PROVIDENCE STREETCAR
AN INVESTMENT IN OUR FUTURE

WTS CT Valley Chapter & ITE Transportation Mini-Series

October 13, 2011
RIPTA’S STRATEGIC PLAN

Serve as Rhode Island’s Mobility Manager

Attract More Riders

Grow Our Network to Expand Mobility and Support Economic Growth

Realize the Environmental, Economic, and Quality of Life Benefits of Transit

Identify a Sustainable Funding Strategy
SUPPORTING BROADER PLANS

“...Expanded, modern transit systems are absolutely essential to job creation and the long-term health and prosperity of our nation’s cities.”

U.S. Transportation Secretary
Ray LaHood

“A strong transit network is one of the most effective tools for achieving the vision established in Providence Tomorrow.”

Thomas E. Deller,
Director, Providence Planning and Development

“We must offer new transit services and better intermodal connections to meet changing travel demands within our state. It is also vital that state investments support growth within established urban areas, helping to preserve Rhode Island’s open space.”

Kevin Flynn, Associate Director, RI Division of Planning

PROVIDENCE TOMORROW / NEIGHBORHOOD GOALS

• Upper South Providence: Use transit to promote new development and improve connections to downtown.

• Downtown: Revitalize the Jewelry District.

• College Hill: Connect key destinations such as shopping districts, institutions, and other job centers.
Growing Smart With Transit

EXECUTIVE SUMMARY

MEETING CURRENT TRANSIT NEEDS AND GROWING OUR TRANSIT SYSTEM

State Agencies
Local Business
Cities
Non-profits
Elected Officials
Environment Advocates
Senior Advocates
Transit Advocates
Private Institutions
Youth Groups
1. Provide Additional Bus Service
2. Improve the Transit Experience
3. Reinvent Kennedy Plaza
4. Introduce New Transit Hubs
5. Increase Park and Ride Capacity
6. Initiate Rapid Bus Service
7. Build a Providence Streetcar System
8. Strengthen Intermodal Connections
9. Expand Programs for Commuters
10. Capitalize on Transit-Oriented Development
“...expanded, modern transit systems are absolutely essential to job creation and the long-term health and prosperity of our nation’s cities.”

U.S. Transportation Secretary Ray LaHood
• Over $6 Million in Investment Today in the City’s Transit Network
A streetcar route between Upper South Providence and College Hill would connect our major activity centers, spur 4 million square feet of new development and create 6,000 new jobs, and enhance the vitality, livability, and attractiveness of our Capital City.
PROJECT OVERVIEW & TIMELINE

2006-2007
- Transit 2020 Coalition
  - Conceptual route
  - Economic impact
  - Preliminary cost estimates

2008-2009
- Metro Transit Study
  - Is there a need?
  - What is the project?
  - What are the benefits, costs, and impacts?
  - How do we pay for it?

2010-2011
- Providence Core Connector Study

2012-2013
- Project Development
  - Track design
  - Stations, roadway, utilities, structures, traffic, systems
  - Detailed cost estimates
  - Financial Plan implementation

2014-2015
- Construction

Ongoing
- On-going operations
STREETCAR HELPS TO ACHIEVE DIVERSE GOALS

Connect
- Links major downtown employment centers and activity centers with statewide transit hubs

Grow
- Economic development produces much-needed revenue for City

Thrive
- Creates a more sustainable, desirable place that attracts people
WHY STREETCAR IN PROVIDENCE?

Good “Bone Structure”

• “Rhode Island’s Downtown”
• Compact urban form
• Key activity generators in place today:
  ➢ Nearly 50,000 employees in urban core
  ➢ World-class medical & educational institutions
  ➢ Major arts and events venues
• Room to grow:
  ➢ Nearly 3 million square feet of vacant and redevelopable land
  ➢ Active redevelopment efforts on-going

Diversity of Travel Markets Sets the City Apart
Serves the state’s second largest employment center, a historic residential neighborhood, and Thayer Street retail

Serves 45,000 daily RIPTA riders at Kennedy Plaza

Serves theaters, cultural venues, the library and the Dunkin’ Donuts Center

Links the new Brown Medical School to RI Hospital and College Hill while serving development in the emerging Knowledge District

Serves nearly 10,000 people at the state’s largest employment center in the Hospital District
WHY STREETCAR INSTEAD OF BUS?

