



Gannett Fleming

*Excellence Delivered **As Promised***

The Next Step in Managed Lanes Going Beyond Creating Choices to Changing Behavior

15th International Conference on Managed Lanes

May 6, 2016



Going Beyond Creating Choices

- Managed lanes can create new capacity
- Managed lanes optimize traffic operations & lane use
- Managed lanes add finite capacity to the network
- Managed lanes currently have limited impact on travel behavior in the aggregate



Trends in Regional Transportation

- New Roads



- Widening Existing Highways



- Converting Lanes for High-Occupancy Vehicles



- Converting HOV to High-Occupancy Toll Lanes

- End of the interstate system

- Era of interstate widening

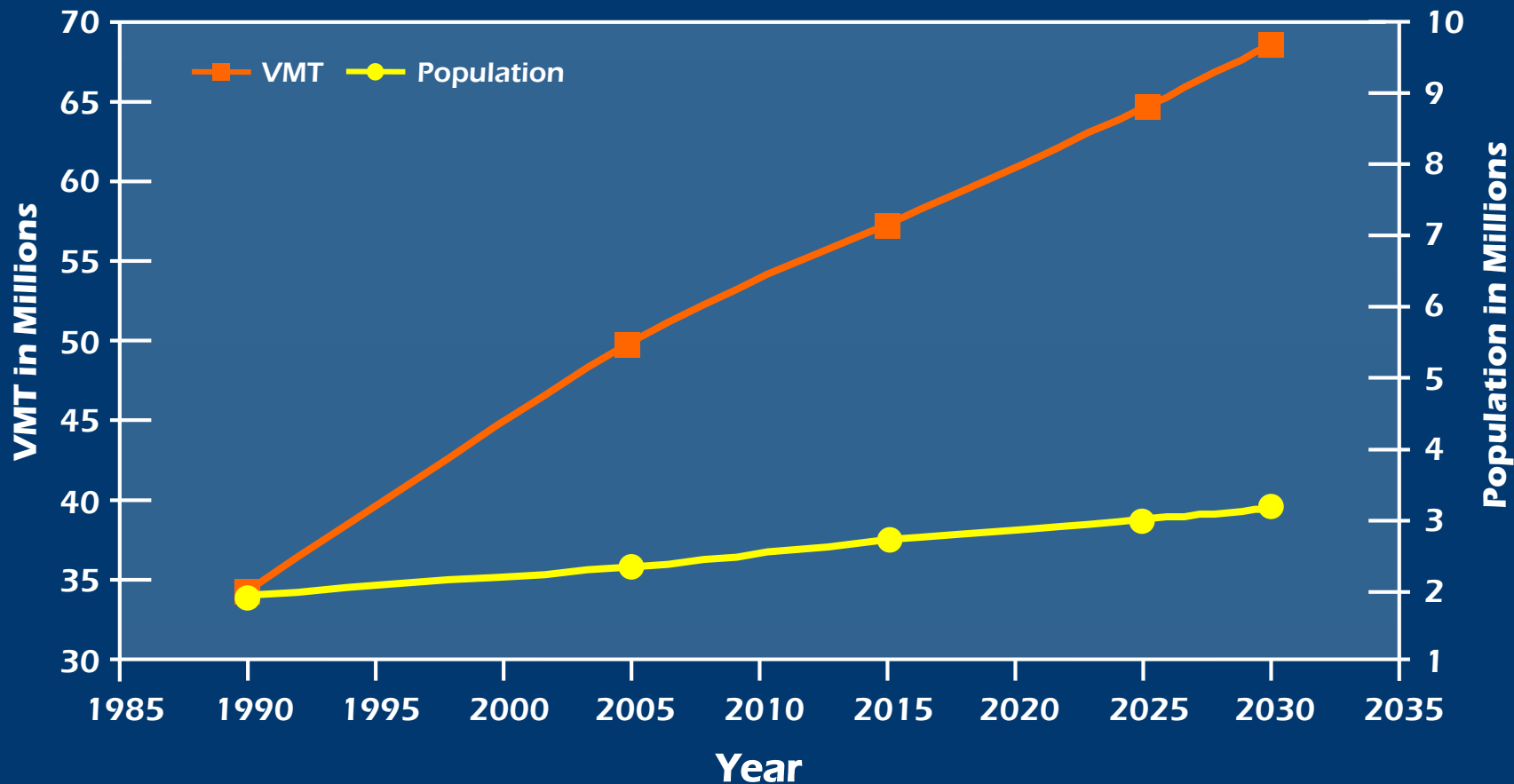
- Abandonment of interstates in urban centers (I-95 through Overtown, promise not to widen I-95 in Miami and I-66 in Virginia)

- HOV as the answer – poor track record in South Florida – low use and high violation rate

- SR-91 and the age of managed lanes

Growth in Population and Travel

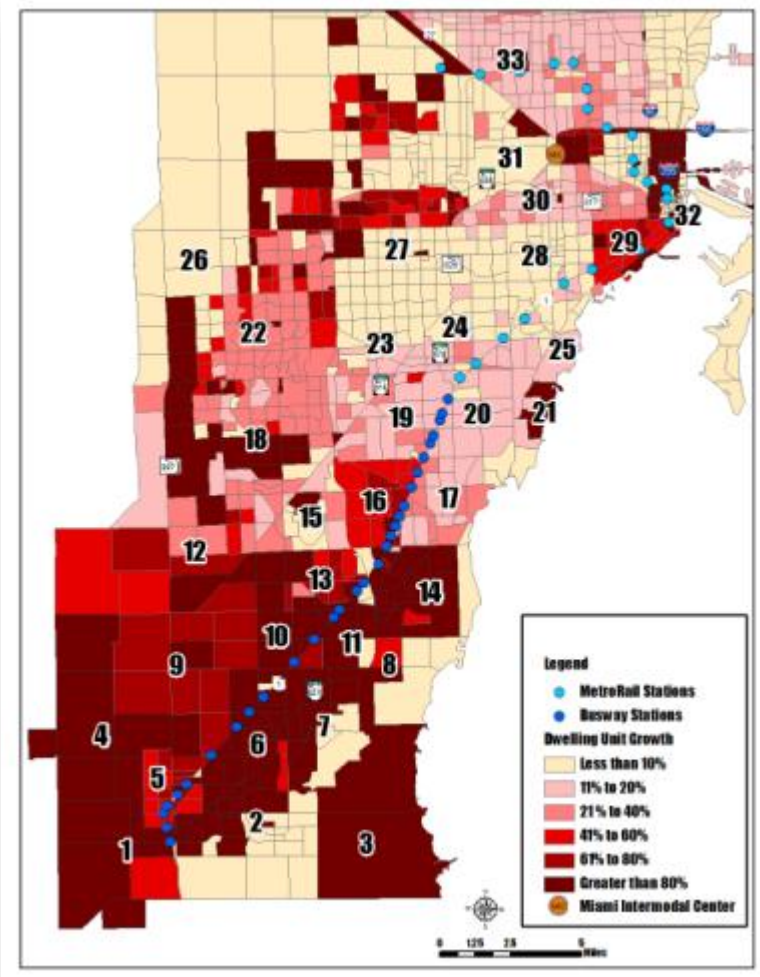
Miami-Dade County Population and VMT Growth 1990-2030



