

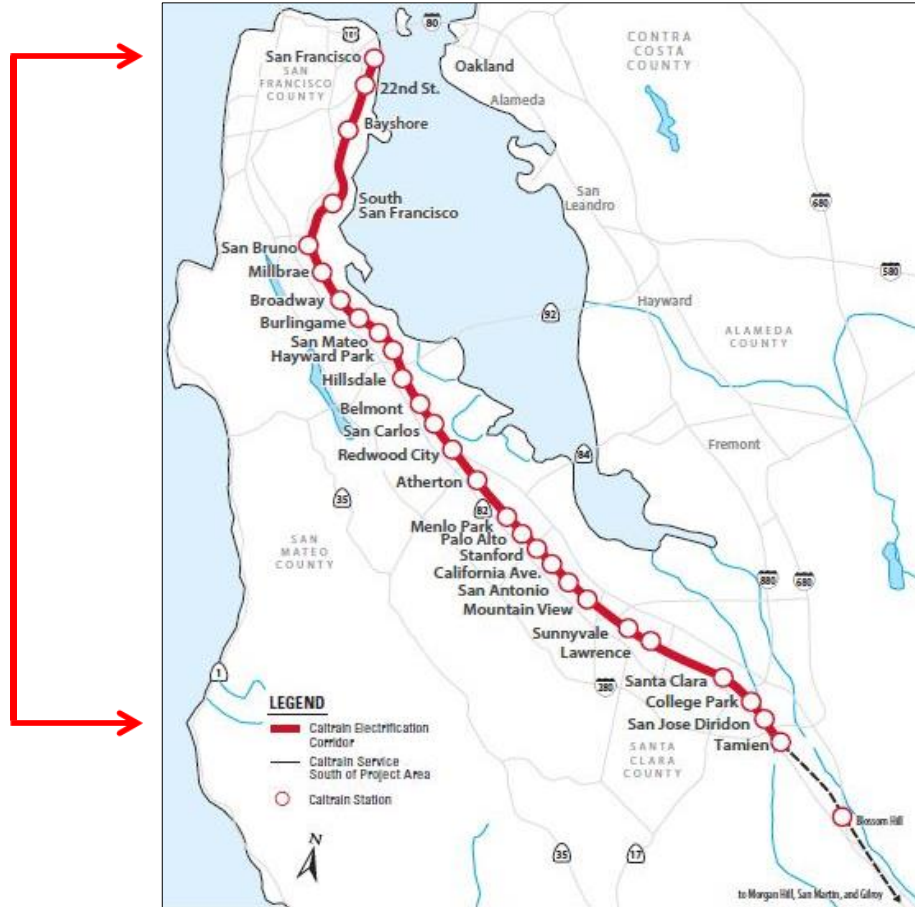


PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP)

