

Caltrain Electrification Project Update

Peninsula Corridor Joint Powers Board

January 4, 2024

Agenda Item #9



Project Highlights

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- Schedule: No change to revenue service date - fall 2024
- Budget: No change to project budget - \$2.44B
 - \$2.30M November 2023 draw from “\$50M Shared Risk Pool”
 - No November 2023 draw from “\$40M Project Contingency”
- Construction
 - Overhead Contact System - Revised Path to Completion – April 1, 2024
 - Short Circuit Testing Scheduled for February 2024 – Dates Approved by PG&E
 - Live Runs Scheduled for March 2024
 - No Bus Bridges Planned for January or February
- Electric Trains
 - Third Electric Trainsets Started 1,000-Mile Test
 - Two Trainsets Arrived Early November 2023
 - Next Two Trainsets Expected January 2024

Safety and Security

Time Period	Reportable Injury Rate
January 1 to November 30, 2023	1.77
Since Project Start (2017)	1.93

Note: National Average Reportable Injury Rate is 2.4.

- **Zero reportable injuries for November 2023 (8 total for 2023)**
- Project Safety Awareness trainings ongoing for Local Fire and Police Departments (1,000 emergency responders trained to date)
- 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	Drawn in November 2023	Drawn To Date	Amount Remaining
BBII Shared Risk Pool	\$50.00M	\$2.30M	\$15.05M	\$34.95M
Project Contingency	\$40.00M	\$0.00M	\$34.30M	\$5.70M
Total	\$90.00M	\$2.30M	\$49.35M	\$40.65M

Top Risks

- Contractor Overhead Contact System Productivity
- Contractor Quality Control and Quality Assurance
- Timely Completion of Integrated Testing and Live Runs
- Traction Power Energization and Short Circuit Testing (TPS-1)
- Theft of Impedance Bonds Cables

Upcoming Board Items

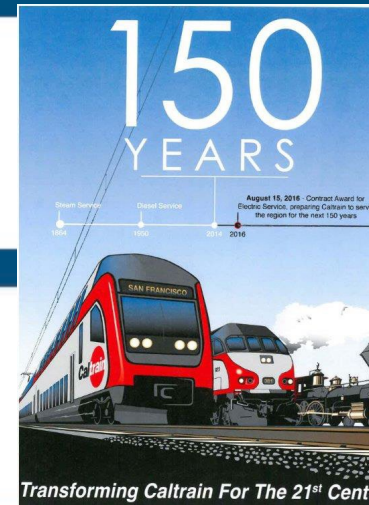
Upcoming Board Items

- Monthly Updates on Construction Progress and Service Changes

January 4, 2024

Caltrain Board of Directors Update

Balfour Beatty
Infrastructure Inc.



Focus Areas

- Continue viewing everything thru the Zero Harm lense – Improving RIR – 1.55 YTD
- OCS Production – Regulation
 - Main Line Regulation Complete – Ready for SC Testing
 - SF Station and Yard to complete - 215 Regulations Remaining
 - Completed Guadalupe Bridge OCS Installation
- Traction Power Stations and WPCs
 - Short Circuit Test - February 2024
 - SCADA Testing – Ongoing – Complete January
- Training Schedule
 - OCS – Complete
 - Signals – Complete
 - Traction Power – February 2024
- Punchlist Execution
 - 59% of the areas walked & punchlist established
 - 40% punchlist items complete
- Closeout Execution
 - As-Built 51.55% complete submitted to the EOR for redline
- Measuring what we do every day

