

95 Express VE – Cooperation Between FDOT Districts



95 Express Project Location Map



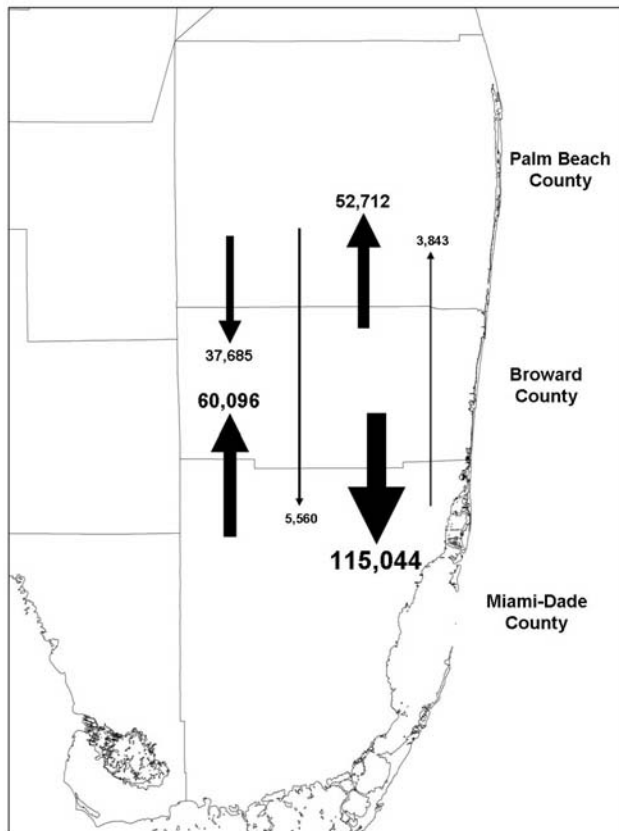
95 Express Project

What is The Problem?

- South Florida - 6th worst traffic congestion in nation!
- I-95 volume can reach 300,000 vehicles south of Golden Glades – expected to grow to 350,000
- Congestion wastes \$2.5 billion & 150 million hours annually
- Widening I-95 is not feasible



95 Express Existing Conditions



- **115,000 Broward County residents commute to Miami-Dade each day representing the highest commute volume in the Tri-County Area**
- **Heavily traveled corridor-weekday volumes as high as 300,000 vehicles per day south of the county line**
- **Broward County Transit currently has 3 bus routes offering connection to the 95 Express at the Golden Glades Interchange**
- **HOV Express Bus Service has deteriorated due to heavy congestion**

95 Express

Existing Conditions



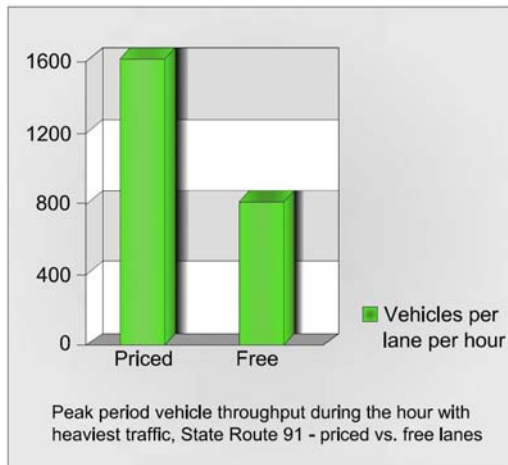
- Demand for Express Bus Service at Golden Glades currently exceeds capacity
- Due to heavy congestion there is limited opportunity to improve 95 Express Bus Service travel time or frequency
- HOV lanes do not function as originally intended
- High violation rates in Broward County and reduced speed due to congestion in Miami-Dade County



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95 Express Benefits Transit Motorists and Businesses



- Adds two new lanes of interstate capacity and provides a new choice for consistent and dependable travel conditions during rush hour
- Additional noise walls where warranted
- Toll revenues will support facility costs and provide funding for Bus Rapid Transit
- Variable congestion pricing to maintain speeds of 50 MPH, reducing delays and stress
- Based on experience from other facilities, Managed Lanes carry twice the number of cars as general purpose lanes at three to four times the speed
- Managed Lanes in the median of State Route 91 in California carry twice as many vehicles per lane as the free lanes during rush hour

