



Managed Lanes Overview - 2011

Robert W. Poole, Jr.

Director of Transportation Policy

Reason Foundation

<http://reason.org>



Reason



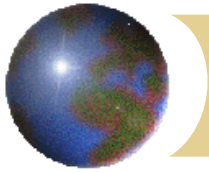
Key Issues:

- ⊕ What are Managed Lanes?
- ⊕ Managed Lanes nationwide
- ⊕ Next step: Managed Lane networks
- ⊕ Key concerns of policymakers:
 - ⊞ Congestion management vs. financing
 - ⊞ Conversion of under-performing HOV lanes
 - ⊞ Equity--"Lexus Lanes"
 - ⊞ Impact on emissions and transit



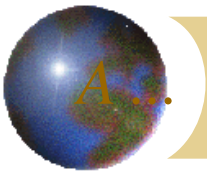
What are Managed Lanes?

- ❖ Synonym for tolled express lanes (such as 91 Express Lanes)
- ❖ Specialized, rather than General Purpose, lanes
- ❖ Variable pricing, to keep traffic flowing uncongested
- ❖ Limited to cars, vans, buses

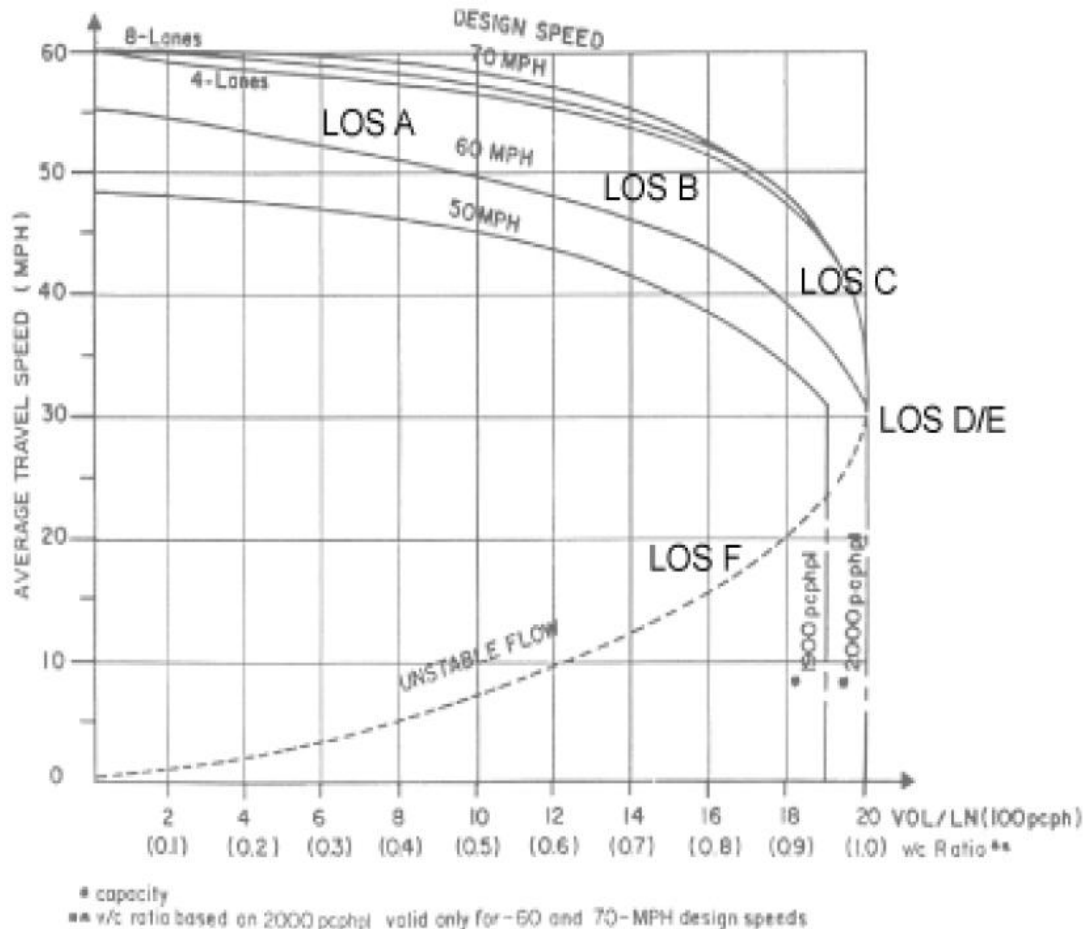


Why Managed Lanes?

