Twin Cities Region
Bus Rapid Transit Plans

ULI Minnesota Workshop
Connecting Bus Rapid Transit to the Community
December 15, 2009

John Levin
Director of Service Development
Metro Transit
Metropolitan Area Transit

- Metropolitan Council
  - Metro Transit
    - Local & Express Bus
    - Hiawatha LRT
    - Northstar Commuter Rail
  - MTS
  - Metro Mobility
  - TransitLink
- Suburban Transit Authorities
2030 Transportation Policy Plan

- Long range transportation plan
- Multimodal - highways, transit, airports, freight, biking, walking
- Fiscally constrained
- Stakeholder input / Public review
Policy 4: Coordination of Transportation Investments and Land Use

- Coordinate transportation investments with land use objectives to support the region’s economic vitality and quality of life.
- **Strategy 4a. Accessibility:** Promote land use planning and development practices that maximize accessibility to jobs, housing and services.
- **Strategy 4b. Alternative Modes:** Coordinate transportation investments and land development to support travel by transit, walking and bicycling.
- **Strategy 4c. Increased Jobs and Housing Concentrations:** Coordinate transportation investments and land development along major transportation corridors to improve the connection between jobs and housing.
- **Strategy 4d. Transit as Catalyst for Development:** Transitways and the arterial bus system should be catalysts for the residential and commercial development.

*Metro Transit*
Policy 15: Transitway Development and Implementation

- The Metropolitan Council will strongly pursue the cost-effective implementation of a regional network of transitways.
- **Strategy 15a. Transitway Modes:** Transitway modes will include commuter rail, light rail, **bus rapid transit**, and express buses with transit advantages.
- **Strategy 15e. Enhanced Transit Service Along Transitways:** Support enhanced transit service and integration of existing routes on transitways.
- **Strategy 15f. Transitway Coordination with Other Units of Government:** Coordinate transitway planning and implementation with other jurisdictions including Mn/DOT, CTIB, regional railroad authorities, local units of government and transit providers.
- **Strategy 15g. Transitways and Development:** Work with local units of government to ensure that transitways promote efficient development and redevelopment.

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TPP Goal: Double Ridership by 2030

Total Riders by Mode, 2007, 2020, 2030

- **Base Bus System**
- **Bus Rides shifting to Bus Transitway**
- **Bus Transitways**
- **Bus Rides shifting to Rail**
- **Bus Transitways**
- **Rail Transitways**

2007:
- 73.3M (2003)
- 60,000,000
- 120,000,000
- 140,000,000
- 89.3M

2020:
- 118,000,000
- 120,000,000
- 145,000,000
- 150,000,000

2030:
- 145,000,000
- 150,000,000
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**Base Bus System**

**Bus Rides shifting to Bus Transitway**

**Bus Transitways**

**Bus Rides shifting to Rail**

**Bus Transitways**

**Rail Transitways**

**Metro Transit**

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Three Types of BRT

• Regional definition of different types of BRT
  – Dedicated Transitway BRT
  – Highway BRT
  – Arterial BRT
Dedicated Transitway BRT

- Operates in dedicated right of way
  - Few grade grossing and intersections
- Dedicated, high-amenity stations
- Stops every ½ to 2 miles
- Examples: Los Angeles Orange Line, Cleveland HealthLine, Eugene EmX
Highway BRT

• Operates on highway in congestion-free right-of-way
  – Bus-only shoulders or HOV/HOT lanes
• Stops every 2 to 5 miles. Online stations where possible
• Combination of express and station-to-station services
• Examples: Cedar Ave BRT, I-35W BRT
Arterial BRT

- Operates on arterial streets, in dedicated right of way if available.
- Stops every ½ to 1 mile. Enhanced shelters at stops, may be shared with local routes
- Examples: LA Rapid Bus, KC Max
Regional BRT Corridors

• Highway BRT
  – Cedar Ave BRT – in construction
  – I-35W BRT – in construction

• Corridors to be studied
  (BRT is an option)
  – Bottineau Corridor
  – Central Ave / Highway 65 Corridor
  – I-35W North Corridor
  – Rush Line Corridor
  – Highway 36 / Northeast Corridor
  – I-94 East Corridor