95 Express SunPass Compatible

95 Express will be free for:

- Express Buses & Vanpools
- Emergency Vehicles
- Registered Carpools with three or more occupants

95 Express will be tolled for:

- **Non-registered carpools**
- **Single-occupant vehicles that choose to pay a toll when the trip purpose justifies a toll**

Carpool Registration:

- For qualifying carpools with three or more occupants that register with Sunpass



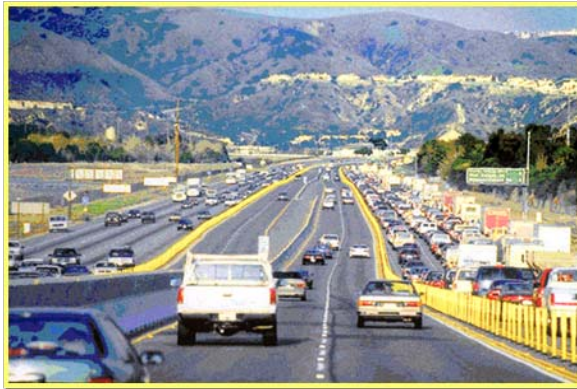
95 Express Bus Rapid Transit (BRT)



- **Bus Rapid Transit (BRT) combines the advantages of a metro system (exclusive corridor with punctuality and frequency) with the advantages of a bus system (low construction and maintenance costs)- Frequently referred to as 'Trains on Wheels'**
- **95 Express includes 5 new bus routes originating from Broward and Southern Palm Beach Counties with 3 direct express routes to downtown Miami**
- **BRT on 95 Express will provide an estimated time savings of 50% from Golden Glades Interchange to I-395**
- **Improved transit service will attract increased passengers, reduce congestion and improve overall operations**
- **BRT offers faster and more reliable service for many**