Changes in Population and Employment

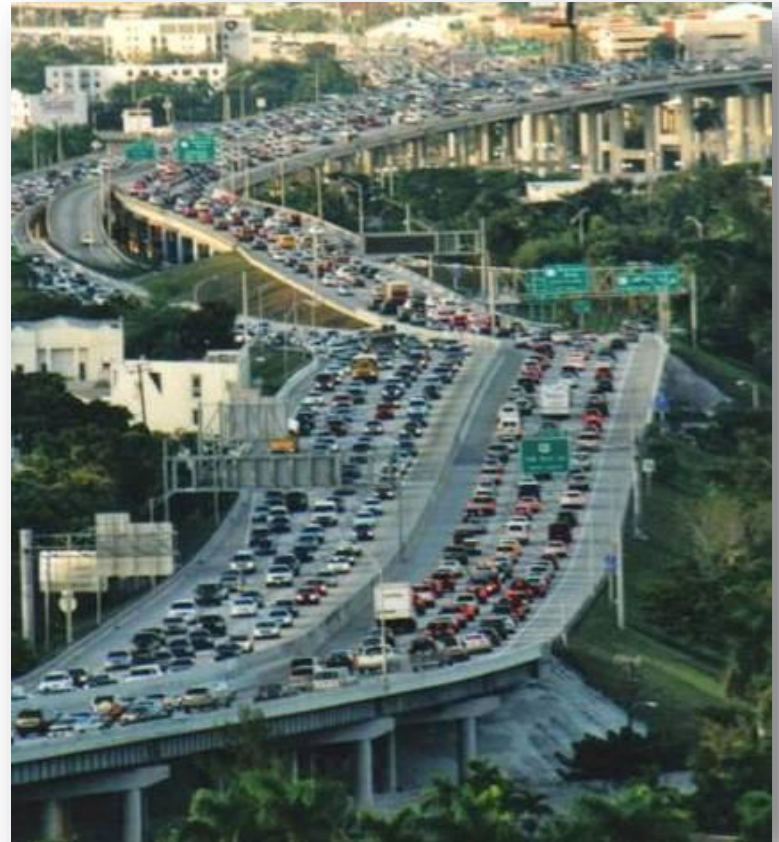
Growth over the next 20 years

- Population: 83%
- Employment: 45%
- Transportation system: 7%
- Funding for transit: limited

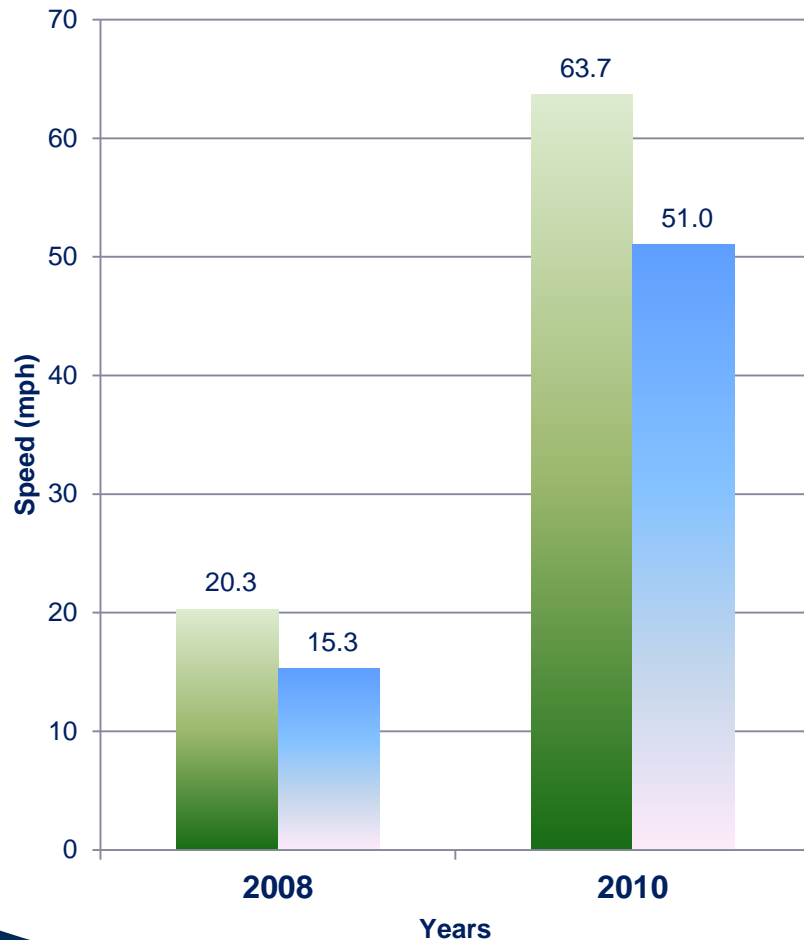


The Promise of Managed Lanes

- A way to bypass congestion
- Not for every day
- Diverts long distance trips
- Reduces weaving
- Creates guideway for express bus service
- New source of revenue