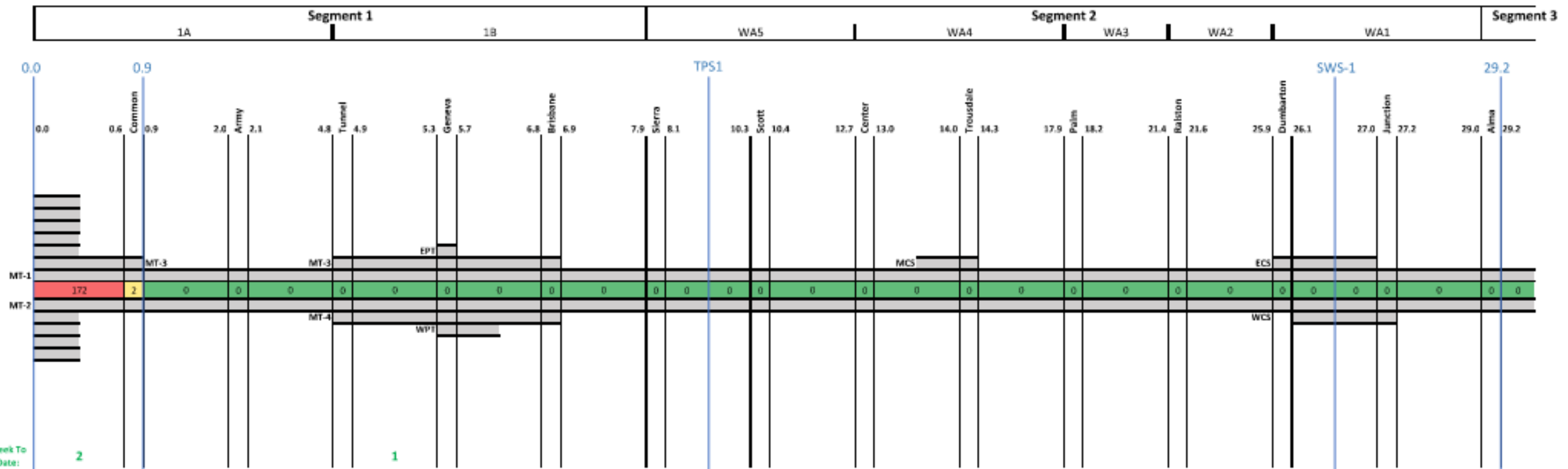
Current Overall OCS

Construction Progress Tracker				Week Completed	51	
				Updated	12/25/2023	
Commodity	Total Quantity	Job to Date % Complete	Quantity Remaining Starting Week 41	Planned Work from Week 41	Remaining Quantity to Install	Remaining Quantity Planned
Regulation Now includes 52 Reg at	5,815	87.05%	877	877	215	215
Panning	95	80.00%	95	96	19	19
Loop Testing	68	76.47%	68	62	16	16
High Pot testing	92	99.75%	92	88	26	26
Sectionalization Testing	4	99.75%	4	4	4	4
Feeder & Static Wire Assemblies	4,855	100.00%	12	12	-	-
Anger Wire (Guadalupe Bridge)	771,077	100.00%	256,576	2,571	-	-
Contact Wire (Guadalupe Bridge)	782,985	100.00%	272,762	2,571	-	-
Feeder Wire (Guadalupe Bridge)	486,189	100.00%	122,047	2,192	-	-
Static Wire (Guadalupe Bridge)	604,799	100.00%	108,990	1,982	-	-
		94.30%				
Additional 52 regulation @ Guadalupe						

Regulation

OCS Regulation Tracker

1/2/2024



Week To Date:

2

1

	Left	Done	Total	% Comp.
0.0 to 0.9	174	330	504	65.5%
0.9 to TPS1	0	1155	1155	100.0%
TPS1 to SWS-1	0	2074	2074	100.0%
SWS-1 to 29.2	0	350	350	100.0%
Total:	174	3909	4083	95.7%

Category A & B Punchlist Items

OCS Punchlist/Inspection Tracker

		Segment 1		Segment 2					Segment 3
1/2/2024		1A	1B	WA5	WA4	WA3	WA2	WA1	WA2
Pole Inspections	Left To Go	306	13	7	0	0	0	0	0
	% Complete	29%	96%	98%	100%	100%	100%	100%	100%
	SFT12								
	SFT11								
	SFT10								
	SFT9								
	SFT8		EPT						
	MT3		MT3	MCS				ECS	
	MT1								
	MT2								
SFT4		MT4					WCS		
SFT3		WPT							
SFT2									
SFT1									
	Week To Date:		11					22	
Open Cat A/B Items	SFT12								
	SFT11								
	SFT10								
	SFT9								
	SFT8		EPT						
	MT3		MT3	MCS				ECS	
	MT1	49	87	20	6	25	54	96	3
	MT2								
	SFT4		MT4					WCS	
	SFT3		WPT						

Cat A/B Punchlist Items									
	1A	1B	2-5	2-4	2-3	2-2	2-1	3-2	All
Open:	49	87	20	6	25	54	96	3	340
Done:	30	52	156	239	78	16	17	18	606
Total:	79	139	176	245	103	70	113	21	946
% Complete:	38.0%	37.4%	88.6%	97.6%	75.7%	22.9%	15.0%	85.7%	64.1%

