



Modernization Program Peninsula Corridor Electrification Project (PCEP)



July 2016 Monthly Progress Report

July 31, 2016

Funding Partners



FTA Core Capacity

FTA Section 5307/5337 (Environmental / Pre Development only)

FTA Section 5307/5337 (EMU only)



Prop 1B (Public Transportation Modernization & Improvement Account)

Caltrain Low Carbon Transit Operations Cap and Trade



Prop 1A

High Speed Rail Cap and Trade



Carl Moyer Fund



RM2

RM1

Bridge Tolls



SFCTA



San Mateo (SMCTA) Contribution

SMCTA Measure A



VTA Measure A

Santa Clara (VTA) Contribution



San Francisco Contribution

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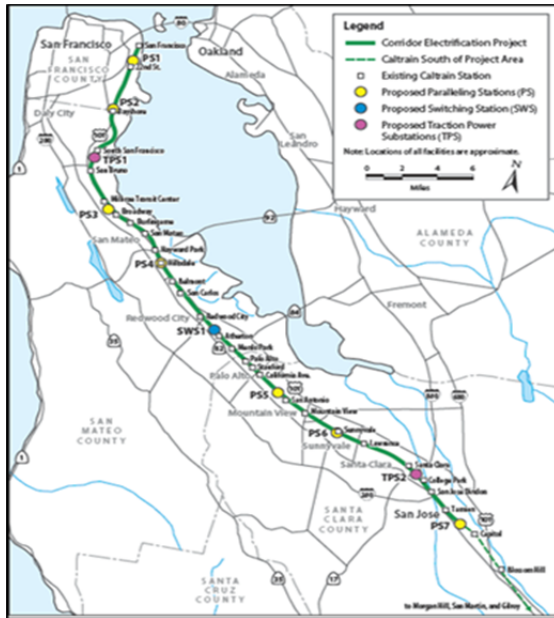
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1.0 PREFACE

Over the last decade, Caltrain has experienced a substantial increase in ridership and anticipates further increases in ridership demand as the San Francisco Bay Area's population grows. The Caltrain Modernization (CalMod) Program, scheduled to be implemented by 2020, will electrify and upgrade the performance, operating efficiency, capacity, safety, and reliability of Caltrain's commuter rail service.



The Peninsula Corridor Electrification Project (PCEP) is a key component of the CalMod Program and consists of converting Caltrain from diesel-hauled to Electric Multiple Unit (EMU) trains for service between San Francisco Station (at the intersection of Fourth and King Streets in San Francisco) and Tamien Station in San Jose. Caltrain will continue Gilroy service and support existing tenants.

An electrified Caltrain will better address Peninsula commuters' vision of an environmentally friendly, and fast and reliable service. Electrification will modernize Caltrain and make it possible to increase service while offering several advantages in comparison with existing diesel power use, including:

Improved Train Performance, Increased Ridership Capacity and Increased Service: Electrified trains can accelerate and decelerate more quickly than diesel-powered trains, allowing Caltrain to run more efficiently. In addition, because of their performance advantages, electrified trains will enable more frequent and/or faster train service to more riders.

Increased Revenue and Reduced Fuel Cost: An electrified Caltrain will increase ridership and fare revenues while decreasing fuel costs.

Reduced Engine Noise Emanating from Trains: Noise from electrified train engines is measurably less than noise from diesel train engines. Train horns will continue to be required at grade crossings, adhering to current safety regulations.

Improved Regional Air Quality and Reduced Greenhouse Gas Emissions: Electrified trains will produce substantially less corridor air pollution compared with diesel trains even when the indirect emissions from electrical power generation are included. Increased ridership will reduce automobile usage, resulting in additional air quality benefits. In addition, the reduction of greenhouse gas emissions will improve our regional air quality, and will also help meet the State's emission reduction goals.

An electrified Caltrain system would set the stage for an enhanced, modern commuter rail service and for future blended California High-Speed Rail (CHSR) service. While this project will not include or study all infrastructure necessary to implement high-speed rail service on the corridor (such as CHSR maintenance facilities, station improvements, or passing tracks), the electrical infrastructure (such as overhead wire systems) will be compatible with later blended service.

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2.0 EXECUTIVE SUMMARY

Electrification Infrastructure

The procurement process for the Electrification contract continued in the month of July. A staff report and resolution was prepared and presented to the JPB Board to recommend award of the Electrification contract to Balfour Beatty Infrastructure Inc. The JPB Board authorized the award of Electrification contract to Balfour Beatty Infrastructure Inc. at the July 7 board meeting. The contract would initially start with a Limited Notice to Proceed (LNTP) expected in September 2016 with a full Notice to Proceed (NTP) expected in March 2017. The PCEP team continued to work with PG&E on providing the necessary infrastructure to support Caltrain loads required for electrification as well as options for interim power required for testing.

Electric Multiple Units

The procurement process for the Electric Multiple Units (EMU) contract continued in the month of July. A staff report and resolution was prepared and presented to the JPB board to recommend award of the EMU contract to Stadler US Inc. The JPB Board authorized the award of EMU contract to Stadler US Inc. at the July 7 board meeting. The Contract would initially start with a Limited Notice to Proceed (LNTP) expected in August 2016, with full Notice to Proceed (NTP) expected in March 2017.

Schedule

The Master Program Schedule (MPS) was updated to reflect a LNTP for both the Electrification and EMU contracts. The LNTP will allow the Electrification contractor to begin design efforts as well as limited long lead material procurement. A LNTP for the EMU Manufacturer will allow the start of design efforts. Full NTPs (FNTP) is expected in March 2017 for both contracts, pending receipt of a Full Funding Grant Agreement (FFGA) from the FTA.

Table 2-1 Schedule Milestones

Milestones	Program Plan	May	June
EMU Contract Limited NTP*	08/01/2016	08/01/2016	08/15/2016
Electrification Contract Limited NTP*	08/01/2016	08/01/2016	09/06/2016
Start of Electrification Major Construction	03/20/2017	03/20/2017	07/24/2017
Start Pre-Revenue Operations	09/08/2020	09/08/2020	09/22/2020
RSD Soft Opening (w/ Risk Contingency)	12/31/2020	12/31/2020	12/31/2020
RSD Full Service (w/ Risk Contingency)	12/30/2021	12/30/2021	12/30/2021

*MPS previously contained only Full NTP

Budget and Expenditures

A summary of the overall budget and expenditure status for the PCEP is provided in Table 2-2 below.

Table 2-2 Budget and Expenditure Status

	Baseline Budget	Accrued To Date	Estimate To Complete	Estimate At Completion
Electrification Subtotal	\$1,318,114,119	\$64,829,069	\$1,253,285,050	\$1,318,114,119
EMU Subtotal	\$662,138,414	\$13,691,224	\$648,447,189	\$662,138,414
PCEP Total	\$1,980,252,532	\$78,520,294	\$1,901,732,239	\$1,980,252,533

Board Actions

At the July 7, 2016 meeting, the Caltrain Board took action on several PCEP items:

- Authorized award of contract to Balfour Beatty Infrastructure In. for design-build services for electrification of the railroad between San Jose and San Francisco for a not-to-exceed amount of \$696,610,558.
- Authorized award of contract to Stadler US Inc. for procurement of 96 electric multiple unit vehicles for a not-to-exceed amount of \$550,899,459.
- Approved an Agreement with the California High-Speed Rail Authority to secure state funding for the Peninsula Corridor Electrification Project for \$713M.
- Authorized execution and submission of an allocation request for \$39.4 million in regional measure 1 and regional measure 2 funds with the Metropolitan Transportation Commission for the PCEP.
- Authorized an increase in expenditure authority by \$2 million to reimburse Pacific Gas and Electric for design and oversight services in support of the PCEP.

A copy of the board package can be viewed here:

http://www.caltrain.com/Assets/_Agendas+and+Minutes/JPB/Board+of+Directors/Agendas/2016/2016-07-07+JPB+BOD+Agenda+Packet.pdf

Community Relations and Outreach

A list of PCEP related Community meetings can be found in section 18.0 of this report.

3.0 ELECTRIFICATION - INFRASTRUCTURE

Electrification

The electrification infrastructure component of the PCEP includes the installation of 138 miles of single-track, overhead contact system (OCS) for the distribution of electrical power to the EMUs. The OCS will be powered from a 25-kilovolt, 60-Hertz, single phase, alternating current supply system consisting of two traction power substations (TPS), one switching station (SS), and seven paralleling stations (PS). Electrification will be performed using a Design-Build (DB) delivery method. A Limited Notice to Proceed (LNTP) is expected to be issued in September 2016 to begin design and limited long lead procurement in the next quarter.