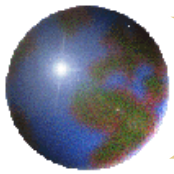
- ⊕ Optimize use of all roadway capacity
- ⊕ Increase throughput compared with GP lanes during peak periods
- ⊕ Add capacity in non-attainment areas
- ⊕ Generate revenue to pay at least part of costs
- ⊕ Create—and sustain—a new time-saving opportunity (“congestion insurance”)
- ⊕ Widespread public and political acceptance
- ⊕ Support from Congress and FHWA



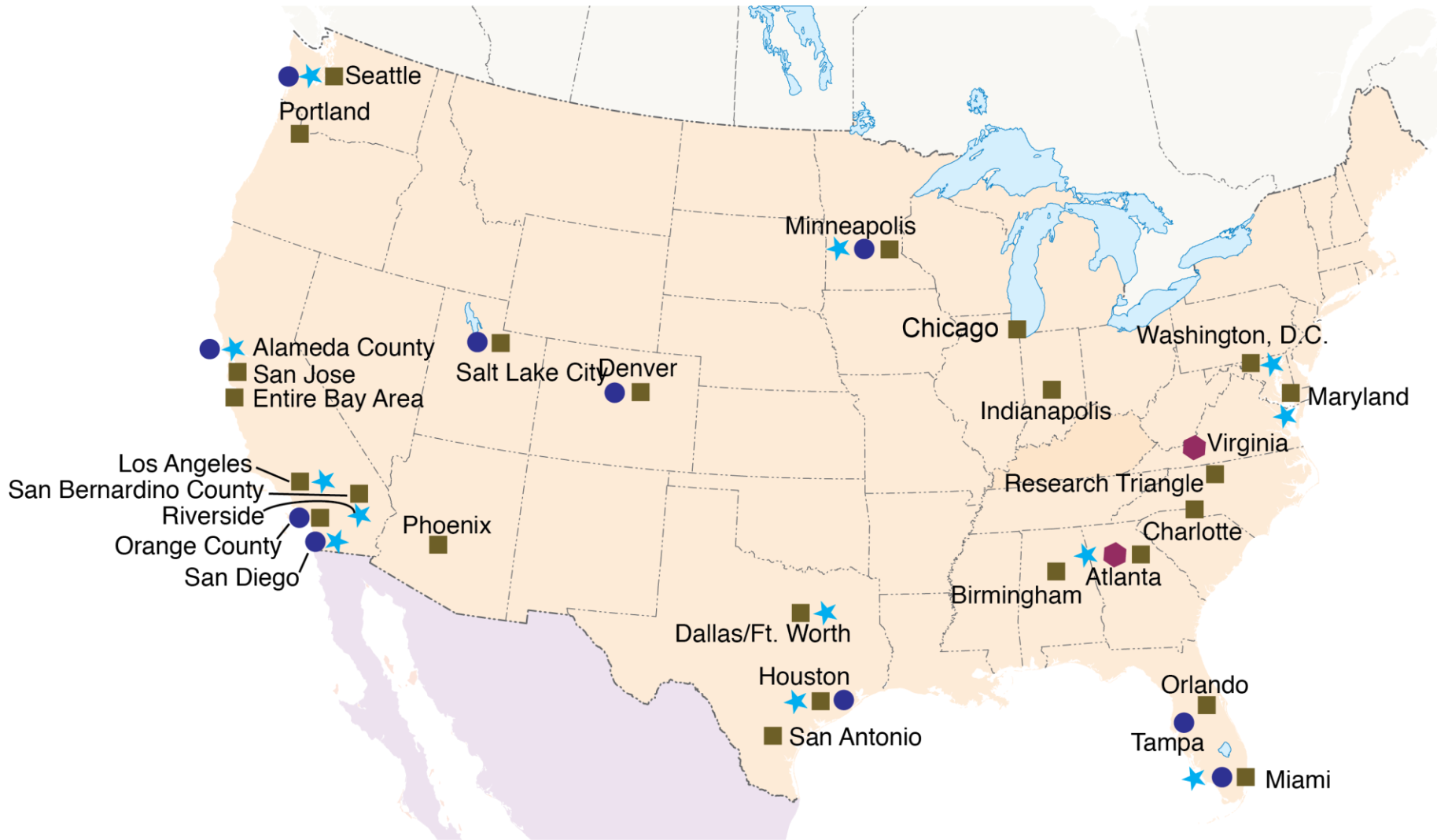
What Variable Pricing Does



Source: Adapted by Reason Foundation from *Highway Capacity Manual 2000*, Chapter 13, "Freeway Concepts: Basic Freeway Segments," pp. 13-8 through 13-11.