95 Express Project National Trend



- SR 91 in Orange County

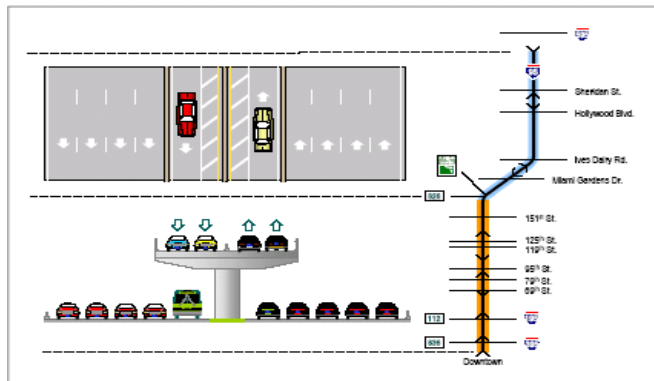
- I-15 in San Diego

- I-10 in Houston

- I-394 in Minneapolis

- 1-25 in Denver

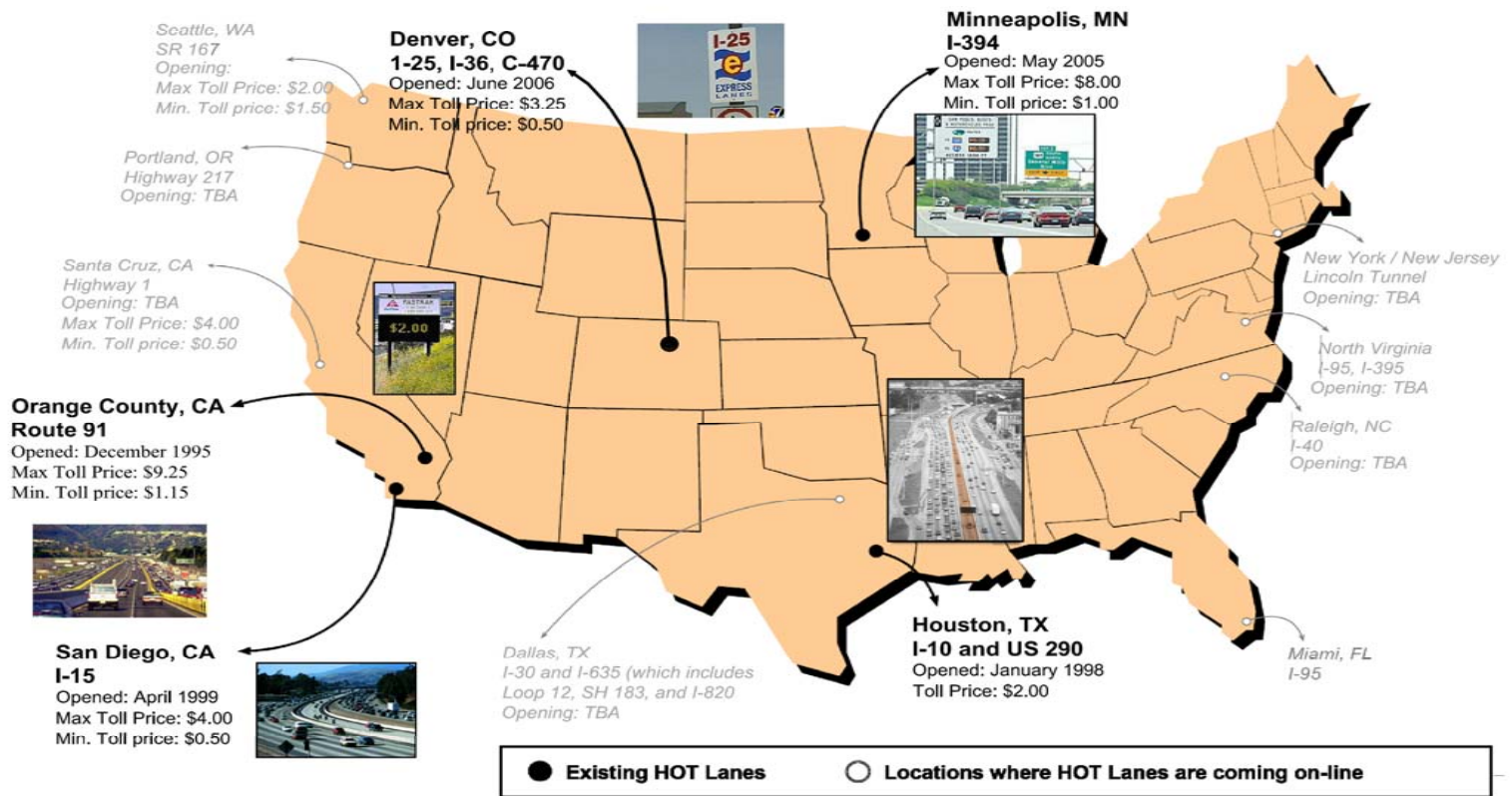
- 95 Express would provide valuable data for future evaluation: I-595; I-75; MDX and other facilities



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Other Examples Across the Nation

