

CalMod



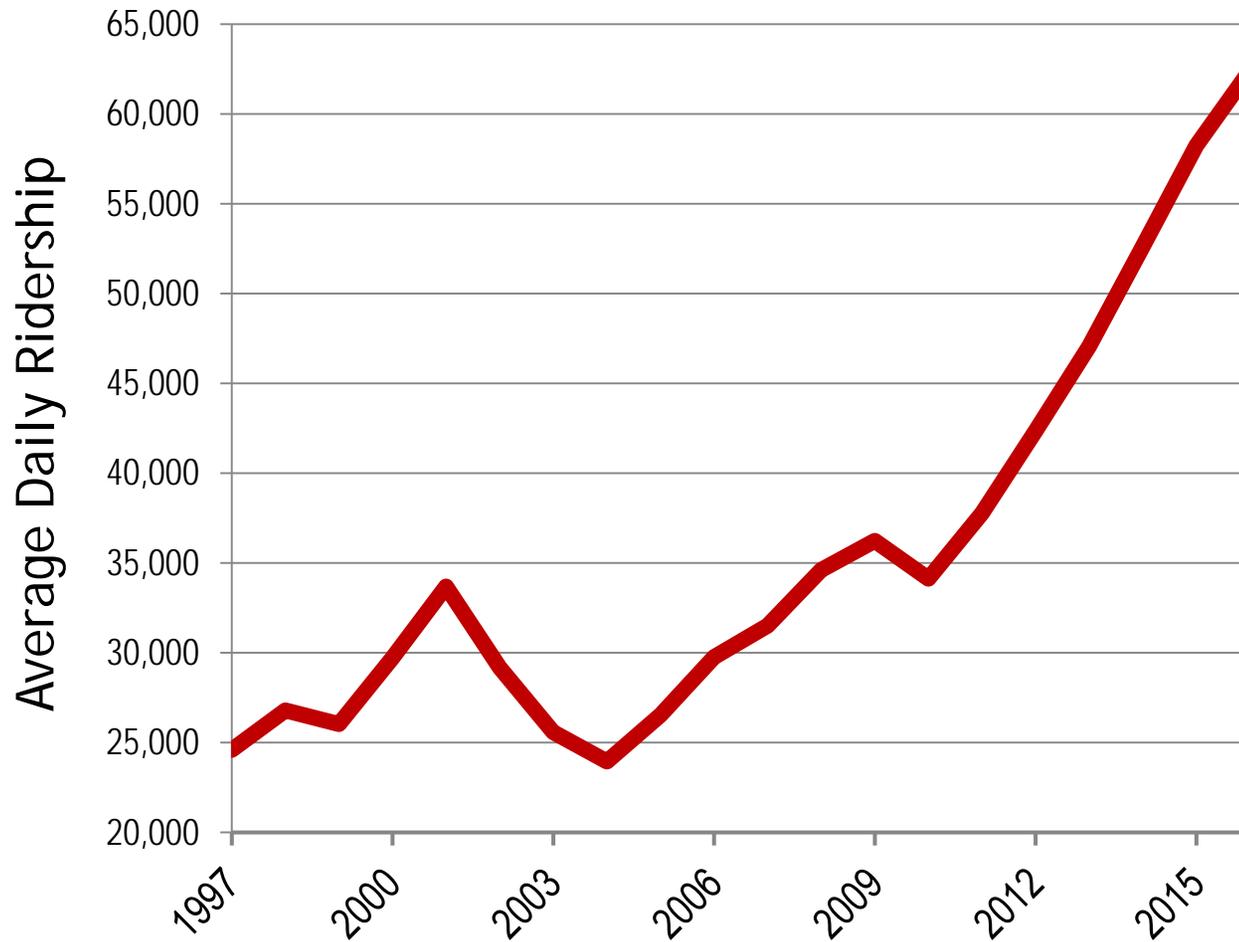
Peninsula Corridor Electrification Project

SMCTA

TA Board of Directors
April 5, 2018
Agenda Item # 11b



Ridership



At Capacity Today



Bi-directional commute with riders standing on trains going southbound and northbound

Aging Fleet

Table 1.2: Caltrain Fleet Inventory

SERIES	QUANTITY	NUMBER OF SEATS	YEAR OF MANUFACTURE	MAKE	RETIRE DATE
Locomotives					
F40 PH-2	5	na	1985	GM - EMD	2015
F40PH-2-CAT	15	na	1985-1987	GM - EMD	2015-2017
F40 PH-2C	3	na	1998	Boise Locomotive	2028
MP36PH-3C	6	na	2003	Motive Power	2033
Passenger Cars					
Gallery Trailer	26	142	1985-1987	Nippon Sharyo	2015-2017
Gallery Trailer	16	148	1985-1987	Nippon Sharyo	2015-2017
Gallery Trailer	14	120	1999-2000	Nippon Sharyo	2030
Gallery Cab (Bike)	10	108	1985-1987	Nippon Sharyo	2015-2017
Gallery Cab (Bike)	6	78	1999-2000	Nippon Sharyo	2030
Gallery Cab (Bike)	21	97	1985	Nippon Sharyo	2015
Bi-Level Trailer*	16	149	1997	Bombardier	2027
Bi-Level Trailer	9	144	2002	Bombardier	2032
Bi-level Trailer (Bike)	2	114	2002	Bombardier	2032
Bi-level Trailer (Bike)	5	114	2001-2002	Bombardier	2031-2032
Bi-level Trailer (Bike)	2	114	2008	Bombardier	2038
Bi-level Trailer (Bike)	1	127	2002	Bombardier	2032
Bi-Level Trailer	6	140	2008	Bombardier	2038

*Trailers recently acquired from Metrolink with refurbishment ongoing.



At Retirement Age: 20/29 loco; 73/134 cars

Electrification Project

Area	Project	Service
51 miles San Francisco to San Jose (Tamien Station)	Electrification: <ul style="list-style-type: none">• Overhead Wiring• Traction Power Facilities Electric Trains (EMUs) <ul style="list-style-type: none">• 75 percent of fleet	Up to 79 mph Service Increase <ul style="list-style-type: none">• 6 trains / hour / direction• More station stops / reduced travel time• Restore Atherton & Broadway service Mixed-fleet service (interim period) Continue tenant service <ul style="list-style-type: none">• ACE, Capital Corridor, Amtrak, Freight



