Lane Transit District’s EmX Project

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Presentation Outline

• EmX Project Background
• Franklin EmX Corridor
• EmX Experience
• Further Corridors
• Future Enhancements
Oregon Population: 3,745,455

Willamette Valley Population: 2,621,800
70% of State
BRT Decision Process

• Need for improved transit service
  – Increased congestion
  – Community desire for higher quality transit
  – State and local mandates

• Options considered
  – Enhanced conventional service
  – Light rail/streetcars
  – BRT

• BRT selected as preferred transit strategy as part of Regional Transportation Plan
“Like” Rail rather than Light Rail
BRT Objectives

• Create system for the future
  – As much exclusive lane as possible

• Create rail-like image
  – Unique name and identity
  – High quality stations
  – Attractive vehicle

• Ease of use
  – Straight-forward routing
  – High frequency (10 minutes)
## LTD’s EmX System

<table>
<thead>
<tr>
<th>Element</th>
<th>Included</th>
<th>Planned</th>
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<tbody>
<tr>
<td>Exclusive transitways</td>
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<tr>
<td>Transit Signal Priority</td>
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<tr>
<td>Wider Stop Spacing</td>
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<td>Near-Level Boarding</td>
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<tr>
<td>Eliminate On-Board Fare Collection</td>
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<tr>
<td>Improved Stops and Stations</td>
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<td>Real-Time Passenger Information</td>
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<tr>
<td>Unique Vehicle Design</td>
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<tr>
<td>Precision Docking</td>
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<td>Lane-Keeping System</td>
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<tr>
<td>Unique Identity</td>
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Franklin EmX Corridor
Project Objectives

• Be competitive with autos
• No increase in auto travel times
• No impact to street trees
• Minimize displacements
• Enhance pedestrian/bicycle facilities
• Enhance corridor and improve landscaping
• Gain approval from all jurisdictions
• 100% Exclusive right-of-way
Franklin EmX
Key Dates

1996   BRT Concept Developed/TAC formed
1997-1999  BRT Steering Committee/MIS/Outreach
2000    Draft Environmental Assessment
2001    Final EA/Local Approval & Engineering
2002-2003  Vehicle selection
2004    Groundbreaking/Construction begins
2006    Vehicle delivery/Operator Training
January 2007  Open for Service
Corridor Design Process

- Divide corridor up
- Develop “seed” ideas
- Meet with every property owner/occupant
- Hold design charrettes
- Open houses
Visualizations
Franklin EmX Facts

- Four-mile corridor & eight stations
- 15.5-minute travel time (projected 16-minutes)
- $6 Million per mile (typical LRT is $50 M per mile)
- 80% federal discretionary funds
- 25% of EmX riders are new transit users
- Free fare on route (applies to 9% of riders)
- Lower operating costs per rider than regular bus
Runningway Configurations

- Median, One-way lane – curb separated
- Median, Bi-directional lane – curb separated
- Median, Bi-directional – no barrier
- Curb side, Bi-directional – no barrier
- Curb side, One-way lane - no barrier
- Mixed traffic operation
Curbed Transit Lanes
Median traversable Transit Lane
Transit Lanes
Traffic Signal Priority
EmX Stations
Curb-side Stations
Single-sided median Station
Station approach angle critical for docking
Public Art
• 63-foot articulated bus
• Domestic manufacturer
• Hybrid-electric propulsion
• Doors on left and right side
• Bikes on board
Bikes on Board
Door Lift/Ramps
Shared lane at intersection
Agate Station Video
Operations

• Opened January 2007
• Ridership increasing
• Bicycle accommodation
• Wheel chair bay availability / preference
• Customer satisfaction high
Operations (Continued)

• Vehicle issues
• Driver variability
• Operational changes
• Crashes
• Traffic signal limitations
• Single vs dual EmX lanes
• Community attitude
Gateway EmX Corridor
Gateway EmX
Key Dates

2001  Corridor Selection
2001- ongoing  Public Outreach
Spring 2006  LPA Approval
Fall 2006  Completed EA/ Public Review
October 2007  95% Final Design Complete
Winter 2008  Submit for Construction Permits
Spring 2009  Start Construction
Fall 2010  Open for Service
Pioneer Parkway East (existing)
Pioneer Parkway East  (with transit lane)
Pioneer Parkway (existing)
Pioneer Parkway (with transit lanes)
Cost: $41.3 Million

- $33.0 M – Federal
- $5.4 M – ConnectOregon
- $2.9 M – LTD Match
Third EmX Corridor
• Third EmX corridor
• Incorporated into broader transportation study of west Eugene
• Preparing DEIS
• Planned service start 2015
Vehicle Assist and Automation

Lane Keeping

Precision Docking

Mechanical

Optical

Magnetic
Magnetic Guidance
Conclusions

- Proof of Concept
- Mode less important
- Corridor ridership rather than community size