Activity This Month

- Board approved recommendation to award the Electrification contract to BBI at the July 2016 Board meeting.
- Completed revisions to Final System Impact Study with PG&E, which will be submitted to CAISO in August for their annual transmission planning process.
- Continued to coordinate with PG&E on the power quality study to finalize scope and necessary infrastructure to support Caltrain loads required for electrification.
- Continued to coordinate with PG&E for the scoping and preliminary design of infrastructure needed for the PCEP.
- Continued to coordinate with PG&E on supplement agreements for final design and construction of infrastructure needed for the PCEP.
- Worked with PG&E to develop interim power options to support PCEP testing.
- PG&E completed facility study for FMC Substation, which will connect to Caltrain's TPS-2.

Activity Next Month

- Continue scoping and preliminary design for PG&E related work.
- PG&E to complete facility studies for East Grand Substation, which will be connected to Caltrain's TPS-1.
- Continue coordination with PG&E on infrastructure design.

SCADA

Supervisory Control and Data Acquisition (SCADA) is system that monitors and controls field devices, including substations, track signals, sectionalization switches, vehicle location and direction, and video feeds from station platforms. The base operating system for Caltrain Operations and Control is Rail Operations Center System (ROCS). To reduce the risk due to the major integration effort necessary between two differing systems, consideration of ongoing maintenance in the future and a technical evaluation, the PCEP team recommended the system be implemented by the provider of the

existing Rail Operations Center System (ROCS), including the integrated components of CBOSS PTC, using a sole source procurement.

Activity This Month

- Prepared Submitted scope and estimate documents to Contracts and Procurement for the procurement of the SCADA contract.

Activity Next Month

- Support Caltrain Contracts & Procurement on an as needed basis.

Tunnel Modification

Tunnel modifications will be required on the four tunnels located in San Francisco. This effort is needed to accommodate the required clearance for the OCS to support electrification of the corridor. Additionally, Caltrain Engineering and Construction has requested the PCEP team to manage completion of design and construction management for the Tunnel 1 and Tunnel 4 Drainage Rehab Project. This project is separate and distinct from the PCEP and will have its own budget and funding source. The Tunnel Modifications and Drainage Rehab Project contract will be included in a separate comprehensive Design-Bid-Build (DBB) package for coordination and cost reduction. Design efforts are expected to conclude at the end of 2016. Construction will occur concurrently with the Electrification contractor's efforts in Segment 1.

Activity This Month

- Continued progress on design drawings and specifications.
- Continued coordination of design effort on Tunnel 1 and Tunnel 4 Drainage Rehab Project
- Continued refinement of preliminary construction schedule and cost estimate for review.
- Continued refinement of constructability.
- Continued support for on-going technical discussions with third-party stakeholders.

Activity Next Month

- Continue to progress design efforts.
- Continue revision and refinement of construction schedule and cost estimate.
- Continue coordination of design efforts with Tunnel 1 and Tunnel 4 Drainage Rehab Project.
- Support field survey activities of Tunnel 1 and Tunnel 4 Drainage Rehab Project.
- Continue technical support for on-going discussions with third-party stakeholders.

CEMOF Modifications

The Centralized Equipment Maintenance and Operations Facility (CEMOF) Modifications project is will provide safe work areas for performing maintenance on the new EMUs. The schematic design for CEMOF modifications is complete. Preliminary design efforts remain on hold and will resume in September 2016 as the selection of a car body is necessary to complete design of the platforms. The start of construction will be determined upon acceptance of a baseline schedule from the Electrification contractor in order to coordinate the timing of CEMOF Modification effort.

Activity This Month

- No work undertaken during the reporting period.

Activity Next Month

- No activity will be scheduled until the car body has been selected.

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4.0 ELECTRIC MULTIPLE UNITS

The Electric Multiple Units (EMU) procurement component of the PCEP consists of the purchase of 96 new EMUs. The EMUs will consist of both cab and non-cab units configured as sixteen six-car consists. Power will be obtained from the OCS via roof-mounted pantographs which will power the axle-mounted traction motors. The EMUs will replace a portion of the existing diesel locomotives and passenger cars currently in use by Caltrain. A LNTP is expected to be issued in August 2016 to begin design efforts.

Activity This Month

- Negotiations with Stadler were completed in preparation for the July Board Meeting.
- Procurement prepared the conformed Contract Documents in support of the Contract signing scheduled for August 2016.
- Coordination discussions with Stadler in preparation for the EMU Pre-Commencement Conference scheduled for mid-August continued.
- Weekly Pre-LNTP coordination teleconferences were conducted with Stadler's Project Team; and actions were taken that will carry over following LNTP. These actions will be recorded and tracked by Stadler.
- Continued to advance work on the System Integration Matrix and Interface Control Document (ICD).
- Continued monthly interface coordination conference calls with CHSRA which focus on technical issues.
- The JPB conducted an initial review of the proposed Maintenance Services option in which Stadler would provide the maintenance services for the existing Caltrain diesel fleet in addition to the new EMU's under their named subcontractor.
- A list of EMU Tests which can be performed on the Santa Clara Drill Track as well as those that will need to be performed on the Main Line is being finalized.

Activity Next Month

- LNTP is expected to be issued to Stadler in August 2016.
- Stadler to identify what level of presentations, simulations and other types of non-physical involvement, including a detailed description and pricing.
- Continue to advance work on the System Integration Matrix and Interface Control Document (ICD).
- Continue monthly interface coordination conference calls with CHSRA.

5.0 SAFETY

The PCEP Safety team continued to develop and update the safety and security management processes as committed to within the scope of the project Safety and Security Management Plan (SSMP).

Activity This Month

- Safety staff is updating the project Safety and Security Management Plan (SSMP) based on comments received from the PMOC. Draft responses were sent to PMOC reviewer G. Gordon, phone review of responses to be conducted early in August.
- Staff continues to work with the IndustrySafe hazard management software application that will also be utilized by the Electrification Contractor throughout the project life cycle. Results from the project Preliminary Hazards Analysis (PHA) have been uploaded to the site.
- Project safety staff continues to meet weekly with the JPB management to provide project updates, review project document deliverables, and initiated changes as directed.
- Working with PTC contractor to ensure Safety Certification documents required for overall CalMod project are being developed.
- Initiated discussions with Rail Operations to review and update the project Site Specific Work Plan (SSWP) process.

Activity Next Month

- The team will further update the SSMP following the PMOC review and comments of the document.
- Safety staff is updating the Roadway Worker Protection (RWP) Program to include Basic RWP training module that will be required of contractor personnel requiring access to the Caltrain track area. A review and further development of the program modules will continue to be performed in July in coordination with Caltrain Rail Operations and Engineering & Construction.
- Safety staff will continue to work closely with Caltrain Rail Operations to update the SSWP review, approval and document control process.
- Safety staff is scheduled to meet with D/B contractor to review SSWPs and process.

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6.0 QUALITY

Activity This Month

- Continue to provide on-going quality-related assistance to project team.
- Continued to perform duties described in the Quality Manager Transition Plan.
- Coordinated and worked with AECOM to close NCR 3. Re-Audit of AECOM Document Control will occur 60-90 days from finalization of AECOM Scope of Work for Document Control.
- Coordinated with LKL-CMC regarding NCR 2. Close out of NCR anticipated next month.
- Provided Quality Assurance reviews for responses to the Readiness Review comments.
- Discussed format & content of requested PowerPoint presentation for use during Stadler Pre-Commencement Conference

Table 6-1 below provides details on the status of audits performed through the reporting period.

Table 6-1 Quality Assurance Audit Summary

Quality Assurance Activity	This Reporting Period	Total to Date
Internal Audits Conducted	0	14
Non-Conformances Open	0	2
Non-Conformances Issued	0	4
Non-Conformances Closed	1	3

Activity Next Month

- Provide Quality Assurance (QA) support of FTA document submittals.
- Provide QA reviews for Readiness Review responses.
- Continue implementation of Quality Manager Transition Plan until such time as replacement Quality Manager joins the project.
- Provide PowerPoint presentation for use during Stadler Pre-Commencement Conference on August 11, 2016

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7.0 SCHEDULE

The Master Program Schedule (MPS) was updated to reflect Limited NTP's (LNTP) for both the Electrification and EMU contracts. The LNTP will allow the Electrification contractor to begin design efforts as well as limited long lead material procurement. A LNTP for the EMU Manufacturer will allow the start of design efforts. Full NTP (FNTP) is expected in March 2017 for both contracts, pending receipt of a Full Funding Grant Agreement (FFGA) from the FTA.

The MPS contains two Revenue Service Dates (RSD). The first RSD represents a "soft opening" with six EMU trainsets providing revenue operations. This date is forecasted as December 2020. The second RSD represents "full service" with all 16 EMU trainsets providing revenue operations. This date without contingency is forecast as July 2021. With the addition of six months of contingency to account for potential risk to the project the Full Service RSD is anticipated as December 2021.