JPB CAC Meeting
February 19, 2020
Agenda Item #7

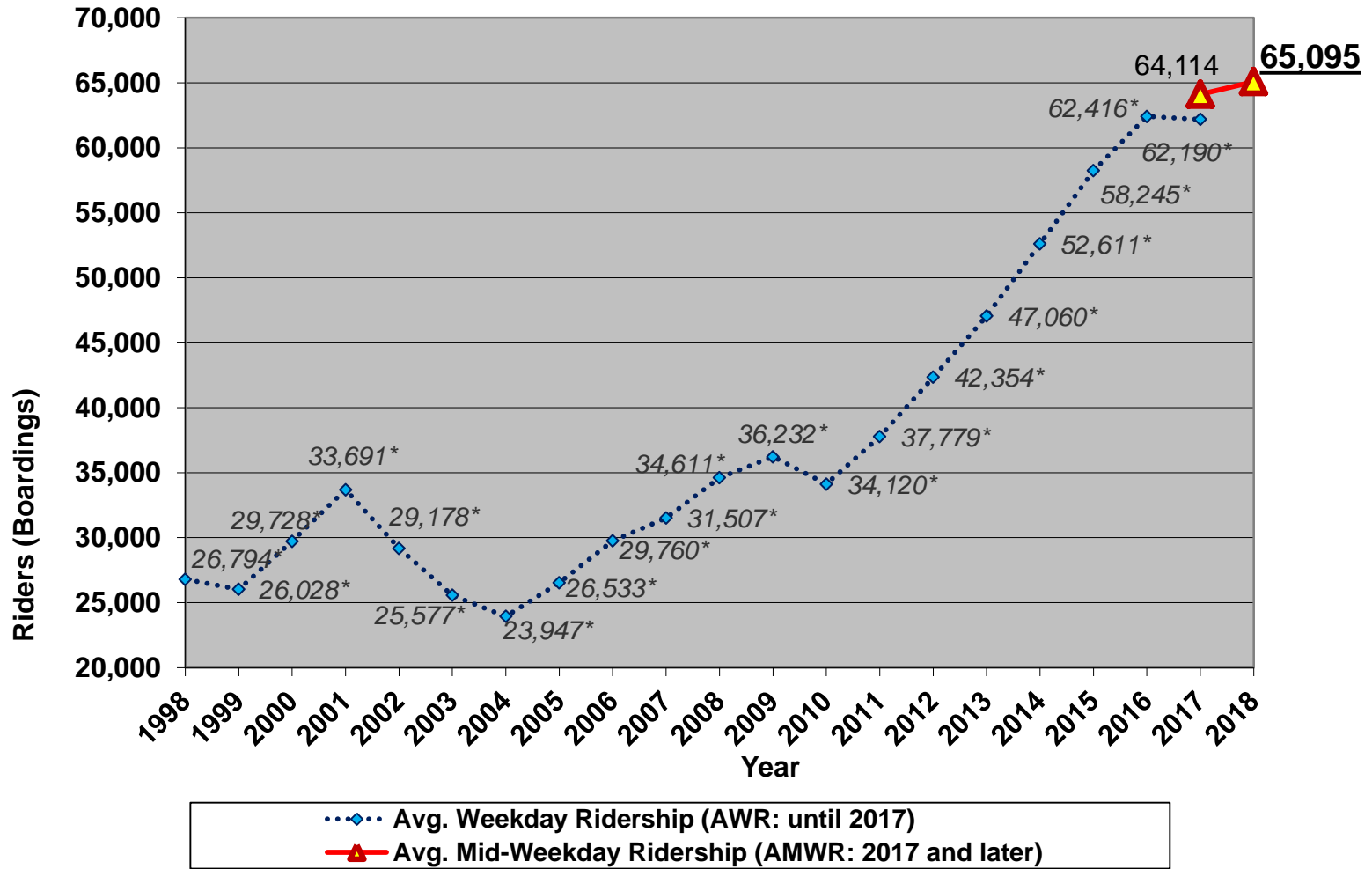


Caltrain owns
(SF to SJ)



- 77 Miles, 32 Stations
- 92 Weekday Trains
- Tenants (Altamont Corridor Express, Capitol Corridor, Amtrak, Freight)

Union Pacific owns
(SJ to Gilroy)





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

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.

