

# STREET SMARTS: MANAGING RAIL OPERATIONS IN TRAFFIC

## How Teamwork Tamed Traffic in the Wild West

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2013 Rail Conference



# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

## METRO History and Services

- 1973, Texas State Legislature authorized creation of local transit authorities
- 1978, Houston-area voters created METRO and approved one-cent sales tax to support operations
- 1,230 Buses
- 7.5-mile light rail service and 16 rail stations
  - From University of Houston-Downtown to south of Reliant Park
- METROLift
- HOV Lanes
- 29 Park & Ride Lots and 20 Transit Centers



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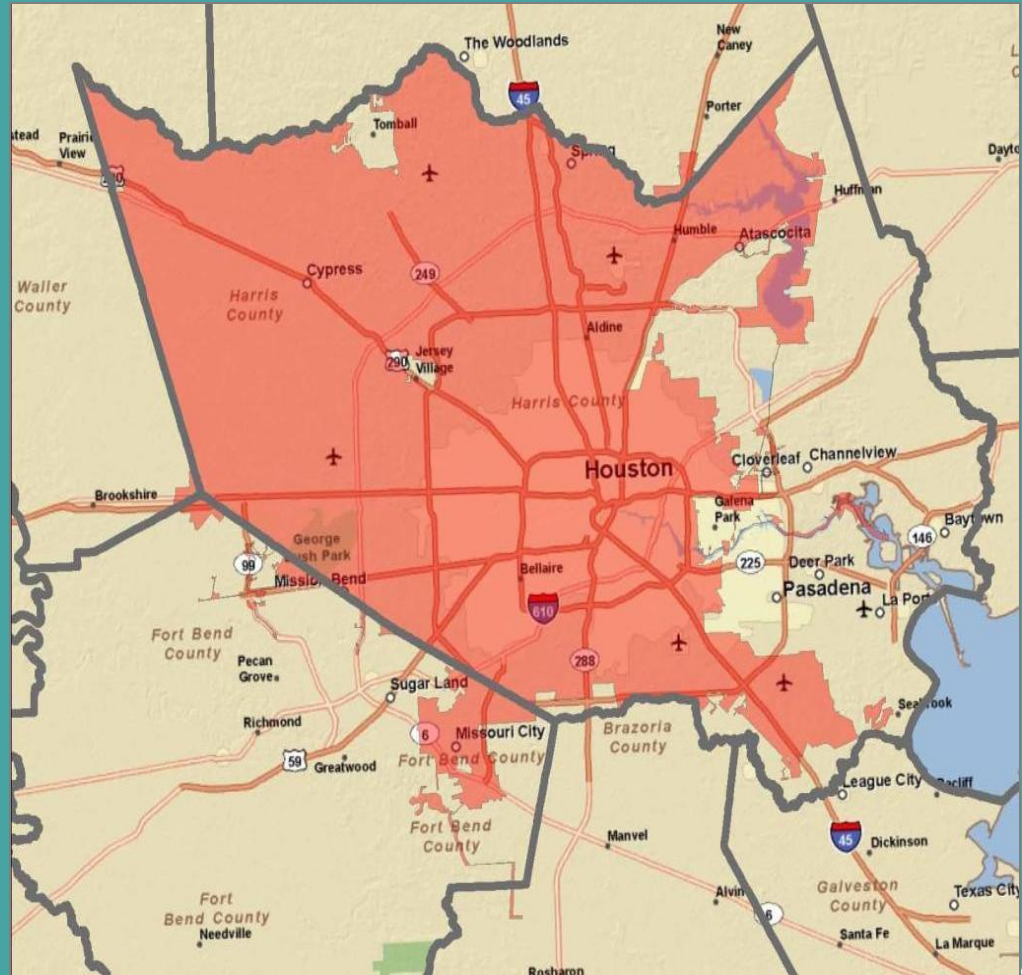
# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

## METRO Service Area

- 1,285 square miles

## Ridership FY2011

- Local Bus – 58M
- Park & Ride – 7.5M
- METRORail – 11.5M



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# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST





# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

- Stampede in the Central Business District



# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

- Conditions and Decisions prior to Red Line 2004
  - Design was performed with little City involvement
    - Result “Red Tag Room”
  - No City of Houston staff knowledge base on traffic timing with rail line
  - Control of cabinets & timing of signals were controlled by METRO
  - Traffic & communication cabinets were shared

# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

- Issues with Signal Timing post Revenue Service of Red Line
  - All red light conditions snarled traffic in Downtown Houston
  - All 311 calls regarding light timing in the Central Business District were forwarded to METRO
  - METRO incurred all maintenance cost associated with traffic signals (*> \$1.5M per year*)
  - METRO incurred additional traffic liability

# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

- Expansion of Houston Rail System
  - Discussions begin for new METRO-COH Interlocal Agreement





# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

- Improvements to Previous Interlocal Agreement

*“The City will operate and maintain the Traffic Signal System...”*

- Design review with timeline for City approval
- City to maintain signal timing on all rail lines
- Clauses in the Agreement requires City to adjust signal timing should METRO’s level of service be affected
- Dedicated fiber runs for both COH and METRO
- Traffic & communications cabinets are separate

# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

## Signal Timing Evolution

- Red Line
  - Predictive Priority
    - Light Rail Priority of Signals for three sequential signals
- METRO Rail Expansion
  - Combination of Priority and Queue Jumping

# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

- Traffic Challenges of Shared Curb Lanes in Downtown Houston
  - Entry into parking garages
  - Exits from garages
    - Signage on private property
    - Pedestrian movements
    - Impacts to level of service
  - Loading Docks
    - Delivery trucks backing into loading docks

# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

- Solutions
  - Entry into garages
    - Off duty officers
    - Queue Jumping
  - Exits from garages
    - Static and dynamic signs with access and use agreements
    - Off duty officers
    - Education program for downtown stakeholders

# HOW TEAMWORK TAMED TRAFFIC IN THE WILD WEST

## QUESTIONS



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