• Arterial BRT network
Cedar Avenue BRT

- 16 miles from Mall of America to CSAH 70 in Lakeville
- Bus Rapid Transit on bus-only shoulders
- 3 on-line stations
- 5 park & ride stations
- Pedestrian/bikeway facilities
Cedar Ave BRT First Phase

- Adding 9 miles of dedicated bus shoulder
- Upgrading 9 miles of pedestrian/bike facilities
- Pedestrian skyway over Cedar Avenue at Apple Valley Transit Station
- Transit signal priority
- Modified intersections from preliminary engineering layout to make more “pedestrian friendly” crossings
Streetscape Concept – Commercial Area
Cedar Ave BRT Service Plan Concept

- Direct express service to downtowns and U of M
- Station to Station service to Mall of America area
Apple Valley Transit Station

• 750 space park & ride
• Connections to:
  – Minneapolis, St. Paul, Burnsville, Eagan, Apple Valley, Lakeville, Rosemount
• Close to housing employment, retail, dining, services
• 4,620 daily rides (90% express)
2005 I-35W Bus Rapid Transit Study

- Corridor extends from Lakeville to Minneapolis
- Buses operating in shared Bus/HOV lane
- Multiple median online stations
- Mix of express, station-to-station, local service
- Multi-phase implementation
I-35W BRT Service

• BRT Station-to-Station service
  – All day, frequent service
  – All stop and limited stop variations

• BRT Express service

• Local connections / feeder routes
  – Coordinate with existing routes
  – American Blvd proposed for Arterial BRT
<table>
<thead>
<tr>
<th>Station</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Future</th>
<th>Park &amp; Ride</th>
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<td>46th Street</td>
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<td>82nd Street / American Blvd</td>
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<td>98th Street</td>
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<td>Burnsville South (future)</td>
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<td>t/b/d</td>
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* Lake Street online station on outside shoulder
I-35W / 46th Street Online Station
Potential BRT Operations on 35W
Twin Cities Arterial BRT Planning

- 9 corridors proposed
  - Chicago Ave
  - Nicollet Ave
  - Broadway
  - Central
  - Snelling
  - East 7th Street
  - West 7th Street
  - Robert Street
  - American Boulevard
2010 Arterial BRT Study

- Options for service design, stop spacing and location, fare collection, vehicle design, signal priority, branding, etc.

- Screening corridors
  - Right of Way, options for dedicated lanes, queue jumps, etc.
  - Estimating speed & reliability, ridership, costs
  - Evaluation

- Implementation Plan
  - Detail operations plans, ridership, etc. for each corridor
  - Station concepts and other capital needs
  - Recommendations for fare collection, branding, vehicle design, etc.
TOD’s create less traffic

• TOD residents are
  – Take fewer overall trips
  – Five times more likely to commute by transit
  – Twice as likely not to own a car
• Higher density mixed land uses
  – Mean less distance to destinations
  – Can replace auto trips with bike or pedestrian trips
• Self-selection is responsible for up to 40% of TOD ridership increment

From: TCRP Report 128: Effects of TOD on Housing, Parking, & Travel, Cervero & Arrington, 2009
## Land Use Planning Process During Transitway Project Development

### Transitway Project Process

<table>
<thead>
<tr>
<th>Regional System Plan, Corridor Priorities, Feasibility Study</th>
<th>Alternatives Analysis</th>
<th>Preliminary Engineering</th>
<th>Final Design</th>
<th>Construction</th>
<th>Operation</th>
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<tbody>
<tr>
<td>Regional TOD guidance</td>
<td>Land Use Vision</td>
<td>Station Area Plans</td>
<td>Implementation Strategy</td>
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<td>Local comprehensive plans</td>
<td>Station Area Concepts</td>
<td>Zoning Changes</td>
<td>Station Area Specific Plan</td>
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<td>Market Study</td>
<td>Financial Plan</td>
<td>Construct infrastructure</td>
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<td>Streetscape Design</td>
<td>Issue development RFP’s</td>
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<td>Land Assembly</td>
<td>Negotiate joint development</td>
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### Land Use Planning & Development Process
Thank You!

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Metro Transit

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