• Bus and streetcar provide similar mobility benefits
• Streetcar is an economic development engine and placemaking tool to enhance a community’s vitality and livability
• Streetcar provides a more appealing passenger experience and attracts new customers

<table>
<thead>
<tr>
<th>Enhanced Bus</th>
<th>Streetcar</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONNECT</td>
<td>✓</td>
</tr>
<tr>
<td>GROW</td>
<td>✓</td>
</tr>
<tr>
<td>THRIVE</td>
<td>✓</td>
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</tbody>
</table>
MODERN STREETCAR OVERVIEW

- Uses rails embedded in the street
- Shares traffic lane with automobiles
- Provides connections within a compact urban setting
- Not intended for long-distance, high-speed travel
- Support neighborhoods as “walk extenders”
- Station platforms enable easy boarding for bikes, wheelchairs, and strollers
- Accelerates economic development and creates more livable, desirable places

Portland opened the country’s first modern streetcar in 2001.
NEW STREETCAR TECHNOLOGIES EMERGING

Hybrid vehicle propelled by either overhead electric catenary or onboard battery power.

In battery powered mode, it uses electricity stored from regenerative braking and by charging the batteries while running on catenary, minimizing total power consumption.

Currently can travel 5 miles without a charge. Made for North American market, ADA and Buy America compliant.
SERVICE OPTIONS CONSIDERED

Connection to College Hill

Connection to Train Station

Connection to both College Hill and Train Station
- Single route possible for enhanced bus
- Streetcar would require branching structure
TRAIN STATION CONNECTIONS

• Create strong transit / pedestrian connection on Exchange St. from train station to Kennedy Plaza
  ➢ Reorient bus service to north (up to 1 to 4 minute frequency)
  ➢ Streetscape and pedestrian-friendly design

• Kennedy Plaza design changes and enhanced passenger information
  ➢ “Next bus” signage
  ➢ Destination-based schedules
  ➢ Berth assignment changes

• Bus passenger amenities at train station including shelter and Next Bus signage

• Possible direct streetcar connection as part of subsequent phase
OPERATIONS & SCHEDULE IMPROVEMENTS

- Provide frequent, direct connections between Kennedy Plaza and train station
- Up to 11 routes could be revised, resulting in 1 to 4 minute frequencies
- Assign all train station service to adjacent berths
- Better public information, including destination-based schedules

**TO TRAIN STATION**

<table>
<thead>
<tr>
<th>Depart</th>
<th>Route</th>
<th>Berth</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:00 PM</td>
<td>50 Douglas Ave</td>
<td>BerthI</td>
</tr>
<tr>
<td>4:02 PM</td>
<td>57 Smith Street</td>
<td>BerthK</td>
</tr>
<tr>
<td>4:06 PM</td>
<td>99 Pawtucket</td>
<td>BerthJ</td>
</tr>
<tr>
<td>4:12 PM</td>
<td>55 Admiral/Providence College</td>
<td>BerthI</td>
</tr>
<tr>
<td>4:12 PM</td>
<td>56 Chalkstone Avenue</td>
<td>BerthK</td>
</tr>
<tr>
<td>4:16 PM</td>
<td>99 Pawtucket</td>
<td>BerthJ</td>
</tr>
<tr>
<td>4:18 PM</td>
<td>54 Lincoln/Woonsocket</td>
<td>BerthL</td>
</tr>
<tr>
<td>4:20 PM</td>
<td>50 Douglas Ave</td>
<td>BerthI</td>
</tr>
<tr>
<td>4:22 PM</td>
<td>52 Branch/Bryant University</td>
<td>BerthL</td>
</tr>
<tr>
<td>4:25 PM</td>
<td>99 Pawtucket</td>
<td>BerthJ</td>
</tr>
<tr>
<td>4:27 PM</td>
<td>57 Smith Street</td>
<td>BerthK</td>
</tr>
<tr>
<td>4:29 PM</td>
<td>72 Weeden/Central Falls</td>
<td>BerthI</td>
</tr>
<tr>
<td>4:31 PM</td>
<td>56 Chalkstone Avenue</td>
<td>BerthK</td>
</tr>
<tr>
<td>4:32 PM</td>
<td>51 Charles St</td>
<td>BerthL</td>
</tr>
<tr>
<td>4:35 PM</td>
<td>99 Pawtucket</td>
<td>BerthJ</td>
</tr>
<tr>
<td>4:40 PM</td>
<td>50 Douglas Ave</td>
<td>BerthI</td>
</tr>
<tr>
<td>4:40 PM</td>
<td>55 Admiral/Providence College</td>
<td>BerthI</td>
</tr>
<tr>
<td>4:40 PM</td>
<td>54 Lincoln/Woonsocket</td>
<td>BerthL</td>
</tr>
<tr>
<td>4:43 PM</td>
<td>53 Smithfield Avenue</td>
<td>BerthK</td>
</tr>
<tr>
<td>4:44 PM</td>
<td>54 Lincoln/Woonsocket</td>
<td>BerthL</td>
</tr>
<tr>
<td>4:44 PM</td>
<td>58 Mineral Spring / North Providence</td>
<td>BerthL</td>
</tr>
<tr>
<td>4:46 PM</td>
<td>99 Pawtucket</td>
<td>BerthJ</td>
</tr>
<tr>
<td>4:50 PM</td>
<td>56 Chalkstone Avenue</td>
<td>BerthK</td>
</tr>
<tr>
<td>4:52 PM</td>
<td>57 Smith Street</td>
<td>BerthK</td>
</tr>
<tr>
<td>4:56 PM</td>
<td>99 Pawtucket</td>
<td>BerthJ</td>
</tr>
<tr>
<td>5:00 PM</td>
<td>50 Douglas Ave</td>
<td>BerthI</td>
</tr>
</tbody>
</table>
TECHNOLOGY (MODE) OPTIONS CONSIDERED