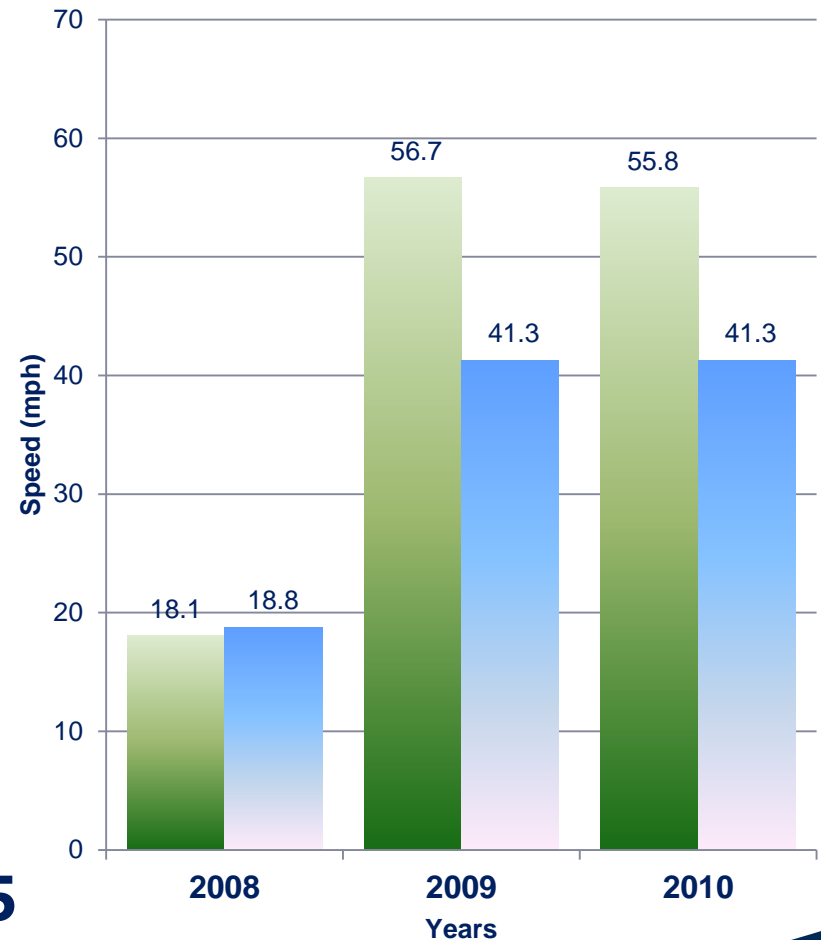
Speeds Increase in All Lanes



Southbound

95

Express

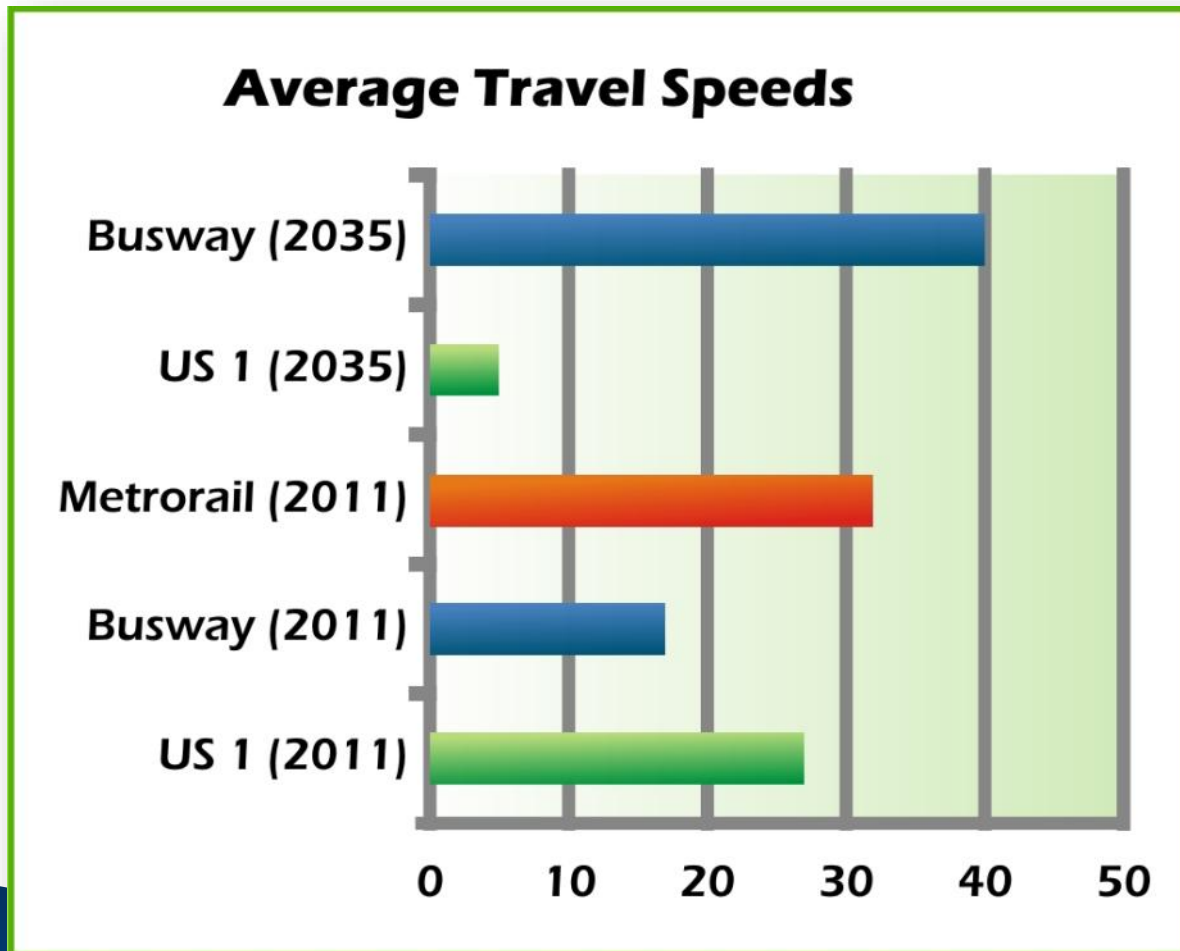


Northbound



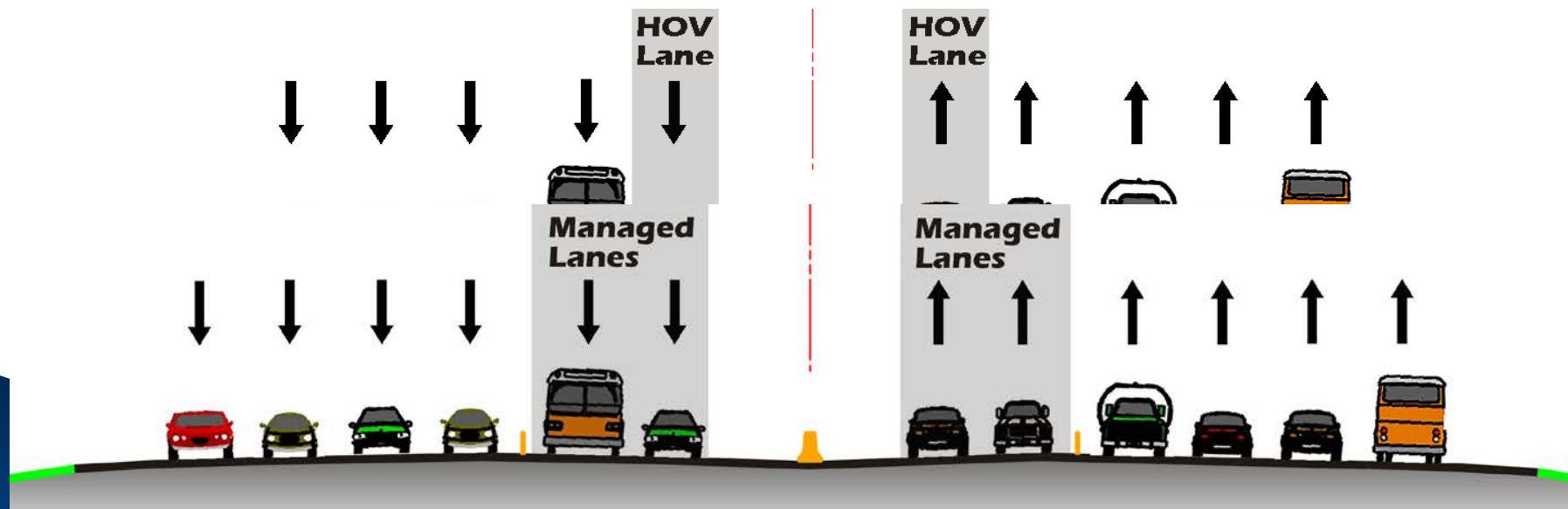
The Promise of Managed Lanes

- Increased travel speeds



I-95 Conversion

HOV-HOT Conversion with Capacity



Transit Service

Expanded transit with 95 Express

- Express bus routes
- Eliminate County-line transfer
- New passenger amenities
- Signal priority



How Successful is 95 Express?



