

Caltrain Electrification Project Update

Peninsula Corridor Joint Powers Board
June 1, 2023
Agenda Item #12



Project Highlights

Project Highlights

- Schedule: No change to revenue service date - fall 2024
- Budget: No change to project budget - \$2.44B
 - \$1.86M draw from \$50M Shared Risk Pool in April 2023
 - No draw from \$40M Project Contingency in April 2023
- Construction
 - Twelve weekend shutdowns complete
 - Weekly overhead contact system projections being met
 - Segment 3 Signal Cutover Complete
 - Segment OCS Sectionalization Testing
 - Short circuit test for Traction Power Substation 2
- Electric Trains
 - Next two trainset expected Fall 2023

Safety and Security

Time Period	Reportable Injury Rate
January 1 to April 30, 2023	3.24
Since Project Start (2017)	1.98

Note: National Average Reportable Injury Rate is 2.50.

- **One reportable personal injury for April 2023**
- Project Safety Awareness trainings ongoing for Local Fire and Police Departments
- Completed 25kV training for all TASI and tenant railroad staff
- Development of emergency responder safety presentation for local first responders

Project Contingency and Shared Risk Pool

Item	Amount	Executed in April 2023	Executed To Date	Amount Remaining
BBII Shared Risk Pool	\$50.00M	\$1.86M	\$7.09M	\$42.91M
Project Contingency	\$40.00M	\$0.00M	\$3.52M	\$36.48M
Total	\$90.00M	\$1.86M	\$10.61M	\$79.39M

- \$1.73M for temporary generators for signal houses from BBII Shared Risk Pool
- \$0.12M for track access delays and differing site conditions from BBII Shared Risk Pool

Top Risks

- Contractor Productivity on Overhead Contact System Installation
- Traction Power Short Circuit Testing
- Contractor Quality Control and Quality Assurance

Service Changes and Customer Experience

February to July 2023 – Weekend Shutdowns

Area (Phase)	Work Activity	Weekends	Number of Weekends
San Francisco to Millbrae (Phase 1)	OCS Construction	February 11-12 February 25-26 March 4-5 March 11-12	4
Millbrae to Hillsdale (Phase 2)	OCS Construction	March 25-26 April 1-2	2
Belmont to Menlo Park (Phase 3)	OCS Construction	April 8-9 April 15-16	2
Menlo Park to Santa Clara (Phase 4)	Signal Installation OCS Testing System Integration Testing	April 22-23 April 29-30 May 5-6 May 13-14	4
San Francisco to Millbrae (Phase 5)	OCS Construction Signal Installation	June 10-11 June 17-18	2
Hillsdale to Palo Alto (Phase 6)	OCS Construction	July 15-16 July 22-23	2

- August to December up to 16 weekends

June to July - Regular Service Weekends

Caltrain will run regular weekend service on the following dates:

- **June**
 - June 3-4: Giants Home Games
 - June 24-25: Giants Home Games & Pride Parade
- **July**
 - July 1-2
 - July 8-9: Giants Home Games
 - July 29-30: Electric Train Tour



May 21, 2023 Bay to Breakers Caltrain Special Service

Phase 5 – San Francisco to Millbrae

Weekends: June 10-11, 17-18

- No weekend train service between San Francisco and Millbrae
- Weekend lifeline bus bridge
 - Overall people capacity limited; customers should use bike parking or bike share
 - ADA accessible vehicle provided for each connecting train during service
 - Supplemental bus capacity provided for Giants games
- Service ends early on weekends



Customer Communication

- caltrain.com/status



A screenshot of the Caltrain website. The top navigation bar includes the Caltrain logo, a search bar, and a language selection dropdown. Below the navigation bar are links for Stations, Fares, Rider Information, Projects, and About Caltrain. A secondary navigation bar features buttons for Trip Planner, Live Map, Service Alerts, and Schedules. A large banner with a teal and white background reads "SERVICE CHANGES IN EFFECT!" in bold red letters. Below this, a dark teal box contains the text "Temporary Weekday Service Changes Starting April 17, 2023. Plan ahead at caltrain.com/status." To the right of the text is an icon of a train with a speech bubble containing an exclamation mark. At the bottom of the banner, a red bar contains the text "ALERT: : Temp. Weekday Service Changes Starting April 17. Weekend Shutdowns in Effect. Plan ahead: Caltrain.com/Status."

