

Bellaire Blvd. Signature Bus Service

Presented at the
TexITE Winter Meeting
February 3, 2007

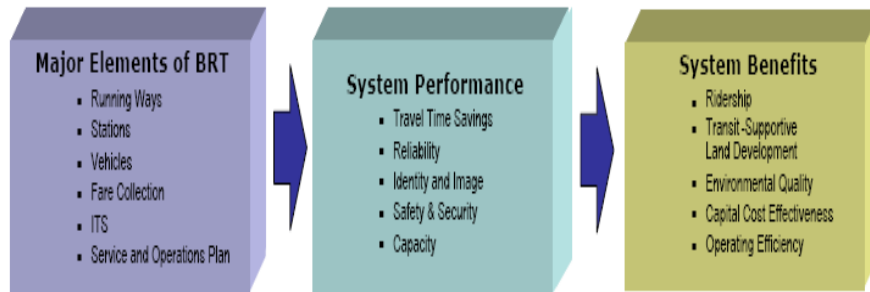
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Existing 2 Bellaire Route Characteristics

- Local Fixed Route Bus Service
- Very Heavily Traveled: 11,000+ weekday boardings
- 100 +/- weekday trips each direction
- 5-7 minute headways during peak
- 15 minute headways off peak

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Source: Characteristics of Bus Rapid Transit, FTA, 2004

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BRT Element - Service and Operating Plans

- Route Length **9 miles**
- Route Structure **9 - stop overlay**
- Service Span **Peak period only**
- Frequency of Service **15 minutes**
- Station Spacing **1 mile average**
- Method of Schedule Control **Schedule**

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BRT Element - Running Way

- | | |
|---------------------------|----------------|
| • Running Way Segregation | Limited |
| • Running Way Marking | TBD |
| • Guidance (Lateral) | No |

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BRT Element – Stations

- | | |
|----------------------|--------------------------------|
| • Station Type | Enhanced bus shelter |
| • Platform Height | 6-inch curb |
| • Platform Layout | Linear |
| • Passing Capability | N/A |
| • Station Access | Typical urban sidewalk* |

* Exceptions at Existing Transit Centers, Gessner

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BRT Element – Vehicles

- Vehicle Configuration **40 ft. transit bus**
- Aesthetics **Unique brand & colors, premium interior**
- Passenger Circulation **No fare box, low floor Enhancement**
- Propulsion **Hybrid diesel - electric**

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BRT Element - Fare Collection

- Fare Collection Process **Onboard**
- Fare Transaction Media **Q-card only**
- Fare Structure **Local fare**



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BRT Element – Intelligent Transportation Systems

- Vehicle Prioritization **Yes**
- Driver Assist and Automation Technology **No**
- Operations Management **Standard**
- Passenger Information **Next bus arrival**
- Safety and Security **On-board cameras, plus station features TBD**

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Bellaire Blvd. Signature Route Characteristics (at start-up)

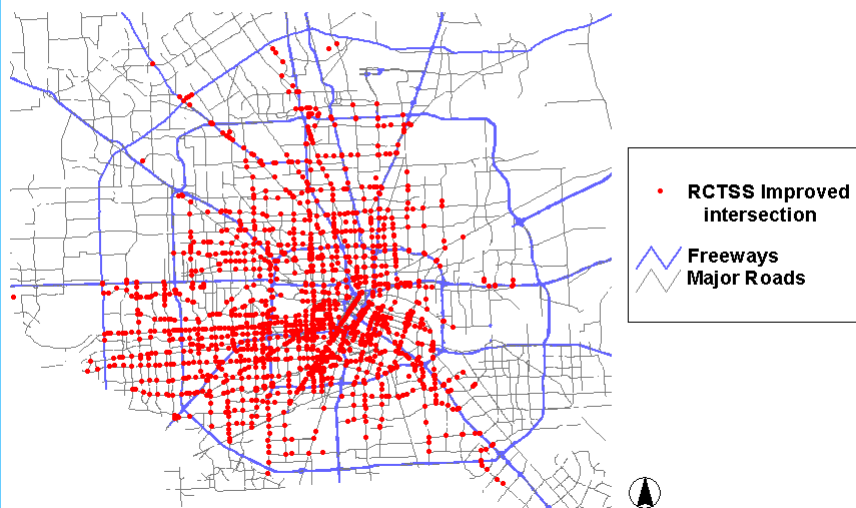
- Limited-stop fixed route bus service
- 1000 +/- weekday boardings
- 15 minute headways during peak
- 20-30% faster end-to-end running time

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Traffic Engineering Objectives

- Reduce run-time
- Primary run-time savings come from limited stop route design
- How can we deliver additional time savings?
 - Coordinate signal timing among jurisdictions
 - Signal optimization
 - Transit signal priority
 - Bus stop relocation
 - Queue jumping (?)

METRO RCTSS Program



RCTSS System Components

- Transtar
 - Central traffic monitoring and control elements
- Intersections
 - Distributed traffic control elements
 - Transit Signal Priority (TSP) detectors
- Communications
 - Intersections-to-TranStar
 - METRO facility-to-facility
- Buses
 - TSP emitters

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TRANSIT SIGNAL PRIORITY - Implementation Process

Conduct before studies for General purpose (GP) Traffic and Transit – baseline

Collect data – and develop timing model – present findings

Optimize the system – deploy new timing plans – lots of fresh data!

Conduct before and after studies to measure improvement - share

Review and discuss with jurisdictional partners

Deploy TSP Control strategies – monitor and adjust

Conduct after studies for GP and Transit – adjust

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Project status

- On schedule for June 2007 start of service
- Vehicles in production
- Shelter concepts, stop locations approved
- “Before” data collected
- Signal conditions verified
- Optimization work to begin this month

Thank You!