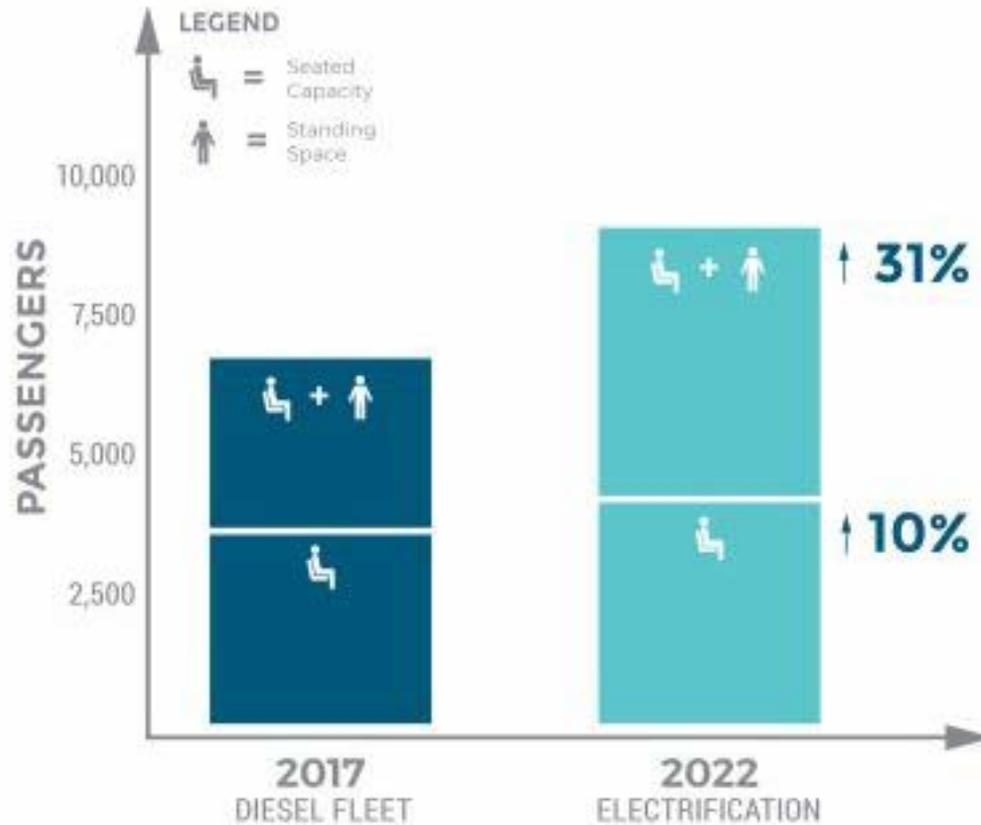
Service Benefits

Metric	Today	PCEP
Example Baby Bullet Train		
Retain 5-6 stops	60 minutes	45 minutes
Retain SF to SJ 60 minutes	6 stops	13 stops
Example Redwood City Station		
Train stops / peak hour	3	5



Note: Prototypical Train and Schedule

Capacity Increase



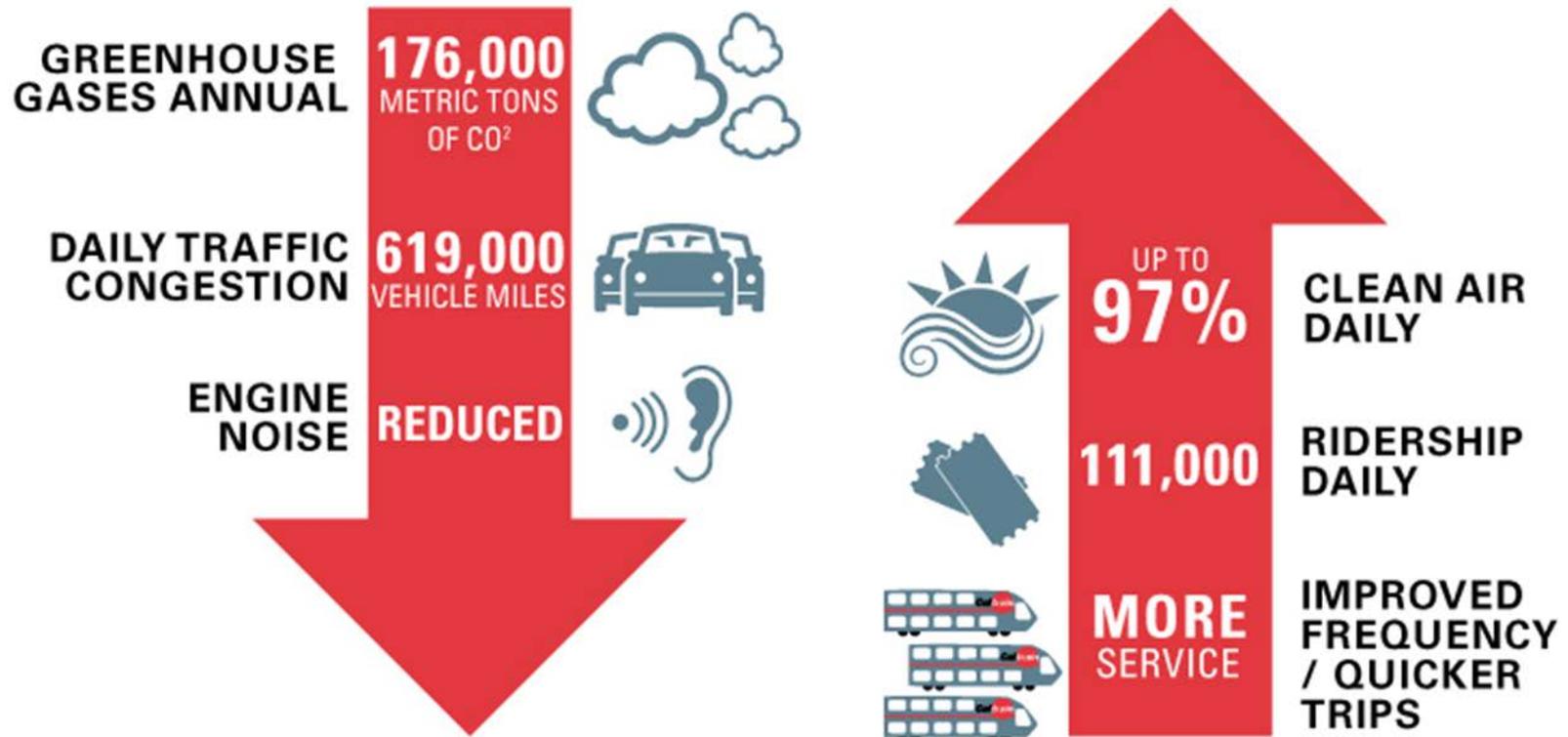
The CalMod program lays the foundation for continued capacity growth on the corridor. Unlike diesel trains, electric trains can maintain performance while expanding the number of train cars.

Figures and percentages subject to changes as EMU design elements and new service schedules are finalized.