Overall Schedule Status

A summary of the overall schedule status for the PCEP is provided in Table 7-1 below.

Table 7-1 Schedule Status

Milestones	Program Plan	May	June
EMU Contract Limited NTP*	08/01/2016	08/01/2016	08/15/2016
Electrification Contract Limited NTP*	08/01/2016	08/01/2016	09/06/2016
Start of Electrification Major Construction	03/20/2017	03/20/2017	07/24/2017
Start Pre-Revenue Operations	09/08/2020	09/08/2020	09/22/2020
RSD Soft Opening (w/ Risk Contingency)	12/31/2020	12/31/2020	12/31/2020
RSD Full Service (w/ Risk Contingency)	12/30/2021	12/30/2021	12/30/2021

*MPS previously contained only Full NTP

The critical path is summarized below in Table 7-2 and Figure 7-1.

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Table 7-2 Critical Path Summary

Activity	Start	Finish
EMU Procurement	Ongoing	08/15/2016
Electrification Procurement	Ongoing	09/06/2016
EMU Design to Delivery of First Carbody	08/15/2016	09/22/2017
Electrification Design to Begin Major Construction	09/06/2016	07/21/2017
Electrification OCS Construction	07/24/2017	02/26/2020
Electrification Acceptance & Integrated Testing	02/26/2020	04/25/2020
PG&E Complete Infrastructure Upgrades to Provide Permanent Power*	09/04/2020	09/04/2020
Vehicle Manufacturing & Assembly to Provide First 6 Trainsets	10/09/2017	09/21/2020
Pre-Revenue Operations	09/22/2020	12/22/2020
RSD Soft Opening (w/ Risk Contingency)*	12/31/2020	12/31/2020
RSD Full Service (w/out Risk Contingency)*	07/26/2021	07/26/2021
RSD Full Service (w/ Risk Contingency)*	12/30/2021	12/30/2021

*Milestone activity

The critical path is summarized below in Figure 7-1.

Figure 7-1 Critical Path Bar Chart

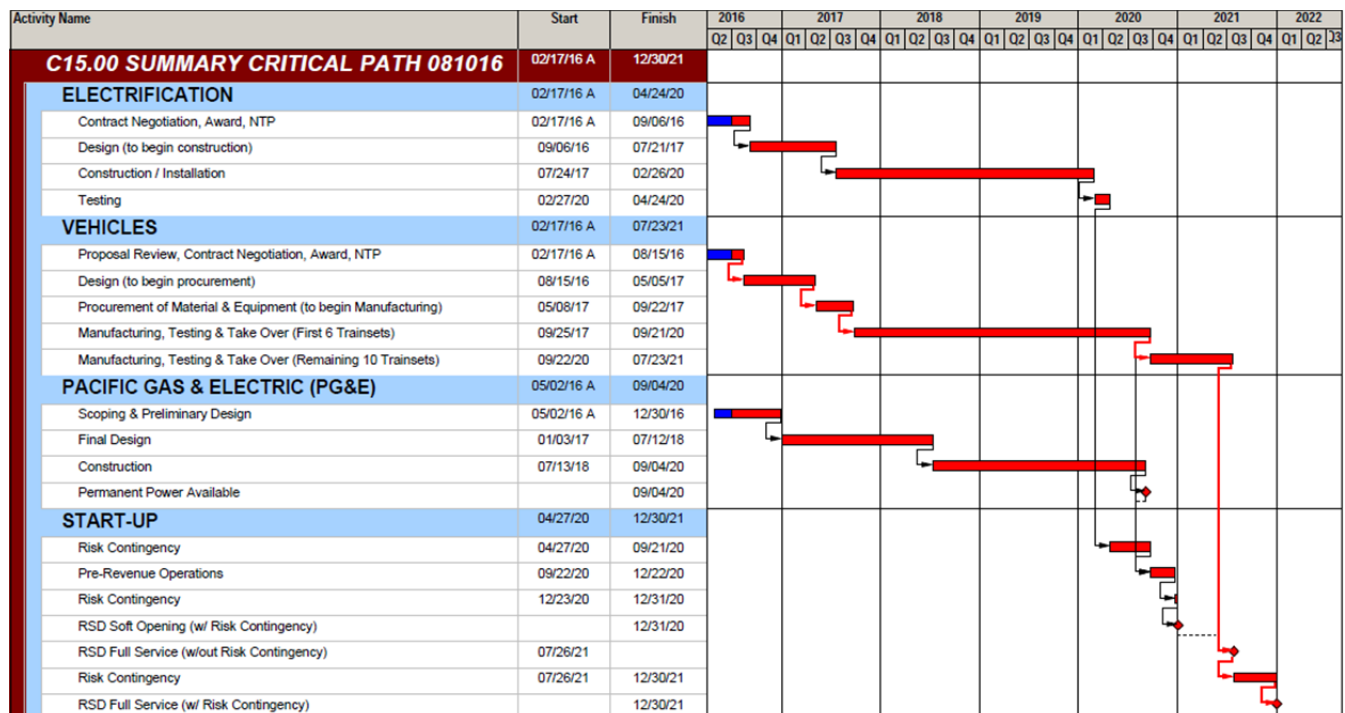


Table 7-3 Near-Term, Near-Critical with Less Than Three Months of Float

WBS	Activity	Responsibility
FTA	Path to Full Funding Grant Agreement (FFGA)	Project Delivery
Utilities	PG&E Scoping & Preliminary Design	Project Delivery

Notable Variances

The incorporation of LNTP's for EMU and Electrification into the MPS had the following overall effect:

- Electrification – the total duration for Electrification increased by ~four months
- EMU – the total duration for EMU remains unchanged however the schedule shifted to the right by two weeks

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8.0 BUDGET AND EXPENDITURES

The budget was updated to reflect final negotiations with the Electrification contractor and the EMU Manufacturer. The negotiations resulted in a reduction in the amount for each contract carried in the program budget. The budget was also modified to capture revised cost estimates for private utilities, management oversight costs, TASI support and insurance. The overall program budget remains unchanged.

The budget and expenditure table has been modified from the previous reporting periods to indicate actual payouts in the reporting period. The monthly reports from prior months showed accruals and payouts in a combined number under the heading of "Incurred to Date."

A summary of the overall budget and expenditure status for the PCEP is shown in the following tables. Table 8-1 reflects the Electrification budget, Table 8-2 reflects the EMU budget, and Table 8-3 reflects the overall project budget.

Table 8-1 Electrification Budget & Expenditure Status

Description of Work	Budget ▪ (A)	Actual This Period (B) ¹	Accrued To Date (C) ²	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
ELECTRIFICATION					
Electrification	\$ 696,610,558	\$ -	\$ -	\$ 696,610,558	\$ 696,610,558
Tunnel Notching	\$ 11,029,649	\$ -	\$ -	\$ 11,029,649	\$ 11,029,649
Real Estate	\$ 28,385,456	\$ 463,065	\$ 4,835,059	\$ 23,550,397	\$ 28,385,456
Private Utilities	\$ 66,526,406	\$ 23,530	\$ 1,733,236	\$ 64,793,170	\$ 66,526,406
Management Oversight	\$ 142,814,987	\$ 900,257	\$ 57,513,037	\$ 85,301,950	\$ 142,814,987
Executive Management	\$ 7,494,952	\$ 60,872	\$ 1,929,192	\$ 5,565,760	\$ 7,494,952
Planning	\$ 7,235,808	\$ 52,421	\$ 3,981,947	\$ 3,253,861	\$ 7,235,808
Community Relations	\$ 2,826,960	\$ 17,889	\$ 753,173	\$ 2,073,788	\$ 2,826,960
Safety & Security	\$ 2,350,737	\$ -	\$ 444,760	\$ 1,905,977	\$ 2,350,737
Project Management Services	\$ 20,905,616	\$ 79,821	\$ 5,500,780	\$ 15,404,836	\$ 20,905,616
Engineering & Construction	\$ 11,934,024	\$ 54,353	\$ 1,713,481	\$ 10,220,543	\$ 11,934,024
Electrification Engineering & Management	\$ 49,093,647	\$ 487,045	\$ 13,678,040	\$ 35,415,607	\$ 49,093,647
IT Support	\$ 818,790	\$ 7,734	\$ 304,759	\$ 514,032	\$ 818,790
Operations Support	\$ 1,423,335	\$ 17,961	\$ 312,741	\$ 1,110,594	\$ 1,423,335
General Support	\$ 3,859,806	\$ 45,556	\$ 1,029,946	\$ 2,829,860	\$ 3,859,806
Budget / Grants / Finance	\$ 1,268,408	\$ 4,001	\$ 83,735	\$ 1,184,673	\$ 1,268,408
Legal	\$ 2,480,274	\$ 36,195	\$ 1,372,620	\$ 1,107,654	\$ 2,480,274
Other Direct Costs	\$ 5,583,917	\$ 33,779	\$ 1,283,230	\$ 4,300,687	\$ 5,583,917
Prior Costs 2002 - 2013	\$ 25,538,712	\$ 2,630	\$ 25,124,634	\$ 414,078	\$ 25,538,712
TASI Support	\$ 53,063,531	\$ -	\$ 250,419	\$ 52,813,112	\$ 53,063,531
RRP Insurance	\$ 3,500,000	\$ -	\$ -	\$ 3,500,000	\$ 3,500,000
Environmental Mitigations	\$ 17,685,498	\$ -	\$ -	\$ 17,685,498	\$ 17,685,498
Required Projects	\$ 17,337,378	\$ -	\$ 497,318	\$ 16,840,060	\$ 17,337,378
Maintenance Training	\$ 1,021,808	\$ -	\$ -	\$ 1,021,808	\$ 1,021,808
Finance Charges	\$ 3,168,200	\$ -	\$ -	\$ 3,168,200	\$ 3,168,200
Contingency	\$ 276,970,649	\$ -	\$ -	\$ 276,970,649	\$ 276,970,649
Owner's Reserve	\$ -	\$ -	\$ -	\$ -	\$ -
ELECTRIFICATION SUBTOTAL	\$ 1,318,114,119	\$ 1,386,852	\$ 64,829,069	\$ 1,253,285,050	\$ 1,318,114,119

