Sacramento Streetcar System Plan

12th National Light Rail Conference
Sustaining the Metropolis: LRT & Streetcars
For Super Cities
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Development of Sacramento’s Streetcar System Plan using Transportation, Land Use and Economic Development Performance Measures

AUTHORS

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"Increased transit use will further the City’s efforts to become more sustainable and energy efficient. Transit and land use will be tightly linked, with transit stations integrated into walkable, transit-oriented districts and neighborhoods. Plans will be developed for new transit service such as high speed rail, regional rail, bus rapid transit, streetcars, new bus routes between urban centers, and neighborhood bus service."
Streetcar System Plan Goals

- Conduct Alternatives Analysis to establish citywide Streetcar Network
- Identify preferred initial streetcar route and associated funding plan
Sacramento's Streetcars
1930

Sacramento's trolleys began service in 1890 and continued in operation until January 4, 1947. Fares were 7¢ on all local lines, having been from 5¢ in 1929.

The first trolley cars, built in the 1890s, were very small with a bumpy ride. Many of them started out as horse cars and were converted to electric operation.

The newest cars in Sacramento, built by the American Car Company in 1929, saw much service on the 'J' and 'P' street lines.

Built in P.G.E.'s own shops around 1905, these cars were seen on Sacramento streets for many years.

The little Birney cars, built in 1910, ran on the C street line until 1946.

Legend:
Pacific Gas & Electric trolleys
Sacramento Northern Rwy.
Central Calif. Traction Co.
To Stockton via 21st av
Project Approach

**Goals and Context**
- Project Goals and Issues
  - Study Purpose
  - Streetcar Purpose
  - Streetcar Economics
  - Purpose and Need
  - Ranking Criteria

**Identify Streetcar Routes**
- Planning Context
- Economic Context

**Initial Screening**
- Fatal Flaw Assessment
- Demographic Analysis
- Connectivity Assessment
- Constraints Review

**Route Analysis**
- Ridership Forecasts
- Streetcar Operations
- Traffic Operations
- Preliminary Cost Evaluation

**Select Preferred Route**
- Network Evaluation
- Economic Analysis
- Select Preferred Route

**Funding Plan**
- Cost Estimates
- Funding Plan

**Deliverables**
- Working Paper 1: Purpose and Need, Ranking Criteria
- Profiles of Comparable Streetcar Systems

**Deliverables**
- Working Paper 2: Description of Streetcar Routes

**Deliverables**
- Working Paper 3: Initial Screening

**Deliverables**
- Working Paper 4: Streetcar Route(s) Evaluation

**Deliverables**
- Working Paper 5: Final Streetcar Prioritization

**Deliverables**
- Working Paper 6: Funding Plan
- Draft Report
- Final Report

**Outreach Milestone**
- TAC Meetings (2)
- CAC Meetings (1)

**Outreach Milestone**
- TAC Meeting (1)
- BAC Meeting (1)

**Outreach Milestone**
- TAC Meeting (1)
- CAC Meeting (1)
- Council Meeting (1)

**Outreach Milestone**
- TAC Meeting (2)
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- BAC Meeting (1)

**Outreach Milestone**
- TAC Meeting (1)
- CAC Meeting (1)
- Council Meeting (1)
Evaluation Process

- **Stage 1: Streetcar Route Screening**
  - Fatal flaw screening to select most promising routes for detailed evaluation

- **Stage 2: Streetcar Route Evaluation**
  - Detailed route evaluation based on Purpose & Need and key Alternatives criteria

- **Stage 3: Streetcar Network Evaluation**
  - Identify optimal network with best performing routes
Project Stakeholders

- Citizen’s Advisory Committee
- Technical Advisory Committee
- Business Advisory Committee
Why are Cities & Businesses Taking the Lead in Streetcar Implementation?

- Modern streetcar lines are downtown circulators, with substantially higher ridership than bus lines they replace.

- They link residents, employees, and tourists with commercial districts, entertainment venues, and recreation areas.

- Streetcar lines have played a significant role in economic revitalization and redevelopment.
Streetcars and Development

“Streetcars promote a “ribbon” of development instead of the nodal development that occurs around light and heavy rail stations.”

—American Public Transportation Association
Streetcar Purpose (Highlights)

• **Connect** major transit stations and lines, employment centers, commercial corridors, tourist destinations, future development areas, transit supportive residential neighborhoods, and other major *activity centers*

• **Support community and economic revitalization and redevelopment** in the Central City and surrounding areas

• Increase multi-modal travel choices in the study area by establishing a *network of streetcar routes that complements existing rail and bus service*
Key Performance Metrics

- Daily Ridership

- Existing Population & Employment Per Track Mile (1/4 mile catchment area)

- 2035 Population & Employment Per Track Mile

- Existing Annual Retail Sales Per Track Mile
Daily Ridership

- 2035 ridership forecasts prepared for all 13 preliminary routes studied – to create network

- More detailed forecasts prepared for recommended starter line
  - 2035 forecasts using 3 tools
    - Regional four-step model
    - New regional activity based model
    - Direct Ridership Model (DRM)
  - Opening day forecasting using Direct Ridership Model
Land Use

- Population + Employment (1/4 mile catchment area)
  - Existing conditions
  - 2035 conditions
  - Growth from Existing to 2035
Economic Development

- Annual retail sales
- Acres of existing vacant land
- Acres of underutilized land

All data generated for:
- 1 block catchment area
- 1 to 3 block catchment area

**Downtown/Riverfront Starter Line**

- 5,800 boardings per day
- 2.5 million square feet of new development
- $926 million increase in new development
- $672 million increase in assessed value
- $42 million increase in annual existing sales
- $162 million increase in annual new sales
- $16 million increase in annual property taxes

*Financial estimates for City of Sacramento only*
## Summary of Key Performance Data

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<thead>
<tr>
<th>Alternative</th>
<th>Travel Metric</th>
<th>Land Use Metric</th>
<th>Economic Development Metric</th>
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<tr>
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<td>Daily Ridership</td>
<td>Existing Pop + Employment</td>
<td>2035 Pop + Employment</td>
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Current Population & Employment – Top 3
2035 Population & Employment – Top 3
Growth in Population & Employment – Top 3
Future Ridership – Top 3
Retail Stimulus Potential (Existing Sales) – Top 3
Top 6 Ranked Segments
## Characteristics of Best Performing Lines

<table>
<thead>
<tr>
<th>PERFORMANCE MEASURE</th>
<th>VALUE</th>
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<tr>
<td>Daily Ridership</td>
<td>&gt; 1,500</td>
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<tr>
<td>Existing Population + Employment (1/4 mile) per track mile</td>
<td>&gt; 10,000</td>
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<tr>
<td>2035 Population + Employment (1/4 mile) per track mile</td>
<td>&gt; 15,000</td>
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<tr>
<td>Existing Annual Retail Sales (within 1 block) per track mile</td>
<td>&gt; $15 million</td>
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