



## PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP)

Q4 Quarterly Update #15  
April 1 – June 30, 2018

JPB Board Meeting  
August 2, 2018  
Agenda Item # 7c



### **CalMod** ELECTRIFICATION

#### Progression of Design

- Overhead Catenary System (OCS):
  - Continued design for all Segments
  - Continued technical coordination with Union Pacific Railroad for Segment 4 OCS Design Changes
- Signal System:
  - Continued submission and review of 65% signal design for Segments 2 and 4
  - Continued technical coordination with Union Pacific Railroad for systemwide signal system design
  - Continued developing Consistent Warning Time (CWT) Solution Approaches
  - Continued review of Segment 2 and 4 Line of Sight Studies



## CalMod **ELECTRIFICATION**

### Progression of Design

- Traction Power System:
  - Completed Traction Power Systemwide Design
  - Continued design of Traction Power Facilities Plans in all Segments
  - Completed design of Traction Power Substation 2 in Segment 4
  - Coordinated design of Traction Power Substation 1, including interface with South San Francisco Station Improvement Project
  - Continued coordination with PG&E on design of interconnection
- Communication System:
  - Continued work on systemwide communication design
- Systems Integration:
  - Continued design of Systems Integration Testing Plan



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## CalMod **ELECTRIFICATION**

### Issued for Construction Designs Completed

Design Discipline	OCS		Signal		Traction Power	
	Required	Completed	Required	Completed	Required	Completed
Segment 1	6	1	3	0	3	0
Segment 2	11	9	66	0	3	2
Segment 3	4	1	10	0	2	0
Segment 4	9	5	24	0	4	3
Systemwide	9	7	14	0	7	5



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# CONSTRUCTION



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## CalMod ELECTRIFICATION

### Construction Progress

Segment	Work Area	Foundations		Poles	
		Required <sup>1</sup>	Completed	Required	Completed
2	5	256	172	162	149
	4	366	194	259	0
	3	190	37	147	0
	2	260	0	218	0
	1	206	0	155	0

Note:

<sup>1</sup> Foundations Required do not match Poles Required as guy foundations are needed in some locations for extra support.



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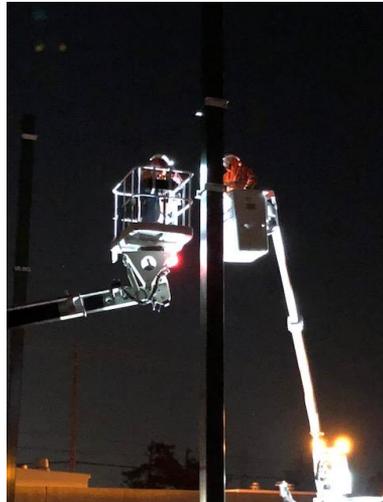
**CalMod** ELECTRIFICATION