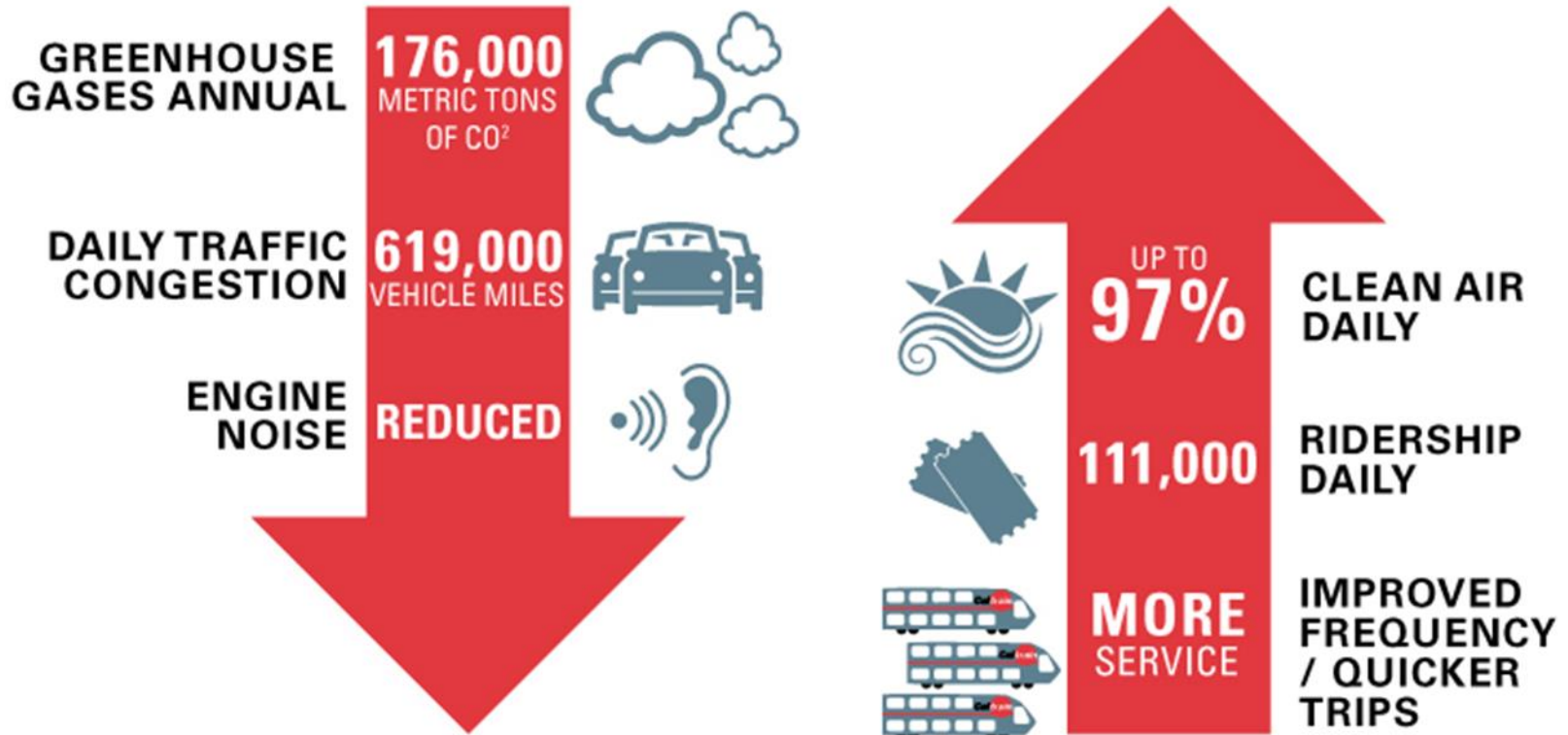


At Retirement Age: 20/29 loco; 73/134 cars

- US 101 and Interstate 280 Congested
- Corridor supports growing economy
- 75% Caltrain riders commute to work
- 60% are choice riders