Category A, B, & C Punchlist

Category A – Electrical – Insulators, Jumpers, Insulation

Category B – Pantograph – Interference on the Pantograph, alignment of the contact wire

Category C – Aesthetics – Paint chip, rust

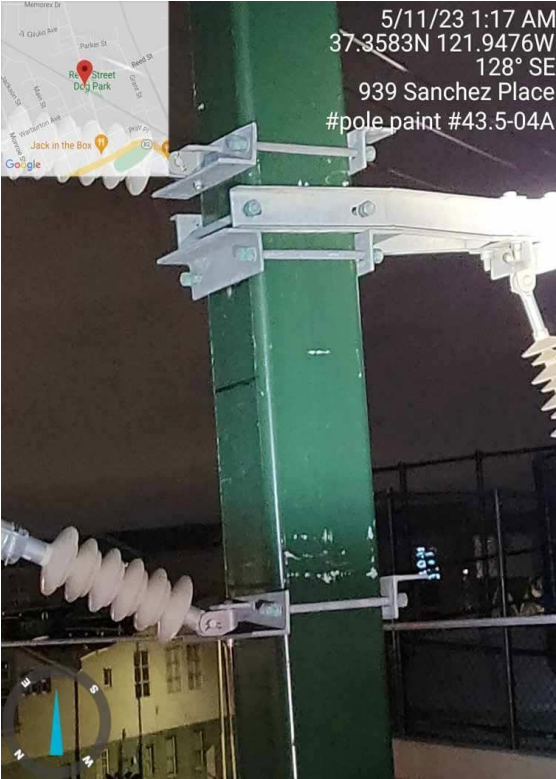
Category A



Category B



Category C



Current Short Circuit Testing and Live Run Testing Plan

SC Test	Track	Teams @ MP	Revised Dates	Sub Station	Limits
Test 1	MT 2	45.24	2/23/2024	TPS 1	1.1 to 45.24
Test 2	MT 1	26.2	2/9/2024	TPS 1	TPS 1 to 26 Mp
Test 3	MT 2	1.1	2/17/2024	TPS 2	TPS 2 to 1.1
Test 4	MT 2	26.2	2/16/2024	TPS 2	TPS 2 to 26.2
Test 5	MT 2	38.61(PS 6)	2/10/2024	TPS 2	TPS 2 to SWS(26.1)

Note: The Short Circuit Testing dates are confirmed by PG&E

Overall Path To Completion

	January	February	March	April	May	June	July
OCS Main Line Completion - COMPLETE							
OCS Panning/Loop/HighPot Testing Complete	█	█	█				
OCS SF Station Completion	█	█	█				
Sectionalization Testing	█	█	█				
SCADA Testing Complete	█	█	█				
Parallel Station Complete	█	█	█				
Wayside Power Cabinets Complete	█	█	█				
Short Circuit Testing		█	█				
Segment 1 & 2 Live Run Test			█	█			
End to End Test				█			
Substantial Completion Documents Complete	█	█	█	█			
Substantial Completion				█			
Punchlist Complete	█	█	█	█	█	█	█
Final Acceptance Documents Complete	█	█	█	█	█	█	█
Final Acceptance Documents Complete	█	█	█	█	█	█	█

No Changes to Schedule from December 7th update

What are the action items to ensure Substantial Completion?

➤ **December Reduction in Regulation Numbers - WHY**

- Crews focused on 90 Degree curve leading into SF Station – Most Technical Section for Regulation – **Known Challenge - Tracking**
- Planned TASI Training & Reduction in RWIC availability – **Known - Done**
- Reduced crews between Christmas & New Years – **Known - Done**
- 4 weather days in December affecting OCS crews – **Risk – On-Going - Managing**

➤ **What gives us confidence in the path to substantial completion**

- Regulation on the Mainline is complete. This is what is needed for SC Testing - **Done**
- Crews on track with Cat A & Cat B Punchlist items – **On Schedule**
- 90-degree curve solution in place and tracking for completion - **Tracking**
- Punchlist creation crews shifting to enhance punchlist completion crews, more production – **Week of 1/8/2024**
- Sectionalization Testing on schedule to begin January 15, 2024 - **Tracking**
- Traction Power SCADA Testing – **Tracking**
- **SFO Station has no bearing on Sectionalization Testing & Short Circuit Testing**

FOR MORE INFORMATION

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