95 Express Managed Lanes Consolidated Analysis Technical Report



Final Report

95 Express Annual Report

Covering July 1, 2010 through June 30, 2011

*Project Status for Urban Partnership Agreement
(Phase I Complete)*

prepared by
Florida Department of Transportation
District Six
1001 NW 111th Avenue
Miami, FL 33172

date
February 17, 2012



November 2011
FDOT District 4
Prepared by
Cambridge Systematics, Inc

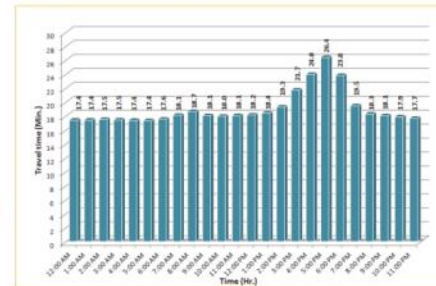


FDOT DISTRICT SIX INTELLIGENT TRANSPORTATION SYSTEM
TRAVEL TIME RELIABILITY

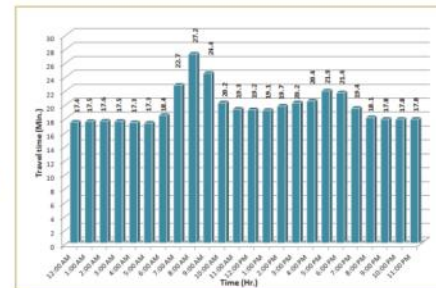


Weekdays Travel Times by Time of Day*

1-95 Northbound: 17.3 Miles
[D. Miami-Dade - Broward County Lane]



1-95 Southbound: 17.3 Miles
[D. Miami-Dade - Broward County Lane]

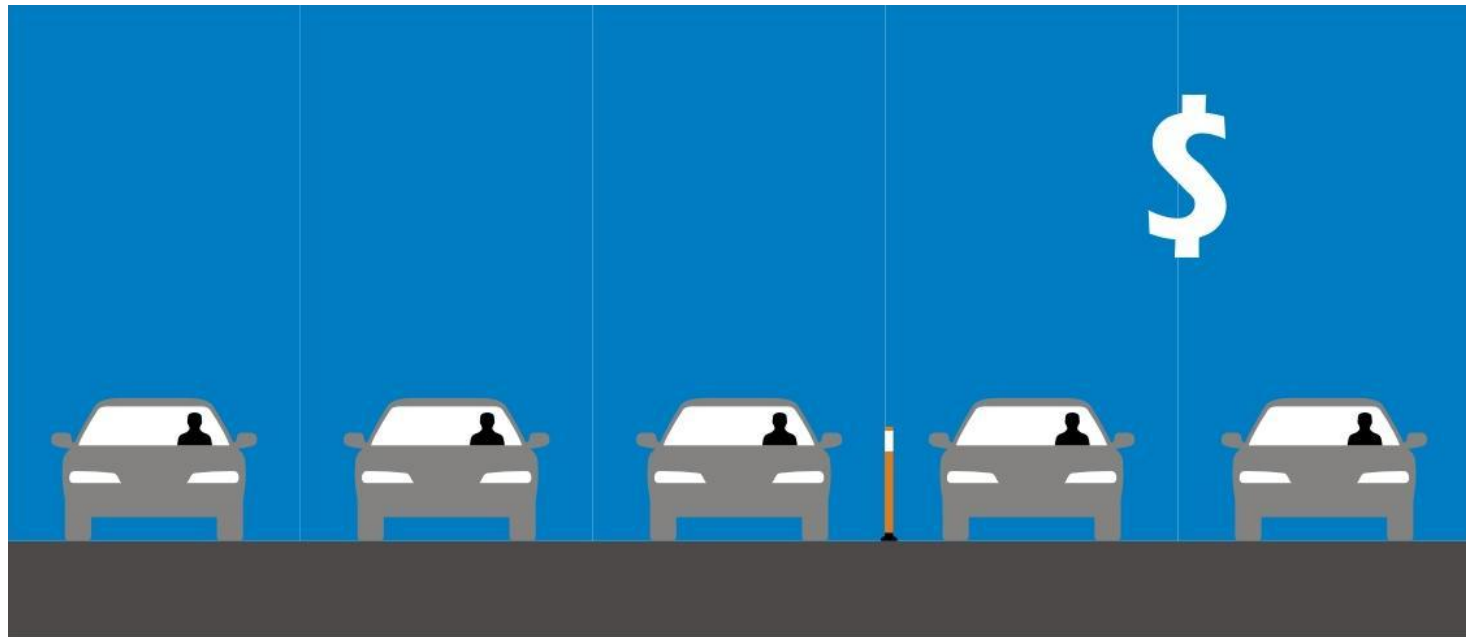


* Twelve-month average travel times from February 2012 - January 2013. Excludes express lanes.