Managed Lanes Projects, 2011

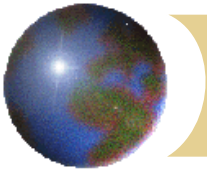


- Managed lanes in Operation
- ★ Managed lanes being implemented
- ◆ Proposals being considered
- Feasibility studies



Ways to Create Managed Lanes

- ✚ Convert under-performing HOV lanes:
 - ▣ If under-utilized, sell excess capacity
 - ▣ If over-crowded, raise occupancy and then sell excess capacity (FHWA standards)
- ✚ Add new lane(s)
- ✚ Combination—convert one HOV and add new lane (e.g., Miami I-95)



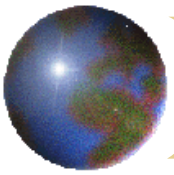
Managed Lanes Networks

- ✦ In Long Range Transportation Plan already:
 - ✦ Atlanta
 - ✦ Dallas
 - ✦ Houston
 - ✦ San Diego
 - ✦ San Francisco
 - ✦ Seattle
- ✦ Being considered:
 - ✦ Los Angeles
 - ✦ Miami-Dade/Broward/Palm Beach Counties
 - ✦ Washington, DC



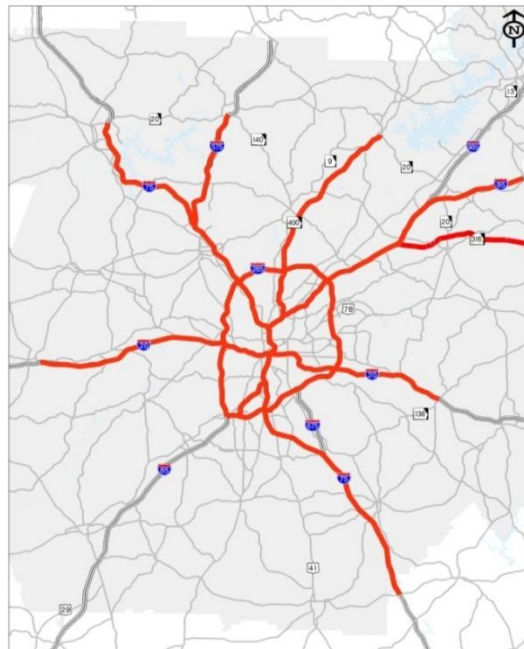
Benefits of Managed Lanes and Networks

- ✚ Reduced congestion (improves regional economic productivity & competitiveness)
- ✚ Reduced emissions (especially if network)
- ✚ Synergy with bus transit (a win-win)
- ✚ Partial financing of new capacity



Atlanta's Approved ML Network

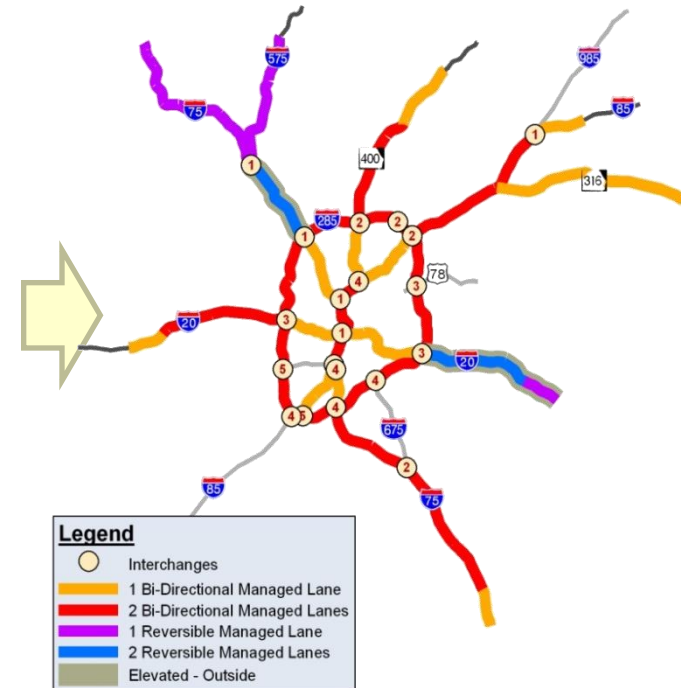
Corridor-Level Screening Results



Options Considered

- Lane Operations
 - Reversible Lanes
 - Bi-directional Lanes (2 way travel)
- Number of Lanes
 - 1 lane in each direction
 - 2 lanes in each direction
- Facility Location
 - Elevated
 - At-grade
 - Inside median
 - Outside median

