



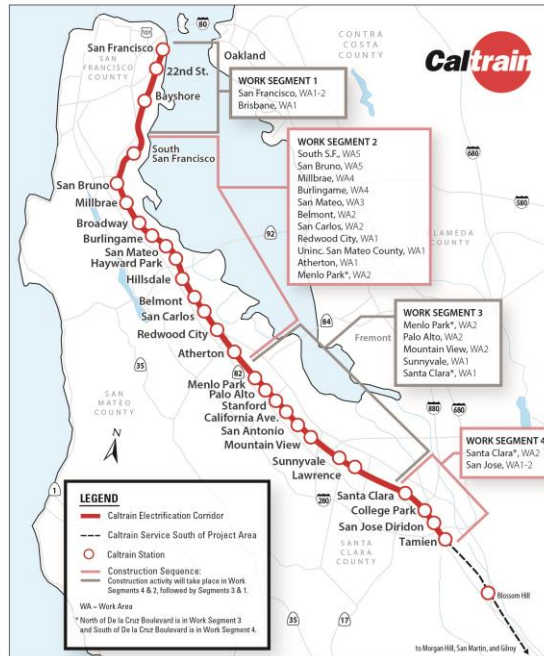
PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP)

Q2 Quarterly Update #17
October 1 – December 31, 2018

JPB Board Meeting
February 7, 2019
Agenda Item # 8a



PCEP Work Segment Map



CalMod ELECTRIFICATION CONTRACT UPDATE

Design Progress

Design Discipline	OCS			Signal			Traction Power		
	Required	Completed Previously	Completed this Period	Required	Completed Previously	Completed this Period	Required	Completed Previously	Completed this Period
Segment 1	6	1	0	3	0	0	3	0	0
Segment 2	11	9	2	66	0	0	3	2	0
Segment 3	4	1	0	10	0	0	2	0	0
Segment 4	9	5	1	24	0	0	4	3	1
Systemwide	9	7	1	14	0	2	7	5	2
Totals	39	23	4	117	0	2	19	10	3

Note: Data as of January 22, 2018



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CalMod ELECTRIFICATION CONTRACT UPDATE

OCS Progress

Segment	Work Area	Foundations			Poles		
		Required	Completed this Period (10/01-12/31)	Total Completed	Required	Completed this Period (10/01-12/31)	Total Completed
1	Tunnels	32	12	12	32	0	0
2	5	242	12	184	186	10	160
	4	315	21	220	259	162	163
	3	182	20	57	147	0	0
	2	248	55	59	218	0	0
	1	206	67	67	155	0	0
Total:		1,225	187	599	997	172	323

Note:
Foundations Required do not match Poles Required as guy foundations are needed in some locations for extra support.

Note: Data as of December 31, 2018



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CalMod **ELECTRIFICATION CONTRACT UPDATE**

Traction Power Facilities Progress

Facility	Sitework			Substation Building			Low / High Voltage Equipment			Transformer			Gantry		
	Last Period	This Period	To Date	Last Period	This Period	To Date	Last Period	This Period	To Date	Last Period	This Period	To Date	Last Period	This Period	To Date
TPSS-1	-	28%	28%	-	0%	0%	-	7%	7%	-	100%	100%	-	0%	0%
TPSS-2	-	38%	38%	-	10%	10%	-	22%	22%	-	100%	100%	-	25%	25%
SWS-1	-	5%	5%	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%
PS-1	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%
PS-2	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%
PS-3	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%
PS-4	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%
PS-5	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%
PS-6	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%	-	0%	0%
PS-7	-	5%	5%	-	0%	0%	-	5%	5%	-	0%	0%	-	0%	0%

Wayside Power Cubicles	Required	Installed
		28

Note: Data as of December 31, 2018



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CalMod **ELECTRIFICATION**

Signal Progress

- Began impedance bond installation in Segments 4 and 1
- Signal house and ductbank installed at Auzerais Avenue