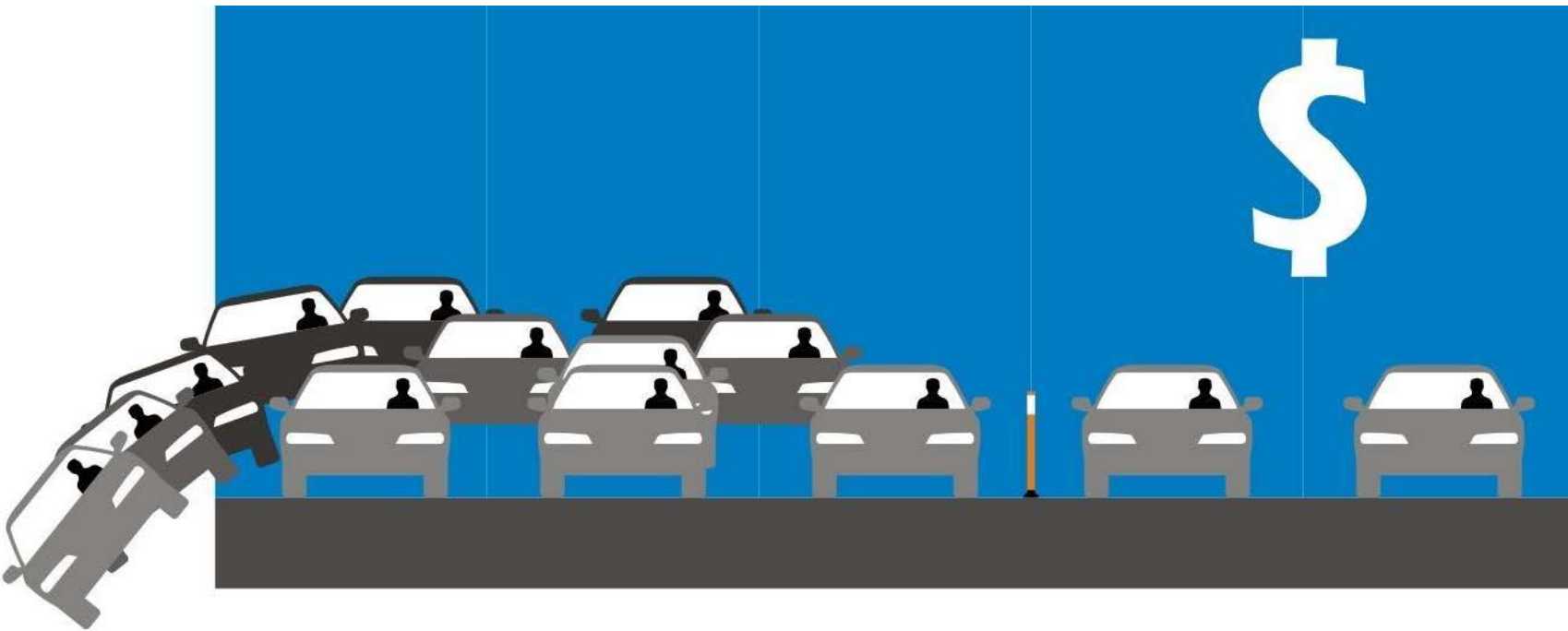
Limits to Success

- Golden Glades chokepoint Northbound
- Delineators and lane diving
- HOV enforcement
- Hybrid use – the last 200 vehicles of capacity
- Political limits to maximum toll