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Table 8-2 EMU Budget & Expenditure Status

Description of Work	Budget A)	Actual This Period (B) ¹	Accrued To Date (C) ²	Estimate To Complete D)	Estimate At Completion (E) = (C) + (D)
EMU	\$ 550,899,459	\$ -	\$ -	\$ 550,899,459	\$ 550,899,459
CEMOF Modifications	\$ 1,344,000	\$ -	\$ -	\$ 1,344,000	\$ 1,344,000
Management Oversight	\$ 62,150,192	\$ 441,061	\$ 13,691,224	\$ 48,458,968	\$ 62,150,192
Executive Management	\$ 4,715,388	\$ 31,533	\$ 1,317,499	\$ 3,397,889	\$ 4,715,388
Community Relations	\$ 1,631,907	\$ 17,336	\$ 193,963	\$ 1,437,944	\$ 1,631,907
Safety & Security	\$ 570,000	\$ -	\$ 110,332	\$ 459,668	\$ 570,000
Project Management Services	\$ 11,713,423	\$ 77,325	\$ 4,272,027	\$ 7,441,396	\$ 11,713,423
Engineering & Construction	\$ 89,113	\$ -	\$ 23,817	\$ 65,296	\$ 89,113
EMU Engineering & Management	\$ 33,083,374	\$ 179,636	\$ 5,870,175	\$ 27,213,198	\$ 33,083,374
IT Support	\$ 501,839	\$ 4,740	\$ 173,035	\$ 328,805	\$ 501,839
Operations Support	\$ 1,879,350	\$ 20,740	\$ 258,079	\$ 1,621,270	\$ 1,879,350
General Support	\$ 2,373,849	\$ 48,453	\$ 459,875	\$ 1,913,974	\$ 2,373,849
Budget / Grants / Finance	\$ 603,101	\$ 3,810	\$ 17,142	\$ 585,959	\$ 603,101
Legal	\$ 1,258,753	\$ 53,989	\$ 343,124	\$ 915,629	\$ 1,258,753
Other Direct Costs	\$ 3,730,096	\$ 3,499	\$ 652,155	\$ 3,077,940	\$ 3,730,096
TASI Support	\$ 2,740,000			\$ 2,740,000	\$ 2,740,000
Required Projects	\$ 4,500,000		\$ -	\$ 4,500,000	\$ 4,500,000
Finance Charges	\$ 1,941,800		\$ -	\$ 1,941,800	\$ 1,941,800
Contingency	\$ 38,562,962		\$ -	\$ 38,562,962	\$ 38,562,962
Owner's Reserve	\$ -	\$ -	\$ -	\$ -	\$ -
EMU SUBTOTAL	\$ 662,138,414	\$ 441,061	\$ 13,691,224	\$ 648,447,189	\$ 662,138,414

Table 8-3 PCEP Budget & Expenditure Status

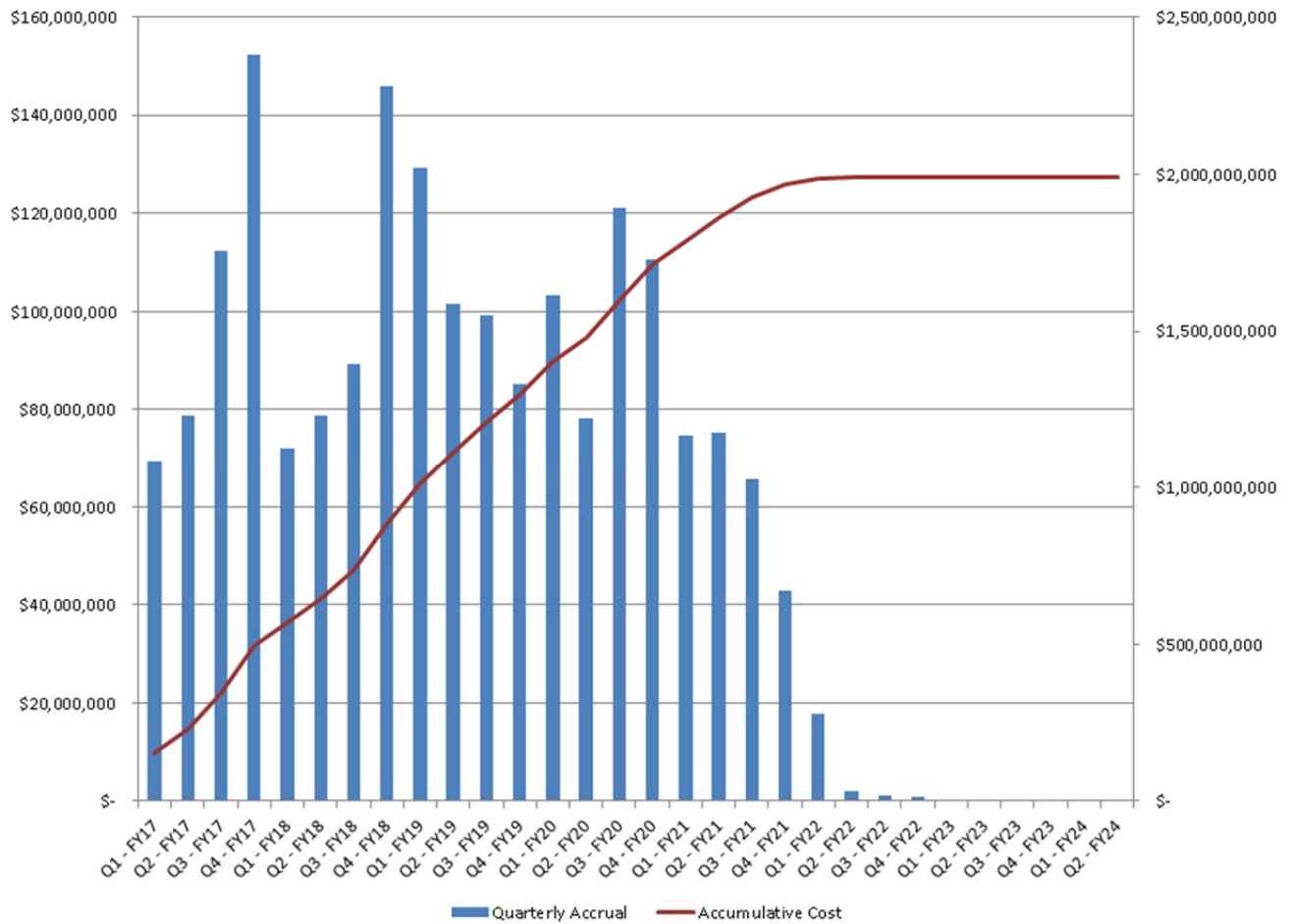
Description of Work	Budget (A)	Actual This Period (B) ¹	Accrued To Date (C) ²	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
Electrification Subtotal	\$ 1,318,114,119	\$ 1,386,852	\$ 64,829,069	\$ 1,253,285,050	\$ 1,318,114,119
EMU Subtotal	\$ 662,138,414	\$ 441,061	\$ 13,691,224	\$ 648,447,189	\$ 662,138,414
PCEP TOTAL	\$ 1,980,252,533	\$ 1,827,913	\$ 78,520,294	\$ 1,901,732,239	\$ 1,980,252,533

Notes regarding tables above:

1. Column B "Actual This Period" represents the actual cash payment during the reporting period.
2. Column C "Accrued To Date" includes actuals incurred to date and accruals to date.
3. The current budget vs. expenditure table represents the reconciled information based on the improved reporting from the district accounting system and implementation of new cost management system.