Note: Prototypical Train and Schedule

Key Regional Benefits (2040)



Note: 2013 BAC Report, generates \$2.5B economic activity and 9,600 jobs





Broad Coalition Support

Elected Officials & Local, State Support

- California Governor Jerry Brown ([Link to Letter](#))
- Utah Governor's Office of Economic Development
- U.S. Senator Dianne Feinstein ([February 3, 2017](#))
- U.S. Senator Kamala Harris ([February 3, 2017](#))
- U.S. Democratic Leader Nancy Pelosi ([Link to Letter](#))
- U.S. Congresswoman Anna Eshoo ([Feb. 2, 2017](#))
- U.S. Congresswoman Zoe Lofgren ([Link to Letter](#))
- U.S. Congresswoman Jackie Speier ([Link to Letter](#))
- U.S. Congressman Pete Aguilar ([Link to Letter](#))
- U.S. Congresswoman Karen Bass ([Link to Letter](#))
- U.S. Congressman Ami Bera ([Link to Letter](#))
- U.S. Congresswoman Julia Brownley ([Link to Letter](#))
- U.S. Congressman Salud Carbajal ([Link to Letter](#))
- U.S. Congressman Tony Cardenas ([Link to Letter](#))
- U.S. Congresswoman Judy Chu ([Link to Letter](#))
- U.S. Congressman Luis Correa ([Link to Letter](#))
- U.S. Congressman Jim Costa ([Link to Letter](#))
- U.S. Congresswoman Susan Davis ([Link to Letter](#))
- U.S. Congressman Mark DeSaulnier ([Link to Letter](#))
- U.S. Congresswoman Nanette Diaz Barragan ([Link to Letter](#))
- U.S. Congressman John Garamendi ([Link to Letter](#))
- U.S. Congressman Jared Huffman ([Link to Letter](#))
- U.S. Congressman Ro Khanna ([Link to Letter](#))
- U.S. Congresswoman Barbara Lee ([Link to Letter](#))
- U.S. Congressman Ted Lieu ([Link to Letter](#))
- U.S. Congressman Alan Lowenthal ([Link to Letter](#))
- U.S. Congresswoman Doris Matsui ([Link to Letter](#))
- U.S. Congressman Jerry McNerney ([Link to Letter](#))
- U.S. Congresswoman Grace Napolitano ([Link to Letter](#))
- U.S. Congressman Jimmy Panetta ([Link to Letter](#))
- U.S. Congressman Scott Peters ([Link to Letter](#))
- U.S. Congresswoman Lucille Roybal-Allard ([Link to Letter](#))
- U.S. Congressman Raul Ruiz ([Link to Letter](#))
- U.S. Congresswoman Linda Sanchez ([Link to Letter](#))
- U.S. Congressman Adam Schiff ([Link to Letter](#))
- U.S. Congressman Brad Sherman ([Link to Letter](#))
- U.S. Congressman Eric Swalwell ([Link to Letter](#))
- U.S. Congressman Mark Takano ([Link to Letter](#))



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Governor's Office of
Economic Development

BUSINESS • TOURISM • FILM

Q. VAL HALE
Executive Director

March 9, 2017

By electrifying the line, we can run more trains, cut commute times, save fuel costs, improve air quality, reduce noise, and ease traffic congestion by more than half-a-million vehicle miles each day, all while creating manufacturing jobs from Florida to Texas to Utah.

I urge you to let this grant move forward.

Sincerely,

Edmund G. Brown Jr.

Can we discuss this on the phone?

GOVERNOR EDMUND G. BROWN JR. • SACRAMENTO, CALIFORNIA 95814 • (916) 445-2841



AMERICAN
PUBLIC
TRANSPORTATION
ASSOCIATION

March

The Honorable Elaine L. Chao
Secretary
United States Department of Transportat



Over 250 Entities





Groundbreaking



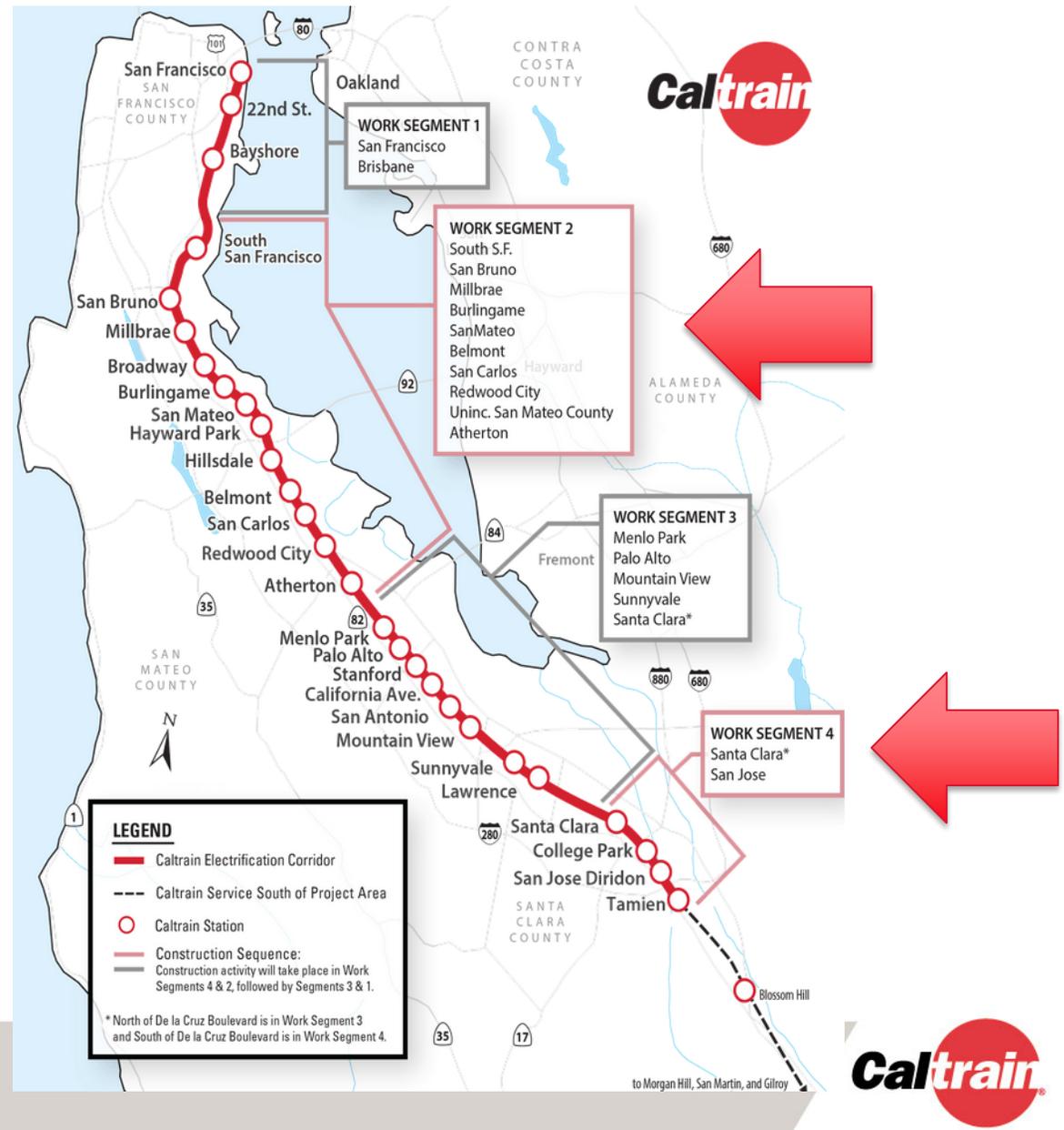
Salt Lake City
Vehicle Plant
Groundbreaking
October 2017

