private Activity Bonds to lower the cost of capital required to construct transportation facilities
- Direct loans, loan guarantees, and standby lines of credit under DOT’s TIFIA Program
- Grants for transit projects under FTA’s New Starts/Small Starts Program
- Grants for traffic and congestion management under FHWA’s Intelligent Transportation Systems (ITS) Program
- Grants for implementation of pricing under FHWA’s Value Pricing Pilot Program

Facilitate/Help Remove Barriers

- New tolling authorities under SAFETEA-LU
- SEP-15 Flexibility
In Summary.... USDOT Role in Infrastructure Finance

**Educate**
- Web page, publications on infrastructure project finance
- Research and Development
- Sponsorship of Conferences/Meetings (TRB, ARBTA)
- Outreach to capital markets/project sponsors
- Technical assistance available for States - FHWA National Resource Center – 15 disciplines provide services

**Validate**
- Continuous oversight of projects with Federal funds or credit assistance
Questions