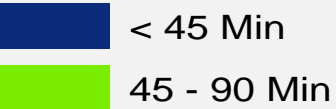
System-wide Implementation Strategy



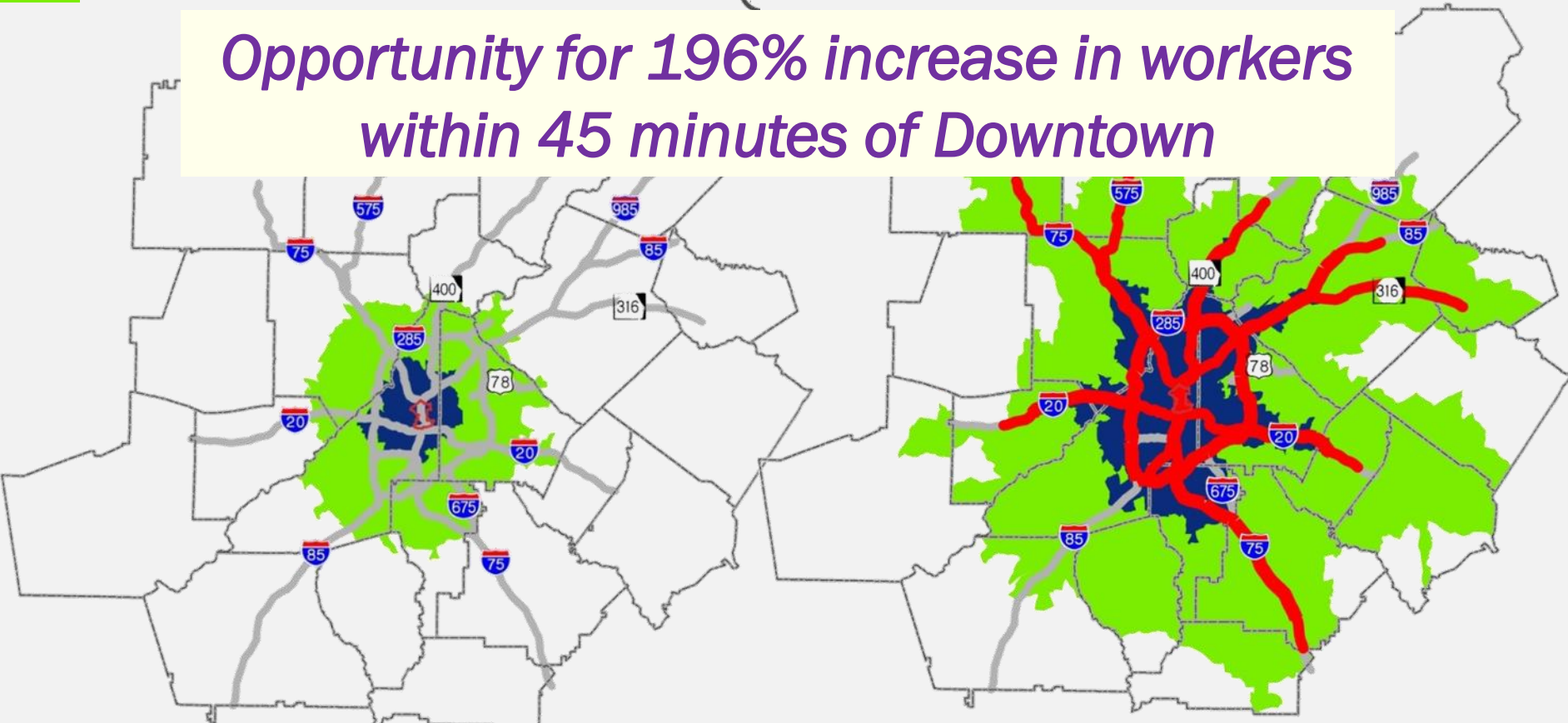
***Ensure system-wide interface between corridors**