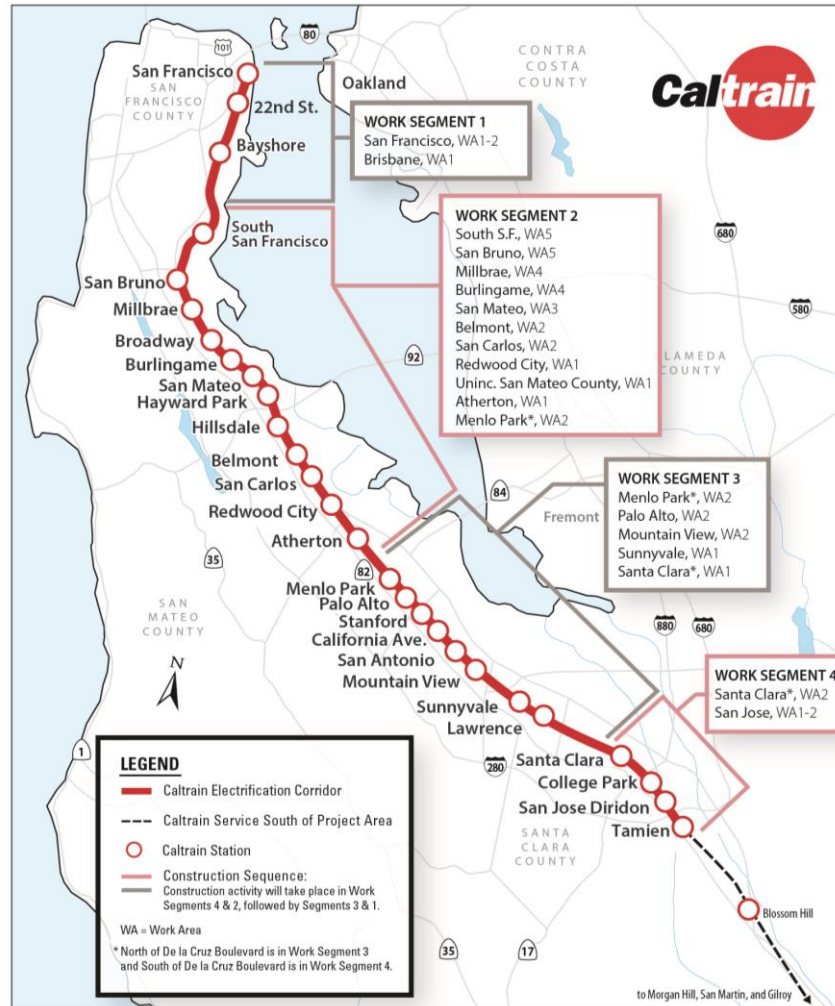


Area	Project	Service
51 miles San Francisco to San Jose (Tamien Station)	Electrification: <ul style="list-style-type: none">• Overhead Wiring• Traction Power Facilities Electric Trains (EMUs) <ul style="list-style-type: none">• 19 seven-car trainsets (133 cars)	Up to 79 mph Service Increase <ul style="list-style-type: none">• 6 trains / hour / direction• More station stops / reduced travel time• Restore weekday Atherton & Broadway service Mixed-fleet service (interim period) Continue tenant service <ul style="list-style-type: none">• Altamont Corridor Express, Capitol Corridor, Amtrak, Freight



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

- 51 Miles Corridor
- 4 Work Segments
- 3,000 Poles
- 10 Traction Power Facilities



- Utility Survey
- Geotechnical Investigations
- Disposal of Soil from Geotechnical Investigations
- Soil Resistivity Testing
- Site Surveys
- Signal Cable Inspections
- Foundation Potholing
- Tree Pruning and Removal

PCEP Progress

- Ongoing activities include potholing, foundation and pole installation, installation of cable, pipe, wire, ductbank, and conduit
- Signal design and installation underway for the 221 signal locations; first signal cutover planned for April 2020
- Traction Power Facilities work includes sitework, substation building, installation of low/high voltage equipment, transformer, and gantry
 - 6 transformers have been installed at Traction Power Substation (TPS) TPS-1, TPS-2, Switching Station, Paralleling Station (PS) PS-4, PS-6, and PS-7, and other construction activities progressing at these facilities
 - Design is progressing for PS-1, PS-2, PS-3, and PS-5
- Centralized Equipment Maintenance and Operations Facility (CEMOF)
 - Modifications will provide work areas to perform maintenance on new electric trains
 - Notice to Proceed issued September 2019
 - Work to-date includes potholing, identifying underground utilities, building track concrete formwork, removing rails and ties
 - Work scheduled to be complete by June 2020

OCS Progress

Segment	Work Area	Foundations		Poles	
		Required ^{ab}	Total Completed	Required ^a	Total Completed
1	Tunnels	32	32	32	0
	A	309	0	259	0
	B	237	0	177	0
2	5	243	184	208	160
	4	314	240	253	186
	3	174	63	140	36
	2	248	78	205	60
	1	206	79	154	33
3	2	512	192	442	0
	1	390	353	311	132
4	A	244	156	180	107
	B	131	87	124	70
	CEMOF	112	0	102	0
Total:		3,152	1,464	2,587	784

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

^b 55 foundations in S2WA5 will be installed by SSF and 64 foundations in S2WA3 will be installed by 25th Avenue.

Note: **Data as of December 31, 2019**



San Bruno Station OCS



Assembly of Gantry at TPS-1



Erected Gantry at TPS-1



Paralleling Station 4
Hillsdale Station



Setting a Wayside Power Cubicle

ProVen Management, Inc.

- Contract Scope:
 - Increase tunnel clearances in four 100+ year old tunnels (complete)
 - Install OCS (ongoing)
 - Drainage improvements and track rehabilitation (complete)
- Tunnel 1: 124 out of 130 Total Drop Tubes installed
- Tunnel 2: 76 out of 80 Total Drop Tubes installed
- Tunnel 3: 162 out of 170 Total Drop Tubes installed
- Tunnel 4: 240 out of 248 Total Drop Tubes installed
- Weekend closures (6) are confirmed from February 22 until March 29 for installation of the conductor rail and contact wire
- Fabrication of the conductor rail and contact wire is in progress
- OCS termination structure fabrication for all portals is in progress and should be delivered onsite by end of January, and installation will start at the first weekend closure on 2/22/20
- Installation of the historic blocks for Tunnel 4 south will be scheduled on a weekend shutdown
- Overall substation completion by 6/4/20
- Contractor required to perform a detailed pre-check inspection prior to OCS energization by BBII and provide onsite support during OCS energization