Caltrain Electrification Groundbreaking
July 2017

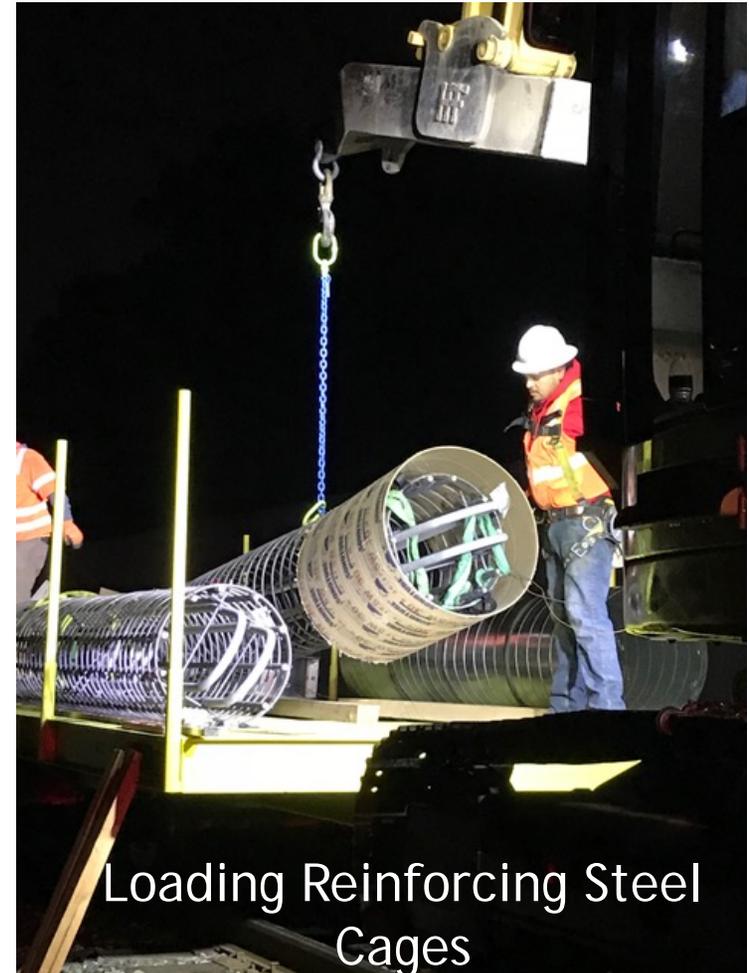


Construction Phasing

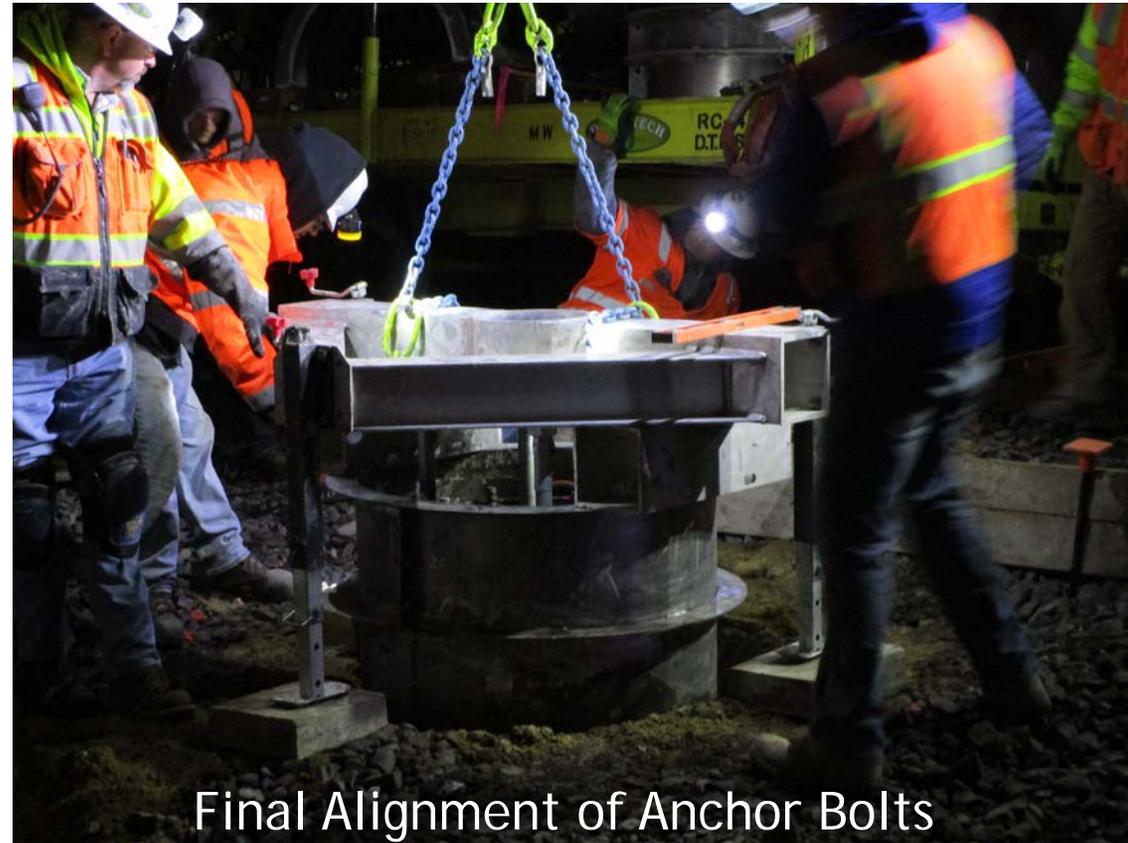
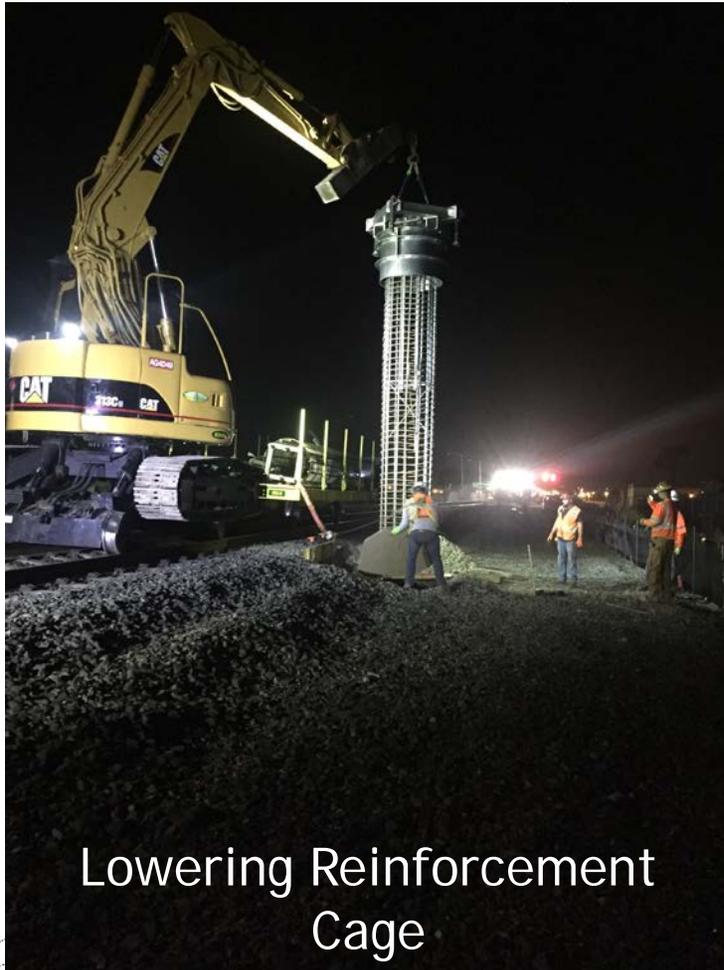
- Segments 2 & 4 followed by 1 & 3
- Daytime work and night work from 8 p.m. - 6 a.m.
- Some 24 hour weekend work
- Crews will utilize acoustical barrier blankets and position lights away from homes



