Local Policy Makers Group
August 24, 2017

Electric Train Design & Public Input
Peninsula Corridor Electrification Project
Electric Multiple Units (EMU)

- Design coordination meetings held with Federal Railroad Administration, Federal Transit Administration (FTA)
- Conceptual Design Reviews completed
- Preliminary Design Reviews to commence in September
- System-wide interface being addressed

Electric Train Outreach: Phased

- 2016 Capacity Board Decision (bike to seat ratio, onboard bathrooms, upper doors)
- 2017 Design Progressing, Additional Public Input (bike storage, seat colors, signage content, etc.)
- 2018 Virtual Reality 360 Tour
EMU Seat Outreach

- Public Poll from July 20 to July 28
- Over 2,500 votes
- Station Outreach with Seat Samples

<table>
<thead>
<tr>
<th>DATE</th>
<th>STATION</th>
<th>CITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 24</td>
<td>4th &amp; King</td>
<td>San Francisco</td>
</tr>
<tr>
<td>July 25</td>
<td>San Mateo</td>
<td>San Mateo</td>
</tr>
<tr>
<td>July 28</td>
<td>Diridon</td>
<td>San Jose</td>
</tr>
</tbody>
</table>

EMU Seat Public Poll
Winning Design
EMU Onboard Bike Storage Outreach

- Public Poll from August 8 to September 1
- Station Outreach with Samples

EMU Bike Outreach Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 8</td>
<td>9:00 a.m. - 6:00 p.m.</td>
<td>Silicon Valley Bike Summit Mt. View</td>
</tr>
<tr>
<td>August 9 &amp; 10</td>
<td>7:30 a.m. - 7:00 p.m.</td>
<td>4th &amp; King Station outreach</td>
</tr>
<tr>
<td>August 14</td>
<td>4:30 p.m. - 6:30 p.m.</td>
<td>Redwood City Station outreach</td>
</tr>
<tr>
<td>August 15</td>
<td>4:30 p.m. - 7:00 p.m.</td>
<td>Palo Alto Station outreach</td>
</tr>
<tr>
<td>August 16</td>
<td>5:30 p.m. - 8:00 p.m.</td>
<td>Menlo Park Block Party</td>
</tr>
<tr>
<td>August 22 to Sept. 1</td>
<td>9:00 a.m. - 6:00 p.m.</td>
<td>Project Outreach Office 2121 S. El Camino, San Mateo</td>
</tr>
<tr>
<td>August 24</td>
<td>5:45 p.m.</td>
<td>Bicycle Advisory Committee</td>
</tr>
</tbody>
</table>
Next Steps

- Capture feedback on design elements
- Continue rollout of key design features for public input and education
  - Onboard Bike Storage Designs: Occurring Now
  - Interior Destination Sign Content: Fall 2017
- Public feedback paired with technical analysis
- Virtual Reality Tour: 2018

Construction Update

Peninsula Corridor Electrification Project
## Electrification - Infrastructure

**Design Build Contract**
- Advanced Issued for Construction (IFC) Overhead Contact System (OCS) layout design in Segment 2 work areas 5
- Design review coordination with local jurisdictions
- 65% location-specific and typical signal design
- Advanced typical 95% communication system and traction power system designs
- Continued potholing

**Tunnel Modifications**
- Union Pacific Railroad (UPRR) comments on the 95% design drawings and specifications are under review
- 100% Plans and Specifications completion targeted for end of August

**Centralized Equipment Maintenance and Operations Facility (CEMOF)**
- Build out concepts being evaluated

## Field Work Status

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

**Work In Progress and Upcoming**
- OCS Foundation Potholing
- Signal Cable Potholing
- Tree Pruning and Removal
- OCS Foundation Construction

**Future Work**
- Overhead Utility Relocation
- OCS Pole Installation
- OCS Wire Installation
Foundation Work

- Excavation
- Rebar and Anchor Installation
- Electrical Grounding
- Concrete Fill
- Foundation work within the South San Francisco Station area will be completed by SSF Station Improvement Project
- Foundations for San Bruno Station area were installed as part of the San Bruno Grade Separation

Pole Foundation Work

Will take place on and off track

Above: DrillTech on track foundation train

Right: Drilltech off-track OCS Drill Rig
OCS Wire Installation

Will take place on-track

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
Ongoing Public Outreach

- Weekly Updates
  - Visit caltrain.com/pcepconstruction
- Pre-Construction Community Meetings
  - July 13: San Bruno and South San Francisco area
  - August 23: Millbrae and Burlingame area
- Construction Outreach Office, M-F, 9:00 am to 6:00 pm