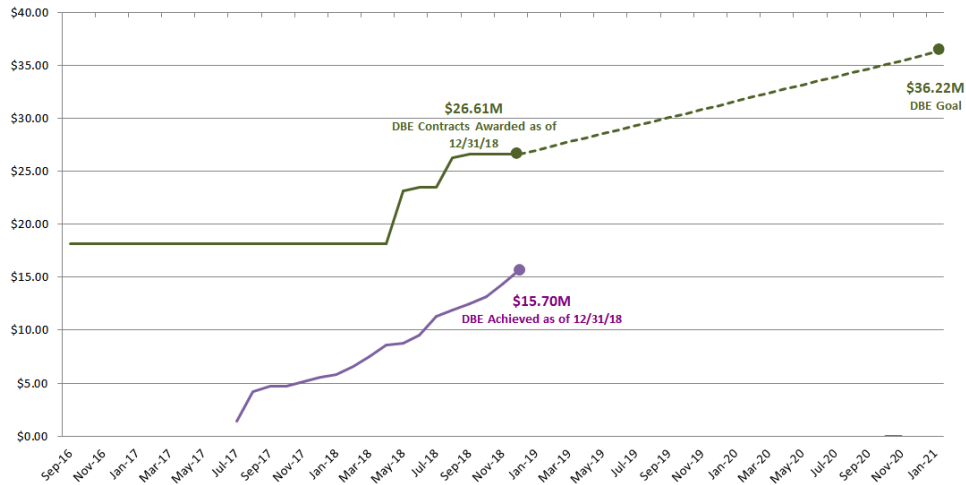


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CalMod DBE UPDATE

Disadvantaged Business Enterprises

- 5.2% of total DB contract value (**\$36,223,749**) subcontracted to DBEs
- DBE payments to date: 12/31/18: **\$15,700,321**



CalMod ELECTRIFICATION

Other Electrification Contracts

- Supervisory Control and Data Acquisition (SCADA)
 - Continued implementation of clearance, remote power terminal and other feature development
- Reviewed and approved Points List
- Centralized Equipment Maintenance and Operations Facility
 - Bid received, negotiations with single bidder complete
 - Bid amount reduced from \$7,197,777 to \$6,550,777 as a result of negotiations
 - Proposed award of contract JPB February 2019 meeting

CalMod TUNNEL CONTRACT UPDATE

ProVen Management, Inc.

- Contract Scope:
 - Increase tunnel clearances
 - Install OCS
 - Drainage improvements and track rehabilitation (CNPA)
- 13 weekend tunnel closures (with bus bridges) occurred through December 31, 2018 with successful Monday return to Caltrain revenue service
- Construction Update:
 - Tunnel 1: Grouting and notching complete; shotcrete complete, OCS anchor bolts cored and installed, drainage work began
 - Tunnel 2: Hand-notching (saw-cutting/chipping) complete; rebar installation and shotcrete complete, 12 of 15 OCS anchorages installed
 - Tunnel 3: Grouting complete; notching nearly complete, anchor coring nearly complete
 - Tunnel 4: Grouting complete; rock bolt installation ongoing; notching nearly complete; significant progress made on installation of dry-fix pins, welded-wire mesh, and shotcrete
 - All Tunnels: 12 of 32 OCS termination structure foundation installations complete

Update through December 31, 2018



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CalMod TUNNEL CONTRACT UPDATE



Dry Fix Pin Installation



Grouting Operation



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CalMod TUNNEL CONTRACT UPDATE



On-Track Drill
(for Rock Bolts and Grout Holes)



Rock Bolt Installation (foreground)
Grout Hole Drilling (background)



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CalMod TUNNEL CONTRACT UPDATE