First Public Train Tour - July 29th at San Jose Diridon Station Additional Tours Fall 2023



Upcoming Board Items

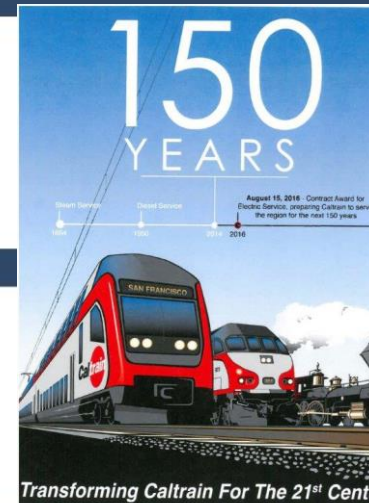
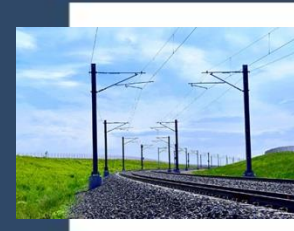
Upcoming Board Items

- Monthly Updates on Construction Progress and Service Changes
- SamTrans Memorandum of Understanding for Weekend Bus Bridge Support (June 2023)
- Railroad Isolation Protection Change Order (August 2023)
- Increase Contract Authority Within Existing Budget for Consultant Services
 - Hatch LTK (October 2023)

June 1, 2023

Caltrain Board of Directors Update

Balfour Beatty
Infrastructure Inc.



May Highlights

- Traction Power Substation 2 Loadbank Test – Successful & Completed as scheduled
- Segment 3 High-Pot Testing – Successful & Completed as scheduled
- Segment 3 Sectionalization – Successful & Completed as scheduled
- TPS2 Short Circuit Testing – Completed with Actions Items
- Live Run Ready for Drill Track
- Punchlist Walks – Joint JPB Punchlist walks have started, we can improve in this area
- Segment 1 OCS Completion – This will be completed on June 5th - missed target by 5 days
- Wire Train Back Online and Mobilized in Segment 2
- OCS Production – 121% Complete for May Projections

June Targets

- Santa Clara Drill Track Live Run Test
- Energize CEMOF
- Live Run Test Segment 4
- Live Run Test Segment 3
- SF to Millbrae Signal Cutover – Bus Bridge Weekend
- Specialty Subcontractors Regulating in Segment 1

Focus Areas

- Milestone 1 Delivery – (Mountain View to San Jose)
- OCS Production
- TPS1 Preparedness
- Punchlist Execution
- Closeout Planning
- Training Schedule
- Preparing As-Built & O&M Manuals
- Improve communication & collaboration at all levels
- Measuring what we do every day

OCS Progress Since Last Caltrain Board Meeting

Commodity	Plan Since Last Board Meeting	Actual Since Last Board Meeting	Total % Complete
Pole	11	12	109%
All Beams	17	27	159%
Cantilevers & Drop Tubes	106	142	134%
Feeder & Static Wire Assemblies	90	89	99%
Messenger Wire	32,644	33,279	102%
Contact Wire	20,331	29,038	143%
Feeder Wire	21,954	22,234	101%
Static Wire	11,237	20,380	181%
Regulation	255	212	83%
Total Wire Pull Plan vs. Actual	86,166	104,931	123%
Total Wire Pull % of Plan 5 Weeks		121.78%	