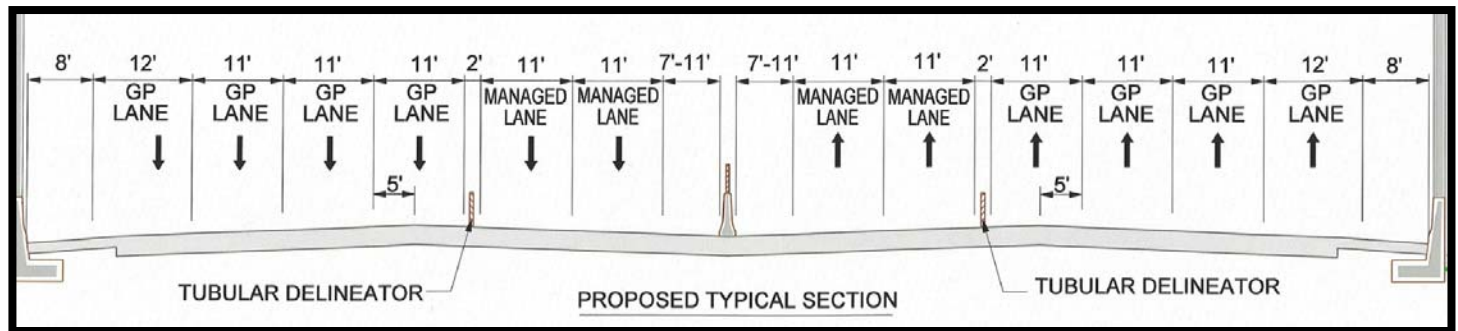
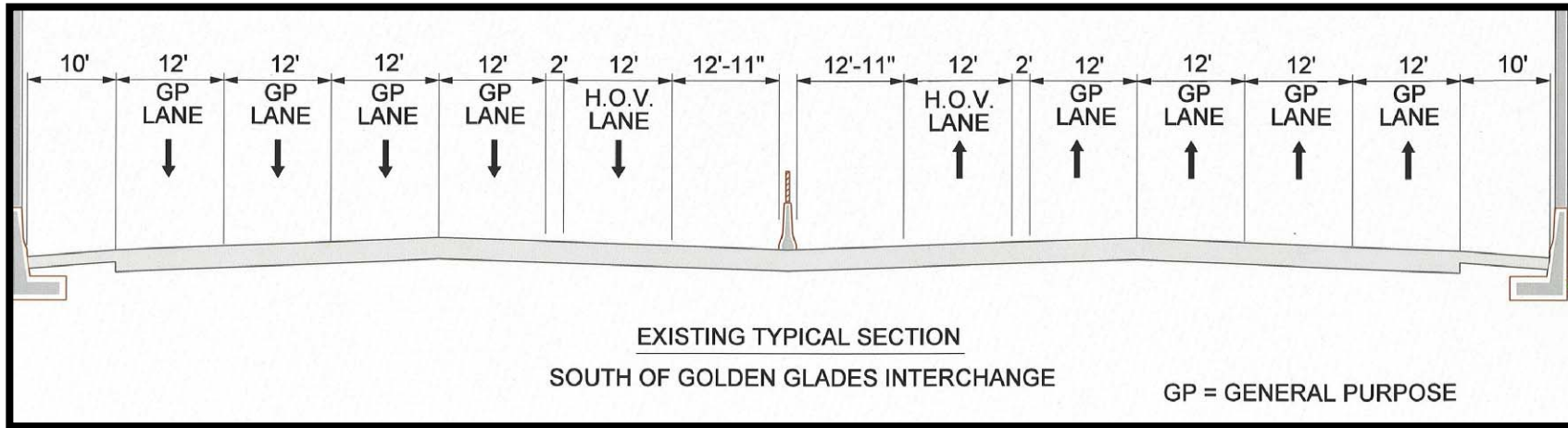