Evolution of Managed Lanes

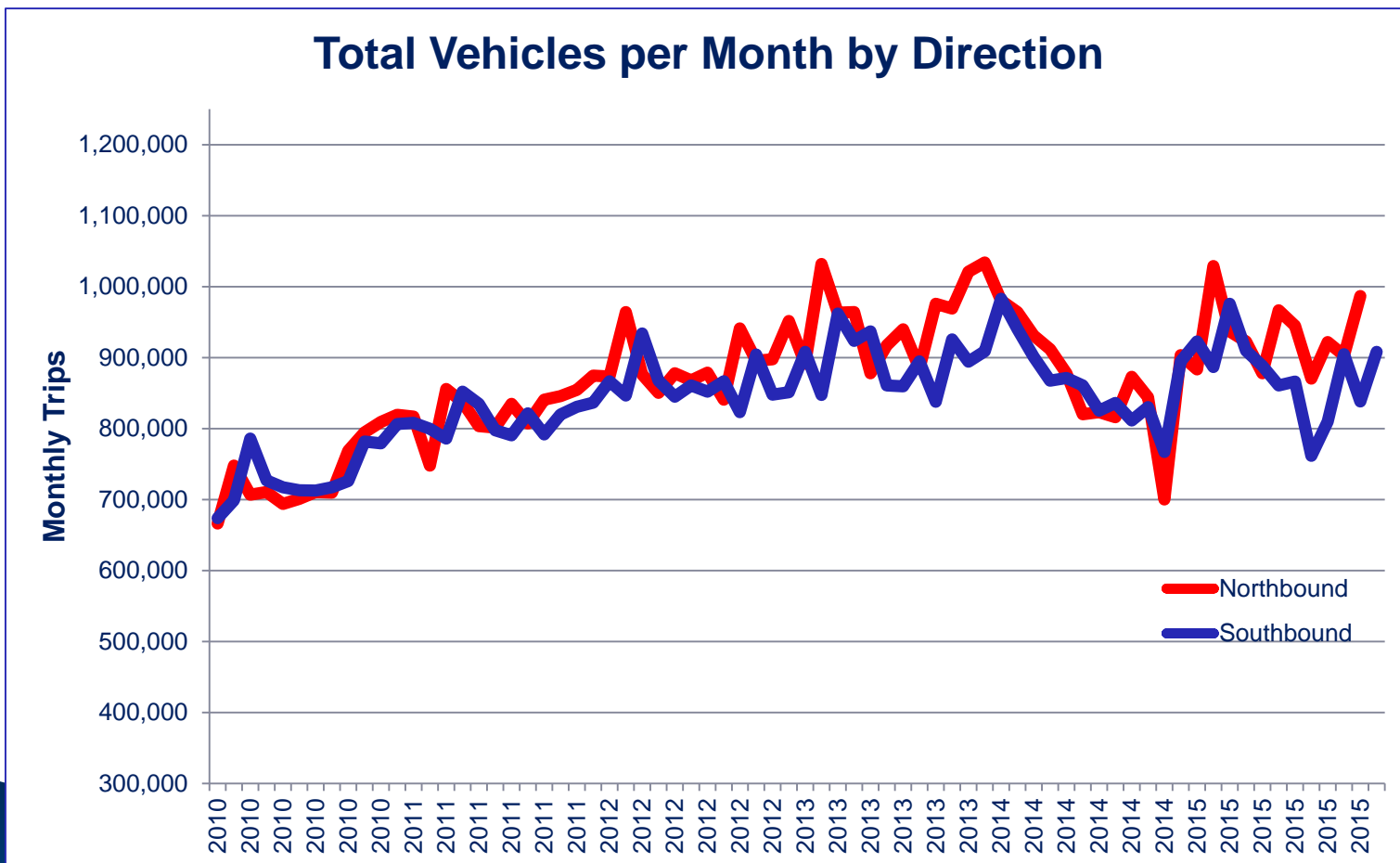


Evolution of Managed Lanes



95 Express Eight Years Later

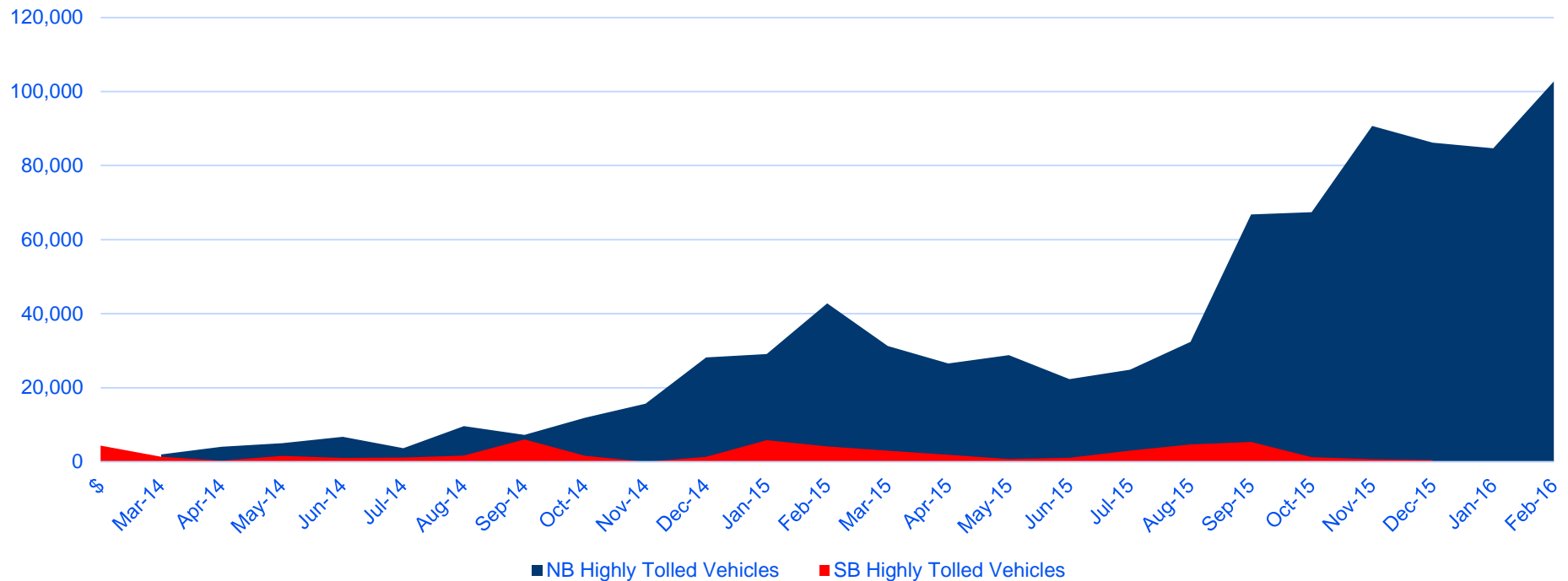
- Growing demand



95 Express Eight Years Later

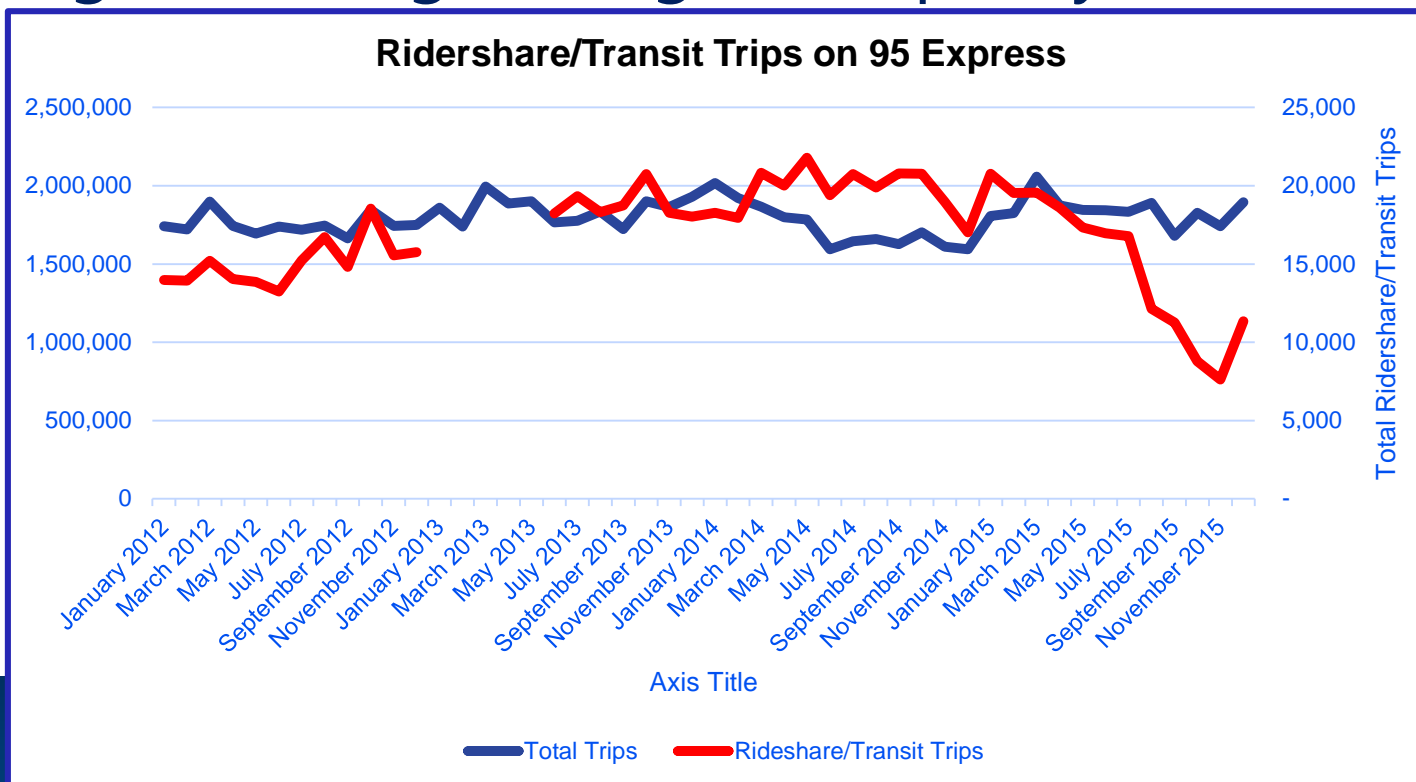
- Growing demand
- Increasing tolls

Vehicles Charged \$9 or more per Month Since Toll Increase (March 2014)



95 Express Eight Years Later

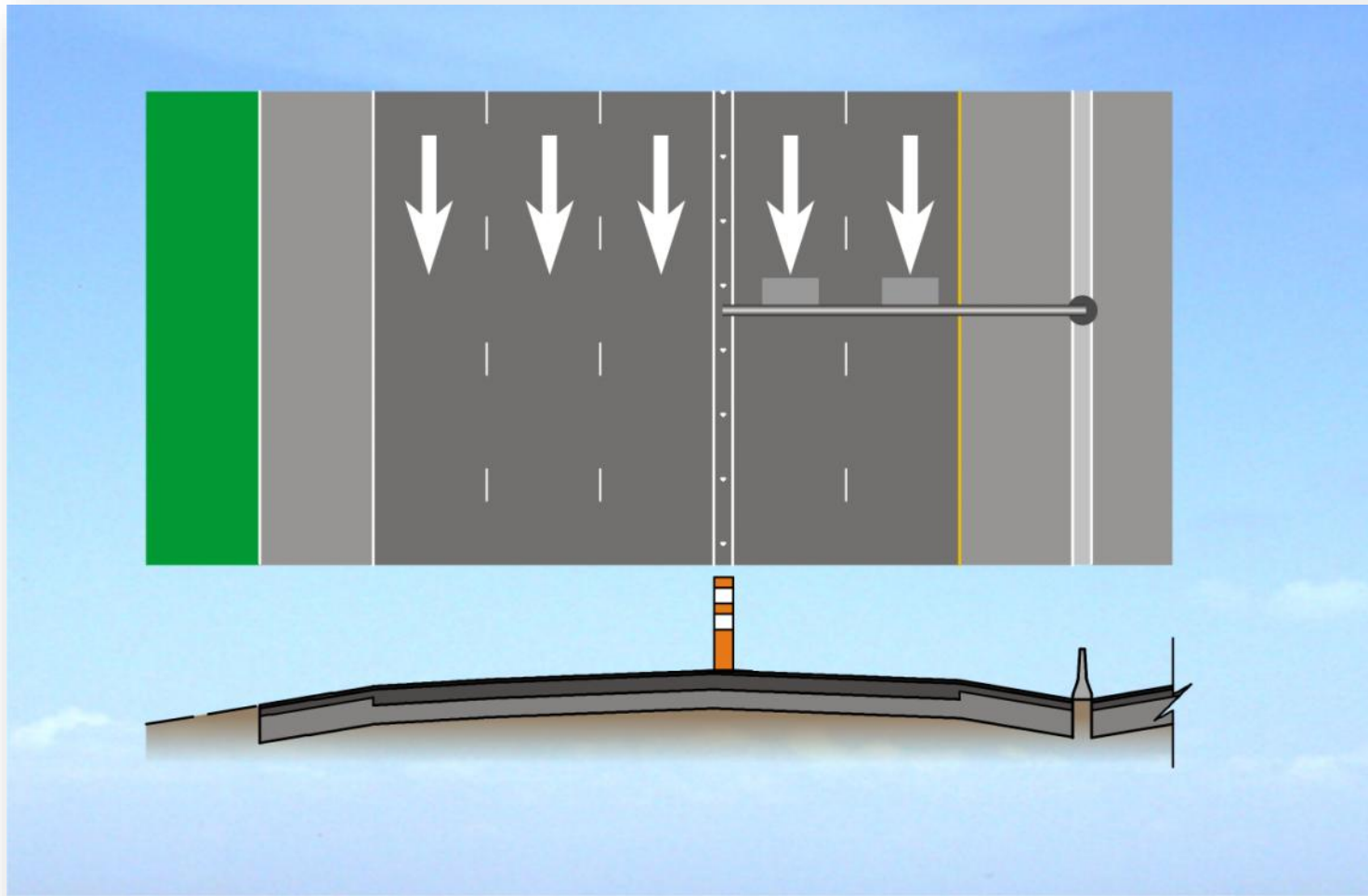
- Growing demand
- Increasing tolls
- Marginal change in high occupancy travel



