Peninsula Corridor Electrification Update Meeting
Mountain View Community Meeting
September 12, 2018

Agenda

• Caltrain System Overview
• Project Overview
• Electric Train Design
• Mountain View Construction Activities
• Questions
Caltrain System

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

JPB owns right-of-way from SF to San Jose

Union Pacific owns

Ridership

Average Daily Ridership

1998
2018

10,000
20,000
30,000
40,000
50,000
60,000
70,000
At Capacity Today

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

Aging Fleet

<table>
<thead>
<tr>
<th>SERIES</th>
<th>QUANTITY</th>
<th>NUMBER OF STARTS</th>
<th>YEAR OF MANUFACTURE</th>
<th>MAKE</th>
<th>RETIRE DATE</th>
</tr>
</thead>
</table>
| Locomotives
  F40PH-2 | 5        | na               | 1986                | GM - EMD | 2015        |
  F40PH-2C | 3        | na               | 1990                | Blue Locomotive | 2017 |
  MP56PH-2C | 6 | na               | 2003                | Motive Power | 2033 |
| Passenger Cars
  Gallery Trailer | 14 | 120 | 1990-2000 | Nippon Sharyo | 2020 |
  Gallery Cab (Bike) | 10 | 108 | 1985-1987 | Nippon Sharyo | 2015-2017 |
  Gallery Cab (Bike) | 6 | 78 | 1999-2000 | Nippon Sharyo | 2030 |
  Gallery Cab (Bike) | 21 | 87 | 1985 | Nippon Sharyo | 2015 |
  Bi-Level Trailer* | 15 | 149 | 1997 | Bombardier | 2027 |
  Bi-Level Trailer | 9 | 144 | 2002 | Bombardier | 2030 |
  Bi-Level Trailer (Bike) | 2 | 114 | 2002 | Bombardier | 2030 |
  Bi-Level Trailer (Bike) | 5 | 114 | 2001-2002 | Bombardier | 2031-2032 |
  Bi-Level Trailer (Bike) | 3 | 114 | 2008 | Bombardier | 2038 |
  Bi-Level Trailer (Bike) | 1 | 127 | 2002 | Bombardier | 2032 |
  Bi-Level Trailer | 6 | 140 | 2008 | Bombardier | 2038 |

*Trailers recently acquired from Metrolink with refurbishment ongoing.

At Retirement Age: 20/29 loco; 73/134 cars
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  
• 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>
</tr>
</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
- **Clean Air Daily**: Up to 97%
- **Ridership Daily**: 111,000
- **Improved Frequency / Quicker Trips**: More Service

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

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

EXTERIOR DESIGN POLL RESULTS
6331 TOTAL VOTES

<table>
<thead>
<tr>
<th>Option</th>
<th>Votes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2665</td>
<td>42.1%</td>
</tr>
<tr>
<td>2</td>
<td>834</td>
<td>12.9%</td>
</tr>
<tr>
<td>3</td>
<td>1580</td>
<td>25%</td>
</tr>
<tr>
<td>4</td>
<td>1272</td>
<td>20.1%</td>
</tr>
</tbody>
</table>

WINNING DESIGN: OPTION 1
Electric Train Seat Design

WINNING DESIGN: OPTION B

SEAT POLL RESULTS

<table>
<thead>
<tr>
<th>Option</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1,007</td>
</tr>
<tr>
<td>B</td>
<td>1,528</td>
</tr>
</tbody>
</table>

2,549 TOTAL VOTES

60.3% for Option B, 39.7% for Option A

Electric Train Onboard Bike Storage Outreach

Thanks to everyone at CalTrain for helping test out our bike options.