Cash flow projections are displayed in Figure 8-1 and Tables 8-4, 8-5, and 8-6.

Figure 8-1 Program Cash Flow Projections



Peninsula Corridor Electrification Project
Monthly Progress Report

Table 8-4 Electrification Year by Year Cash Flow

Description of Work	Budget	Prior Years	FY16	FY17 ²	FY18	FY19	FY20	FY21	FY22
Electrification	\$696,610,558	\$0	\$0	\$217,412,195	\$207,500,000	\$185,000,000	\$84,198,363	\$2,500,000	\$0
Tunnel Notching	\$11,029,649	\$0	\$0	\$0	\$5,366,775	\$5,662,873	\$0	\$0	\$0
Real Estate	\$28,385,456	\$2,444,566	\$1,875,173	\$14,227,257	\$9,565,268	\$218,869	\$26,754	\$27,570	\$0
Private Utilities	\$66,526,406	\$1,144,439	\$570,244	\$7,125,876	\$24,127,210	\$24,821,678	\$8,736,958	\$0	\$0
Management Oversight	\$142,814,987	\$45,808,243	\$11,455,901	\$16,860,025	\$20,067,139	\$17,990,638	\$15,253,180	\$13,495,539	\$1,884,323
Executive Management	\$7,494,952	\$1,181,236	\$850,606	\$1,011,207	\$1,081,446	\$1,111,649	\$1,112,448	\$1,146,360	\$0
Planning	\$7,235,808	\$3,466,575	\$493,759	\$1,580,456	\$725,078	\$488,692	\$301,696	\$179,552	\$0
Community Relations	\$2,826,960	\$523,755	\$231,146	\$282,093	\$439,794	\$452,453	\$466,253	\$431,466	\$0
Safety & Security	\$2,350,737	\$278,067	\$163,456	\$271,326	\$400,973	\$412,514	\$425,096	\$399,304	\$0
Project Management Services	\$20,905,616	\$3,141,981	\$2,590,486	\$2,958,933	\$2,734,269	\$2,812,971	\$2,898,764	\$2,987,130	\$781,083
Engineering & Construction	\$11,934,024	\$1,269,097	\$436,702	\$1,932,889	\$1,997,843	\$1,968,033	\$1,984,221	\$2,087,224	\$258,015
Electrification Engineering & Management	\$49,093,647	\$8,385,224	\$4,914,978	\$5,795,472	\$10,294,028	\$8,576,575	\$5,873,246	\$4,488,699	\$765,425
IT Support	\$818,790	\$195,230	\$102,489	\$80,238	\$115,650	\$118,978	\$122,607	\$83,598	\$0
Operations Support	\$1,423,335	\$256,565	\$40,399	\$125,528	\$239,355	\$246,244	\$253,754	\$261,490	\$0
General Support	\$3,859,806	\$633,564	\$366,543	\$748,191	\$534,284	\$510,031	\$525,586	\$541,608	\$0
Budget / Grants / Finance	\$1,268,408	\$17,399	\$63,264	\$526,468	\$298,760	\$220,671	\$69,858	\$71,987	\$0
Legal	\$2,480,274	\$765,005	\$639,864	\$335,393	\$180,000	\$180,000	\$180,000	\$200,012	\$0
Other Direct Costs	\$5,583,917	\$573,896	\$560,854	\$795,121	\$1,025,661	\$891,826	\$1,039,652	\$617,108	\$79,800
Prior Costs 2002 - 2013	\$25,538,712	\$25,120,649	\$1,355	\$416,708	\$0	\$0	\$0	\$0	\$0
TASI Support	\$53,063,531	\$171,580	\$83,265	\$1,533,602	\$23,615,073	\$19,670,366	\$7,487,534	\$502,110	\$0
RRP Insurance	\$3,500,000		\$0	\$1,750,000	\$875,000	\$875,000	\$0	\$0	\$0
Environmental Mitigations	\$17,685,498		\$0	\$2,435,623	\$2,351,224	\$5,882,663	\$5,073,446	\$1,942,541	\$0
Required Projects	\$17,337,378	\$497,318	\$0	\$60	\$200,000	\$1,288,590	\$5,351,410	\$10,000,000	\$0
Maintenance Training	\$1,021,808		\$0	\$0	\$0	\$521,336	\$500,472	\$0	\$0
Finance Charges	\$3,168,200		\$0	\$378,647	\$1,142,981	\$1,159,912	\$486,660	\$0	\$0
Contingency	\$276,970,649		\$0	\$42,808,001	\$69,162,426	\$60,577,001	\$73,423,747	\$28,700,169	\$2,299,306
Owner's Reserve	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
ELECTRIFICATION SUBTOTAL	\$1,318,114,119	\$50,066,146	\$13,984,583	\$304,531,286	\$363,973,097	\$323,668,927	\$200,538,524	\$57,167,929	\$4,183,629

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Table 8-5 EMU Year by Year Cash Flow

Description of Work	Budget	Prior Years	FY16	FY17 ²	FY18	FY19	FY20	FY21	FY22
EMU									
EMU	\$550,899,459	\$0	\$0	\$84,467,176	\$62,034,212	\$81,541,520	\$136,153,203	\$173,885,968	\$12,817,380
CEMOF Modifications	\$1,344,000	\$0	\$0	\$0	\$0	\$1,344,000	\$0	\$0	\$0
Management Oversight	\$62,150,192	\$7,254,970	\$5,536,874	\$8,919,795	\$9,200,200	\$9,977,504	\$8,565,184	\$8,206,592	\$4,489,073
Executive Management	\$4,715,388	\$870,867	\$408,123	\$707,812	\$662,821	\$681,334	\$681,823	\$702,607	\$0
Community Relations	\$1,631,907	\$5,181	\$179,177	\$219,320	\$300,917	\$309,578	\$319,020	\$298,713	\$0
Safety & Security	\$570,000	\$27,816	\$81,452	\$249,535	\$50,508	\$51,962	\$53,547	\$55,179	\$0
Project Management Services	\$11,713,423	\$1,961,111	\$1,801,985	\$464,195	\$1,675,842	\$1,724,079	\$1,776,662	\$1,830,822	\$478,727
Engineering & Construction	\$89,113	\$0	\$0	\$19,015	\$17,110	\$15,672	\$13,843	\$23,473	\$0
EMU Engineering & Management	\$33,083,374	\$3,476,960	\$2,209,074	\$5,506,663	\$4,934,093	\$5,533,090	\$4,045,773	\$3,799,056	\$3,578,664
IT Support	\$501,839	\$106,926	\$66,108	\$58,617	\$70,882	\$72,922	\$75,146	\$51,237	\$0
Operations Support	\$1,879,350	\$166,331	\$69,667	\$152,888	\$188,910	\$371,931	\$383,554	\$395,247	\$150,821
General Support	\$2,373,849	\$170,858	\$42,654	\$626,187	\$327,464	\$312,599	\$322,133	\$331,953	\$240,000
Budget / Grants / Finance	\$603,101	\$4,847	\$162,361	\$4,467	\$120,322	\$100,602	\$103,671	\$106,831	\$0
Legal	\$1,258,753	\$129,606	\$202,084	\$306,927	\$155,034	\$155,034	\$155,034	\$155,034	\$0
Other Direct Costs	\$3,730,096	\$334,467	\$314,189	\$604,168	\$696,295	\$648,699	\$634,978	\$456,440	\$40,860
TASI Support	\$2,740,000	\$0	\$0	\$0	\$0	\$600,607	\$1,305,051	\$834,343	\$0
Required Projects	\$4,500,000	\$0	\$0	\$0	\$416,379	\$83,621	\$4,000,000	\$0	\$0
Finance Charges	\$1,941,800	\$0	\$0	\$232,074	\$700,537	\$710,914	\$298,276	\$0	\$0
Contingency	\$38,562,962	\$0	\$0	\$5,912,702	\$4,342,395	\$5,707,906	\$9,530,724	\$12,172,018	\$897,217
Owner's Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EMU SUBTOTAL	\$662,138,414	\$7,254,970	\$5,536,874	\$99,531,748	\$76,693,723	\$99,966,072	\$159,852,438	\$195,098,920	\$18,203,669

Table 8-6 PCEP Year by Year Cash Flow

Description of Work	Budget	Prior Years	FY16	FY17 ²	FY18	FY19	FY20	FY21	FY22
ELECTRIFICATION SUBTOTAL	\$1,318,114,119	\$50,066,146	\$13,984,583	\$304,531,286	\$363,973,097	\$323,668,927	\$200,538,524	\$57,167,929	\$4,183,629
EMU SUBTOTAL	\$662,138,414	\$7,254,970	\$5,536,874	\$99,531,748	\$76,693,723	\$99,966,072	\$159,852,438	\$195,098,920	\$18,203,669
PCEP TOTAL	\$1,980,252,533	\$57,321,116	\$19,521,457	\$404,063,033	\$440,666,820	\$423,634,999	\$360,390,962	\$252,266,848	\$22,387,298