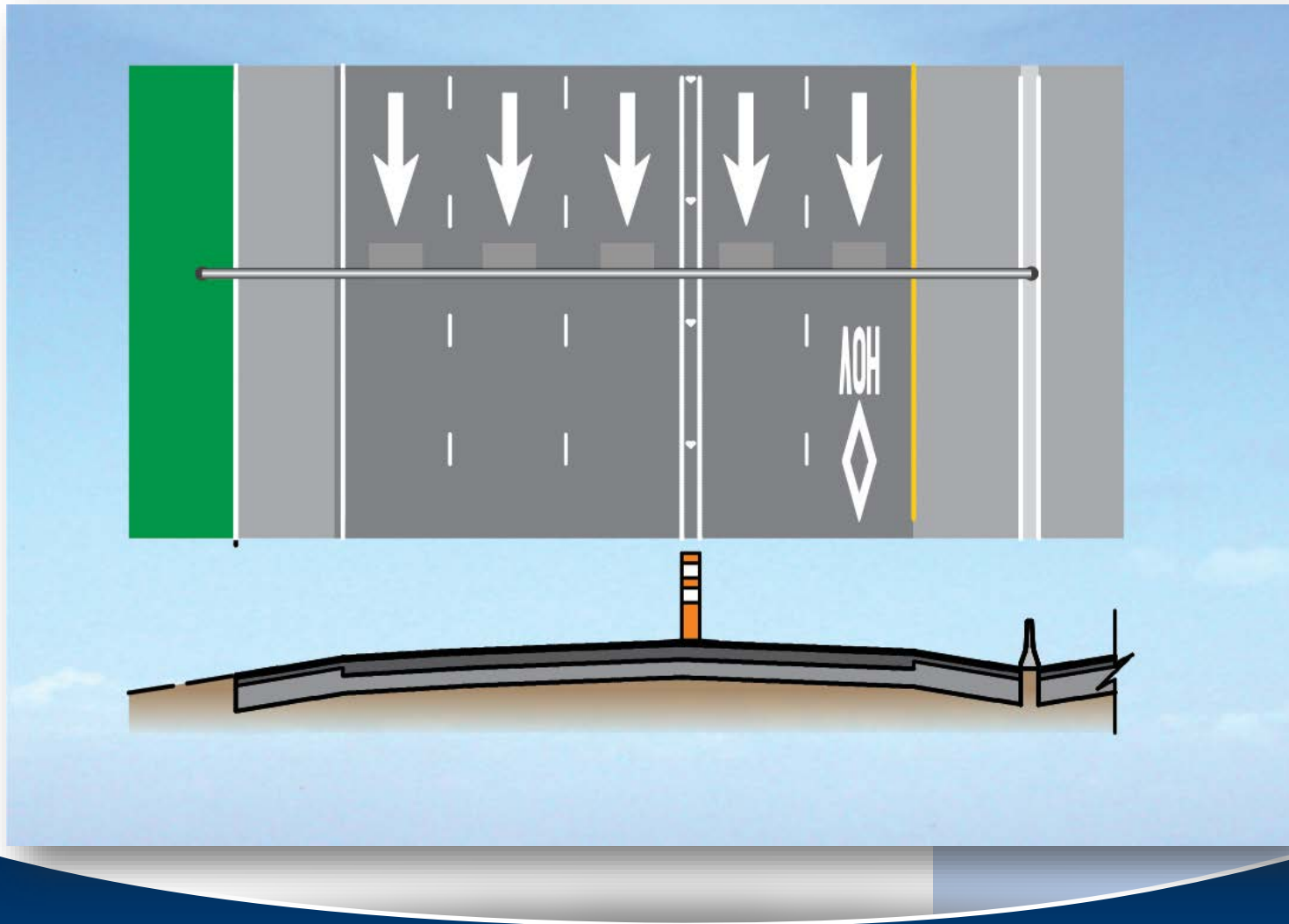
Supply & /Demand Side Incentives

- Increasing Park & Ride lots – most Broward transit riders access transit by auto
- Adding routes – most routes stop at only one or two P&R lots to minimize travel time
- Expand registered carpooling to those sharing common lots
- Low transit fares

