Making the Case for Streetcars

RailVolution
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Photo courtesy of Portland Development Commission
Streetcar Facts

Service began in 2001

- Locally funded
- Seven mile loop
- Runs in mixed traffic
- Accommodates existing curbside parking and loading except at platform stops
Streetcar Details

- 13 minute headways.
- Capacity of up to 140 passengers
- Carrying over 9,000 trips/day
- Low floor design, air conditioned
Portland Streetcar Costs

Capital Costs (Westside, to date)

$88.7 million for in the first three phases totaling:

- 3.0 miles double track, 0.6 additional single track
- Average $25 million per mile of double track
- Ten vehicles
Portland Streetcar Revenues

Capital Revenue Sources:

- Parking meter revenues ($28.6 million - 32%)
- Tax increment financing ($19.7 million - 22%)
- Streetcar improvement district ($14.6 million - 16%)
- MPO, transit agency and local funds ($25.8 Million - 30%.)
Reuse of Rail Yards & Vacant Lands

- Recycling land: more efficient use of land in the central city.

- Public/private partnership – public investments with developers agreeing to more density.
Between 1997 and 2005, over $2.8 billion has been invested within three blocks of streetcar service.

Over 7,200 residential units built.

More than 4.6 million square feet of commercial.

Photo courtesy of Portland Development Commission
Ridership has grown since 2001 year opening with highest ridership tending to occur in summer.
The Closer to Streetcar, the More Development

Development Potential Achieved in Westside
(By Distance from Streetcar)

- Pre 1997 Development
- 1997 through 2005 Development

Distance from Streetcar

Percent of Maximum Floor Area Ratio

0 10 20 30 40 50 60 70 80 90

1 Block 2 Blocks 3 Blocks 3 + Blocks
Percent of Downtown Development

Percent of Building Square Footage Built by Distance from Streetcar, Pre vs. Post 1997

Percent of All CBD Development

Distance from Streetcar

- 1 Block
- 2 Blocks
- 3 Blocks
- 3+ Blocks

Pre 1997
Post 1997
Location of new development shows proximity to streetcar service.
The $64,000 Questions

- Do streetcar projects have development impacts?
- Can those impacts be quantified?
- Why do they matter?
Famous Economist’s Adage

Things that have been proven in fact are not real until they have been proven in theory!
Eastside Streetcar

- Proposed inner city circulator
- 12,400 new streetcar riders in 2025.
- Small Starts Proposal
Variety of Techniques are Available

- Economic Analyses
- Projections of Housing and Commercial Space
- Development Agreements
- Local Improvement Districts
- Direct Cash Contributions
- Urban Renewal Districts
- Comprehensive Plan Amendments
- Others
Technical Methods
Variety of Techniques are Available

- Hedonic Pricing model analysis or other analysis in several cities with streetcar experience could further document streetcars economic development potential.

- Predictive Model for Transit and Economic Development
Variety of Techniques are Available

Existing eastside and westside development

3D model of building heights in the central city
Variety of Techniques are Available

Projections of housing and commercial space

FAR potential
Projects with streetcar extension will develop almost twice the floor area than with a bus.

Variety of Techniques are Available

Eastside Year 2025 Projected Development
(additional housing and jobs)

<table>
<thead>
<tr>
<th>Projected Floor Area Developed</th>
<th>Without Streetcar</th>
<th>With Streetcar</th>
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</thead>
<tbody>
<tr>
<td>2,900,000</td>
<td>5,300,000</td>
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Projections of housing and commercial space
Portland, through its development agency (PDC) has pioneered the concept of agreements to make public improvements, such as a streetcar, in return for private investment.
Variety of Techniques are Available

Development Agreement with Hoyt Street Properties, 1998

Public-private agreement where the City would provide infrastructure to support new development and Hoyt Street Properties would provide identified amenities. These included increased minimum densities:

- At agreement’s onset, 15 dwelling units per acre must be built
- Upon the demolition and replacement of the Lovejoy Viaduct, 87 dwelling units per acre must be built
- Upon completion of the Portland Streetcar, 109 dwelling units per acre must be built
- Upon completion of the area’s first park (Jamison Square) 131 dwelling units must be built
Development Agreement with Hoyt Street Properties, 1998

The development agreement also included requirements that addressed housing affordability:

• 15% of housing units must be affordable to households earning 0-50% of the Portland region’s median family income (MFI)
• 20% of housing units must be affordable to households earning 51-80% of Portland’s MFI
Four towers under construction – OHSU medical offices and research in addition to residential.

Six more towers announced mid April.
Variety of Techniques are Available

Types of Sponsorship Agreements

• Streetcar: $20k per year for company name on streetcar
• Stop: $500 per month for names on station shelters
• Tickets: $50 per book of tickets and Portland Streetcar logo for business window
• Restaurant/Retail: $50 per month for business name on official route map
Portland Streetcar Loop
Eastside Extension

Proposed Local Improvement District

Streetcar Route

Zone A ($7.70/$1,000 rmv)

Zone B ($3.85/$1,000 rmv)
Variety of Techniques are Available

Central Eastside Urban Renewal District
Variety of Techniques are Available

Up-zoning of station areas

Comprehensive Plan Amendments

Metro
People Places Open Spaces
Cost-Effectiveness Options

Benefits
- Higher Densities
- Less VMT
- Fewer Auto Trips
- More Walking Trips

Costs
- More Development
- More Transit Trips
Benefits

- Over 3,500 additional housing units would be built around Eastside Streetcar.
- Over 7,200 new housing units have been constructed near existing streetcar.
- Development community does not respond to bus routes.

Why does development matter?
Benefits

- Streetcar has 30% higher ridership than a bus.
- Streetcar has much higher level of community support.

Why does development matter?
Benefits

- Streetcars change development patterns
- Development patterns change travel modes and travel options
- The Trip Not Taken - Existing streetcar saves over 27 million miles/year of auto travel in Portland!
Cost Effectiveness

- Streetcars are not built to save travel time.
- TSUB inherently favors longer trips.
- Simpler measures are available.
Simple Cost-Effectiveness Measure

- Annualized Cost/Streetcar Rider: $4.25
- Federal Cost/Streetcar Rider: $2.55
- O&M Cost/Streetcar Rider: $1.30
Comprehensive Cost-Effectiveness Measure

Riders + Development Potential + Land Use

Annualized Cost
Travel Modes in Portland by Area

**Poor Transit, No Mixed Use**
- Auto: 87%
- Walk: 6%
- Transit: 1%
- Bike: 1%
- Other: 5%

**Good Transit, Good Mixed Use**
- Auto: 57%
- Walk: 27%
- Transit: 12%
- Bike: 2%
- Other: 2%
Transit Ridership Growth

- TriMet Ridership: 55%
- TriMet Service: 32%
- Average Daily Vehicle Miles Traveled: 19%
- Population: 21%