Tunnel 1 Template Truck

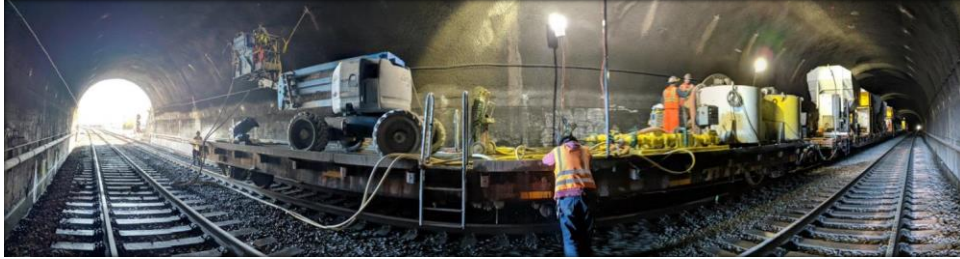
Helps determine envelope for tunnel notching



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CalMod TUNNEL CONTRACT UPDATE

Tunnel 4: Grouting Train



CalMod TUNNEL CONTRACT UPDATE

Tunnel 4



South Portal MT1 Potholing
for OCS Termination Structure Piles



Grouting

CalMod TUNNEL CONTRACT UPDATE

Tunnel 4 Grouting

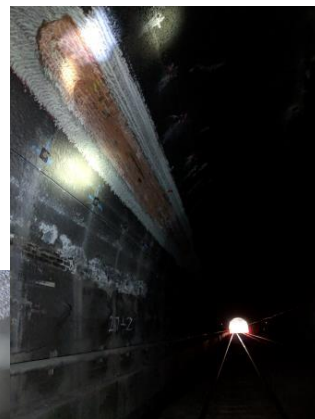


CalMod TUNNEL CONTRACT UPDATE

Notching



Fan used to maintain airflow during notching



Exposed Brick in Notch

Roadheader Notching Operation



CalMod EMU VEHICLES

EMUs – Design & Manufacturing

- Final design complete except software intensive equipment such as passenger information signs and train monitoring and diagnostics system, scheduled to be complete Q4 2019

Stadler Electric Multiple Unit Manufacturing Progress: 133 Carshells (19 Trainsets of 7 Carshells)				
	Switzerland Construction Facility in Various Stages of Completion	En Route from Switzerland to Salt Lake City	Salt Lake City Assembly Facility	Total Manufactured Cars per Trainset
Trainset 1		1	6	7
Trainset 2	3	4		7
Trainset 3	4			4
Total	7	5	6	18

- Truck frame first article inspection complete and production manufacturing underway. Frames for static and fatigue testing fabricated and prepared for shipment to independent testing facility. Fatigue testing of the truck to be complete in May 2019
- Second of 3 floor/ceiling fire tests completed successfully
- Stadler new Salt Lake City manufacturing facility construction on schedule, with incremental completion in advance of car manufacturing needs



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CalMod EMU VEHICLES

Stadler's Utah Manufacturing Facility



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CalMod RISK MANAGEMENT

Next Steps

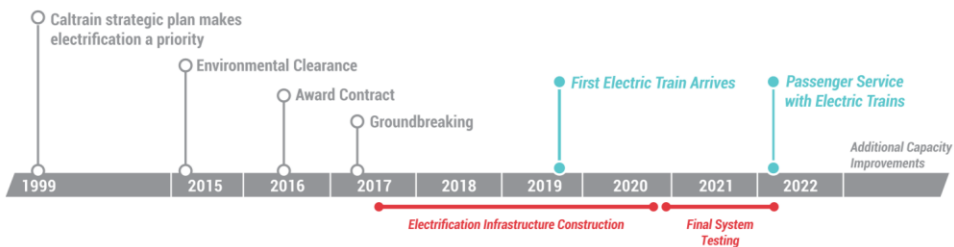
- Risk Refresh for EMU-related risks (scheduled for December 18)
 - Risk Refresh for Electrification-related risks (planned for January 2019)
 - Quarterly Contractor Risk Management Meeting (planned for January 2019)
 - Focused Schedule Risk Refresh (subsequent to preceding items)
 - » Updated Monte Carlo Simulation analysis/report out on changes to project risk exposure
- Top 2 Risks:
 - BBII may be unable to develop grade crossing modifications that meets stakeholder and regulatory requirements
 - Received Statement of No Objection from UPRR
 - Meeting with FRA on January 18
 - Extent of differing site conditions and delays in resolving differing site conditions may delay completion of electrification
 - Added personnel to help engineering/utility conflict resolution
 - Meeting on weekly basis to prioritize and resolve conflicts



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CalMod SCHEDULE

MILESTONES



*Please keep in mind that testing and construction will overlap as each Segment will be tested individually, prior to final system testing.