Streetcar
Fixed rail technology, operating in mixed traffic

Enhanced Bus
Bus option offering physical and technological enhancements

Standard Bus
Continuation of typical local bus service
### TECHNOLOGY: Impacts on Passengers

<table>
<thead>
<tr>
<th>Passenger Experience</th>
<th>Streetcar</th>
<th>Enhanced Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Appealing to choice riders</td>
<td>• Not as attractive to choice riders</td>
<td></td>
</tr>
<tr>
<td>• Smoother ride</td>
<td>• Decreased ride comfort (potholes, swaying, abrupt starting and stopping)</td>
<td></td>
</tr>
<tr>
<td>• Larger, roomier vehicle</td>
<td>• Bus designs are becoming more attractive</td>
<td></td>
</tr>
<tr>
<td>• Passengers have more confidence in the route and are more likely to board</td>
<td>• Infrequent riders are less confident about vehicle route</td>
<td></td>
</tr>
<tr>
<td>• Bicycles accommodated on-board</td>
<td>• Bicycles stored on rack on front bus bumper</td>
<td></td>
</tr>
<tr>
<td>• More iconic for City</td>
<td>• Does not grab attention</td>
<td></td>
</tr>
</tbody>
</table>
Technology Impacts on Economic Development

Enhanced bus can include a variety of infrastructure elements; development impacts increase as the level of investment increases.

Permanence of infrastructure investment is key to realizing development impacts:

- Dedicated transitway
- High-quality stations
- Streetscape improvements
- Attractive vehicles
One of the best things that cities can do to create jobs—especially in the private sector—is to improve the quality of life of their inhabitants.

- Carlos Slim Helú (Mexican business magnate and philanthropist)

“We need to create a city that people want to live in. Talent can move anywhere. Building out places for people to walk...is important for business.”

- Janette Sadik-Khan, the commissioner of the New York City Department of Transportation
A streetcar route between Upper South Providence and College Hill would connect our major activity centers, spur 4 million square feet of new development and create 6,000 new jobs, and enhance the vitality, livability, and attractiveness of our Capital City.
OPERATING CHARACTERISTICS

HOURS AND FREQUENCY

Monday-Thursday
- 15
- 10
- 15

Friday
- 15
- 10
- 15

Saturday
- 15
- 10
- 15

Sunday
- 15
- 10
- 15

PROJECTED RIDERSHIP

Vehicles Required:
4 active plus 1 spare (total of 5)

Station Spacing:
Approximately every 800 feet

End-to-End Travel Time:
18 minutes
HOW WILL WE PAY FOR IT?

