Streetcar Context in the Twin Cities Region
Modern Streetcar vs. Light Rail

Modern Streetcar

- Mixed-traffic lanes with cars
- Single car trains (~70’ long)
- ¼ mile stop spacing
- Short /circulator trips
- $30-$60 million/mile

Light Rail

- Tracks separated from cars
- 2-3 car trains (each ~90’ long)
- ½ to 1 mile stop spacing
- Longer trip distances
- $80-$125 million/mile
Modern Streetcar vs. Light Rail
Transportation Policy Plan

Current language on streetcars (Page 151):

• …high-density areas with short average passenger trip lengths…
• …shoppers and visitors…
• …development tool for local units of government…
Current language on streetcars (Page 151):

• Council collaborate with local units of government to determine where and when streetcars are appropriate

• ...(if) positive, significant, and cost-effective transportation benefits beyond bus, BRT…local, regional, federal funding

• ...(if) pursued primarily for development outcomes…primarily local funded

• Regardless, streetcars should integrate seamlessly
Urban Context – Arterial Corridors

Transportation Policy Plan Recommends:

• Expanded and improved arterial routes
• Arterial BRT improvements where beneficial

Source: Metropolitan Council 2030 Transportation Policy Plan (2010)
Policy Considerations for Role of Streetcars in the Region
Transportation Policy Plan – Transit Market Areas

<table>
<thead>
<tr>
<th>Market Area</th>
<th>Typical Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 1</td>
<td>Express, Urban Radial, Urban Crosstown, Downtown Circulator</td>
</tr>
<tr>
<td>Area 2</td>
<td>Express, Urban Radial, Urban Crosstown, Suburban Local</td>
</tr>
<tr>
<td>Area 3</td>
<td>Express, Urban Radial, Suburban Local, Circulators, General Public Dial-a-Ride*</td>
</tr>
<tr>
<td>Area 4</td>
<td>Peak Period Express, General Public Dial-a-Ride</td>
</tr>
<tr>
<td>Area 5</td>
<td>General Public Dial-a-Ride</td>
</tr>
</tbody>
</table>

* Market Area 3 Dial-a-Ride is appropriate in some circumstances

- ADA paratransit service follows federal and state regulations in the regular route service area
- Additional details on market areas and service standards are available in Appendix G
- Market area geography was calculated at the census block group level

Source: Metropolitan Council 2030 Transportation Policy Plan (2010)
Matching Transit Modes to Markets?

Frequent, all-day service

Streetcar/Circulator
Urban Local Bus
Arterial BRT/Rapid Bus
Light Rail
Dedicated Busway BRT
Highway BRT
Express Bus w/ Transit Advantages

Peak-period service

Suburban Local Bus
Commuter Rail

← Transit Market Areas →

Frequent Transit Users
Commuter Markets
Access Minneapolis Primary Transit Network

• Performance Criteria
  – At least every 15 minutes, 18 hours a day, 7 days a week
  – Reliable, on-time
  – At least 30% of speed limit

• Bus or rail

• Land Use/Transit Coordination
  – Direct growth/density to transit
  – Grow/improve transit through density
2007 Streetcar Feasibility Study

- Based upon Primary Transit Network
- Streetcar Study Goals:
  - Increase transit ridership, especially near downtown
  - Increase the attractiveness of transit to new markets
  - Provide connections and between regional transit and neighborhoods
  - Catalyze and organize development around a permanent transit investment
2007 Streetcar Feasibility Study

• 7 corridors recommended for long-term network
  – Central
  – 4th/University
  – Chicago
  – Nicollet
  – Hennepin
  – West
    Broadway/Washington
  – Midtown Corridor
Preferred Transit Network
St. Paul Comprehensive Plan (2010)

- Streetcar Feasibility Analysis currently underway in St. Paul
- Corridor recommendations and priorities this summer-fall (2013)
National Streetcar Experience

• Growing interest but still only a few examples
• Short corridors, 1-4 miles
• $50-$200 million capital cost
• High capacity, high-frequency service
• Rarely replaces local bus
• Primarily connects major destinations (downtown, entertainment, universities, major redevelopment sectors)
Role of Arterial BRT?

More Effective

• Focus on improving speed and service frequency
• Reinforce broader urban transit network
• Enhance experience for many bus riders
• Lower cost allows for widespread, nearer-term, and faster implementation
Role of Arterial BRT?

Less Effective

- Less visible improvement for non-users or infrequent users
- Incremental development and limited funding resources may lead to shortcuts that undercut performance and quality
- Less likely to generate intense site- or sub-corridor private development
- Less intensive public policy and development subsidy support
Role of Streetcars?

More Effective

- Circulator for short trips
- Easily recognized and generally well used
- Increases capacity (larger vehicles)
- Concentrates public and private investment in urban development forms
- Can assist economic development and investment
Role of Streetcars?