TPS-2 Site Work / Civil Work



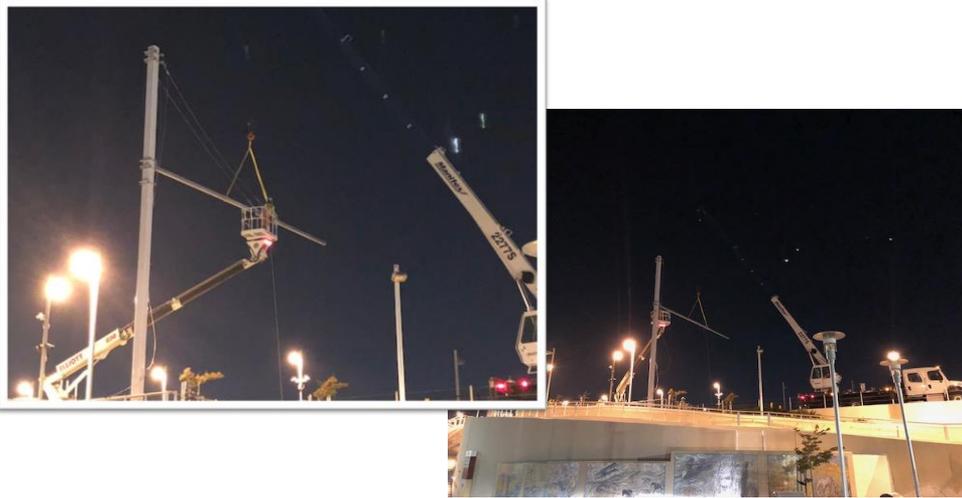
**CalMod** ELECTRIFICATION

Bracket Setting



**CalMod** ELECTRIFICATION

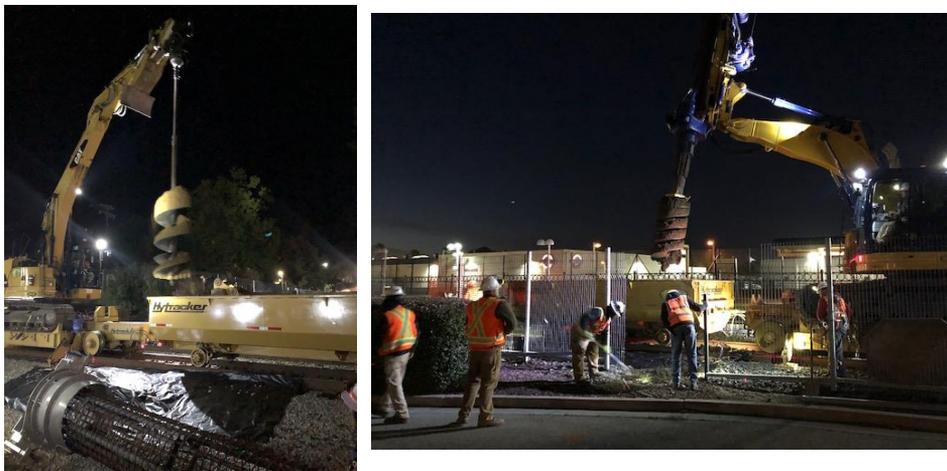
**Cantilever Installation**



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**CalMod** ELECTRIFICATION

**Dangle Drill for Long Reach Foundations**



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## **CalMod** ELECTRIFICATION

### Other Electrification Contracts

- **Supervisory Control and Data Acquisition (SCADA)**
  - Preliminary Design Review completed
  - Final Design Reviews underway
- **Centralized Equipment Maintenance and Operations Facility (CEMOF)**
  - Design Complete
  - IFB release: July 26, 2018
  - Pre-Bid: August 8, 2018
  - Bids Due: September 17, 2018
  - NTP: November 1, 2018



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## **CalMod** ELECTRIFICATION

### Tunnel Modifications

- Completed successful negotiations with the single bidder for the Tunnel Modifications Contract, Proven Management, Inc. (PMI) which resulted in a decrease in the total bid price from \$41,837,777 to \$38,477,777.
- Work in the tunnels will be performed during weekend outages between Bayshore Station and 4<sup>th</sup> and King Station, from October 2018 to March 2019.
- PMI is scheduled to start preliminary work in the tunnels during non-revenue service periods in the weekends in September.



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## CalMod ELECTRIFICATION

### Other Electrification Contracts (continued)

- **Pacific Gas and Electric (PG&E)**

- Continued design of Permanent Power at FMC and East Grand
- Continued construction for FMC Temp Power. Erected steel and received major material
- Continued Material procurement for Permanent Power

FMC Substation -  
San Jose



New 115kV Breaker on Pad



Cable Pulling



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## DISADVANTAGED BUSINESS ENTERPRISES (DBE)

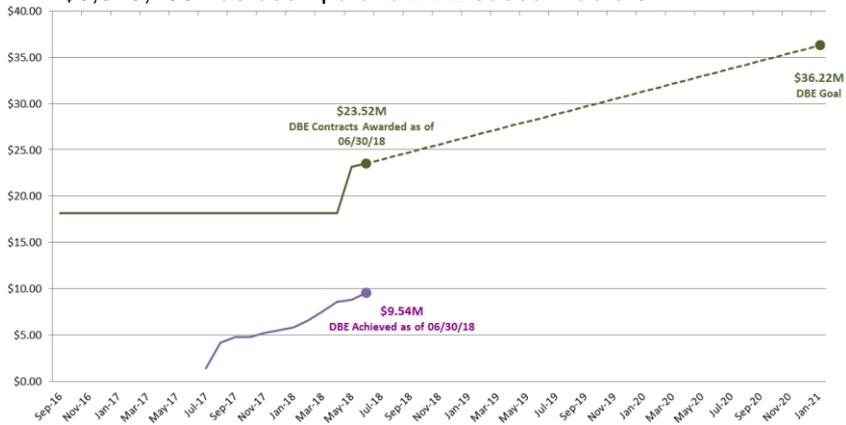


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**CalMod** **DBE**

**Goal of 5.2% (\$36,223,749) of the DB contract**

- As of June 30, 2018
  - \$9,543,158 has been paid to DBE subcontractors



**ELECTRIC MULTIPLE UNITS (EMU)**



**Stadler**

- Most Final Design Reviews for major systems conducted and being finalized for Caltrain approval
- Carshell Construction and Painting First Article Inspections completed successfully
- 3<sup>rd</sup> Cab Car Shell shipped to independent test facility in Germany for 10 weeks of structural test setup, measurements, and load testing
- 2 Cab Car Shells shipped from Altenrhein to Salt Lake City June 5<sup>th</sup> to begin scheduled 8-week journey
- Manufacturing and Final Assembly Facility construction continues on schedule in Salt Lake City. 'Displacement Hall' is to be available for first car shell delivery in August 2018