Initial Costs

Federal Small Starts funds (50%)
RIPTA and the City to apply for federal grant to leverage up to $63M in funds

State (10%)
State RICAP funds would be targeted

Other Federal (9%)
USDOT dollars through other programs available to Rhode Island

Bonding (32%)
A 20-year bond would be backed by state and/or local funds

Total Capital Cost = $126M

Other Area Projects:
- Warwick Interlink ($267M)
- Wickford Station ($56M)
- Proposed Pawtucket Station ($54M)
- Purchase / Rehab of Dunk ($109M)
HOW WILL WE PAY FOR IT?

On-going Costs

Local Assessment District (38-54%)
An annual benefits assessment on property owners close to the route provides a dedicated source of funding

Federal (4%)
A small amount of on-going Federal formula funding is used for maintenance

Fares / Sponsorships (14%)
Passengers fare of $1.00 will help support operations, and businesses can purchasing naming rights at stops and other system elements

Other City & State Revenues (30-50%)
Additional City revenues could come from parking meter revenues or other sources

Key Points:
• No impact to existing operations budget
• On-going costs covered largely by those who directly benefit
• Annual cost drops by $3.3M after 20-year debt is paid; assessment district rates then can be reduced

Operations = $3.3M/year plus inflation
Debt Service = $3.3M/year
STREETCARS WOULD BOOST CITY REVENUES

By 2025, streetcar-induced growth is expected to result in a $24M annual boost to property tax revenues, compared to a City funding requirement of $7M.

By 2033, over $33M annually is expected to be generated, compared to a City funding requirement of $8M.

After 2035, debt service would end, reducing the City’s funding requirement by over $3M.
LOCAL ASSESSMENT DISTRICT

• Has been used in RI to support water and sewer improvements

• Used in other US cities to support streetcar projects

• Property within $\frac{1}{8}$ mile of route assessed at about $$.80-0.95 per $1,000 of value

• Property within $\frac{1}{4}$ mile of route assessed at about $.40-0.55 per $1,000 of value

• (Assessment rates would be decreased by about 50% once debt service is retired)

• Tax-exempt hospitals and schools included in Assessment District

• Residential properties with no more than 5 units would not be assessed
By the year 2020, property owners within the proposed assessment district will have paid $23M dollars total in assessment fees. This pales in comparison to the estimated $530M increase in property value for those same properties by the year 2020.
WHY IS STREETCAR A GOOD INVESTMENT?

- Entices new riders and enhances RIPTA’s service without negatively impacting existing operations budget
- Provides critical connections and helps to attract talent to medical, educational, and research institutions
- Creates an appealing transit option for downtown office workers

“The move of Group Health's headquarters to the South Lake Union neighborhood was influenced by the development of the Seattle Streetcar network... The opening of the Streetcar gives our employees the ability to connect to the region's transportation hub and we're pleased the Streetcar has arrived!”

William Biggs,
Executive Director of Administrative Services for Group Health
# How Does Providence Compare to Other "Streetcar Cities"?

<table>
<thead>
<tr>
<th>City</th>
<th>Total Land Area (sq. mi)</th>
<th>Population</th>
<th>Employment</th>
<th>University Enrollment</th>
<th>Hotel Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providence</td>
<td>18</td>
<td>7,926</td>
<td>47,925</td>
<td>20,320</td>
<td>2,159</td>
</tr>
<tr>
<td>Little Rock</td>
<td>181</td>
<td>1,942</td>
<td>21,323</td>
<td>0</td>
<td>1,896</td>
</tr>
<tr>
<td>Portland</td>
<td>134</td>
<td>20,564</td>
<td>110,684</td>
<td>16,781</td>
<td>3,910</td>
</tr>
<tr>
<td>Seattle</td>
<td>83</td>
<td>6,031</td>
<td>22,411</td>
<td>800</td>
<td>1,453</td>
</tr>
<tr>
<td>Tacoma</td>
<td>50</td>
<td>2,836</td>
<td>13,296</td>
<td>2,001</td>
<td>641</td>
</tr>
<tr>
<td>Tampa</td>
<td>112</td>
<td>1,603</td>
<td>10,358</td>
<td>1,125</td>
<td>1,328</td>
</tr>
</tbody>
</table>

Data includes the area generally within walking distance of the streetcar route in each city.
WHY IS STREETCAR A GOOD INVESTMENT?