Less Effective

- May not integrate well with existing bus rider patterns
- High cost leads to longer implementation timeline, limited resources elsewhere
- Increased parking and traffic impacts
- May not achieve transportation goals for regional or local arterial networks
Role of Streetcar in the Region

“Council collaborate with local units of government to determine where and when streetcars are appropriate”

• Determine appropriate mix of bus and streetcar that could meet travel and local development opportunities

• Questions for policy-makers:
  – How should streetcars be funded? Federal? Regional? Local?
  – How might short-term improvements or broader corridor improvements advance, in the interim?
  – How will Thrive play a role in the potential for streetcar and economic development / regional growth?
Midtown Corridor Alternatives Analysis

Metropolitan Council Transportation Committee
May 13, 2013

Michael Mechtenberg
Transit Planner, Metro Transit
Why do an Alternatives Analysis?

• Identify and analyze the **benefits, costs, and impacts** associated with transit alternatives.
• Select a locally preferred alternative (LPA) that best meets project purpose.
• Develop information to enter federal funding process.
Purpose Statement

The purpose of the Midtown Corridor Transitway Project is to provide transit service that meets current and future travel needs, attracts new riders, connects users with job centers and key destinations, and supports sustainable growth and development.
Runningway Options

Midtown Greenway

Lake Street
Possible Modes

- Enhanced Bus
- Dedicated Busway
- Streetcar
- Light-rail Transit
Study Process

STAGE 1
- Problem Statement
- Goals and Objectives
- Universe of Alternatives
- Screening Level Evaluation Criteria

* AA Initiation Package

STAGE 2
- Conceptual Alternatives
- Evaluation of Alternatives

* Detailed Definition of Alternatives

STAGE 3
- Final Screening

* Final Definition of Alternatives

STAGE 4
- Locally Preferred Alternative

* Final Report

PUBLIC INVOLVEMENT
Purpose of Initial Screening

- To evaluate the full range of alternatives against project development criteria.
- Only alternatives that meet the overall project purpose and need will be advanced to the next level of analysis.
## Universe of Alternatives

<table>
<thead>
<tr>
<th>Lake Street</th>
<th>1. Arterial BRT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Streetcar</td>
</tr>
<tr>
<td></td>
<td>3. LRT</td>
</tr>
<tr>
<td></td>
<td>4. Dedicated Busway</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Midtown Greenway</th>
<th>5. Double/Single-Track Streetcar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6. Full Double-Track LRT/Streetcar</td>
</tr>
<tr>
<td></td>
<td>7. Dedicated Busway</td>
</tr>
<tr>
<td></td>
<td>8. Personal Rapid Transit</td>
</tr>
<tr>
<td></td>
<td>9. Commuter Rail</td>
</tr>
<tr>
<td></td>
<td>10. Streetcar Lake Street/Greenway Loop</td>
</tr>
</tbody>
</table>
## Screening Conclusions

<table>
<thead>
<tr>
<th>Recommended for Further Study</th>
<th>Not Recommended for Further Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Arterial BRT on Lake Street</td>
<td>• Streetcar on Lake Street</td>
</tr>
<tr>
<td>• Single/double-track streetcar in Midtown Greenway</td>
<td>• LRT on Lake Street</td>
</tr>
<tr>
<td>• Potential alignment combinations</td>
<td>• Dedicated busway on Lake Street</td>
</tr>
<tr>
<td></td>
<td>• Full double-track LRT/Streetcar in Midtown Greenway</td>
</tr>
<tr>
<td></td>
<td>• Dedicated busway in Midtown Greenway</td>
</tr>
<tr>
<td></td>
<td>• Streetcar loop in Midtown Greenway and Lake Street</td>
</tr>
<tr>
<td></td>
<td>• Commuter rail in Midtown Greenway</td>
</tr>
<tr>
<td></td>
<td>• PRT in Midtown Greenway</td>
</tr>
</tbody>
</table>
Upcoming Public Meetings

• To present initial screening results to the public

• Two meetings in the study area:
  - May 21, 6-8 p.m. at the Colin Power Center
  - May 23, 6-8 p.m. at the Whittier Clinic
Questions?

michael.mechtenberg@metrotransit.org

(612) 349-7793
Nicollet-Central Corridor

- Prioritized by City Council for further study in 2010
- Best place to start implementation of long-term streetcar network
- Received FTA Alternatives Analysis grant
Decision-Making

- Metropolitan Council
- Minneapolis City Council
- Policy Advisory Committee
- Project Management/Consultant Team
  - Agency/Community Resources
  - Technical/Community Advisory Committee
  - Focused Public Engagement
  - Focused Stakeholder Engagement

Nicollet-Central Transit Alternatives | May 2013
Project Purpose

(approved by Policy Advisory Committee 10/25/2012)

• The purpose is to...
  – improve transit connectivity,
  – enhance the attractiveness of transit service, and
  – catalyze development through an investment in transit infrastructure within the Nicollet-Central Corridor.
2012 – 2013: Nicollet-Central Transit Alternatives Study

