Streetcar versus BRT

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104th Purdue School
Streetcar versus BRT
Agenda

1. What is BRT and Streetcar?
2. Why develop a Streetcar or BRT system?
3. Where to develop BRT or Streetcar systems?
4. How do these projects go from Vision to Reality?
5. Questions
What - Streetcars

- Modern/Electric
- Fixed-rail
- Typically mixed-traffic
- Short trip connector
- Development catalyst
- Systems
  - 11 open
  - 2 opening
  - 8 extensions/new projects in CIG
What – Bus Rapid Transit (BRT)

- Modern/Electric
- Fixed-route
- Majority dedicated lanes
- Longer trip provider (freeway/arterial)
- Systems in U.S.
  - Dozens+ open
  - 20 projects in CIG
What – Differences & Commonalities

**Differences**

1. BRT initiated by transit agencies
2. Streetcar typically in mixed-traffic
3. BRT typically much longer routes
4. Streetcar users are typically initiated by walk based trips. BRT has a greater distribution of transit or auto based trips.
5. BRT has a less direct impact on catalyzing new development

**Commonalities**

1. Relatively robust service
   - 10 – 20 min. frequency
   - Hours of operation – 7 days a week
   - Extended hours – early mornings to late evenings
2. Enhanced station platforms
   - Level boarding, real-time, off-board collection
3. Alternative mobility choice
4. Drive economic investments
What - Costs

- **Capital Costs**
  - **BRT**
    - 20 projects in CIG
    - 11.71 mile route
    - $76M avg. project cost
    - $6.10M per route mile
  - **Streetcar**
    - 8 projects in CIG
    - 3.03 mile route
    - $217M avg. project cost
    - $71.64M per route mile
  - **LRT**
    - 12 projects in CIG
    - 10.38 mile route
    - $1.774B avg. project cost
    - $177.4M per route mile

- **Operating Costs**
  - **BRT**
    - $100 - $200 per revenue hour
  - **Streetcar**
    - $175 - $250 per revenue hour
  - **LRT**
    - $250 - $400 per revenue hour
Why - Establish Purpose & Need

- What problem is being solved?
- What customer is the system serving?
- How to best serve the needs of those customers?
- Origins and Destinations?
  - Activity generators
  - Bookends
- Other goals?
  - Mobility improvements
  - Economic development
Why - Trip Type

- Walk
  - Densities/Auto usage
  - Attractions

- Transit
  - Connections to existing service?
    - Transit center
    - Local service
    - Express Bus/BRT
    - Amtrak/Regional Rail

- Park and Ride
  - Kiss and drop
  - Surface lots
  - Mixed-use
Why - Trip Purpose

- Services
  - Convenience
  - Entertainment
- Work
  - AM/PM commute trips
- Visitor
Why - Common BRT Project Goals

- Travel time savings
- Enhanced transit reliability
- Congestion mitigation
- Increased ridership
- Greater efficiency of resources
- Improved access to jobs
Why - Common Streetcar Project Goals

- Economic Development
- Greater productivity in land
- Improve downtown or a region’s attractiveness
- Last mile connector/Modal link
- Pedestrian accelerator
Where - Activity Generators

- **Housing**
  - High density 15 units per acre+
  - Transit dependent
  - 0-1 vehicle households

- **Employment Centers**
  - 25 jobs per acre+
  - Health campuses

- **Attractions**
  - Sports facilities
  - Zoo’s
  - Museum’s
  - Parks/festival grounds

- **Hotel clusters**
How – Project Implementation

**BRT**
- Transit Agency
- Typically Capital Improvement Grant Program – Small Starts
- Capital Funds – match from existing or new transit agency funds (bonding)
- Operating Revenues - existing or new transit agency funds (sales tax)

**Streetcar**
- City Government with Transit Agency or Non-Profit
- More frequently now through Capital Improvement Grant Program – Small Starts
- Capital Funds – match from value capture/tax increment financing (bonding)
- Operating Revenues – transit agencies funds, parking funds, value capture
Questions?

- BRT
- Streetcar