Caltrain Electrification Project Update

Peninsula Corridor Joint Powers Board
March 3, 2022
Agenda Item #5
Project Overview
Project Overview

- San Francisco to San Jose (Tamien Station)
- 51 miles
- Project Cost: $2.44B
- Revenue Service: fall 2024
Project Elements

- Electrification
  - Overhead Contact System (OCS)
  - Traction Power Facilities
  - Signal System

- Electric Trains
  - 19 7-car train sets (133 cars)

(Note: 96 cars funded by project; 37 cars funded by State TIRCP)
Project Benefits

- Improved Train Performance, Increased Service and Greater Capacity
- Improved Regional Air Quality and Reduced Greenhouse Gas Emissions
- Job Creation Locally and Across the Country
- Reduced Engine Noise Emanating from Trains
Project Highlights
Project Highlights

- No change to revenue service date

Construction progress
  - All foundation work complete
  - Segment 4, “punch list” complete

Go decision on March/April signal work
  - Segment 2 signal cutover plans developed
  - Temporary service changes prepared for March/April

Close monitoring of signal installation, testing and system risks
  - Close coordination with PG&E
Project Highlights, cont.

- No change to project budget
  - No draw from project contingency, incentive pool
  - $46,000 drawn from shared risk pool
  - Proven claim resolution
  - ICAP reevaluation / FTA and CHSRA review

- BBII/JPB additional resources in place and partnering efforts continue

- Progress with FTA and CHSRA on Recovery/Remediation Plan

- Funding
  - State and federal funding opportunities identified and advocacy continues
  - $150M project financing approved by JPB
Foundations Complete Celebration

U.S. Congresswoman Anna Eshoo
U.S. Congresswoman Jackie Speier
CA State Speaker Pro Tempore Kevin Mullin
CA State Assemblymember Phil Ting
CA State Senator Scott Wiener
President of the San Francisco Board of Supervisors & Caltrain Board Member Shamann Walton
## Upcoming Milestones

<table>
<thead>
<tr>
<th>Item</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Finalize Recovery / Remediation Plan</td>
<td>March 2022*</td>
</tr>
<tr>
<td>Major Signal System Cutovers in Segment 2</td>
<td>March 2022</td>
</tr>
<tr>
<td>Arrival of First Trainset</td>
<td>April 2022</td>
</tr>
<tr>
<td>Energization of Segment 4</td>
<td>June 2022**</td>
</tr>
<tr>
<td>Completion of Segment 4</td>
<td>June 2022**</td>
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</table>

*Previous milestone January 2022. Review time extended. No impact to revenue service date.

**30-day delay. No impact to revenue service date.
Safety and Security

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Reportable Injury Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year-to-Date</td>
<td>0</td>
</tr>
<tr>
<td>Since Project Start (2017 to Today)</td>
<td>1.71</td>
</tr>
</tbody>
</table>

Note: National Average Reportable Injury Rate is 2.50

- OCS safety awareness training complete
  - Caltrain employees
  - BBII
  - TASI roadway workers
  - Transit police

- Contractors / subcontractors COVID-19 plans based on federal, state and local requirements

- Collaboration with San Jose / Santa Clara Fire Departments (upcoming emergency response exercise)
Construction Segments

Segment 1
San Francisco to Brisbane

Segment 2
South San Francisco to Atherton

Segment 3
Menlo Park to Santa Clara

Segment 4
Santa Clara to Tamien
Overhead Contact System

• Foundations (3,092 total)
  - All Segments: Complete

• Poles (2,587 total)
  - Segments 3, 4 and CEMOF: Complete
  - Segments 1 and 2: 722 poles remaining (758 previous)

• Wire (1.5M linear feet total)
  - Segments 3 and 4: Complete
  - Segments 1 and 2: 571K linear feet remaining

As of February 20, 2022
Traction Power Facilities

- 10 facilities
- Approximately 83% complete (80% previous)
- Work remaining: energization, commissioning, testing
- Anticipated completion fall 2022

As of February 20, 2022
Signal System and Communication

- **2 Speed Check**
  - Segment 4
    - Complete “punch list”
  - Segment 2
    - Major cutover mid-March (temporary service schedule)
    - 17 grade crossings in Burlingame and San Mateo
    - Work dates: March 14th to April 2nd
    - Anticipated completion November 2022
  - Segments 1 and 3 work remaining

- **Crossing Optimization Project work on-going**

As of February 20, 2022
Temporary Service Schedule

• Temporary train schedule March 14 to April 1
• No change: Mid-day, evening, and weekend schedules
• Overall service reduction from 104 to 88 trains/weekday
  – Peak service reduction from 4 to 3 limited trains/hour/direction
  – No local service during peak hours
  – Suspended Baby Bullet service
• Trains single-track at Broadway, Burlingame, San Mateo, Hayward Park and Hillsdale stations
Customer Outreach