95 Express

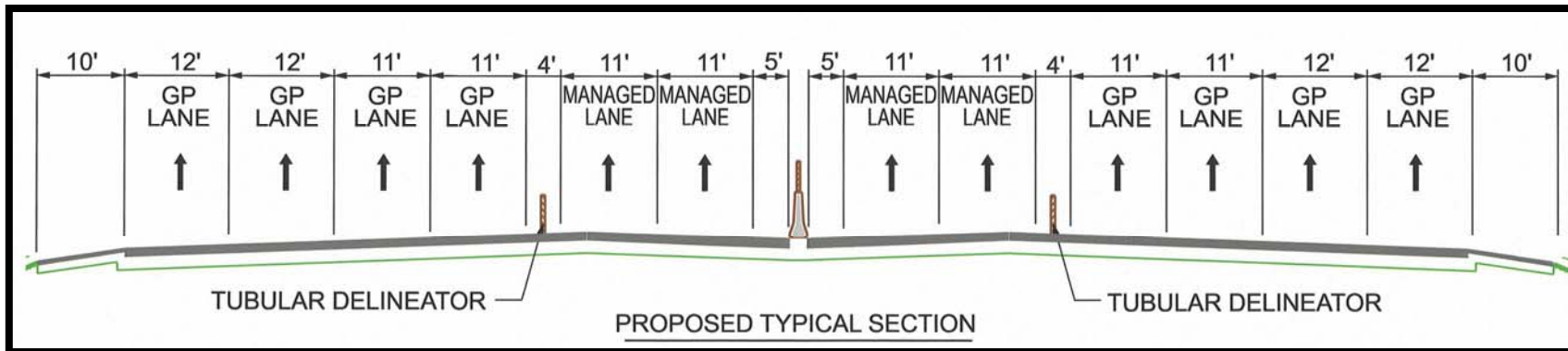
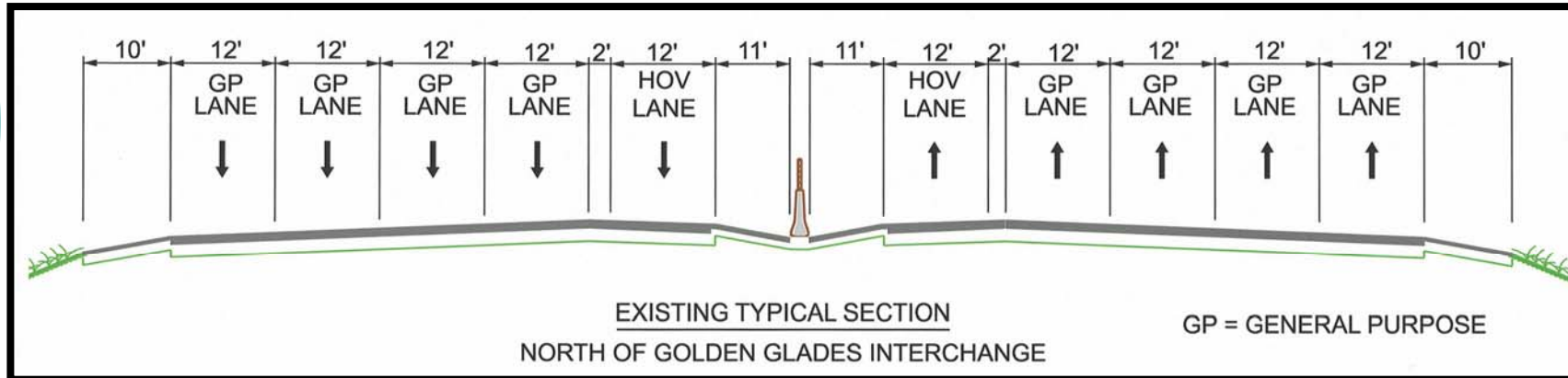
How it would work in South Florida

- Access will be limited to promote higher speeds and longer trips
- Existing lanes & shoulders are reduced with limited highway expansion
- **Adds one lane** in each direction
- Four regular lanes remain in each direction – just as many as now
- Result – new lane & existing HOV lane become **95 Express**, separated from regular lanes by plastic pole barrier