Economic Benefits of Atlanta's ML Network (2030)

Travel Time



Opportunity for 196% increase in workers within 45 minutes of Downtown

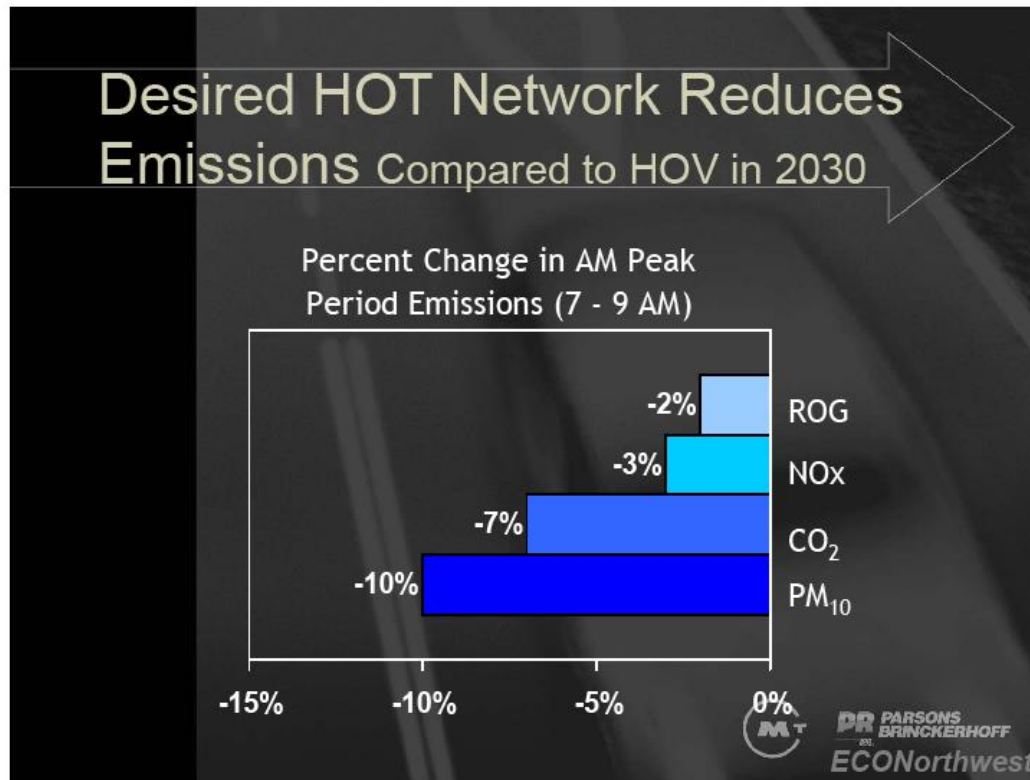


Employment-shed
(without Managed Lanes)

Employment-shed
(with Managed Lanes)