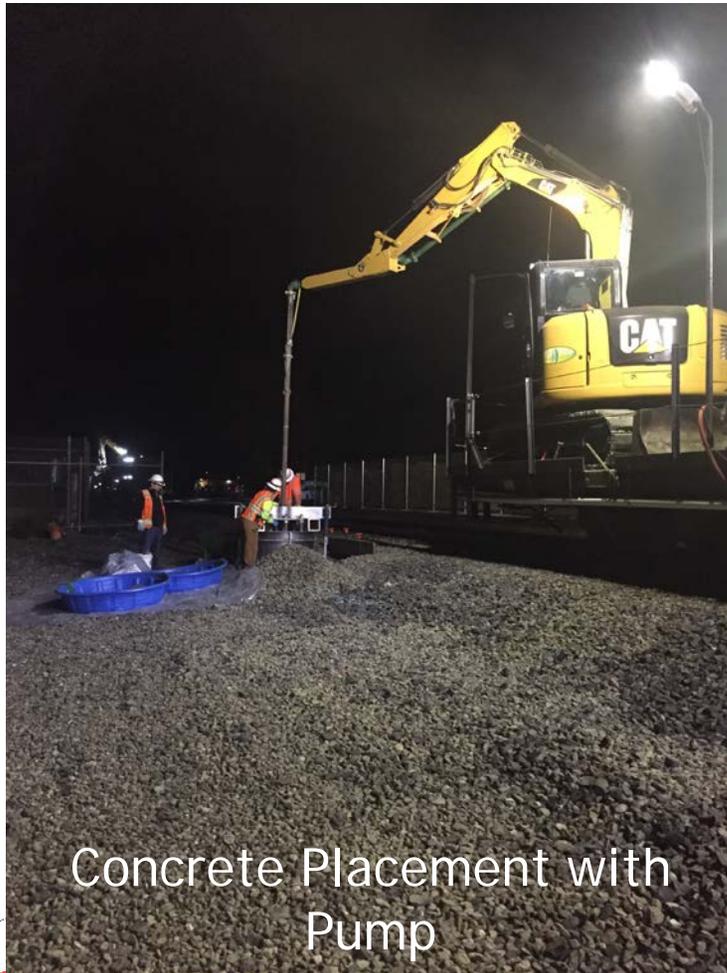
Construction Activities



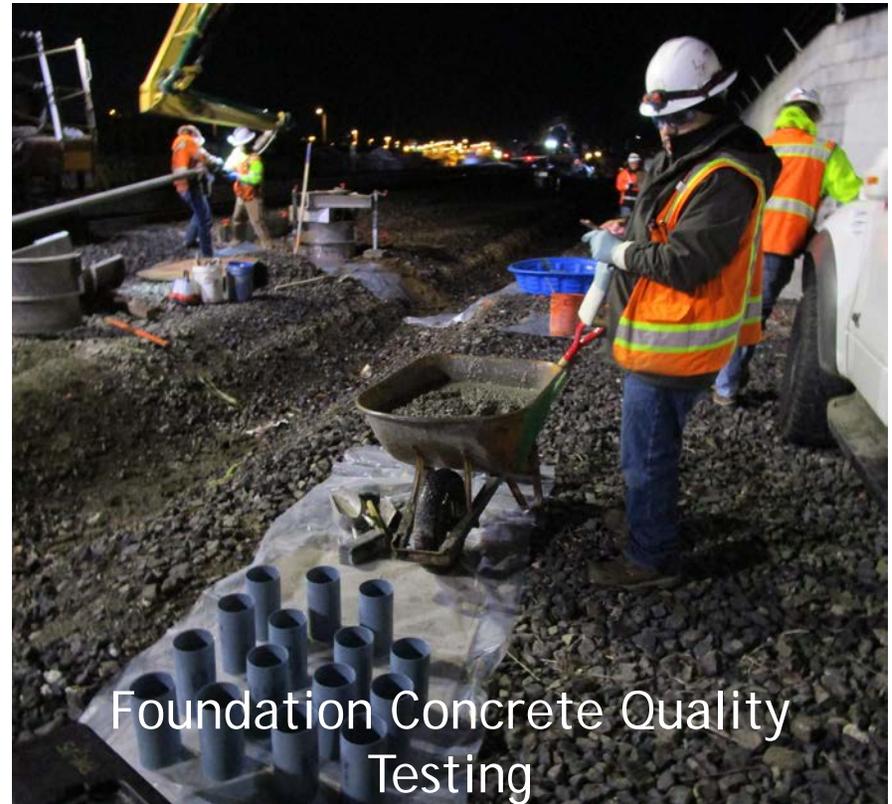
Construction Activities Cont.



Construction Activities Cont.