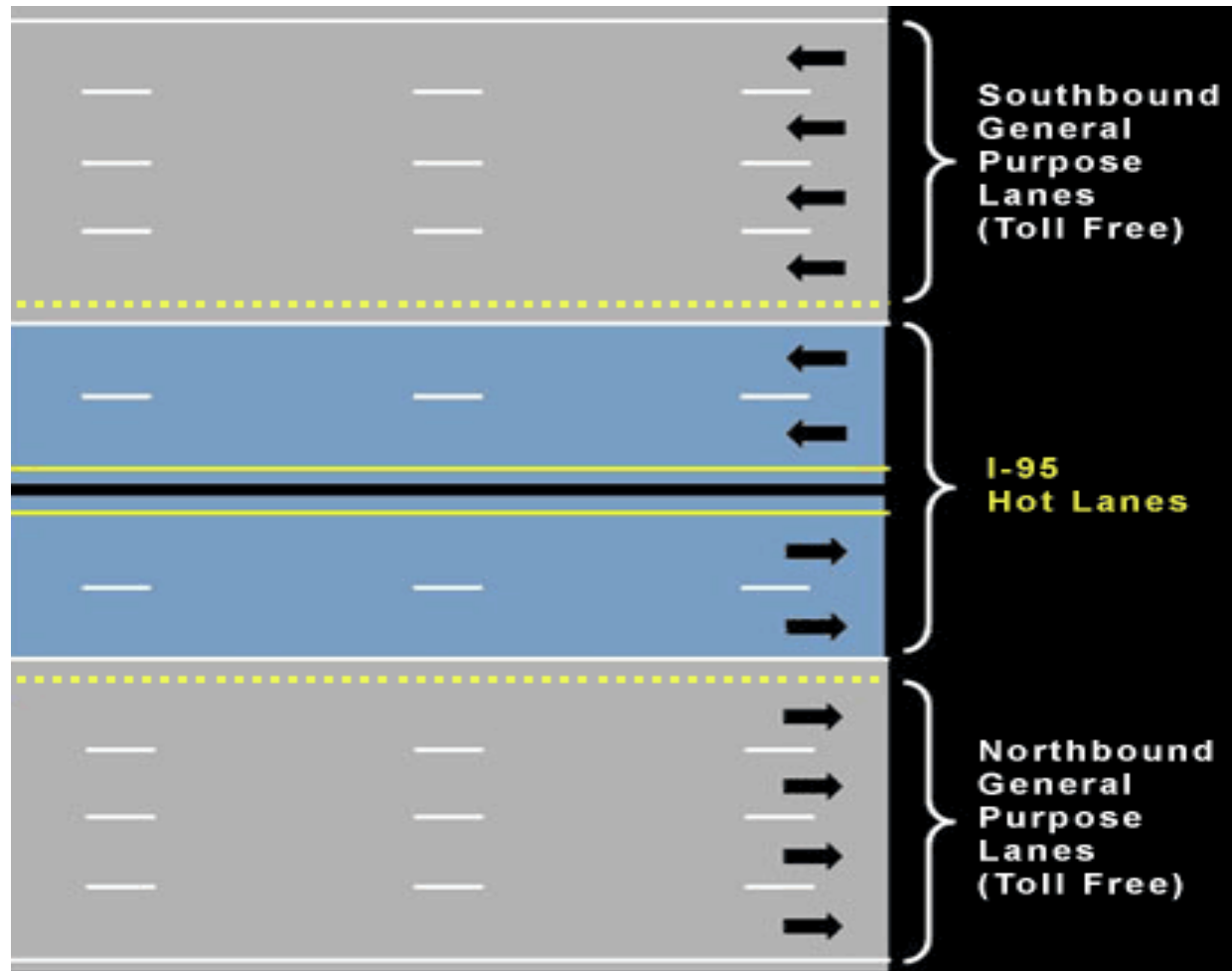
95 Express Configuration



95 Express Configuration



95 Express Configuration



95 Express

Project Segments and Construction Costs



Replace pole delineators with mountable curb

- **Proposed Alternative:** Design Alternative recommends surface mounted channelized posts separating the Managed Lanes from the general purpose lane mounted in either a 2-ft or 4-ft painted buffer.
- **VE Alternative:** Use channelized posts installed on a continuous mountable base.

Replace pole delineators with mountable curb



Replace pole delineators with mountable curb

○ Advantages:

- Less maintenance
- Less closures
- Less debris
- Less enforcement cost

○ Disadvantages:

- Increases capital cost
- Slightly longer replacement time

○ **Potential LCC Savings: \$7,700,000**

Re-stripe GP lane to a HOT Lane (2 HOT, 3 GP)

- **Proposed Alternative:** Design Alternative recommends two HOT Lanes and four General Purpose lanes using a 2-ft separator.
- **VE Alternative:** Construct HOT lanes using existing General Purpose lanes and re-stripe the roadway to provide three General Purpose lanes and with auxiliary lanes for ingress/egress to the mainline and upgrade US 441.

Re-stripe GP lane to a HOT Lane (2 HOT, 3 GP)

Florida I-95 Managed Lanes
Alternative 2A



Re-stripe GP lane to a HOT Lane (2 HOT, 3 GP)

Florida I-95 Managed Lanes
Alternative 3A



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CONSULTANTS



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Re-stripe GP lane to a HOT Lane (2 HOT, 3 GP)

○ Advantages:

- Less cost
- Maintains existing shoulders
- Less construction time

○ Disadvantages:

