### Waves of Change... The Next Generation of HOV





John Barton, P.E. WASHTO Conference July 14, 2009 9:00-10:15 AM - Session Three

## The Katy Freeway Prior to Reconstruction...

- Insufficient Capacity for the Volume of Vehicles Using the Facility
  - The Katy Freeway carried more than 200,000 vehicles per day with congestion for 11 hour periods
- Initially constructed in the 1960's, pavement was 30 to 40 years old
  - Many Sections Have Reached the End of Their Useful Life
  - Maintenance costs nearly \$8M a year.
  - That's \$197,500 per mile, almost four times the normal maintenance cost of \$50,000 per mil per year.





### The Katy Freeway Prior to Reconstruction...

- Frequent Occurrence of Accidents in the Urban Portions of the Corridor
- Areas of the Mainlanes and Frontage Roads Subject to Flooding during Intense Rainfall Periods
- ROW Served as a Major Utility Corridor
- Existing HOV Unable to Serve Travel Demand
  - Inbound and outbound traffic were equally congested
  - Existing access points reduced the HOV lane's ability to serve many users



## The Katy Freeway Reconstruction Program

- Reconstruction of 25 miles of Interstate Freeway under traffic; including 2 miles on I-610
- 2 Freeway-Freeway Interchanges
- 27 Grade Separated Intersections
- Nine Major Construction Contracts
- Total Program Cost \$2.8 Billion







# Planning for the Future

- Major Investment Study (MIS) launched in 1995
- TxDOT officials challenged with identifying future transportation needs for the corridor
- Environmental and community impacts assessed with input from the public and local agencies, MIS concluded in 1997
  - Locally Preferred Alternative (LPA) added one general purpose lane in each direction between IH 610 and Katy and auxiliary lanes to increase capacity
  - LPA also included the provision for two special use lanes in both directions between IH 610 and SH 6
- Sound mitigation strategy put in place that allowed for the management of congestion well into the future
- Record of Decision (ROD) issued by FHWA in 2002

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### Local Transportation Agencies Working Together

- Primary Funding FHWA & TxDOT
- Joint Partnership between, FHWA, TxDOT, Harris County and METRO
- Tri-Party Agreement
  - Among FHWA, TxDOT & Harris County
  - First Project in the Nation to Construct Toll Lanes on an Existing Interstate Highway
  - Contribution of \$250 Million by Harris County













### Public Information... A Critical Element

- Comprehensive Program Web Sites
  - <u>www.katyfreeway.org</u>
- Public Information Office Established at Start of Construction
- Quarterly Hi-Light Newsletters
- Collaborative Messaging Working with Agency Partners
  - <u>www.katymanagedlanes.org</u>
- Targeted Outreach Campaigns for Complex Construction Activities
- Proactive Media Relations





### Katy Freeway Reconstruction Program Features

- Additional General Purpose Lane Capacity
  - Now four (4) continuous through lanes
  - As many as eight (8) freeway lanes at connector, entrance and exit ramps to ease traffic flow
- Enhanced Mobility & Safety Features in Design
- Visionary Strategy to Manage Corridor Congestion Into the Future
  - Single reversible HOV lane converted to four (4) managed lanes (2 toll-managed lanes in each direction)
  - Expanded travel options and additional capacity accessible to all driver
- Additional Frontage Road Lanes
- Corridor Wide Aesthetic and Landscape Master Plan
- Improved Drainage and Flood Control



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IH 10/Katy Managed Lanes

# The I-10/Katy Freeway Managed Lane Concept





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### Why Managed Lanes on the Katy?

- One part of the bigger picture
- More people need an incentive to travel in fewer vehicles.
- Concept offers an innovative way to take advantage of added capacity



<sup>«</sup>The Katy Managed Lanes help to reduce travel times, improving traffic flow and safety for commuters by allowing single occupant vehicles access to the access controlled lanes further relieving congestion in the main lanes. <sup>»</sup>

## The Next Generation of HOV Options

- An innovative tool used to ease traffic congestion during peak travel periods.
- Unlike traditional freeway or tollway lanes, the Katy Managed Lanes provide a freeflow of traffic at or above 45 miles per hour 24 hours a day.
- Offer reliable travel times for buses and HOV riders while opening up unused lane capacity for single drivers willing to pay a toll for travel time savings.





IH 10/Katy Managed Lanes

# The Katy Concept

- Begins West of SH 6 to IH 10\IH 610 Interchan
  - Approximately 12 miles
  - 4 access points eastbound
  - 5 access points westbound
- Four Lane Facility
  - 2 Lanes in each direction
  - 3 Lanes at the toll area



- Tolls Collected by Electronic Toll Collection Equipment (EZ-Tag)
  - Three toll collection areas
  - Overhead signage indicates appropriate lane based on vehicle occupancy
- Dynamically Priced to Manage Congestion
- Toll Lanes Operated by HCTRA
  - Terms delineated in Tri-Party Agreement among FHWA, TxDOT & Harris County







# Good for Houston...Good for You

- Combined with the recent freeway expansion, the new Katy Managed Lanes mean more options for everyone.
- By making underused High Occupancy Vehicle (HOV) lanes available to Single Occupancy



Vehicle (SOV) drivers who pay a toll, the new managed lanes could mean a more predictable trip for IH 10 commuters.

 With Houston's population expected to grow by two million in the next four years, making our HOV lanes work harder and more efficiently is not only the smartest alternative, but an inevitable one.