Managed Lanes: A National Perspective

Managed Lane Strategies

Use the following control strategies to manage a lane(s) to provide a reliable transportation option:

- Eligibility/occupancy
- Access control
- Congestion pricing
Types of Managed Lanes

- Busways
- HOV
- HOT
- Express Toll Lanes

Managed Lane History

- Bus lanes to HOV lanes to HOT lanes to Express Toll Lanes = Managed Lanes
- 2.5 miles to over 4000 miles
- 3 bus demonstrations to accepted practice
- Serving millions of trips and
- Saving over 600,000 hours daily
Benefits from Managed Lanes

**User Benefits**
- Reliable travel time
- Reduced delay
- More choices

**System Benefits**
- Greater throughput
- Increased transit & carpool use
- More modal options
- Improved air quality
- Revenue generation

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<thead>
<tr>
<th>Operational</th>
<th>Under Construction</th>
<th>Under Development</th>
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<tbody>
<tr>
<td>I-10 (Katy Freeway), Houston, TX</td>
<td>I-95 Kennedy Expressway Express Toll Lanes, Baltimore, MD</td>
<td>C-470 Express Toll Lanes, Denver, CO</td>
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<td>US 290 QuickRide, Houston, TX</td>
<td>Intercounty Connector (ICC), Montgomery Co., MD</td>
<td>US 36 Express Toll Lanes, Denver, CO</td>
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<td>I-35W MnPASS, Minneapolis, MN</td>
<td>I-495 Capital Beltway HOT Lanes, Metro DC, Virginia</td>
<td>I-25 North Express Toll Lanes, Denver, CO</td>
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<td>I-394 MnPASS, Minneapolis, MN</td>
<td>I-15 FasTrak Expansion, San Diego, CA</td>
<td>I-680 HOT Lane, San Francisco CA</td>
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<td>I-680 Express Lanes, Alameda Co., CA</td>
<td>I-15 HOT Lanes, San Diego, CA</td>
<td>I-5 HOT Lanes, San Diego, CA</td>
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<td>I-805 Managed Lanes, San Diego, CA</td>
<td>GA 400 HOT Lanes, Atlanta, GA</td>
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<td>SR 91 Express Lanes, Orange County, CA</td>
<td>I-75 / I-575 HOT Lanes, Atlanta, GA</td>
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<td>SR 167 HOT Lanes, Seattle, WA</td>
<td>I-285 HOT Lanes, Atlanta, GA</td>
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<td>I-15 Express Lanes, Salt Lake City, UT</td>
<td>I-595 Express Lanes, Fort Lauderdale, FL</td>
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<td>I-25 HOT Lanes, Denver, CO</td>
<td>Phase 2 I-95 Express Toll Lanes, Miami, FL</td>
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<td>I-95 HOT Lanes, Miami, FL</td>
<td>Loop 1 (MoPac), Austin, TX</td>
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**HOT Lanes**

- The most common priced managed lanes – HOV lanes plus an exception is provided to allow those that don’t meet the occupancy to pay a toll
  - Maintain increased person-throughput
  - Dynamic pricing to control flow
  - Conversion of HOV to HOT
  - New capacity HOT
  - Revenue neutral

**Express Toll Lanes**

- All vehicles are charged a toll
- Dynamic pricing to control flow
- Provides greater opportunities for producing a steady revenue stream – thus expedites new capacity
- Some allow a discount for HOV vehicles
What have we learned

- Managed Lanes have worked
- Managed Lanes are flexible by their nature, and can evolve based on changing demand, technology and commute patterns
- Public outreach is very important
- They fit a wide range of needs
- Part of a comprehensive congestion management program
- Concepts are still misunderstood

Future Trends

Managed Lane Regional Networks
Future Trends (cont.)

- **Design:** Most projects will continue to be single lanes, but more new capacity projects with multi-lane systems
- **Growth:** Managed lane mileage incorporating congestion pricing will double in 5 years, double again in a decade
- **Implementation:** At least half will be implemented by “new” agencies—MPO’s, regional toll authorities, and private partners
- **Operation:** Hours of operation expanding, free use decreasing to 3+, many projects will require all to carry a transponder

Future Trends (cont.)

- **Funding:** Financing and delivery utilizing new partnerships
- **Lane Management:** Maintaining effective enforcement and lane reliability will continue to be challenging
- **Technology:** Lower costs, greater convergence in personal devices that replace the transponder and improve interoperability
Future Trends (cont.)

- **Transit**: Most areas will see improved transit integration and reliability
- **Public acceptance**: Increasing satisfaction if benefits are assured, but institutional barriers public/political understanding will remain a challenge

Where we are going

- Growth: 6000 lane-miles by 2020
- Toward real-time management: 24/7 operations and higher minimum occupancies (largest cities)
- More reliance on automation
- Different goal-based outcomes: conversions vs. new capacity
- Diverse sponsors, new management and delivery approaches
- More mega-projects: dual roadways, regional systems, better connectivity
- More transit coordination/redundancy
- More customer focused
Issues to face

- Adopting the latest technology
- Operational and design flexibility
- Enforcement
- Balancing modal needs
- Agency resources and policy consensus
- Consistency of practice
- Public and political support (and level of engagement)
- Using performance monitoring/reliability
- Funding and financing
- Embracing different approaches for different goals

Questions?

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