Drop Tube Installation



Tunnel 4 South
OCS Termination
Structure

EMUs – Design & Manufacturing

- **Procurement**

- Stadler is providing 133 rail cars configured in 19 seven-car trainsets
- Each trainset includes: operating cab car at each end, 2 bike cars, 1 accessible toilet car, 2 passenger coaches
- Trainsets will be electrically powered by the overhead electrical system

- **Design**

- Final Design Reviews (FDRs) are complete on 14 of 17 major subsystems (e.g. propulsion, brake equipment, HVAC)
- Remaining 3 are software based scheduled for completion in early 2020
- First Article Inspections (FAIs) ongoing of components designed specifically for Caltrain; 54 of 64 FAIs completed

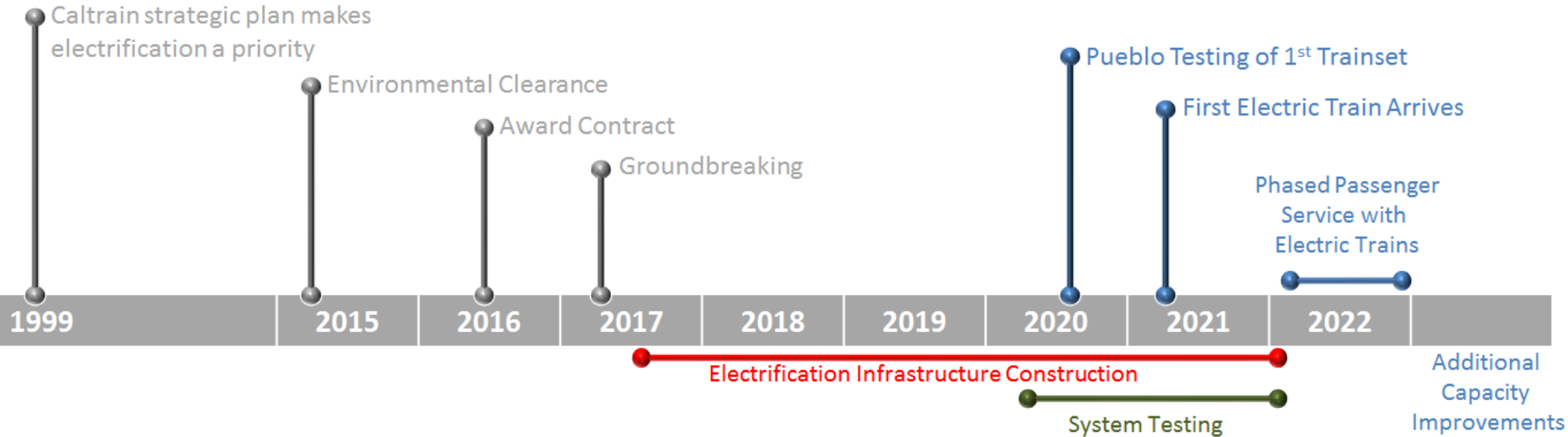




	Budget	Current Budget	FY20 Q2 Costs	Costs to Date	Estimate at Completion
Electrification	\$696.61	\$723.80	\$20.00	\$363.67	\$723.80
SCADA	\$0.00	\$3.45	\$0.00	\$1.93	\$3.45
EMU	\$550.90	\$555.03	\$15.34	\$152.22	\$555.03
PG&E	\$57.22	\$88.49	\$9.71	\$73.83	\$88.49
Tunnel Modifications	\$11.03	\$42.62	\$4.74	\$29.07	\$42.62
CEMOF Modifications	\$1.34	\$6.55	\$0.59	\$1.73	\$6.55
Separate Contract & Support Costs	\$347.62	\$347.75	\$12.55	\$237.36	\$347.75
Contingency ¹	\$315.53	\$212.55	\$0.00	\$0.00	\$208.49
Anticipated Changes	\$0.00	\$0.00	\$0.00	\$0.00	\$4.06
PCEP Total	\$1,980.25	\$1,980.25	\$62.91	\$859.82	\$1,980.25

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

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**

- **48 Community meetings**
- **54,000 direct mailers / door hangers**
- **3,476 Subscribers to the Monthly eNewsletter**
 - 1,400 New Sign-ups
- **2,198 Subscribers to the weekly Construction Updates**

2019 Outreach Campaigns



Job Creation
CalMod.org/jobs



Model Train Roadshow
CalMod.org/roadshow

January 1 – December 31, 2019

Caltrain **CalMod**



QUESTIONS