**First Painted Shell – A-Cab Car**

**First two Car Shells Loaded in Basel for Trip to Salt Lake City**



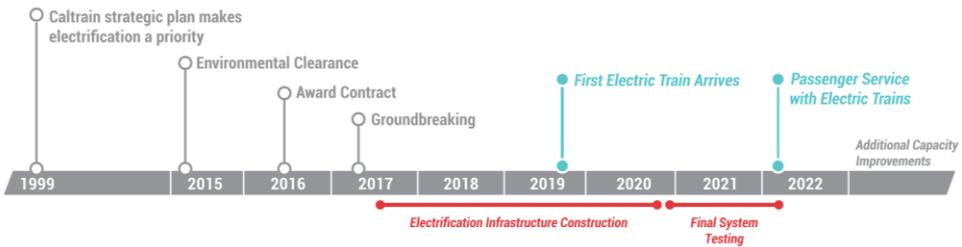
**Stadler New Rail Car Manufacturing Facility in Salt Lake City**





**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



# RISK MANAGEMENT



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## **CalMod** RISK MANAGEMENT

- Review Cost and Schedule Impacts of Risk Register
- 285 risks; 94 active; 191 retired
- Top Risk: BBII may be unable to develop grade crossing modifications that meet regulatory requirements prior to scheduled testing and commissioning of the consistent warning system



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# BUDGET & EXPENDITURES



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## **CalMod** BUDGET & EXPENDITURES (in millions)

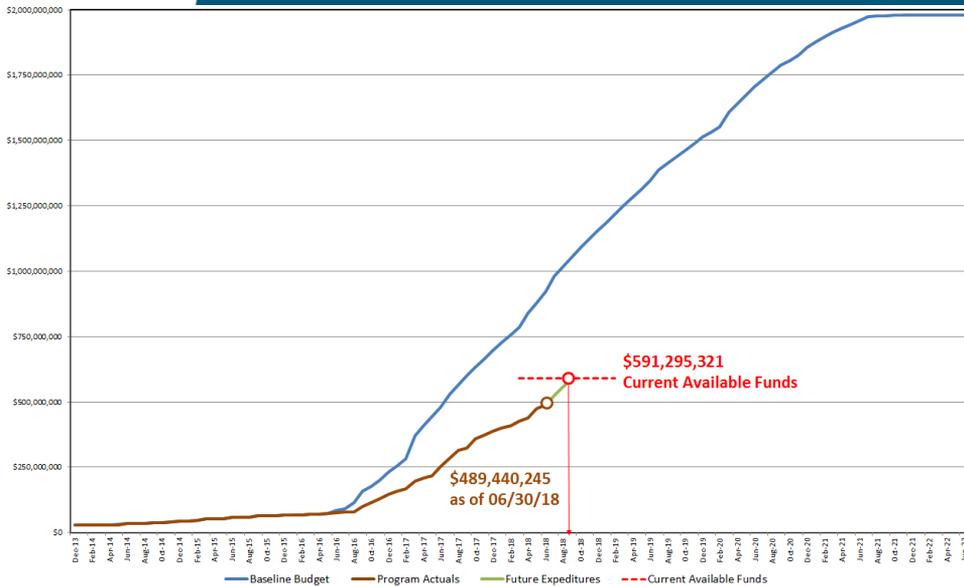
	Budget	Current Budget	FY18 Q3 Costs	Costs to Date	Estimate at Completion
Electrification	\$696.61	\$708.60	\$21.18	\$224.59	\$708.60
SCADA	\$0.00	\$3.45	\$0.00	\$1.38	\$3.45
EMU	\$550.90	\$550.56	\$27.03	\$88.17	\$550.56
PG&E	\$57.22	\$88.49	\$4.17	\$22.33	\$88.49
Separate Contract & Support Costs	\$359.99	\$358.21	\$11.62	\$152.97	\$358.21
Contingency	\$315.53	\$270.94	\$0.00	\$0.00	\$253.60
Anticipated Changes	\$0.00	\$0.00	\$0.00	\$0.00	\$17.34
<b>PCEP Total</b>	<b>\$1,980.25</b>	<b>\$1,980.25</b>	<b>\$64.01</b>	<b>\$489.44</b>	<b>\$1,980.25</b>

