Restoration of Historic Streetcar Services in Downtown Los Angeles

Alternatives Analysis
Community Update Meeting

August 2, 2011
Introduction

• Key players
  – Local lead agency: Metro
  – Federal lead agency: Federal Transit Administration (FTA)
  – Partners:
    • Community Redevelopment Agency of the City of Los Angeles (CRA/LA)
    • Los Angeles Streetcar, Inc.
    • City of Los Angeles
### Purpose and Need

- Restore historic streetcar service
- Connect activity centers and districts
- Improve surface transit circulation
- Support population and employment growth
- Support economic revitalization
- Support alternative modes of travel within downtown

![Diagram showing the process of purpose and need screening leading to the locally preferred alternative.]

**Purpose and Need**

1. Initial Screening
2. Final Screening
3. Locally Preferred Alternative
Streetcar 101

• What is a streetcar?
  – Fixed-guideway electric rail system
  – Operates in mixed traffic or pedestrian zones
  – Can be articulated for tight turns
  – Compatible with on-street parking
  – Shares lanes and stops with buses
  – Can be low floor with multiple doors
  – Bicycles accommodated on board
  – Capacity ranges from 80 to 130 passengers/vehicle
Project Study Area (PSA)
Planning Process

Alternatives Analysis

Locally Preferred Alternative

Environmental Documentation
Advanced Conceptual Engineering

Preliminary Engineering and Final Design

We are here
Alternatives Analysis Process

1. Purpose and Need
2. Initial Screening
3. Final Screening
4. Locally Preferred Alternative
Alternatives Analysis Process

60+ Conceptual Alternatives

Early Scoping

- Fatal Flaws
- Connectivity
- Travel Time
- Expandability
- Historic

7 Alts Seg A, 2 Alts Seg B, 3 Alts Seg C Identified for Screening

Initial Screen

- Ridership Pot.
- Impacts
- Economic Dev.
- Design Criteria

Short List of Alternatives for Final Screening

1 Build Alternative

AA Report Conclusion

- Ridership
- Constr. Cost
- Operating Cost
- Envir. Imp.

Metro
What is Initial Screening?
- Conceptual level evaluation
- Analyzes all reasonable alternatives
- Uses qualitative evaluation criteria
- Ranks the alternatives “high, medium, or low”
- Identifies alternatives to be advanced into Final Screening
### Initial Screening

#### Evaluation criteria:

<table>
<thead>
<tr>
<th>Planning</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Length</td>
<td>- Capital Costs</td>
</tr>
<tr>
<td>- Connectivity</td>
<td>- Operations &amp; Maintenance Costs</td>
</tr>
<tr>
<td>- Travel time</td>
<td>- Community support</td>
</tr>
<tr>
<td>- Ridership potential</td>
<td>- Plans and guidelines</td>
</tr>
<tr>
<td>- Transit integration</td>
<td>- Local funding</td>
</tr>
<tr>
<td>- Economic development</td>
<td>- Traffic and parking</td>
</tr>
<tr>
<td>- Historic integrity</td>
<td>- Street grade</td>
</tr>
<tr>
<td>- Expandability</td>
<td>- Risks</td>
</tr>
</tbody>
</table>

1. **Purpose and Need**
2. **Initial Screening**
3. **Final Screening**
4. **Locally Preferred Alternative**
Alternatives evaluated in Initial Screening
## Alternative A1

### Advantages
- Serves large area of Bunker Hill
- Serves library
- Serves Regional Connector station
- Avoids Grand Ave bridge

### Disadvantages
- Cannot be completed until Regional Connector construction is completed
- Steep grade on 1st St.
- Serves “back door” of buildings on Hope St.
- Out of direction travel to and from Bunker Hill
- Cannot be extended south from terminus on Hope Street

## Recommendation: Drop
## Alternative A2

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Serves “front door” of buildings on Grand Ave</td>
<td>- Cannot be completed until Regional Connector construction is completed</td>
</tr>
<tr>
<td>- Serves Regional Connector station</td>
<td>- Steep grade on 1st St.</td>
</tr>
<tr>
<td></td>
<td>- Requires track construction on Grand Ave bridge</td>
</tr>
<tr>
<td></td>
<td>- Out of direction travel to Bunker Hill</td>
</tr>
<tr>
<td></td>
<td>- Added track miles without serving new attractions</td>
</tr>
</tbody>
</table>

### Recommendation: Drop
## Alternative A3

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves south end of Bunker Hill including library</td>
<td>Cannot be completed until Regional Connector construction is completed</td>
</tr>
<tr>
<td>Serves Regional Connector station</td>
<td>Steep grade on 1st and Olive St.</td>
</tr>
<tr>
<td>Avoids Grand Ave. bridge</td>
<td>Tunnel operation on GTK Way with poor pedestrian connections</td>
</tr>
<tr>
<td></td>
<td>Requires vertical circulation</td>
</tr>
<tr>
<td></td>
<td>Vertical clearance issues in tunnel</td>
</tr>
<tr>
<td></td>
<td>Serves “back door” of buildings</td>
</tr>
</tbody>
</table>

**Recommendation:** Drop
# Alternative A4

## Advantages
- Serves large area of Bunker Hill
- Serves library
- Serves “front door” of buildings on Grand Ave
- Linear alignment