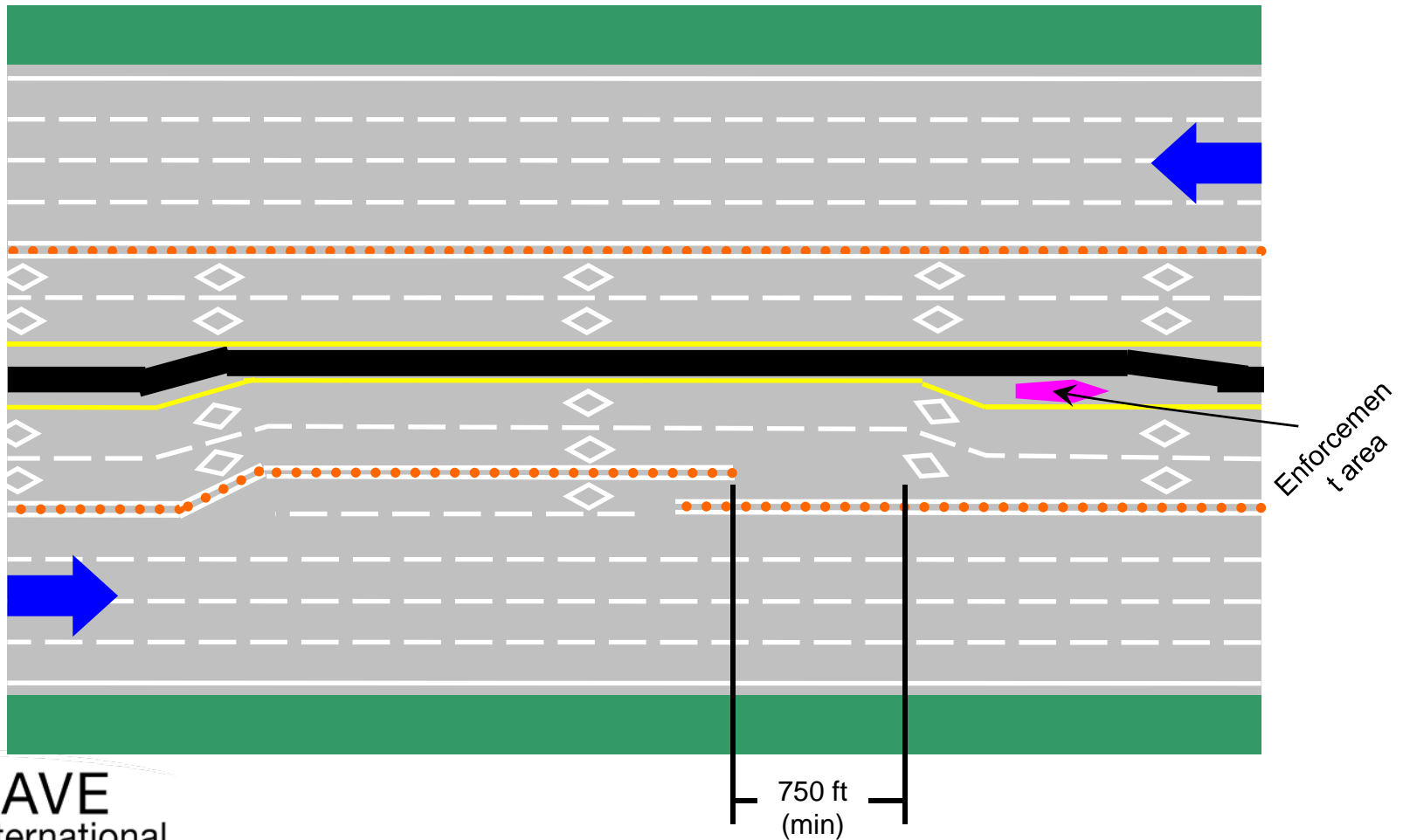
- Lose a general purpose lane
- Public perception