Note: Budget / Expenditures as of **June 30, 2018**



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## CalMod ACTUAL VS PLANNED



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## CalMod CONTINGENCY DRAWDOWN

Contracts	Amount	Contingency
Beginning Contingency		\$315,533,611
Drawdown		
Executed Change Orders	\$9,883,185	
SCADA Contract	\$3,446,917	
PG&E Supplemental #4	\$31,263,082	
Total	\$44,593,184	
Remaining Contingency		\$270,940,427

Note: As of June 30, 2018



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## CalMod ANTICIPATED CONTINGENCY DRAWDOWN

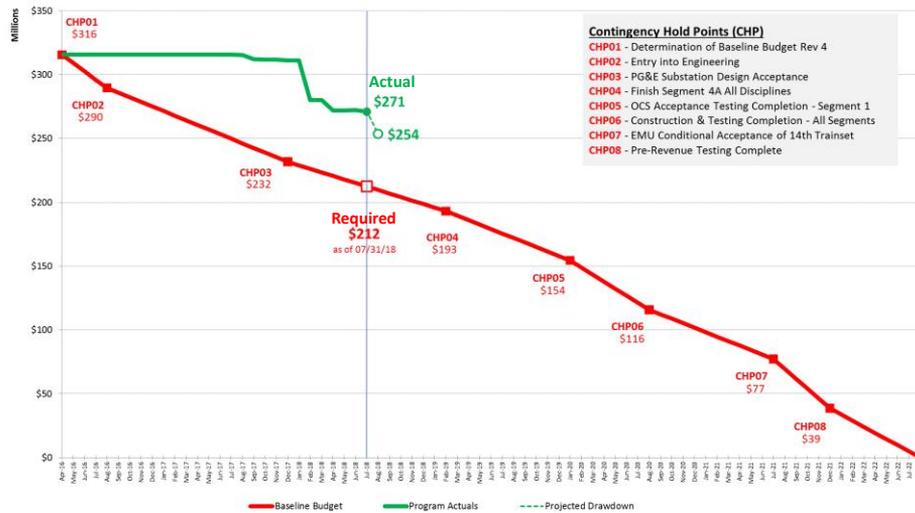
Contracts	Amount	Contingency
Remaining Contingency		\$270,940,427
Pending Contingency Drawdown		
Change Orders In Process	\$2,556,696	
Tunnel Notching (Awarded in July)	\$14,786,286	
<b>Total</b>	<b>\$17,342,982</b>	
Anticipated Remaining Contingency		\$253,597,445

Note: As of June 30, 2018



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## CalMod CONTINGENCY DRAWDOWN CURVE



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## **CalMod** CHANGE MANAGEMENT

### Change Management Board (CMB) Approved Changes

- Balfour Beatty (BBI) Contract
  - Installation of Insulated Joints and Tie Spacing (April)
  - PG&E Interconnection to TPS#1 and TPS#2 – Design (May)
  - Pole Re-design along UPRR-owned Main Track 1 (Santa Clara to San Jose) (June)
- Other Approvals
  - FFGA delay costs (BBI, Stadler, and Program Oversight Costs (April)
  - Construction Management On-Call Services Contract (April)
  - Tunnel Modifications Contract (May)
  - CEMOF Modifications Contract (June)



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## COMMUNITY OUTREACH



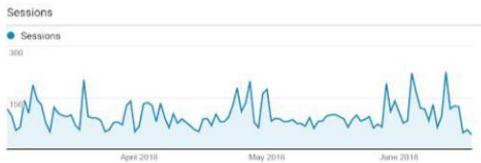
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# CalMod OUTREACH

## Meetings, Mailers & Website

- 5 Public Meetings
- 17,186 Direct Mailers
- CalMod.org Website
  - +78.95% users (7,396 vs. 4,133)
  - +92.51% sessions (10,894 vs. 5,659)
  - +85,33% page views (27,991 vs. 15,103)
  - 84.2% new visitors this quarter, 15.8% returning visitors

POLE INSTALLATION: TIME-LAPSE VIDEO



Sessions by User Type



# CalMod OUTREACH

## CalMod E-Newsletter

**APRIL**  
 44.3% OPEN  
 197 TOTAL CLICK THROUGHS

**MAY**  
 46.6% OPEN  
 135 TOTAL CLICK THROUGHS

**JUNE**  
 37.9% OPEN  
 90 TOTAL CLICK THROUGHS



Sign up at [www.CalMod.org/get-involved](http://www.CalMod.org/get-involved)