Purpose and Need
- Corridor Problems and Challenges
- Vision for the Corridor
- Goals and Objectives and Evaluation Criteria

Initial Development and Screening of Corridor Transportation Options
- Transit Mode Options
- Corridor Segment Options

Detailed Definition and Evaluation of Alternatives

Locally Preferred Alternative

Current Work
- Fall 2012
- Late Fall/Early Winter
- Spring 2013
- Summer 2013

We Are Here
Alternatives for Detailed Evaluation

- **No Build** (existing bus)
- **Enhanced Bus** (9-mile)
- **Streetcar** (9-mile)

Routes and options include:
- Central Avenue
- 2 River Crossing Options
- Nicollet Mall
- Nicollet Avenue
Starter Streetcar Line Concept

Lake St to E. Hennepin
- Densest population and employment today and projected into future
- Connects key activity centers
- Connects key transit services
- More existing riders travelling shorter distances from downtown on Nicollet Avenue than on Central Avenue

Detailed evaluation will evaluate whether these termini are optimal for a starter line.
Enhanced Bus vs. Streetcar

• Designed to be nearly the same
• For both...
  – Same lanes as cars and trucks
  – Larger, distinct vehicles
  – Curb extensions & raised platforms at stops
  – Stops every other block (1/4 mile)
  – Becomes primary local service (short trip focus)
  – Complemented by limited stop bus (longer trip focus)
Alternatives for Detailed Evaluation

- **No Build** (existing bus)
- **Enhanced Bus** (9-mile)
- **Streetcar** (9-mile)
- **Streetcar** (3 ½ mile starter line)
Detailed Evaluation

• Key Measures
  – Cost
  – Ridership
  – Economic development
  – People/destinations served
  – Effects on environment/traffic
  – Public/stakeholder sentiment

• Also prepare some results in greater detail by segment
# Modern Streetcar Federal Awards

(in millions)

<table>
<thead>
<tr>
<th>City</th>
<th>Year Open</th>
<th>Project Cost</th>
<th>Federal Program</th>
<th>Federal Share</th>
<th>Local Share</th>
<th>Federal / Local Split</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland East Side Loop</td>
<td>2012</td>
<td>$148</td>
<td>Small Starts</td>
<td>$75</td>
<td>$73</td>
<td>51% / 49%</td>
</tr>
<tr>
<td>Tucson Modern Streetcar</td>
<td>2013</td>
<td>$199</td>
<td>TIGER (includes $6 million in New Starts “Exempt” Appropriations)</td>
<td>$69</td>
<td>$130</td>
<td>35% / 65%</td>
</tr>
<tr>
<td>Atlanta Streetcar</td>
<td>2013</td>
<td>$69</td>
<td>TIGER</td>
<td>$48</td>
<td>$21</td>
<td>70% / 30%</td>
</tr>
<tr>
<td>Seattle First Hill Line</td>
<td>2014</td>
<td>$134</td>
<td>n/a</td>
<td>$0</td>
<td>$134</td>
<td>0% / 100%</td>
</tr>
<tr>
<td>Salt Lake City Sugar House Streetcar</td>
<td>2014</td>
<td>$56</td>
<td>TIGER</td>
<td>$26</td>
<td>$30</td>
<td>46% / 54%</td>
</tr>
<tr>
<td>Cincinnati Streetcar</td>
<td>2015</td>
<td>$125</td>
<td>TIGER &amp; Urban Circulator</td>
<td>$36</td>
<td>$89</td>
<td>29% / 71%</td>
</tr>
<tr>
<td>Dallas Oak Cliff Streetcar</td>
<td>?</td>
<td>$62</td>
<td>TIGER</td>
<td>$26</td>
<td>$36</td>
<td>42% / 58%</td>
</tr>
<tr>
<td>St. Louis Loop Trolley</td>
<td>?</td>
<td>$43</td>
<td>Urban Circulator</td>
<td>$25</td>
<td>$18</td>
<td>58% / 42%</td>
</tr>
<tr>
<td>Charlotte Streetcar</td>
<td>?</td>
<td>$37</td>
<td>Urban Circulator</td>
<td>$25</td>
<td>$12</td>
<td>68% / 32%</td>
</tr>
</tbody>
</table>
Federal Capital Funding Options

• **Small Starts**
  – Maximum $75 million federal contribution
  – Maximum $250 million total cost

• **Discretionary Funding**
  – i.e. TIGER, Urban Circulator
Local Capital Funding

• LRT funding
  – 50% federal, 30% CTIB, 10% state, 10% local

• Highway BRT funding
  – 30% federal, 30% CTIB, 30% state, 10% local

• Arterial BRT
  – 50% federal, 50% state/Met Council

• Modern Streetcar
  – ?
Value Capture Pilot Project

- State legislation specific to Nicollet-Central streetcar line
- Approved by Tax Conference Committee on Thursday, May 9!