- Landing page
- Organic social
  (Twitter, FB, IG, Nextdoor, Tiktok)
- Paid digital and print ads
- Station ambassadors
- Email blasts
- Mobile app alerts

- Visual messaging signage at stations
- Onboard and station announcements
- Press release
- Amplify message via elected officials, cities, counties
- Updates to key stakeholders, business groups
- 50% off fare promotion for month of April
Electric Trains

- FRA successful final inspection prior to shipment
- Completion of first article inspection for trainset 3 and 4 in Salt Lake City, UT
- First trainset to be shipped March 2022
- Rebaseline of production schedule
- 14th trainset anticipated arrival fall 2023
- 19th trainset anticipated arrival fall 2024

As of February 20, 2022
Program Management
<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late completion of Signal Phase Study (SPS) for TPS 2 impact to Segment 4 OCS/TPS Commissioning and EMU testing</td>
<td>Technical team meetings with PG&amp;E weekly to expedite modeling effort for SPS. Caltrain and PG&amp;E Executives meetings weekly to monitor progress.</td>
</tr>
<tr>
<td>Late execution of PG&amp;E Transmission Operating Load Agreement impact to Segment 4 energization</td>
<td>Technical team and management to expedite documentation reviews.</td>
</tr>
<tr>
<td>Delay of signal design, installation and testing</td>
<td>Global settlement resolved signal scope and fee. PCEP team and Design Builder focused on timely completion of cutovers.</td>
</tr>
<tr>
<td>$410M state/federal funding plan</td>
<td>Funding team has identified federal and state grant opportunities to pursue. Targeted advocacy is on-going.</td>
</tr>
<tr>
<td>Contractor field resources and equipment availability</td>
<td>Schedule / resources workshop with contractor. Identifying areas of concern and solutions.</td>
</tr>
<tr>
<td>Caltrain resources for project acceptance, operations and maintenance</td>
<td>Organization and specialized staff plan development.</td>
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</table>

**Green = Mitigations/actions identified and no impact to budget/schedule**

**Yellow = Mitigations/actions identified and potential impact to budget/schedule**

**Red = Impact to budget/schedule**
# Program Budget

<table>
<thead>
<tr>
<th>Description of Work</th>
<th>Current Budget (1)</th>
<th>Cost for Month (2)</th>
<th>Cost to Date (3)</th>
<th>Estimate to Complete</th>
<th>Project Total</th>
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<tbody>
<tr>
<td>Electrification</td>
<td>$1,749,139,438</td>
<td>$43,002,814</td>
<td>$1,172,554,984</td>
<td>$576,584,454</td>
<td>$1,749,139,438</td>
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<tr>
<td>EMU</td>
<td>$693,551,258</td>
<td>$13,710,817</td>
<td>$333,637,226</td>
<td>$359,914,849</td>
<td>$693,551,258</td>
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<tr>
<td>Program Total</td>
<td>$2,442,690,697</td>
<td>$56,713,631</td>
<td>$1,506,192,210</td>
<td>$936,498,487</td>
<td>$2,442,690,697</td>
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</table>

Notes:
1 “Current Budget” includes executed change orders and awarded contracts
2 “Cost This Month” represents cost of work performed January 2022
3 “Cost To Date” includes actuals (amount paid) and accruals (amount of work performed) as of January 2022
# Contingency, Risk and Incentive

<table>
<thead>
<tr>
<th></th>
<th>Project Contingency</th>
<th>BBII Shared Risk Pool</th>
<th>BBII Incentive Pool*</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>Baseline Amount as of 12/6/21</strong></td>
<td>$40.0M</td>
<td>$50.0M</td>
<td>$18.5M</td>
<td>$108.5M</td>
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<tr>
<td><strong>Usage / Add through 2/28/22</strong></td>
<td>($0.0M)</td>
<td>($0.05M)</td>
<td>($0.0M)</td>
<td>($0.0M)</td>
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<tr>
<td><strong>Remaining Balance</strong></td>
<td>$40.0M</td>
<td>$45.95M</td>
<td>$18.5M</td>
<td>$108.45M</td>
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</table>

Notes: *Total incentive includes carryover from original budget and $15M from BBII global settlement
Funding Update

- $410M State / Federal funding plan being developed
- Funding team with consultant support activated
- Federal efforts
  - Advocate for infrastructure funding for FFGA projects impacted by COVID with completion certainty
  - FRA **State Partnership for Intercity Rail** grant program in partnership with HSR
Funding Update, cont.

- State efforts
  - Advocate for “TIRCP Plus” funding through State budget process
  - Support **AB 2197 (Mullin)** for $260M project funding
  - Assess **CTC Solutions for Congested Corridors Program** for eligibility and competitiveness

- Work with MTC on capital project list for state and federal advocacy
Upcoming Board Actions

- Proven claim resolution
  - No change to budget
  - Need contract authority