Peninsula Corridor Electrification Update Meeting
Burlingame Community Meeting
July 18, 2018

Agenda

• Project Overview Recap

• Project Update
  – Progression & Changes
  – Construction Activities

• Electrification Infrastructure
  – Burlingame Activities

• Questions
Caltrain System

- 32 Stations Gilroy to San Francisco
- 92 Weekday Trains
- At-Grade Crossings, viaducts, and bridges
- Intermodal Connections
- Bike Commuters

Ridership

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Daily Ridership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>20,000</td>
</tr>
<tr>
<td>2000</td>
<td>25,000</td>
</tr>
<tr>
<td>2005</td>
<td>30,000</td>
</tr>
<tr>
<td>2010</td>
<td>35,000</td>
</tr>
<tr>
<td>2015</td>
<td>40,000</td>
</tr>
</tbody>
</table>
At Capacity Today

Bi-directional commute with riders standing on trains going southbound and northbound

Aging Fleet

Table 1.2: Caltrain Fleet Inventory

<table>
<thead>
<tr>
<th>SERIES</th>
<th>QUANTITY</th>
<th>NUMBER OF SEATS</th>
<th>YEAR OF MANUFACTURE</th>
<th>MAKE</th>
<th>RETIRE DATE</th>
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<tbody>
<tr>
<td>Locomotives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>F40PH-2</td>
<td>5</td>
<td>na</td>
<td>1990</td>
<td>GM-EMD</td>
<td>2010</td>
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<tr>
<td>F40PH-2C</td>
<td>3</td>
<td>na</td>
<td>1998</td>
<td>Boise Locomotive</td>
<td>2020</td>
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<tr>
<td>MP63PH-3C</td>
<td>6</td>
<td>na</td>
<td>2003</td>
<td>Motive Power</td>
<td>2033</td>
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<tr>
<td>Passenger Cars</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gallery Trailer</td>
<td>14</td>
<td>120</td>
<td>1999-2000</td>
<td>Nippon Sharyo</td>
<td>2030</td>
</tr>
<tr>
<td>Gallery Cab (Black)</td>
<td>6</td>
<td>78</td>
<td>1999-2000</td>
<td>Nippon Sharyo</td>
<td>2030</td>
</tr>
<tr>
<td>Gallery Cab (Black)</td>
<td>21</td>
<td>97</td>
<td>1985</td>
<td>Nippon Sharyo</td>
<td>2015</td>
</tr>
<tr>
<td>Bi-Level Trailer*</td>
<td>16</td>
<td>149</td>
<td>1997</td>
<td>Bombardier</td>
<td>2027</td>
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<tr>
<td>Bi-Level Trailer</td>
<td>9</td>
<td>144</td>
<td>2002</td>
<td>Bombardier</td>
<td>2032</td>
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<tr>
<td>Bi-Level Trailer (Black)</td>
<td>2</td>
<td>114</td>
<td>2002</td>
<td>Bombardier</td>
<td>2032</td>
</tr>
<tr>
<td>Bi-Level Trailer (Black)</td>
<td>5</td>
<td>114</td>
<td>2001-2002</td>
<td>Bombardier</td>
<td>2031-2033</td>
</tr>
<tr>
<td>Bi-Level Trailer (Black)</td>
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<td>114</td>
<td>2008</td>
<td>Bombardier</td>
<td>2036</td>
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<tr>
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<td>127</td>
<td>2002</td>
<td>Bombardier</td>
<td>2032</td>
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<tr>
<td>Bi-Level Trailer</td>
<td>6</td>
<td>140</td>
<td>2006</td>
<td>Bombardier</td>
<td>2036</td>
</tr>
</tbody>
</table>

*Trailers recently acquired from Metrolink with refurbishment ongoing.
Regional Transportation Needs

- US 101 and Interstate 280 Congested
- Corridor supports growing economy
- 75% Caltrain riders commute to work
- 60% are choice riders

Project Description

<table>
<thead>
<tr>
<th>Area</th>
<th>Project</th>
<th>Service</th>
</tr>
</thead>
</table>
| 51 miles San Francisco to San Jose (Tamien Station) | Electrification:  
- Overhead Contact System (OCS)  
- Traction Power Facilities  
Electric Trains (EMUs)  
- 75 percent of fleet | Up to 79 mph  
Service Increase  
- 6 trains / hour / direction  
- More station stops / reduced travel time  
- Restore Atherton & Broadway service  
Mixed-fleet service (interim period)  
Continue tenant service  
- ACE, Capital Corridor, Amtrak, Freight |
## Service Benefits