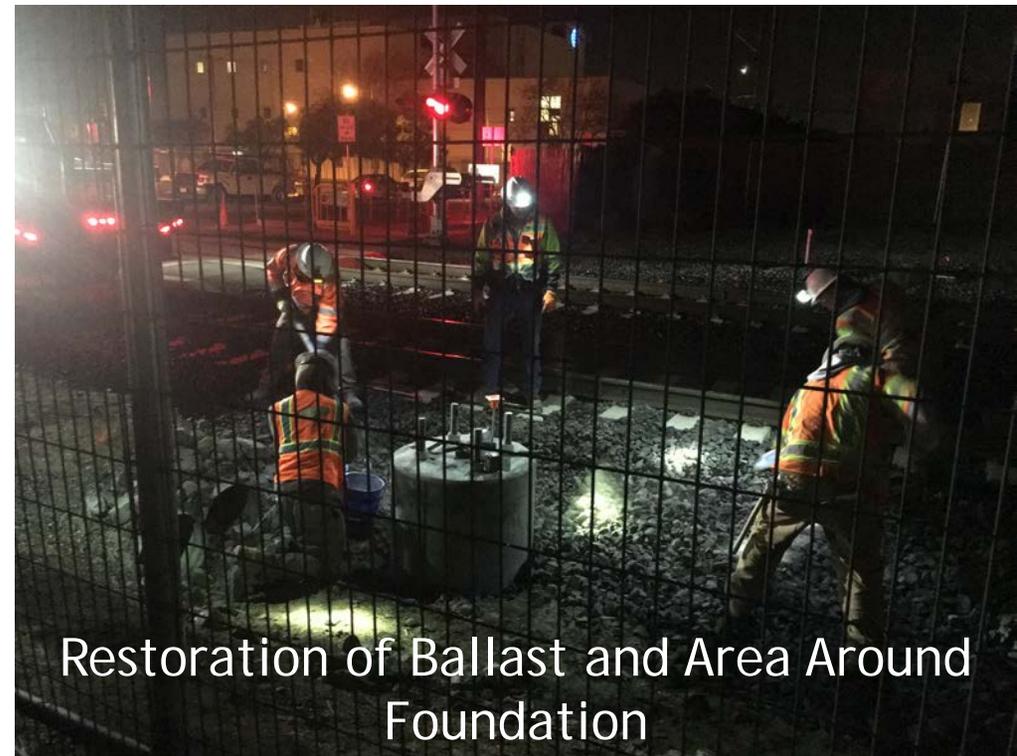
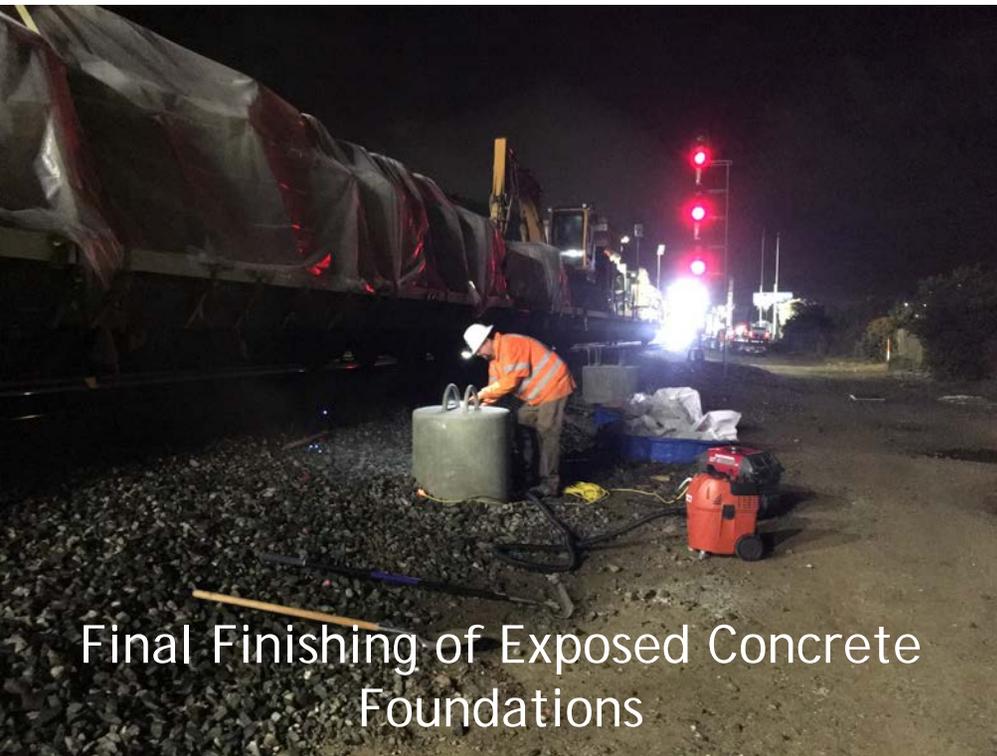
Concrete Placement with Pump



Foundation Concrete Quality Testing

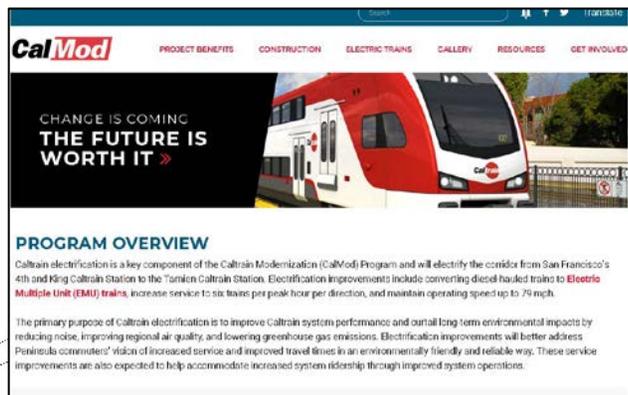


Construction Activities Cont.



Construction Outreach

- Tools: Community meetings, direct mailers, door hangers, weekly website / email update, social media, project phone & email, outreach office
- New Project Website: calmod.org



Electric Train (EMU)