Emission Reductions from San Francisco Bay Area Network



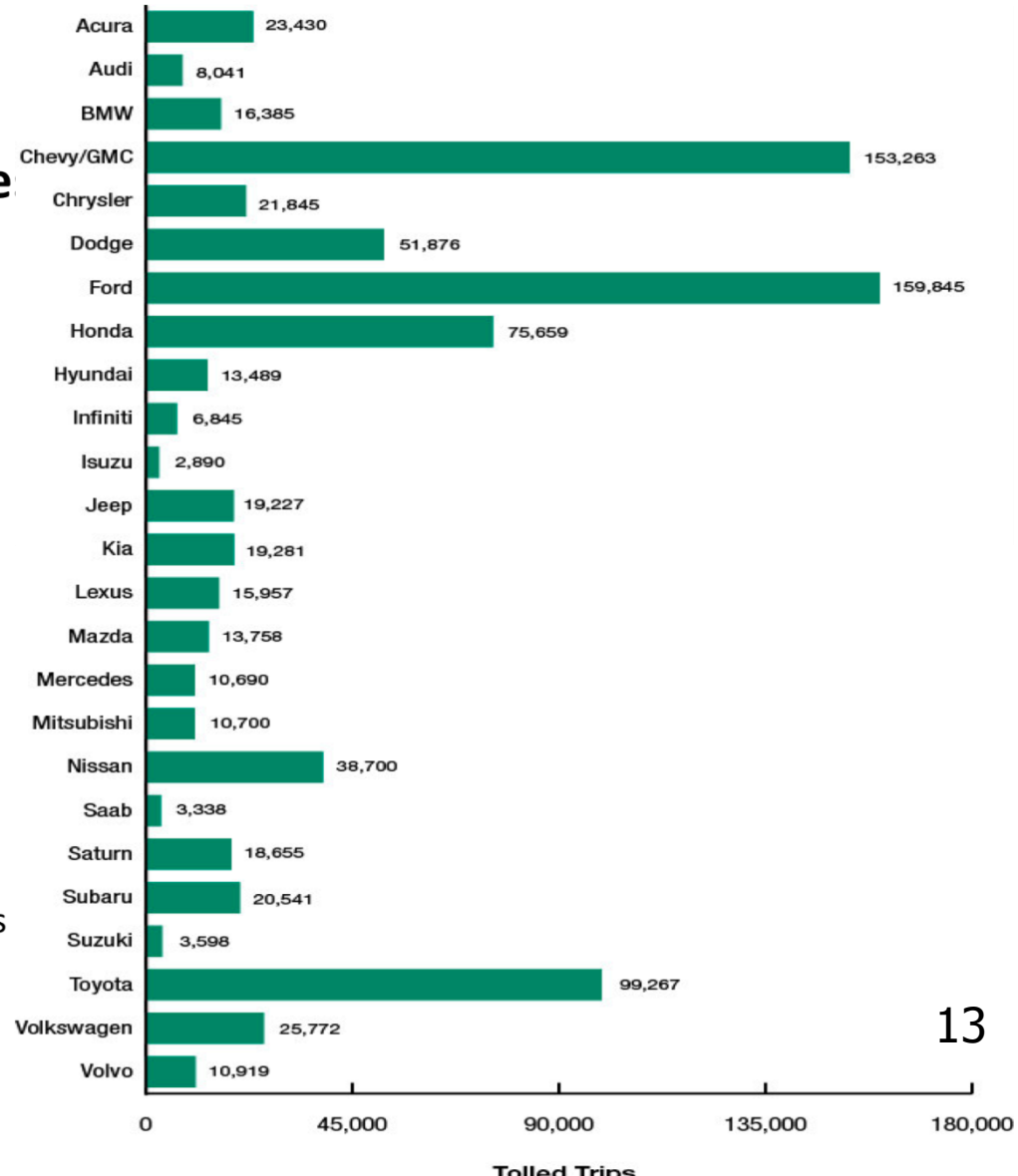


Not “Lexus Lanes”

Five most frequently tolled vehicle in SR 167 HOT lanes:

1. Ford
2. Chevrolet/GMC
3. Toyota
4. Honda
5. Dodge

Based on *Good To Go!* account data for HOT Lanes users who paid a toll





Using a Public-Private Partnership for Managed Lanes Mega-Projects

- ⊕ Significant risk transfer to concession firm:
 - ⊠ Construction risk
 - ⊠ Completion risk
 - ⊠ Traffic & revenue risk
- ⊕ Incentive to design to minimize life-cycle cost, not initial cost
- ⊕ Proper maintenance assured, long-term
- ⊕ Growing U.S. as well as global track record

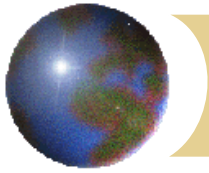


Four ML Mega-Project Financings

⊕ Capital Beltway (VA):	June 2008	\$1.9 billion
⊕ I-595 (FL):	March 2009	\$1.6 billion
⊕ N. Tarrant Express (TX)	Dec. 2009	\$2.1 billion
⊕ LBJ I-635 (TX)	June 2010	<u>\$2.8 billion</u>
Total:		\$8.4 billion

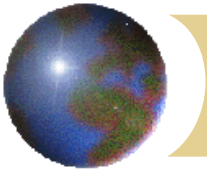
Typical funding mix:

State highway funds	20%
Private equity	20%
Toll revenue bonds	30%
TIFIA loan	30%



Conclusions

- ➊ Managed Lanes are the best available form of capacity expansion for congested freeways.
- ➋ Sustainable congestion relief, plus reduced emissions, expanded transit possibilities.
- ➌ Significant revenue, up to 80% of project cost.
- ➍ Long-term PPP is well-suited to ML mega-projects, especially due to risk transfer.



Questions?

Contact information:

www.reason.org/transportation

Bobp@reason.org