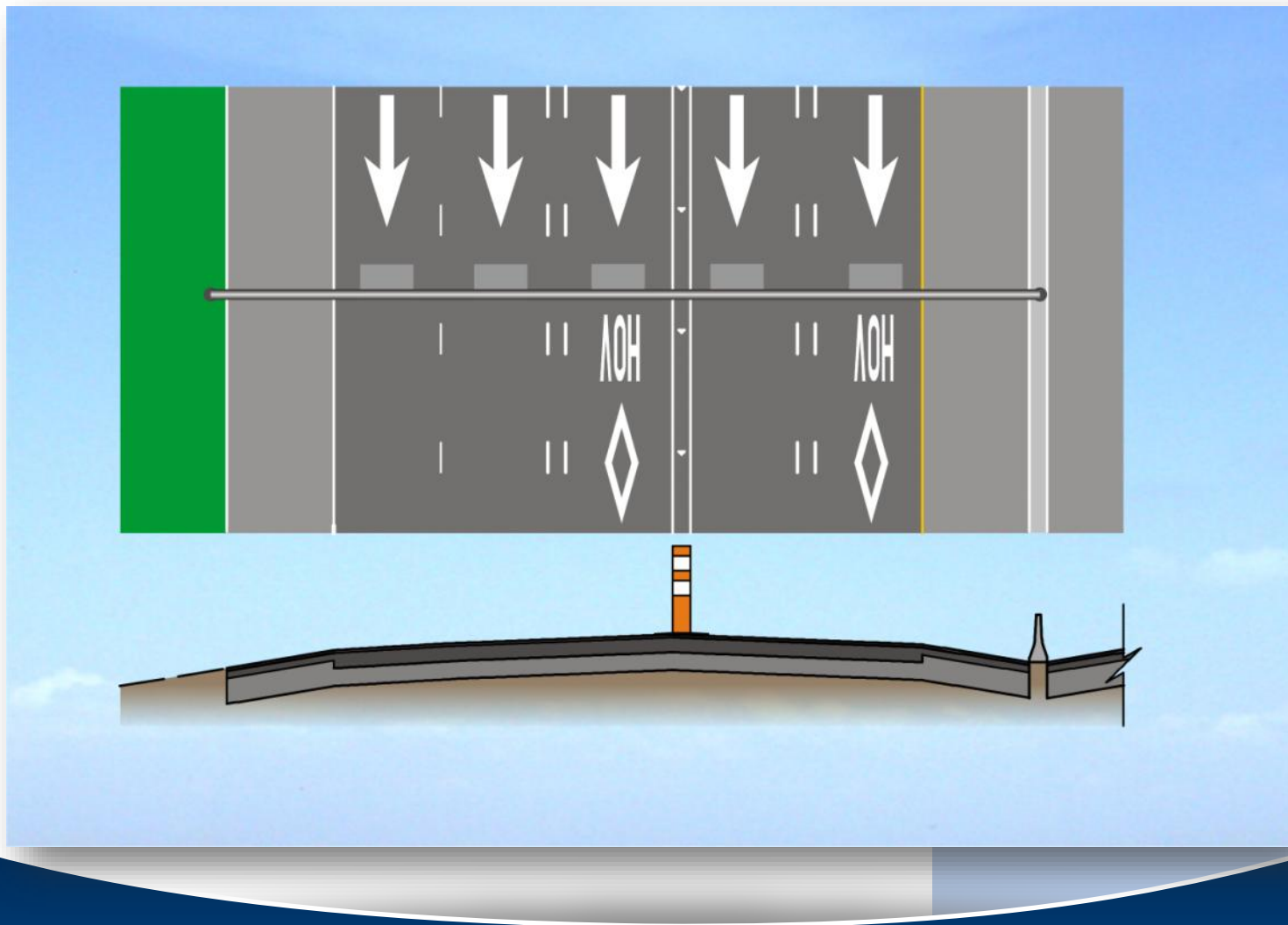
Evolution of Managed Lanes



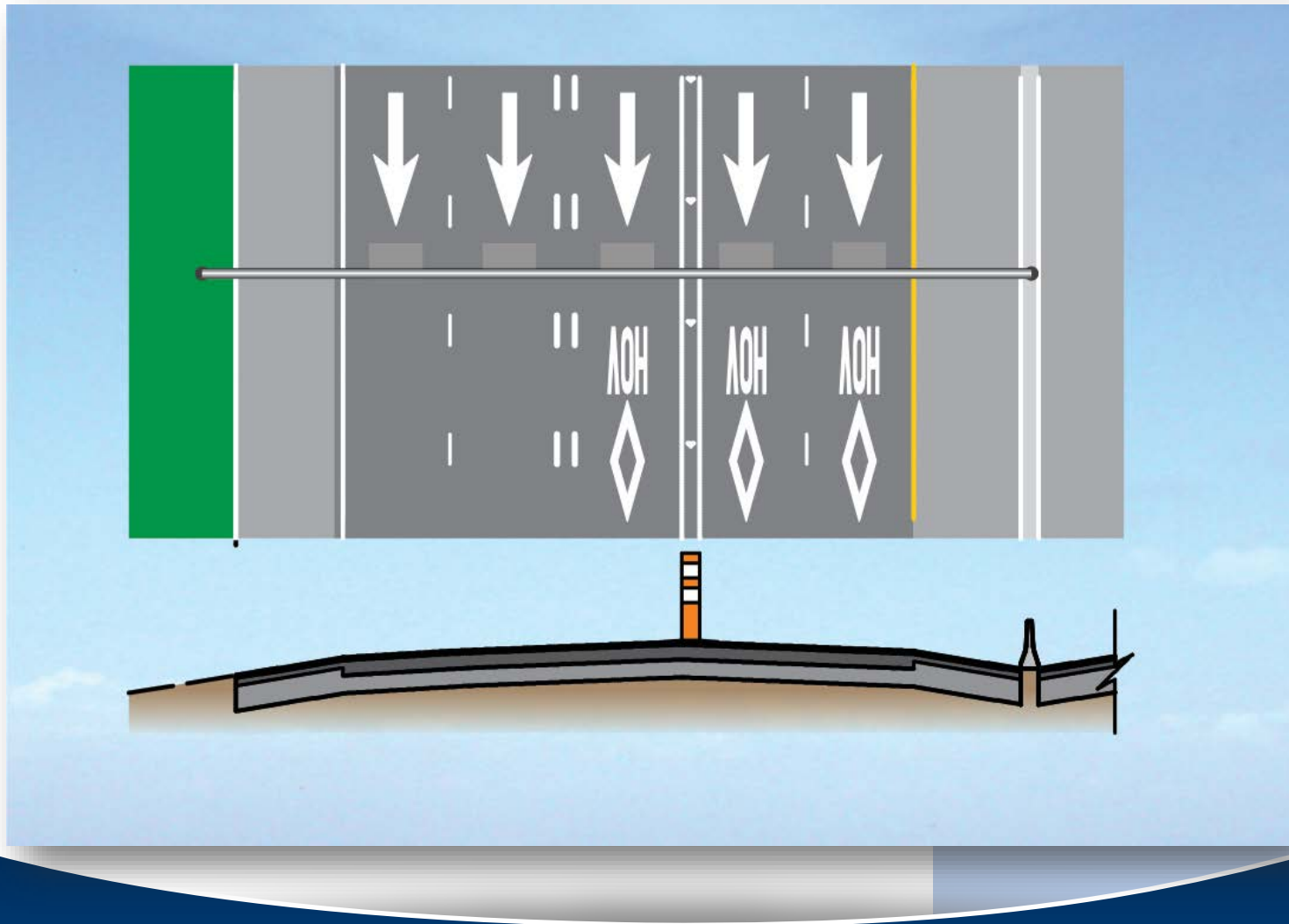
Evolution of Managed Lanes



Evolution of Managed Lanes



Evolution of Managed Lanes



Conclusions

Regional network with ridesharing & express bus network

- Increases vehicle throughput
- Minimizes costs
- Keeps tolls reasonable
- Something for everyone
- Maximizes existing capacity
- Sustainable



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