○ Potential Savings: **\$110,000,000**

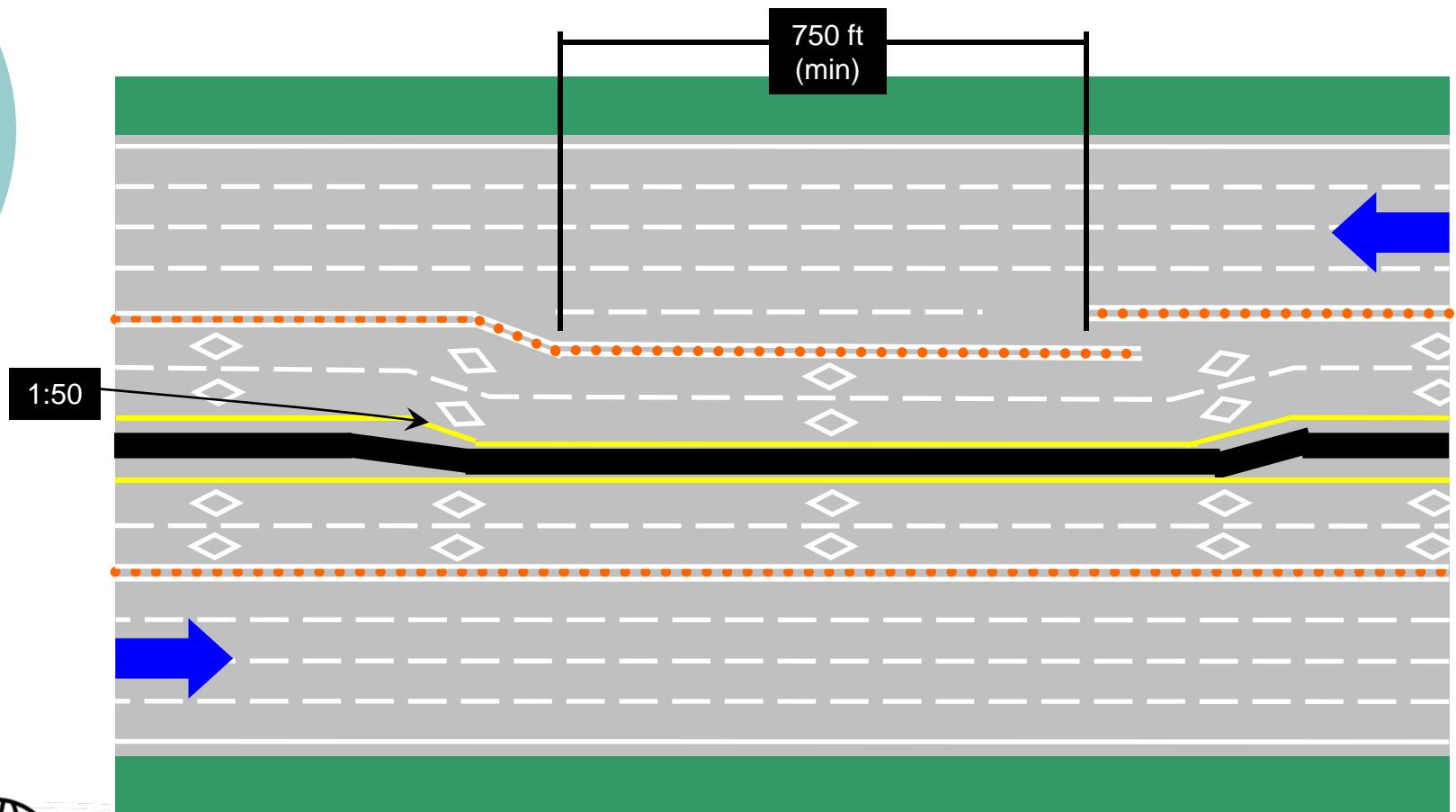
Two HOT lanes in each direction with Slip Ramps

- **Proposed Alternative:** Two HOT lanes in each direction with common ingress/egress zones separated by 2 ft buffer with delineators.
- **VE Alternative:** Construct Two HOT lane in each direction with Slip Ramps.

Two HOT lanes in each direction with Slip Ramps



Two HOT lanes in each direction with Slip Ramps



Two HOT lanes in each direction with Slip Ramps

○ Advantages:

- Optimum merging/diverging operations
- 'Built-in' enforcement/refuge areas

○ Disadvantages:

- Adds costs
- Impacts schedule
- Tougher MOT

○ Potential Value Added: (\$23,000,000)

Conclusion

- Cooperation between the Districts expedited design solutions
- Resulted in a homogeneous typical section
- Became an Award-winning project – Davis Productivity Award