Note: **Schedule Subject to Change**



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BUDGET & EXPENDITURES



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CalMod BUDGET & EXPENDITURES (in millions)

	Budget	Current Budget	FY19 Q2 Costs	Costs to Date	Estimate at Completion
Electrification	\$696.61	\$712.29	\$24.74	\$276.05	\$712.29
SCADA	\$0.00	\$3.45	\$0.04	\$1.93	\$3.45
EMU	\$550.90	\$550.79	\$4.98	\$97.38	\$550.79
PG&E	\$57.22	\$88.49	\$5.84	\$33.80	\$88.49
Tunnel Notching	\$11.03	\$42.42	\$13.10	\$16.00	\$42.42
Separate Contract & Support Costs	\$348.96	\$335.97	\$14.04	\$178.91	\$335.97
Contingency ¹	\$315.53	\$246.85	\$0.00	\$0.00	\$238.68
Anticipated Changes	\$0.00	\$0.00	\$0.00	\$0.00	\$8.17
PCEP Total	\$1,980.25	\$1,980.25	\$62.74	\$604.08	\$1,980.25

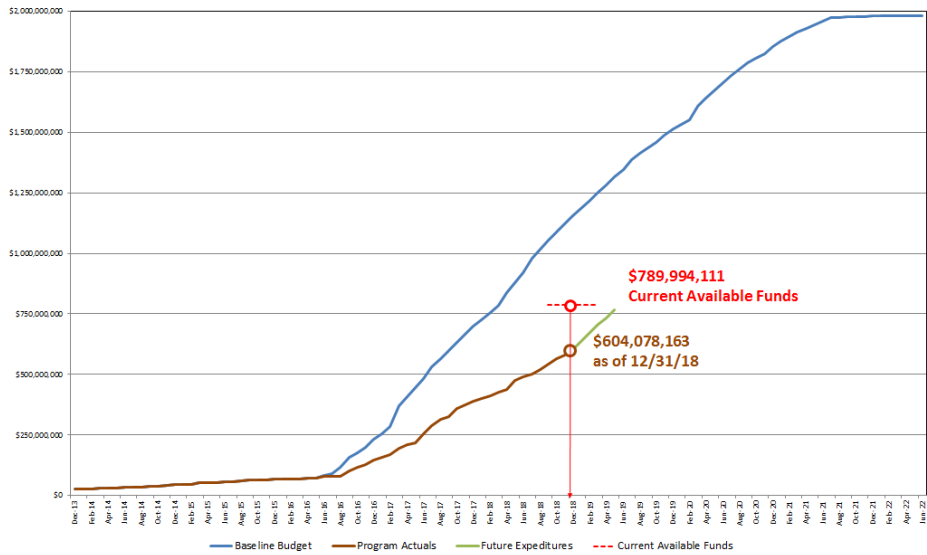
Note 1: Contingency is not for out of scope changes.

Budget / Expenditures as of **December 31, 2018**



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CalMod ACTUAL VS PLANNED



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CalMod CONTINGENCY¹ DRAWDOWN

Contracts	Amount	Contingency
Beginning Contingency		\$315,533,611
Drawdown		
Executed Change Orders	\$10,758,444	
SCADA Contract	\$3,446,917	
PG&E Supplemental #4	\$31,263,082	
Tunnel Modifications	\$31,386,286	
Total	\$76,854,729	
Remaining Contingency		\$238,678,882

Note 1: Contingency is not for out of scope changes.