<table>
<thead>
<tr>
<th>Metric</th>
<th>Today</th>
<th>PCEP</th>
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</thead>
<tbody>
<tr>
<td>Example Baby Bullet Train</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retain 5-6 stops</td>
<td>60 minutes</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Retain SF to SJ 60 minutes</td>
<td>6 stops</td>
<td>13 stops</td>
</tr>
<tr>
<td>Example Redwood City Station</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Train stops / peak hour</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: Prototypical Train and Schedule

## Key Regional Benefits (2040)

- **GREENHOUSE GASES ANNUAL**: 176,000 metric tons of CO₂
- **DAILY TRAFFIC CONGESTION**: 619,000 vehicle miles
- **ENGINE NOISE**: reduced
- **UP TO 97% CLEAN AIR DAILY**
- **111,000 RIDERSHIP DAILY**
- **MORE IMPROVED FREQUENCY / QUICKER TRIPS SERVICE**

Note: 2013 BAC Report, generates $2.5B economic activity and 9,600 jobs
Schedule

MILESTONES
- Caltrain strategic plan makes electrification a priority
- Environmental Clearance
- Award Contract
- Groundbreaking
- First Electric Train Arrives
- Passenger Service with Electric Trains
- Additional Capacity Improvements
- Electrification Infrastructure Construction
- Final System Testing

Note: Schedule Subject to Change

Electric Train

- 2016 Capacity Board Decision (bike to seat ratio, onboard bathrooms, upper doors ‘not precluded’)
- 2017 Design Progressing w/ Additional Public Input (exterior design, Seat colors, Bike Storage, ADA restroom)
- 2018 Virtual Reality 360 Tour
**Construction Phasing**

- 51 Miles Corridor
- 4 Work Segments
- 3,000 Poles
- 10 Traction Power Facilities

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**Burlingame**

- Burlingame Project Area 2.9 miles
### Field Work Progression

**Work Completed**
- Utility Survey
- Geotechnical Investigations
- Disposal of Soil from Geotechnical Investigations
- Soil Resistivity Testing
- Site Surveys
- Signal Cable Inspections

**Work In Progress**
- Tree Pruning/Removal
- Potholing
- Foundation Installation

**Future Work**
- Overhead Contact System Pole Installation
- Overhead Contact System Wire Installation
- Paralleling Station

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### Burlingame – Paralleling Station

Burlingame Project Area 2.9 miles
## Future Construction Activities

**Burlingame**

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Activity</th>
<th>Expected Duration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Process</td>
<td>Potholing</td>
<td>1-2 months</td>
</tr>
<tr>
<td>In Process</td>
<td>Tree Pruning/Removal</td>
<td>1-2 months</td>
</tr>
<tr>
<td>In Progress</td>
<td>Foundation Installation</td>
<td>1-2 months</td>
</tr>
<tr>
<td>Fall 2018</td>
<td>Pole/Wire Installation</td>
<td>4-5 months</td>
</tr>
<tr>
<td>Late 2018</td>
<td>Paralleling Station</td>
<td>3-5 months</td>
</tr>
</tbody>
</table>

*Expected duration indicates first and last day of activity. Number of actual work days will be fewer.

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## Foundation Installation

![Foundation Installation Images]

*On Track Equipment*
Pole Information

- 3,000 Installed throughout Corridor
  - 139 poles in Burlingame
- Pole Spacing: ~180’ apart
- Pole Height: 30-45.5’

Pole Styles Burlingame

Example of Poles Currently Planned for Use in Burlingame

- Single Track Cantilever
- Two Track Cantilever
- Portals
Pole Installation

Stringing Wire

On-track Equipment
Construction Impacts

- Daytime work and night work from 8 p.m.- 6 a.m.
- Some 24 hour weekend work
- Crews will utilize acoustical barrier blankets and position lights away from homes
- Dedicated hotline for construction complaints

Public Outreach

- Subscribe to Weekly Updates
  - Visit [www.calmod.org/get-involved](http://www.calmod.org/get-involved)
- Additional Community Meetings
- Social Media
- Construction Outreach Office
Public Outreach

Physical Notices

Construction Contact Information

Email: calmod@caltrain.com
Phone: 650.399.9659
Toll Free: 800.660.4287

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