Construction Advisory Teams

- Will Provide Construction Updates to Community Representatives
- Divided by Work Segment
- Monthly Meetings During Construction in Segment
- 3 Members per City
  - Business Representative, Neighborhood Association, Civic Leader
  - Designated by LPMG Member
### Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Event 1</th>
<th>Event 2</th>
<th>Event 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Env. Clearance (Jan)</td>
<td>LNTP (Sept)</td>
<td>NTP (June)</td>
</tr>
<tr>
<td>2016</td>
<td>First Train Set Delivered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Rollout First Passenger Service with Electric Trains**
- **Electrification Infrastructure Construction**
- **Final System Testing**

**Note:** Schedule Subject to Change

---

**Construction Contact Information**

Email: [calmod@caltrain.com](mailto:calmod@caltrain.com)
Phone: 650.399.9659
Toll Free: 800.660.4287

2121 S. El Camino Real, Suite A-100
San Mateo, CA 94403
9 a.m. - 6 p.m. Monday-Friday

www.caltrain.com/pcepconstruction
Funding Update

- FTA Core Capacity Grant of $647m approved on May 23
  - $73 approved previous years
  - $100m approved FY 2017 Budget
  - $100m recommended FY 2018 Budget
- Project is fully funded
- JPB approved $1.98b budget on June 1

Budget & Expenditures

<table>
<thead>
<tr>
<th></th>
<th>Budget</th>
<th>Costs This Quarter</th>
<th>Costs to Date</th>
<th>Estimate at Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrification</td>
<td>$697M</td>
<td>$49M</td>
<td>$132M</td>
<td>$697M</td>
</tr>
<tr>
<td>EMU</td>
<td>$551M</td>
<td>-</td>
<td>$14M</td>
<td>$551M</td>
</tr>
<tr>
<td>Separate Contract &amp;</td>
<td>$417M</td>
<td>$9M</td>
<td>$108M</td>
<td>$417M</td>
</tr>
<tr>
<td>Support Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contingency</td>
<td>$315M</td>
<td>-</td>
<td>-</td>
<td>$315M</td>
</tr>
<tr>
<td>PCEP Total</td>
<td>$1,980M</td>
<td>$58M</td>
<td>$254M</td>
<td>$1,980M</td>
</tr>
</tbody>
</table>

Note: Budget / Expenditures as of June 30, 2017
Safety

- San Francisco 16th Street crossing - no overhead wire
- Night inspections of potholing and utility location work performed
- Revised Safety and Security Management Plan
- Received 65% Safety and Certification Design checklists for OCS and Traction Power Substations

Real Estate

<table>
<thead>
<tr>
<th>Segment</th>
<th>Appraisal Packages Needed</th>
<th>Appraisals Completed</th>
<th>Acquisition Offers Presented</th>
<th>Acquisition Offers Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment 1</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Segment 2</td>
<td>27</td>
<td>26</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Segment 3</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Segment 4</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>39</td>
<td>33</td>
<td>15</td>
</tr>
</tbody>
</table>

Note: As of June 30, 2017
Tree Mitigation Commitment

Peninsula Corridor Electrification Project

Tree Pruning and Replacement

- Vegetation cleared for Electrical Safety Zone
Tree Mitigation Commitment

- Avoidance, Minimization, Replacement
- Applies to Private, Public and JPB property
  - Per City or County replacement ratio outside JPB property
  - Per environmental permits, where applicable
  - 1:1 within JPB property
  - Provide replacement if pruning more than 25% (all property)

Tree Mitigation Status

- Segment 2 & 4 jurisdictions
  - Tree Plans and staff coordination complete
  - Permits in progress
  - Tree pruning and removal starting in August

- Segment 1 & 3 jurisdictions
  - Tree Plans and staff coordination in next few months
  - Tree pruning and removal anticipated to start spring/summer 2018
Early Pole Relocation

Peninsula Corridor Electrification Project

- Accommodates Caltrain/HSR pole locations for blended service speeds in select locations
- Minimizes post-PCEP construction impacts to Caltrain
- Environmental evaluation and consideration by JPB and FTA
- Track straightening after CHSRA environmental clearance
- Funded by CHSRA
Early OCS Relocation, cont.

- Contract change to Balfour Beatty
  - ~11.5 miles, includes northbound and southbound track
  - ~450 foundations (out of 3,700 total PCEP foundations)
  - Most less than 1 ft shift

- Potential contract change to Stadler
  - Cant deficiency (allows increased speed through curves)
    - Technical evaluation underway

Discussion