

## Managed Lanes









CAMPO  
 Transportation  
 Policy Board  
 December 13, 2004




## In the Beginning: HOV Lanes



**Number of vehicles needed to carry 45 people**

Bus	
Vanpool	
3 Person Carpool	
2 Person Carpool	
Single Occupant Automobile	

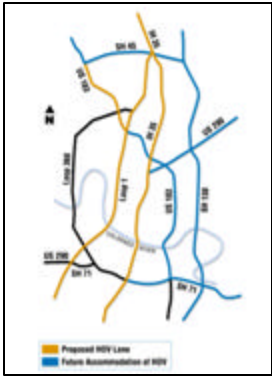



## HOV Lanes in Texas

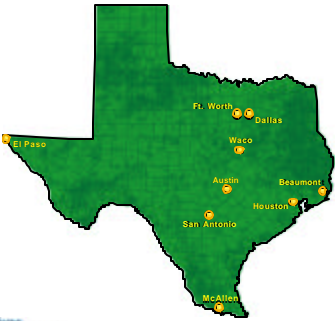

- Houston**
  - ✓ Transitways that allow carpools and vanpools
  - ✓ 120,000 daily person trips
- Dallas**
  - ✓ Variety of HOV lane types
  - ✓ 100,000 daily person trips


## Austin HOV System Plan

## Managed Lanes in Texas

## SR-91 Express Lanes Orange County, CA




Usage	Weekday	Weekend
1:00 am - 5:00 am	1.00	
5:00 am - 6:00 am	1.00	
6:00 am - 7:00 am	1.00	
7:00 am - 8:00 am	1.00	
8:00 am - 9:00 am	1.00	
9:00 am - 10:00 am	1.00	
10:00 am - 11:00 am	1.00	
11:00 am - 12:00 pm	1.00	
12:00 pm - 1:00 pm	1.00	
1:00 pm - 2:00 pm	1.00	
2:00 pm - 3:00 pm	1.00	
3:00 pm - 4:00 pm	1.00	
4:00 pm - 5:00 pm	1.00	
5:00 pm - 6:00 pm	1.00	
6:00 pm - 7:00 pm	1.00	
7:00 pm - 8:00 pm	1.00	
8:00 pm - 9:00 pm	1.00	
9:00 pm - 10:00 pm	1.00	
10:00 pm - 11:00 pm	1.00	
11:00 pm - 12:00 am	1.00	

- Design/Operation**
  - 4 express lanes, 10 miles
  - One entrance and one exit point
  - All vehicles tolled 24/7 except:
    - HOV3+ free or 50% discount
    - Motorcycles, ZEV free
  - Time-of-day tolling
- ADT**
  - Corridor 290,000
  - Express lanes 35,000
  - Exempt: 20% HOV3+
- Revenue**
  - \$26M revenue in 2003
  - Revenue use
    - 60% debt service
    - 40% operations

**Objectives:**

- Facilitate fast
- Maintain fin



### I-15 FasTrak San Diego



**Objectives:**

- M
- Generate revenue to fund transit

- **Design/Operation**
  - 2-lane reversible facility
  - 8 miles, with one entry and one exit
  - HOV2+ free, SOV tolled
  - Dynamic tolling
- **ADT**
  - Corridor 270,000
  - Express Lanes 30,000
  - Exempt: 75% HOV2+
- **Revenue**
  - \$2.2M revenue in 2003
  - Revenue use
    - 55% operation, maintenance, corridor improvement planning
    - 45% express bus service



### I-15 Expansion

**Objectives:**

- Address reverse commute
- Provide intermediate access points
- Emphasize BRT
- Sell excess capacity




### Katy QuickRide - Houston



**Objectives:**

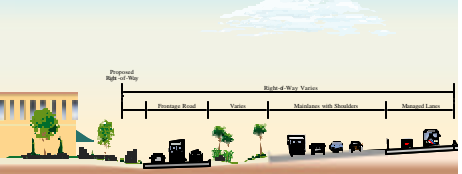

- Make better use of available capacity
- Preserve bus operating speeds

- **Design/Operation**
  - One-lane reversible
  - 13 miles, intermediate access to P&R facilities and transit centers
  - HOV3+ free, HOV2 tolled during super peaks
  - Flat fee of \$2.00/trip for HOV2 in super peaks
- **ADT**
  - Corridor 210,000
  - HOV lane 9,200
  - Exempt: 98%
- **Revenue**
  - \$150,000 in 2003
  - Revenue use: operations



### Katy Expansion

- 4 managed lanes for 13 miles
- MLs operated by Harris County Toll Road Authority
- Free flow during peak periods
- Buses free, HOV3+ free during peak periods, provision for future rail

### Why Managed Lanes?

- Generate revenue
- Offer travel options in congested corridors
- Provide higher operating speeds for buses and carpools



### Loop 1 Considerations

- What is the desired outcome?
  - ✓ Generate revenue to cover debt service, or O&M, or to pay for other improvements in the corridor?
  - ✓ Offer a free-flow alternative to congestion for motorists?
  - ✓ Provide attractive travel options – such as express bus, vanpooling and carpooling – to encourage more ridesharing?
  - ✓ Develop a BRT system with stations that facilitate transit-oriented development?
- What is the importance of revenue in relation to other objectives?
- What can physically be accommodated in the corridor?