Notes:

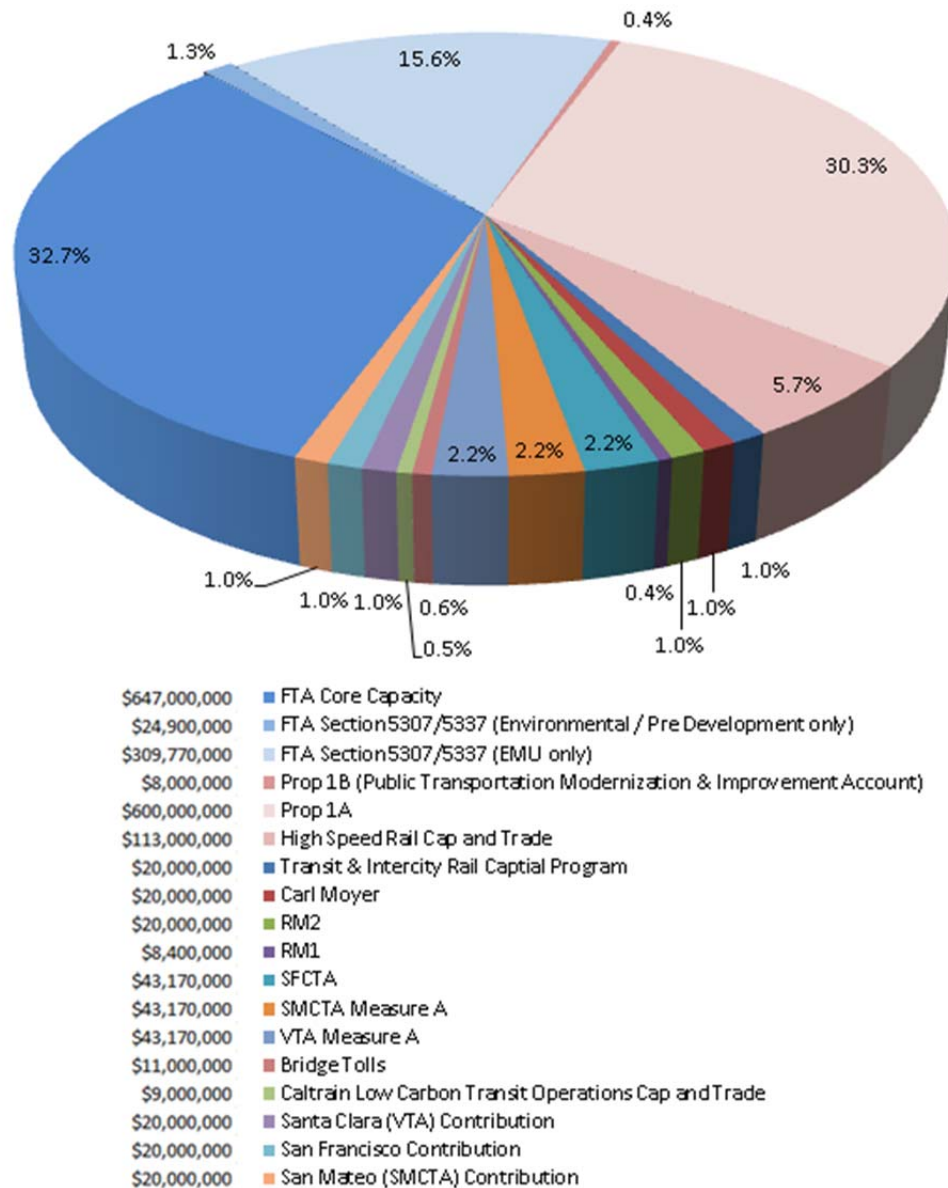
1. The above cash flow is based on actual bid prices for DB and EMU contracts.
2. FY2017 includes unspent budget from FY16 in the amount of \$ 7.37M. The unspent budget consists of Real Estate and PG&E related work.

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9.0 FUNDING

The JPB continues to work with the funding partners, including the California High Speed Rail Authority, to execute the 7-party Regional Funding Supplement to provide additional project funding. As previously noted, the Metropolitan Transportation Commission (MTC) allocated \$39.4 million in regional bridge toll funding to the project. \$11 million of the bridge toll funds were included in the original 9-party MOU and \$28.4 million are included in the 7-party supplement.

Figure 9-1 Funding Plan



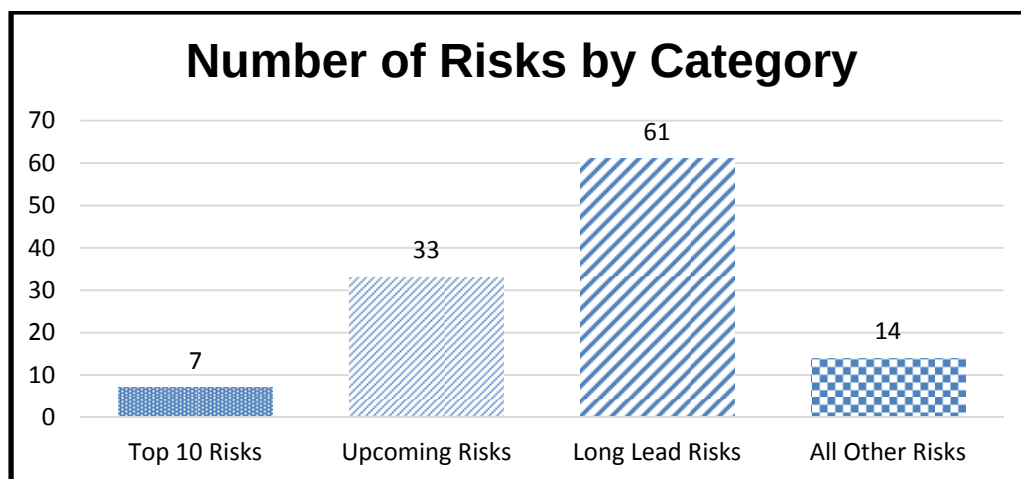
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10.0 RISK MANAGEMENT

Activity This Month

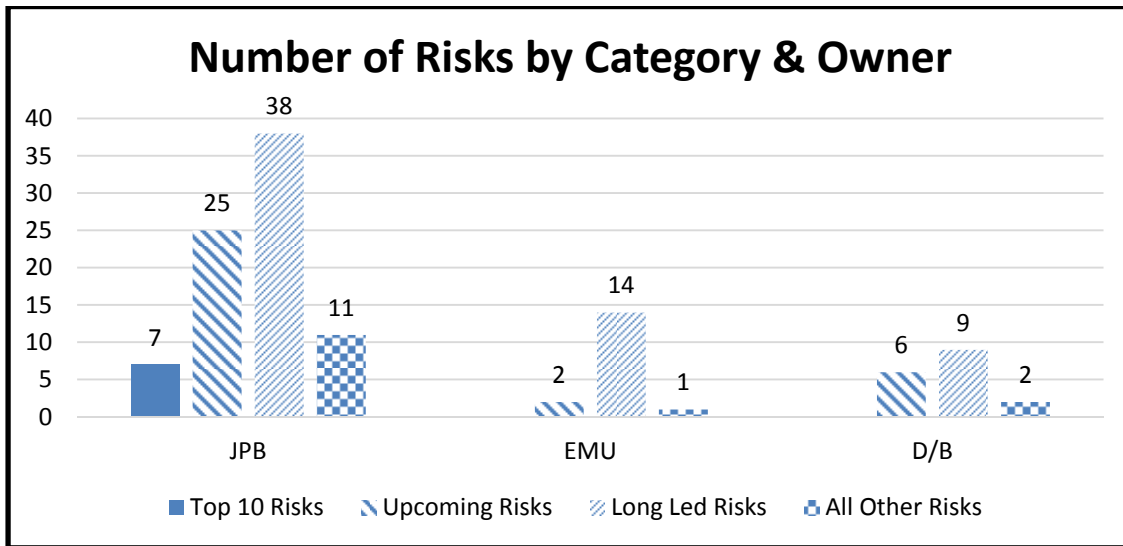
- Conducted risk refresh workshop
 - Evaluated the entire risk register retiring 29 risks, increasing the grade on one risk, decreasing the grade on 41 risks, and adding 16 new risks to the project risk register;
 - Conducted Monte Carlo Simulation to evaluate cost and schedule contingency requirements; and
 - Prepared technical memorandum summarizing the results of the risk refresh workshop.
- Updated risk descriptions, effects, and mitigations based upon weekly input from risk owners. Completed monthly cycle of risk updating based on schedule established in the Risk Identification and Mitigation Plan.
- Updated risk retirement dates based upon revisions to project schedule and input from risk owners.
- Continued weekly monitoring of risk mitigation actions.
- Continued weekly publishing of the risk register.
- Attended Electrification, Project Delivery, and Systems Integration meetings to monitor developments associated with risks and to identify new risks
- Updated risk register with input received from Risk Refresh Workshop.
- Prepared and submitted technical memorandum summarizing risk refresh effort.
- Convened Risk Assessment Committee meeting and ratified major changes to risk register.