As of December 31, 2018



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CalMod ANTICIPATED CONTINGENCY¹ DRAWDOWN

Contracts	Amount	Contingency
Remaining Contingency		\$238,678,882
Pending Contingency Drawdown		
Installation of Insulated Joints	\$2,694,519	
Signal Cable Relocation Field Orders	\$271,114	
CEMOF Modifications	\$5,206,777	
Total	\$8,172,410	
Anticipated Remaining Contingency		\$230,506,472

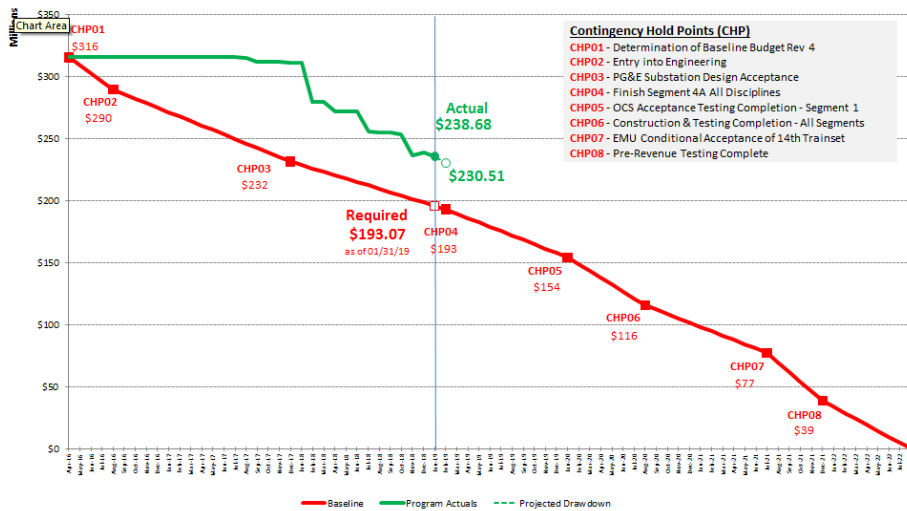
Note 1: Contingency is not for out of scope changes.

As of December 31, 2018



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CalMod CONTINGENCY¹ DRAWDOWN CURVE



Note 1: Contingency is not for out of scope changes.



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CalMod OUTREACH

- 52 Outreach Events (2018)
- 170,000 Direct mailers / door hangers (2018)
- 1,813 Subscribers to the monthly e-updates (up 130%)
- 1,204 Subscribers to the weekly e-update (up 117%)
- Website: CalMod.org

CALMOD E-NEWSLETTER

In this issue, A heartfelt thank you to Caltrain Riders, what's the latest with construction, and a shout out to San Lake City!

THANK YOU, CALTRAIN RIDERS!



Thank You to YOU, our riders, for your continued support while we work to make the future of Caltrain better and brighter. Weekend construction closures can be frustrating, but it means that change is coming, and we hope you'll agree that the future is worth it. We look forward to bringing our riders more train service offers, with better on-time performance and onboard comfort. No matter which improvements you're looking forward to, we thank you for supporting the CalMod program.

Check out what Caltrain riders have to say about the CalMod program at CalMod.org/Riders_Thanks.

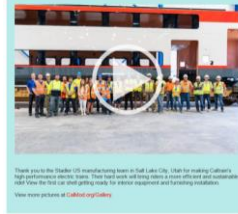
CONSTRUCTION UPDATE



Crews continue switching and grading work in the San Francisco Tunnels for Caltrain. Electrification, and from South San Francisco to Burlingame foundations and poles are being installed. Pre-construction activities are now underway along the entire corridor.

To sign up for weekly construction updates or for more construction information, visit CalMod.org/construction.

ELECTRIC TRAINS UPDATE



Thank you to the Thales C60 manufacturing team in Full Lake City, Utah for making Caltrain's high performance electric trains. One half week of testing shows a train efficient and sustainable with low life cycle cost and getting ready for driver approval and training activities. View more photos at CalMod.org/Caltrain.

UPCOMING EVENTS

Redwood City and North Fair Oaks Community Meeting
 December 28, 2018 10:30 am to 12:00 pm
 Overlook Redwood City Library Community Room
 1044 Redwood Road, Redwood City, CA 94061

Monthly E-Update Example



CalMod CONTACT

CALMOD CONTACT INFORMATION

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