Remember to vote on calmodtrain.com/survey
CalMod Construction Phasing

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

Mountain View – Work Segment 3

Mountain View Work Area 3.5 miles
### Field Work Status

| Pre-Construction Work Completed | • Utility Survey  
|                               | • Geotechnical Investigations  
|                               | • Disposal of Soil from Geotechnical Investigations  
|                               | • Soil Resistivity Testing  
|                               | • Site Surveys  
|                               | • Signal Cable Inspections  
| Pre-Construction Work In Progress | • Foundation Potholing  
| Future Work | • Tree Pruning and Removal  
|             | • Foundation Installation  
|             | • Overhead Contact System Pole Installation  
|             | • Overhead Contact System Wire Installation  

### Future Construction Activities

#### Mountain View

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Activity</th>
<th>Expected Duration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer/Fall 2018</td>
<td>Potholing</td>
<td>2-3 months</td>
</tr>
<tr>
<td>Fall 2018</td>
<td>Tree Pruning/Removal</td>
<td>2-3 months</td>
</tr>
<tr>
<td>Spring 2019</td>
<td>Foundation Installation</td>
<td>2-4 months</td>
</tr>
<tr>
<td>Summer/Fall 2019</td>
<td>Pole/Wire Installation</td>
<td>4-5 months</td>
</tr>
</tbody>
</table>

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

Approx. 213 Potholes Mountain View

Tree Pruning and Replacement

Vegetation cleared for Electrical Safety Zone
City of Mountain View: Tree Pruning and Replacement Plan

<table>
<thead>
<tr>
<th></th>
<th>City of Mountain View</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Caltrain Right of Way</td>
</tr>
<tr>
<td>Trees Removed</td>
<td>11</td>
</tr>
<tr>
<td>Trees Pruned &gt;25%</td>
<td>33</td>
</tr>
<tr>
<td>Trees Pruned &lt;25%</td>
<td>143</td>
</tr>
</tbody>
</table>

172 Trees will be replaced per the Mountain View Tree Replacement Plan

Note: Information may change as the design progresses

Foundation Construction

- Excavation
- Rebar and Anchor Installation
- Electrical Grounding
- Concrete Fill
Foundation Installation

- 3,000 Installed throughout Corridor
- Approx. 186 Poles in Mountain View
- Pole Height: 30-45.5’
- Pole Spacing: ~180’ apart
Pole Installation

Current Pole Installation

Stringing Wire

On-track Equipment
Construction Impacts

- Work will occur during day and night
- Some 24 hour weekend work
- Crews will utilize acoustical barrier blankets and position lights away from homes
- Dedicated hotline for construction complaints

San Francisco Tunnel Work

- Within the four San Francisco Tunnels:
  - Overhead Contact System Installation
  - Grouting and Notching
  - Drainage and Track Work
- September 2018 through March 2019
Caltrain Service During Tunnel Work

- Weekends - Oct 6, 2018 to March 17, 2019
  - Caltrain service north of the Bayshore Station will be suspended on the weekends
  - Bus service will be provided from Bayshore to 4th and King and 22nd Street stations
- Weekday service will remain unchanged
- Caltrain service south of Bayshore will remain unchanged
- Bus schedule will be available in September

Public Outreach

- Subscribe to Weekly Updates
  - Visit www.calmod.org
- Additional Community Meetings
  - Pole and Wire Installation
  - Paralleling Station Construction
- Social Media
- Construction Outreach Office
Public Outreach

Physical Notices

CALMOD CONTACT INFORMATION

WEBSITE 🌐 CalMod.org

EMAIL 📧 CalMod@caltrain.com

PHONE 📞 650-399-9659
800-660-4287 (Toll Free)

OFFICE 📍 2121 S. El Camino, Suite A-100
San Mateo, CA 94403
9 a.m. - 5 p.m. Monday - Friday

FACEBOOK 🌐 www.facebook.com/caltrain
TWITTER 🧐 @caltrain

CalMod

PENINSULA CORRIDOR ELECTRIFICATION

SOUTHERN CALIFORNIA RAIL CORPORATION

PHYSICAL NOTICE

Peninsula Corridor Electrification

10/28/2018

Caltrain

Peninsula Corridor Electrification

11/29/2018

Physical Notice

Peninsula Corridor Electrification

12/5/2018

Physical Notice

Peninsula Corridor Electrification

12/12/2018