- More foot traffic and residential growth increases business for restaurants and shops
- New development increases tax revenue for the City
- Helps to draw new businesses and increases exposure to the entire State

"The Streetcar will help increase business and employment opportunities for my four South Lake Union neighborhood restaurants."

James Schmidt, CEO for Taco Del Mar and Slo Joe’s BBQ and Investor for Paddy Coyne’s and Southlake Grill
STREETCARS ENCOURAGE DEVELOPMENT

- Nearly 3 million square feet of vacant and redevelopable land
- Will complement other redevelopment efforts
STREETCARS ENCOURAGE DEVELOPMENT

Development follows streetcar tracks
• Permanence of infrastructure investment
• Rail attracts customers who would not ride a bus

Development translates into increased property values and jobs

Streetcar is projected to produce 6,000+ new jobs, which is almost as many as currently employed by Rhode Island Hospital.

Nearly 4 million square feet of new development is expected to be generated by streetcar, equal to THREE Providence Place Malls.

Streetcar construction is expected to generate over 200 jobs and $3.1 million in tax revenue in Rhode Island.

Before Streetcar

Portland’s Pearl District

After Streetcar
# Economic Impact of Streetcar

<table>
<thead>
<tr>
<th>City</th>
<th>Streetcar Infrastructure Cost</th>
<th>Development Investment along Route</th>
<th>Return on Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland, OR</td>
<td>$103.2 million</td>
<td>$3.5 billion</td>
<td>34 : 1</td>
</tr>
<tr>
<td>Little Rock, AR</td>
<td>$28 million</td>
<td>$400 million</td>
<td>14 : 1</td>
</tr>
<tr>
<td>Tampa, FL</td>
<td>$48.3 million</td>
<td>$1 billion</td>
<td>21 : 1</td>
</tr>
<tr>
<td>Kenosha, WI</td>
<td>$5.2 million</td>
<td>$150 million</td>
<td>29 : 1</td>
</tr>
<tr>
<td>Memphis, TN</td>
<td>$104.3 million</td>
<td>$2 billion</td>
<td>19 : 1</td>
</tr>
<tr>
<td>Providence, RI</td>
<td>$126 million</td>
<td>$1.1 billion</td>
<td>9 : 1</td>
</tr>
</tbody>
</table>
WHY IS STREETCAR A GOOD INVESTMENT?

- Energizes the community and increases attractiveness of downtown to residents
- Provides a favorable impression of Providence to conventioneers and visitors, encouraging return trips

“*The Streetcar ties the Lake Union life sciences organizations together, giving us easy access to build rich research collaborations among our scientists while giving our employees a great conveyance to experience all the amenities of downtown Seattle.*”

Kent Irwin,
Director of Facilities for
Seattle Biomedical Research Institute
STREETCAR IMPACT: POWELL’S BOOKS

2000 (Before Streetcar): 2 pedestrians / hour

2005 (After Streetcar): 783 pedestrians / hour

2000 (Before Streetcar): 3 pedestrians / hour

2005 (After Streetcar): 933 pedestrians / hour

Streetcar stop
Streetcar line

Powell’s Books
STREETCAR PROJECTS UNDERWAY TODAY

Streetcar Systems in Planning or Design

Streetcar Systems in Operation

Some “Hot” Streetcar Projects

Cities Mentioned:
- Seattle
- Salt Lake City
- Portland
- Cincinnati
- Charlotte
- Tucson
- Los Angeles
- Portland
- Dallas
- Atlanta
- New Orleans
- Washington DC
PEARL DISTRICT
BEFORE...

...AND AFTER
WHAT ARE OTHER PIECES TO THE PUZZLE?

• Generate support and advocacy
• Statewide economic development strategy
• Statewide transit funding strategy
• I-195 redevelopment efforts
• Pursuit of federal funding opportunities
• Refinement of local financing plan
• Maintain strong local partnerships
WHY ADVANCE THIS PROJECT NOW?

*Long-term vision is key, even during short-term crisis*

- Unified call for more transit investment in Rhode Island
- Development catalysts are needed to spur recovery
- Unique ability to weave transit into development plans
- Change is always happening in transit
- The federal process is long...
PROVIDENCE’S CAPITAL CENTER
IS PROVIDENCE READY FOR STREETCARS?

www.ProvidenceCoreConnector.com