Table 10-1 Monthly Status of Risks



Total Number of Active Risks = 115

Table 10-2 Risk Classification



Activity Next Month

- Update risk descriptions, effects, mitigations, retirement dates.
- Conduct weekly monitoring of risk mitigation actions.
- Continue publishing risk register weekly.
- Participate in FTA-led Risk Refresh workshop.

Top Risks

- If overhead utilities are not relocated in time the Electrification contractor may incur delays
- Upgrades to the electrical service needed for the electrification project are dependent upon final agreement with PG&E for which technical and contractual issues must first be resolved.
- TASI may not be able to deliver sufficient staff resources to support the construction and testing of the electrification system.
- JPB's current system integration and configuration program will require additional staff expertise and systems improvements to accommodate proposed electrification improvements.
- The final configuration of the electrification system requires the installation of a duct bank under UPRR tracks requiring coordination with UPRR the negotiation of a broad range of issues that may not be completed in a timely manner.
- All funding for the electrification program is not in place and will require agreements with all parties to the 9-Party MOU and FTA and may be affected by legal challenges associated with the CHSRA project.
- Delays in locating and relocating underground utilities may result in delays to the installation of the electrification system

11.0 ENVIRONMENTAL

Permits

The PCEP requires environmental permits from the following agencies / federal regulations: Section 106 of the National Historic Preservation Act of 1966 (NHPA), Section 7 of the Endangered Species Act (ESA), United States Army Corps of Engineers (USACE), San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), the California Department of Fish and Wildlife (CDFW), and the San Francisco Bay Conservation Development Commission (BCDC).

Section 106 of the NHPA process as well as Section 7 of the ESA process have concluded.

Activity This Month

- All permit applications mentioned above have been submitted. There is ongoing coordination in order to complete the permitting processes.

Activity Next Month

- Continue coordination and response to regulatory agencies in order to further permitting processes. The target completion date for completing the USACE, SFRWQCB, CDFW and the SF BCDC is 2016.

Mitigation Monitoring and Reporting Program

The CEQA requires that a Lead Agency establish a program to monitor and report on mitigation measures that it has adopted as part of the environmental review process. The JPB has prepared a Mitigation Monitoring and Reporting Program (MMRP) to ensure that mitigation measures identified in the PCEP EIR are fully implemented during project implementation. The JPB will implement the mitigation measures through its own actions, those of the design-build contractor and actions taken in cooperation with other agencies and entities. The MMRP is available on the Caltrain website:

<http://www.caltrain.com/Assets/Caltrain+Modernization+Program/Electrification+Documents/MMRP.pdf>

Activity This Month

- There are no current mitigation activities this month.

Activity Next Month

- There are no planned mitigation activities next month.

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12.0 UTILITY RELOCATION

Activity This Month

- Held monthly utility coordination meeting with telecom and power carriers. These meetings are focused on overall project schedule and relocation schedule, responsibilities of relocation, applicable design standards of relocation, and reconciliation of agreements and records.
- Perform final field verifications of overhead utilities within the Caltrain Right of Way.
- Continue work with all utilities on review of overhead utility line relocations based on the current preliminary design. This effort is expected to continue for the next several months to support identification and confirmation of relocations, agreements for the relocations, and design of relocations.

Activity Next Month

- Continue monthly meetings with telecom and power carriers.
- Continue work with all utilities on review of overhead utility line relocations based on the current 35% design and continue coordination and reconciliation of existing agreements with utilities.
- Prepare relocation notices.
- Meeting with UPRR, PG&E and other power providers to resolve relocation requirements with CPUC. Until CPUC defines relocation requirements, work by the utilities cannot begin. This could result in significant delays to the D/B contractor.

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13.0 REAL ESTATE

The ROW team continued work to complete all remaining appraisals for Segment 2 and 4. The Board of Director's concurred with settlement amounts for six Segment 2 and one Segment 4 acquisitions during the Closed Session of the Board meeting on July 7, 2016. Concurrence by the Board will allow the team to make offers. The ROW team plans to take all remaining Segment 2 parcels to the Board of Directors at the August meeting.

- Segment 4 Status:
 - Offers tendered for JPB-SCL4-0112 (full acquisition), JPB-SCL4-0105-1A (partial) and JPB-SCL4-0106-1A (partial).
 - The ROW team continued to prepare offer presentation packages for all remaining parcels in Segment 4.
 - The ROW team coordinated the Phase II Hazmat assessment work needed for two commercial properties in Segment 4. Offers will not be presented until the Phase II work is completed.
 - Phase I Hazmat assessments for Segment 4 are complete.
- Segment 2 Status:
 - The ROW team continued to complete remaining appraisals for Segment 2.
 - Phase I Hazmat assessments for Segment 2 have been completed. It is currently not anticipated that Phase II work will be needed for Segment 2.
 - The team prepared offer presentation packages for six properties in Segment 2.

Activity Next Month

- Continue negotiations for JPB-SCL4-0112 (full acquisition), JPB-SCL4-0105-1A (partial) and JPB-SCL4-0106-1A (partial)
- Begin to present offer packages for remaining Segment 4 parcels.
- Complete Phase II Hazmat assessment work for two commercial properties in Segment 4.
- Seek Board of Directors concurrence to proceed with offers for Segment 2 acquisitions.
- Begin to present offer packages for Segment 2 parcels.
- As needed, complete appraisal work for any newly identified parcels in Segments 4 and 2.

Table 13-1 Real Estate Acquisition Overview

Segment	No. of Parcels Needed*	No. of Appraisals Completed	No. Of Offers Presented	Acquisition Status		
				Escrow Closed	Value Litigation	Parcel Possession
Segment 4	14	14	3	0	0	0
Segment 2	30	18	0	0	0	0
Segment 1	8	0	0	0	0	0
Segment 3	12	0	0	0	0	0
Total	64	32	3	0	0	0

**Note: The table indicates individual parcels. Appraisal Packages include Plat Map, Legal Description and Appraisal Map.*

During design development, the real estate requirements have been adjusted to accommodate design refinements. Parcel requirements are adjusted accordingly. The table in this report reflects the current property needs for the Project.

14.0 THIRD PARTY AGREEMENTS

Third-party coordination is necessary for work impacting public infrastructure, utilities, ROW acquisitions, and others. The table below outlines the status of necessary agreements for the PCEP.

Table 14-1 Third-Party Agreement Status

Type	Agreement	Third-Party	Status
Governmental Jurisdictions	Construction & Maintenance ¹	City and County of San Francisco	In Process
		City of Brisbane	In Process ²
		City of South San Francisco	Executed
		City of San Bruno	In Process
		City of Millbrae	Executed
		City of Burlingame	Executed
		City of San Mateo	In Process ²
		City of Belmont	In Process ²
		City of San Carlos	Executed
		City of Redwood City	In Process
		City of Atherton	In Process
		County of San Mateo	In Process
		City of Menlo Park	In Process ²
		City of Palo Alto	In Process
		City of Mountain View	Executed
		City of Sunnyvale	In Process ²
		City of Santa Clara	In Process
		County of Santa Clara	In Process ²
		City of San Jose	In Process
	Condemnation Authority	San Francisco	In Process
		San Mateo	In Process
		Santa Clara	Executed
Utilities	Infrastructure	Pacific Gas & Electric (PG&E)	Executed ³
	Operating Rules	California Public Utilities Commission (CPUC)	In Process
Transportation & Railroad	Construction & Maintenance	Bay Area Rapid Transit (BART)	Executed ⁴
	Construction & Maintenance	California Dept. of Transportation (Caltrans)	In Process
	Trackage Rights	Union Pacific Railroad (UPRR)	Executed ⁴

Notes regarding table above:

¹ Agreements memorialize the parties' consultation and cooperation, designate respective rights and obligations and ensure cooperation between the JPB and the cities and counties in connection with the design and construction of the PCEP. A comprehensive agreement is planned for each of the 17 cities and three counties along the Caltrain ROW and within the PCEP limits.

² Approved by City Council, or Board of Supervisors, and awaiting signature for execution.

³ Master agreement and two supplemental agreements.