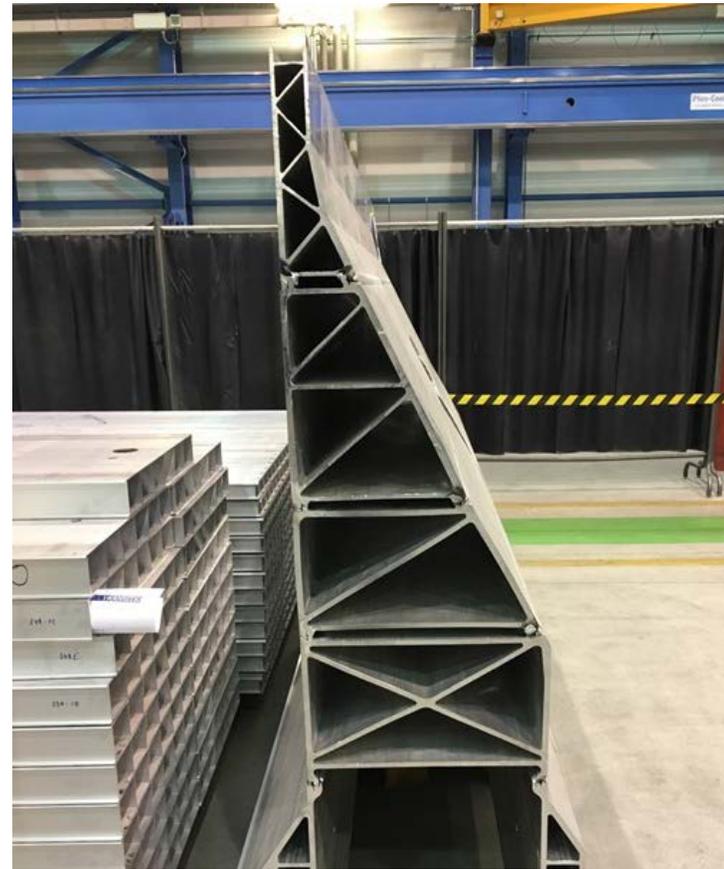
- Stadler
 - Preliminary Designs Reviews for all major systems conducted being finalized
 - Carshell extrusions in production
 - Carbody subassemblies being fabricated
 - Carshell structures being welded
 - Manufacturing and Final Assembly Facility beginning construction in Salt Lake City area



Electric Train Activities



Exterior Paint Test Samples
on Sidewall Extrusion



Cab End Underframe

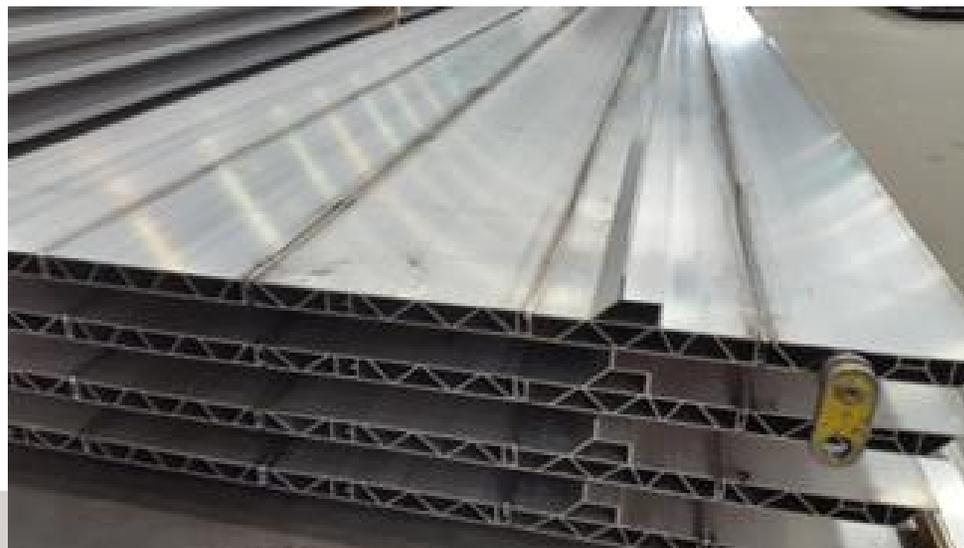


Electric Train Activities

Machined part



Cruciform joint fillet weld



Side wall



Electric Train Activities



Upper Deck Assembly



Middle Underframe in Welding



Electric Train Activities



Upper and Lower Carbody Subassemblies Coming Together

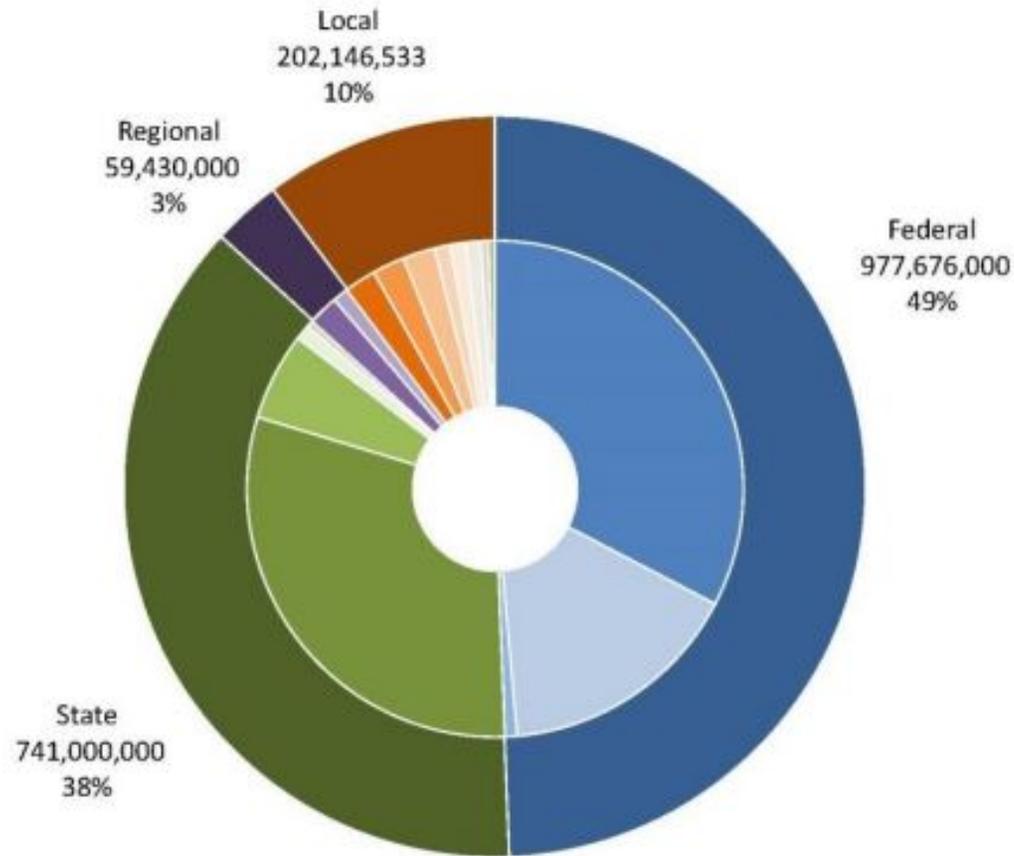


Electric Train Outreach

- 2016 Capacity Board Decision (bike to seat ratio, onboard bathrooms, upper doors)
- 2017 Design Progressing, Additional Public Input
 - Completed: Exterior design, Seat colors, Bike Storage
- 2018 Virtual Reality 360 Tour



Budget \$1.98B



SMCTA Contribution: \$80m

Budget & Expenditures (in millions)