## Disadvantages
- Very steep grade on Grand (high risk), steep grade on 1st St.
- Requires custom vehicle technology and operation (cog or cable) for very steep grade
- Requires special track construction on Grand Ave bridge
- Wide loop/couplet

**Recommendation: Advance**
## Alternative A5

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Avoids grade issues</td>
<td>- Poor property assessment value due to government properties</td>
</tr>
<tr>
<td>- Serves Civic Center, County Administration Buildings, Civic Park, Courthouses, Cathedral</td>
<td>- Increases the amount of out-of-direction travel to and from Bunker Hill, negatively impacting ridership</td>
</tr>
</tbody>
</table>

**Recommendation:** Drop
### Alternative A6

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Shortest, most direct connection to Bunker Hill</td>
<td>– Steep grade on 1st St.</td>
</tr>
<tr>
<td>– Lowest capital cost</td>
<td>– Does not circulate far through Bunker Hill</td>
</tr>
<tr>
<td>– Simple design</td>
<td></td>
</tr>
<tr>
<td>– Avoids Grand Ave bridge</td>
<td></td>
</tr>
<tr>
<td>– Serves “front door” of buildings on Grand Ave</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendation:** Advance
### Alternative A7

**Advantages**
- Serves Union Station
- Serves City Hall
- Serves El Pueblo
- Potential extension to Chinatown

**Disadvantages**
- Freeway crossings
- Poor property assessment potential due to government properties
- Does not serve Bunker Hill
- Redundant service to Red/Purple Line and Regional Connector

**Recommendation:** Advance
Segment B
# Alternative B1

## Advantages
- Preserves Broadway-Hill Couplet, more understandable to a visitor
- Better service to Spring St./Main St.

## Disadvantages
- Shared parking lane
- Potential trade-off between parking and peak capacity

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**Recommendation:** Advance
### Alternative B2

**Recommendation:** Advance

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Closer to Financial Core</td>
<td>– Wide couplet is potentially confusing</td>
</tr>
<tr>
<td>– Larger service area</td>
<td>– Farther from Spring St./Main St.</td>
</tr>
</tbody>
</table>
Segment B

Before Initial Screening

After Initial Screening
Segment C
## Alternative C1

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>- High economic development potential due to underutilized properties on Pico Blvd.</td>
<td>- At-grade crossing of Blue Line at Pico Blvd.</td>
</tr>
<tr>
<td>- Serves Convention Center</td>
<td>- Higher capital and operating cost</td>
</tr>
<tr>
<td>- Large service area</td>
<td>- Traffic impacts from special events at Staples Center, etc.</td>
</tr>
<tr>
<td>- Serves California Hospital Medical Center</td>
<td>- Figueroa St. congestion during peak hours and special events</td>
</tr>
<tr>
<td></td>
<td>- Less ridership initially than 11th Street</td>
</tr>
</tbody>
</table>

**Recommendation: Advance**
# Alternative C2

**Recommendation:** Keep as a backup to C1 if C1 has fatal flaw, otherwise do not evaluate

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Serves both Pico Blvd. and 11th St.</td>
<td>– Does not serve “front door” of convention center</td>
</tr>
<tr>
<td>– High economic development potential due to underutilized properties on Pico Blvd.</td>
<td>– 2 additional turns</td>
</tr>
<tr>
<td>– Large service area</td>
<td>– Figueroa St. congestion during peak hours and special events</td>
</tr>
<tr>
<td>– Serves California Hospital Medical Center</td>
<td></td>
</tr>
</tbody>
</table>

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**Advantages**
- Serves both Pico Blvd. and 11th St.
- High economic development potential due to underutilized properties on Pico Blvd.
- Large service area
- Serves California Hospital Medical Center

**Disadvantages**
- Does not serve “front door” of convention center
- 2 additional turns
- Figueroa St. congestion during peak hours and special events
### Alternative C3

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Most direct</td>
<td>- Less economic development potential</td>
</tr>
<tr>
<td>- Shorter alignment</td>
<td>- Does not southerly portion of South Park</td>
</tr>
<tr>
<td>- Lowest capital cost</td>
<td>- Impacts from special events at Staples Center, etc.</td>
</tr>
<tr>
<td>- Serves activity centers on 11th St.</td>
<td>- Figueroa St. congestion during peak hours and special events</td>
</tr>
</tbody>
</table>

**Recommendation: Advance**
Alternatives to be advanced into Final Screening
Final Screening

• What is final screening?
  – More detailed analysis on the short list of alternatives
  – Leads to recommended Locally Preferred Alternative

• Uses quantitative evaluation criteria
  – Ridership
  – Operating characteristics
  – Cost estimates
  – System configuration
  – Design
  – Environmental impacts
  – Land use and economic development
  – Community support
Next Steps

• Final Screening

• Continue to meet with community stakeholders

• LA City Council- October/November

• LPA to Metro Board- December
Please Comment

• Additional opportunities to provide public comment:
  – Email: streetcarservice@metro.net
  – Voicemail: (213) 922-3000
  – Mail: Metro, c/o Laura Cornejo, One Gateway Plaza, 99-22-2, Los Angeles, CA 90012
  – For more information, please visit the project website: www.metro.net/streetcar