Construction Update
Peninsula Corridor Electrification Project
## Field Work Status

<table>
<thead>
<tr>
<th>Work Completed to Date</th>
<th>Work In Progress and Upcoming</th>
<th>Future Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Utility Survey</td>
<td>• OCS Foundation Potholing</td>
<td>• Overhead Utility Relocation</td>
</tr>
<tr>
<td>• Geotechnical Investigations</td>
<td>• Signal Cable Potholing</td>
<td>• OCS Pole Installation</td>
</tr>
<tr>
<td>• Soil Resistivity Testing</td>
<td>• Tree Pruning and Removal</td>
<td>• OCS Wire Installation</td>
</tr>
<tr>
<td>• Site Surveys</td>
<td>• OCS Foundation Construction</td>
<td></td>
</tr>
<tr>
<td>• Disposal of Soil from Geotechnical Investigations</td>
<td></td>
<td></td>
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<tr>
<td>• Signal Cable Inspections</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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This is a table showing the status of various field work tasks. The tasks are categorized into three sections: Work Completed to Date, Work In Progress and Upcoming, and Future Work. Each section lists specific tasks that have been completed, are currently in progress, or are planned for future work.
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
- **Hotline:** 650-399-9659
- **Construction Outreach Office**, M-F, 9:00 am to 6:00 pm
Schedule

Note: Schedule Subject to Change

- Env. Clearance (Jan)
- LNTP (Sept)
- NTP (June)
- First Train Set Delivered
- Rollout First Passenger Service with Electric Trains
- Electrification Infrastructure Construction
- Final System Testing
Electric Train Design
Seats
Peninsula Corridor Electrification Project
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>
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</table>
EMU Seat Public Poll

Winning Design

Option A: 60.3%
Option B: 39.7%

www.CalModTrains.com
Electric Train Design
Bike Car Configuration
Peninsula Corridor Electrification Project
Bike Car Configuration
Why Two Bike Cars v. Three Trainset Parameters

- 2 bike cars: 5’ longer on lower level
- 2 cab cars: Smaller interior lower level seating area
- 1 passenger-only car: shorter than bike cars
  - not equal exchange of bike racks and seats (not seat neutral)
Why Two Bike Cars v. Three Trainset Parameters - Load

- Length of train/cars/configuration dependent on number of factors, including load
- 2 bike cars can be longer because no electrical equipment on either side of car
- 1 passenger car has denser weight with electrical equipment on both sides of car
Why Two Bike Cars v. Three Seat Loss

- Current trains at or above capacity at peak hour
- Federal funding dependent on 10% capacity increase
- 3 bike cars = loss of 10 seats per trainset > not meet requirement for funding
Exploration of Other Designs
Security
Reported Bike Thefts: 2016

- 110 total bike theft cases reported.
- 31% of occurred at the Palo Alto Caltrain Station
- Only 1 occurred onboard a train
- Does not include unreported thefts.
Bike Car Security

- 10 security cameras in lower and mid level of each car
- Staff exploring monitor capabilities: Fall
- Mock-up of closed loop possibility: Fall
- Locking bike
  - To train: No
  - To itself: will explore
Electric Train Design
Onboard Bike Storage
Peninsula Corridor Electrification Project
## Comparison Table for Poll

<table>
<thead>
<tr>
<th>Option</th>
<th>Capacity</th>
<th>Benefits</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1 -</td>
<td>72 bikes/train set</td>
<td>• More capacity</td>
<td>• Unless top bike, may need to move / shuffle others to access</td>
</tr>
<tr>
<td>Stacking</td>
<td>12.5% increase from today (per peak hour, per</td>
<td>• Accommodates greater variety of bike types</td>
<td></td>
</tr>
<tr>
<td></td>
<td>direction)</td>
<td>• Similar to current system</td>
<td></td>
</tr>
<tr>
<td>Option 2 -</td>
<td>68 bikes/train set</td>
<td>• Provides option that avoids stacking / shuffling of bikes</td>
<td>• Less capacity</td>
</tr>
<tr>
<td>Hybrid</td>
<td>8.3% increase from today (per peak hour, per</td>
<td>• New concept not currently in use</td>
<td>• May limit types of bikes accommodated</td>
</tr>
<tr>
<td></td>
<td>direction)</td>
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</tbody>
</table>
EMU Onboard Bike Storage Outreach

- Public Poll from August 8 to September 1
- Station Outreach with Samples
# EMU Onboard Bike Storage 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</td>
<td>9:00 a.m. - 6:00 p.m. Monday through Friday</td>
<td>Project Outreach Office 2121 S. El Camino, San Mateo</td>
</tr>
<tr>
<td>Sept. 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>August 24</td>
<td>5:45 p.m.</td>
<td>Bicycle Advisory Committee</td>
</tr>
</tbody>
</table>
EMU Onboard Bike Storage Outreach Continued

- Coordination with Bike Coalitions
- Flyer for bike car and events
- Social Media
EMU Onboard Bike Storage Outreach

Videos of hybrid user experience

View @Caltrain Twitter
EMU Onboard Bike Storage
Written Comments

• Hybrid preference = 24%
  – Voters who favored the hybrid option mostly preferred it because of easy storage.
  – A few commenters stated they do not like other riders handling their bikes or that their bikes get scratched with the stacking option.

• Stacked preference = 24%
  – Some people who chose the stacking option preferred it due to current capacity issues.
  – A few commented that it was easier to store their bikes with the bungees.
EMU Onboard Bike Storage
Written Comments cont.

• Other = 36%
  – Some commenters inquired about hanging racks and if they will be part of either option.
  – Some people want a combination of both the hybrid and stacking options in different parts of the train.

• Bike theft = 16%
  – There is concern over bike theft in general and the effectiveness of cameras to prevent it.
  – A few commenters prefer to have seats in close proximity to bikes for added vigilance.
Mid-Poll Update

- Option 1 (Stacking): 31.7%
- Option 2 (Hybrid): 68.3%
- Total voted: 1296

<table>
<thead>
<tr>
<th>Answer</th>
<th>Votes</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1 - Stacking</td>
<td>411</td>
<td>31.7%</td>
</tr>
<tr>
<td>Option 2 - Hybrid</td>
<td>885</td>
<td>68.3%</td>
</tr>
</tbody>
</table>
Timeline Overview

- Samples Arrive: early August 2017
- Public feedback paired with technical analysis: ongoing
- Outreach Events. Poll, Social/Media: August 8 to September 1, 2017
- BAC Special Meeting: August 24, 2017
- Determination: September 2017
Test Samples & Outreach Discussion