	Budget	Current Budget*	Q2 Costs	Costs to Date	Estimate at Completion
Electrification	\$696.6	\$696.7	\$26.7	\$183.9	\$696.7
SCADA	\$0.0	\$3.4	\$0.0	\$0.0	\$3.4
EMU	\$550.9	\$551.8	\$17.1	\$60.7	\$551.8
Separate Contract & Support Costs	\$417.2	\$417.2	\$20.5	\$143.9	\$417.2
Contingency	\$315.5	\$311.1	\$0.0	\$0.0	\$269.6
Anticipated Changes	\$0.0	\$0.0	\$0.0	\$0.0	\$41.5
PCEP Total	\$1,980.3	\$1,980.3	\$64.4	\$388.5	\$1,980.3

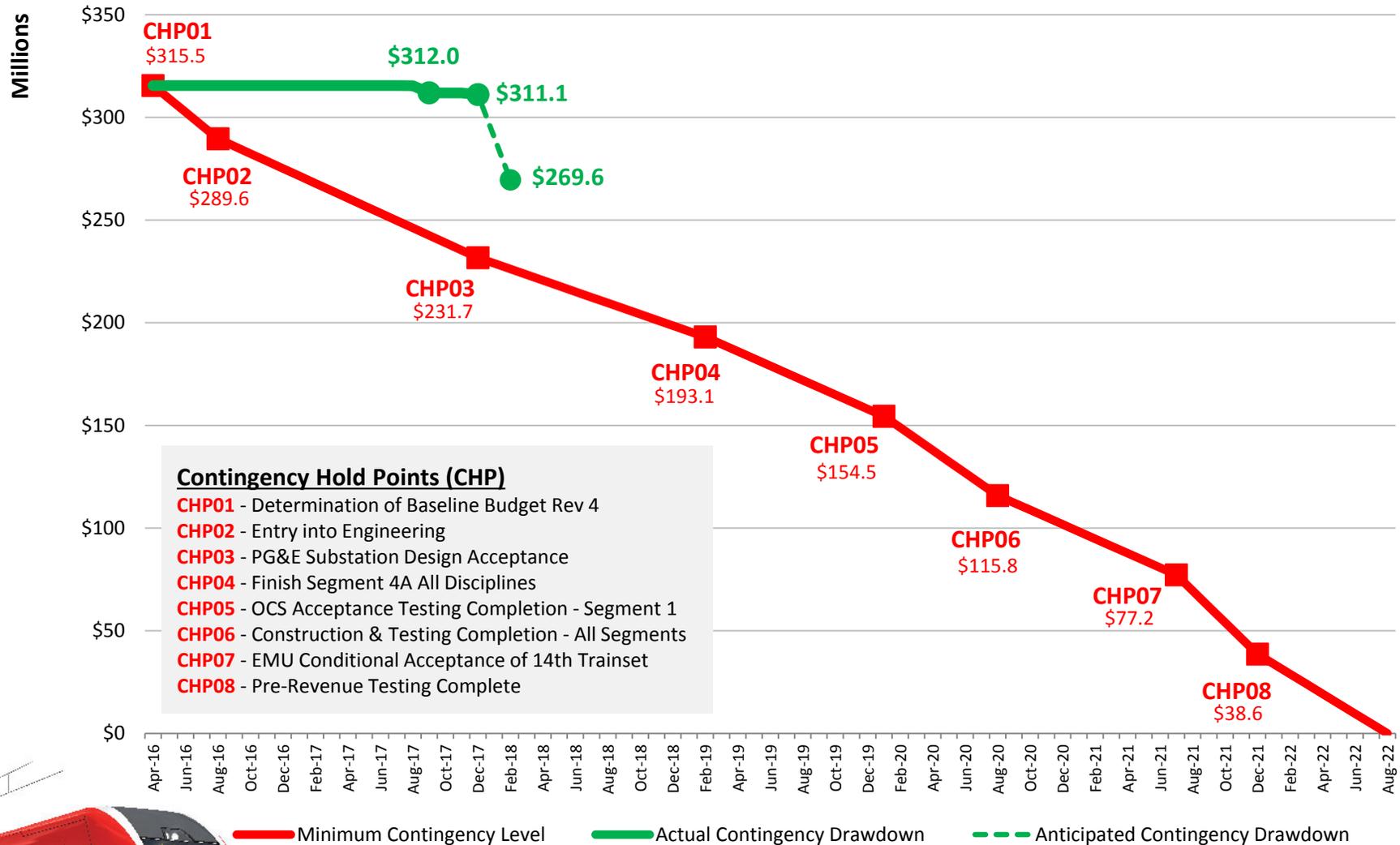
* Includes executed change orders and awarded contracts

** Refer to Contingency Drawdown Table on next slide for details



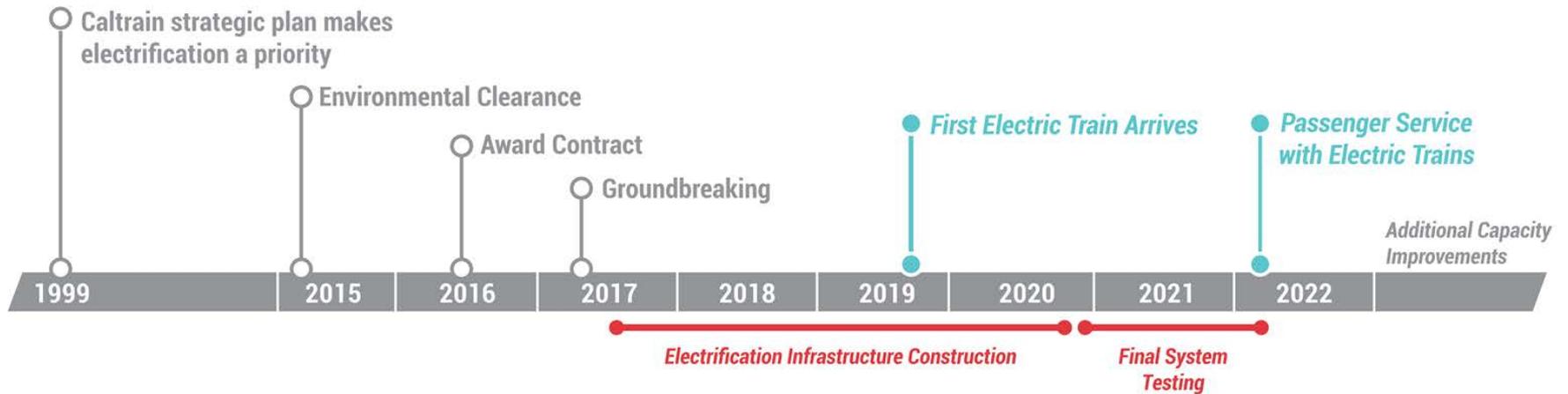
Note: Budget / Expenditures as of **December 31, 2017**

Contingency Drawdown Curve



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

Questions