Overall OCS Production as of May 21, 2023

Commodity	Total Quantity	Job to Date % Complete	Total Quantity Remaining Starting Week 6	Planned Work from Week 6	Actual Installed form week 6	Delta	% Achieved against Bus Bridge Plan (week 6)	Remaining Quantity to Install
Pole	2,568	99.6%	73	58	62	4	106.9%	11
All Beams	958	99.5%	87	67	82	15	122.4%	5
Cantilevers & Drop Tubes	5,896	89.0%	1,052	455	406	(49)	89.2%	646
Feeder & Static Wire Assemblies	4,855	91.4%	1,245	711	827	116	116.3%	418
Messenger Wire	771,077	80.5%	256,576	103,343	106,040	2,697	102.6%	150,536
Contact Wire	782,985	79.3%	271,062	129,024	108,636	(20,388)	84.2%	162,426
Feeder Wire	486,189	82.8%	122,684	25,156	39,013	13,857	100.0%	83,671
Static Wire	604,799	87.0%	109,249	16,100	30,875	14,775	191.8%	78,374
Regulation	5,768	57.5%	3,250	821	796	(25)	97.0%	2,454

OCS Interim Milestone Management

OCS Segment Milestone Matrix				
Activity	Segment 1	Segment 2**	Segment 3	Segment 4 *
Poles	30-April***	31-Jul***	Done	Done
All Beams	30-April***	31-Jul***	Done	Done
Cantilevers & Drop Tubes	30-May-23	31-Aug-23	Done	Done
Feeder & Static Wire Assemblies	30-May-23	31-Aug-23	Done	Done
Messenger Wire	16-Jun-23	25-Sep-23	Done	Done
Contact Wire	16-Jun-23	25-Sep-23	Done	Done
Feeder Wire	16-Jun-23	18-Sep-23	Done	Done
Static Wire	16-Jun-23	18-Sep-23	Done	Done
Regulation	30-Sep-23	10-Oct-23	Done	Done
High Pot Testing	06-Oct - 07-Oct	13-Oct - 14-Oct	6-May - 7-May	Done
Sectionalization Testing	07-Oct - 08-Oct	13-Oct - 14-Oct	13-May - 14-May	Done
SC TPS Testing	21-Oct - 29-Oct	21-Oct - 29-Oct	19-May - 21-May	19-May - 21-May
(SIT)Live Run Test	4-Nov - 5-Nov	18-Nov - 19-Nov	26-Jun - 9-Jul	05-Jun - 19-Jun
Start BBII Pre-Punch List/Walks	31-Aug-23	15-Sep-23	20-Mar-23	Done
Complete BBII Punch List Work	30-Sep-23	15-Oct-23	19-May-23	Done
Start BBI/JPB Joint Punch List Walks	1-Oct-23	16-Oct-23	9-May-23	Done
Complete BBI/JPB Punch List Work	31-Dec-23	31-Dec-23	31-Jul-23	31-Jul-23
Contractual Overall Substantial Completion	1-Apr-24	1-Apr-24	1-Apr-24	1-Apr-24
Contractual Final Acceptance	31-Jul-24	31-Jul-24	31-Jul-24	31-Jul-24

* Excludes Guadalupe Bridge - End of September

*** Coordinating with PG&E OH Shutdowns

TPS Interim Milestone Management

TPS1 Milestone Matrix	
Activity	TPS1
MRS Com Equipment & Testing	10-May
Set Final Battery House	28-Apr
Interlocking Test	15-Jul
EPS Testing	26-Apr
PG Energization 115 Kv transformers	20-Aug
TPS1 Lockdown Substation 115 Kv Transformer	21-Aug
Loadbank Pre-Test	7-Sep - 14-Sep
Short Circuit Testing	21-Oct - 29-Oct

TPS2 Milestone Matrix	
Activity	TPS2
Uplodad & Test New Relay Settings	21-Apr
3rd Party Wire Inspection - NETE	28-Apr
Load bank Pre-Test	3-May - 5-May
Short Circuit Testing	19-May - 22-May

FOR MORE INFORMATION

WWW.CALTRAIN.COM