⁴ Utilizing existing agreements

15.0 COMMUNITY RELATIONS AND OUTREACH

The following PCEP related external affairs meetings took place in July:

- Tabled at HSR Community Meeting in San Jose
- Presentation at SAMCEDA
- Presentation at the Transbay Joint Powers Authority Citizen Advisory Committee
- Meeting with the Peninsula Corridor Working Group
- Presentation at the Transbay Joint Powers Authority Board
- Meeting with Diridon Working Group
- Meetings with individual Local Policy Maker Group members
- Presentation at Local Realtors Association
- Presentation at the Caltrain Bicycle Advisory Committee
- Participated HSR Community Working Group Meetings
- Unanimous support at SF Supervisors Budget and Finance Subcommittee re: 7-party Supplemental MOU
- Presentation at the Menlo Park Chamber Transportation Committee
- Unanimous support at the Sunnyvale Council meeting re: Cooperative Agreement
- Presentation at the Bay Area Congestion Management Agency Meeting

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16.0 DBE PARTICIPATION AND LABOR STATISTICS

Disadvantaged Business Enterprise (DBE) and labor statistics will be reported after construction has commenced.

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17.0 PROCUREMENT

Contract Activity

The JPB Board authorized the award of both the EMU and Design Build contracts at the July 7 board meeting. A LNTP is expected to be issued in August 2016 for the EMU contract and September 2016 for Design Build Contract with a full NTP expected in March 2017 for both contracts.

Invitation for Bids / RFQ / RFP Advertised this month

No Bids/RFQs/RFPs were advertised in July.

Bids / Qualifications / Proposals Received this month

No Bids/RFQs were received in July.

Upcoming Bids/Qualifications/Proposals:

Issue a proposal request for the SCADA system to support CalMod.

Work Directive / Purchase Order Awards and Amendments

Table 17-1 shows Work Directive / Purchase Order awards and amendments issued in July 2016.

Table 17-1 WD / PO Awards & Amendments

Work Directive No.	Task Description	Firm	Cost (Thousands)
7912-A2	CalMod Financial Support (B. Peskin) (July – June 2017)	AECOM	\$0
8581	Real Estate Acquisition Services – Segment 2 – 20 Parcels (July – Sept 2016)	ARWS	\$100,000.00
8593	Real Estate Appraisal - Segment 2 – 1 parcel (extend term to 12/30/2016)	J. Kaueper	\$0

Table 17-2 shows Work Directive / Purchase Order awards and amendments to be issued for the 1st Quarter of FY17.

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Table 17-2 Upcoming WD / PO Awards & Amendments

Work Directive No.	Task Description	Firm	Cost (Thousands)¹
8505	EMU Consultant Support (July – Sept 2016)	LTK	TBD
8506	Elect EIP Support (D. Irwin) (July – Sept 2016)	LTK	TBD
8507	Electrification Support (July – Sept 2016)	GFI	TBD
8508	Program Management Support (July – Sept 2016)	AECOM	TBD
8509	EMU EIP Support (L. Welch) (July – Sept 2016)	AECOM	TBD
8510	Project Delivery Director Support (D. Couch) (July – Sept 2016)	DConsult	TBD
8511	Systems Safety Support (July – Sept 2016)	B&G	TBD
8517	IT Applications Support (A. Alano) (July – Sept 2016)	CompuCom	TBD
8532	Communications & Outreach Support (July – Sept 2016)	HNTB/Circle Point	TBD
8563	IT Applications Support (H. Charns) (July – Sept 2016)	Modis	TBD
8564	Chief Officer Support (M. Burns) (July – Sept 2016)	Transportation Consultant	TBD
8582	Real Estate Project Management & Coordination - Segment 2 & 4	BRI	TBD

Note: FY17 Work Directives will be issued for LNTP Q1, incl. funding (July – September 2016).

18.0 TIMELINE OF MAJOR PROJECT ACCOMPLISHMENTS

- The timeline of major project accomplishments includes the following milestones:
- Conceptual Design (2002);
- Draft NEPA Environmental Assessment (EA) / Environmental Impact Report (EIR) (2004);
- 35% design complete (2008);
- Final NEPA EA/EIR and Finding of No Significant Impact (FONSI) (2009);
- Request for Qualifications (RFQ) for Electrification (May 2014);
- JPB Approves Final CEQA Environmental Impact Report (EIR) (January 2015);
- JPB Approves Issuance of RFP for Electrification (February 2015);
- JPB Approves Issuance of RFP for EMU (July 2015);
- JPB Approves EIR Addendum #1: PS-7 (February 2016)
- FTA Re-Evaluation of 2009 FONSI (February 2016);
- Receipt of Electrification BAFOs (February 2016);
- Receipt of EMU Proposal (February and March 2016);
- Application for Entry to Engineering to FTA (April 2016);
- Receipt of EMU BAFO (June 2016);
- Completed the EMU Buy America Pre-Award Audit and Certification (June 2016);
- Negotiations completed with Stadler US, Inc. for EMU Vehicles; and
- Negotiations completed with Balfour Beatty Infrastructure, Inc., the apparent best value Electrification firm
- JPB Approves Contract Award (LNTP) Balfour Beatty (July 7, 2016)
- JPB Approves Contract Award (LNTP) Stadler US (July 7, 2016)

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APPENDICES

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Appendix A – Acronyms

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AIM	Advanced Information Management	ESA	Endangered Species Act
ARINC	Aeronautical Radio, Inc.	ESA	Environmental Site Assessments
BAAQMD	Bay Area Air Quality Management District	FEIR	Final Environmental Impact Report
BBI	Balfour Beatty Infrastructure, Inc.	FONSI	Finding of No Significant Impact
CalMod	Caltrain Modernization Program	FRA	Federal Railway Administration
Caltrans	California Department of Transportation	FTA	Federal Transit Administration
CDFW	California Department of Fish and Wildlife	GO	General Order
CEMOF	Centralized Equipment Maintenance and Operations Facility	HSR	High Speed Rail
		ICD	Interface Control Document
CEQA	California Environmental Quality Act (State)	ITS	Intelligent Transportation System
CHSRA	California High-Speed Rail Authority	JPB	Peninsula Corridor Joint Powers Board
CIP	Capital Improvement Plan	LNTP	Limited Notice to Proceed
CPUC	California Public Utilities Commission	MMRP	Mitigation, Monitoring, and Reporting Program
DB	Design-Build	MOU	Memorandum of Understanding
DBB	Design-Bid-Build	MPS	Master Program Schedule
DBE	Disadvantaged Business Enterprise	NCR	Non Conformance Report
DEMP	Design, Engineering, and Management Planning	NEPA	National Environmental Policy Act (Federal)
EA	Environmental Assessment	NHPA	National Historic Preservation Act
EAC	Expenditure at Completion	NMFS	National Marine Fisheries Service
EIR	Environmental Impact Report	NTP	Notice to Proceed
EMU	Electric Multiple Unit	OCS	Overhead Contact System

Peninsula Corridor Electrification Project
Monthly Progress Report

PCEP	Peninsula Corridor Electrification Project	SPUR	San Francisco Bay Area Planning and Urban Research Association
PCJPB	Peninsula Corridor Joint Powers Board	SFBCDC	San Francisco Bay Conservation Development Commission
PG&E	Pacific Gas and Electric		
PHA	Preliminary Hazard Analysis	SFCTA	San Francisco County Transportation Authority
PMOC	Project Management Oversight Contractor	SFMTA	San Francisco Municipal Transportation Authority
PS	Paralleling Station	SFRWQCB	San Francisco Regional Water Quality Control Board
QA	Quality Assurance		
QC	Quality Control	SOGR	State of Good Repair
QMP	Quality Management Plan	SS	Switching Station
QMS	Quality Management System	SSMP	Safety and Security Management Plan
RAMP	Real Estate Acquisition Management Plan	SSWP	Site Specific Work Plan
RE	Real Estate	TASI	Transit America Services Inc.
RFP	Request for Proposals	TBD	To Be Determined
RFQ	Request for Qualifications	TPS	Traction Power Substation
ROCS	Rail Operations Center System	TVA	Threat and Vulnerability Assessment
ROW	Right-of-Way	UPRR	Union Pacific Railroad
RRP	Railroad Protective Liability	USACE	United States Army Corp of Engineers
RSD	Revenue Service Date	USFWS	U.S. Fish and Wildlife Service
RWP	Roadway Worker Protection	VTA	Santa Clara Valley Transportation Authority
SamTrans	San Mateo County Transit District		
SCADA	Supervisory Control and Data Acquisition		
SCC	Standard Cost Code		

Appendix B – Schedule

MASTER CPM SCHEDULE C15.00...				Data Date: 07/01/16				PCEP C15.00 Summary																FOR INTERNAL USE ONLY 07/28/16 12:29																																																																																																																
#	Activity Name	Duration	Start	Finish	2014				2015				2016				2017				2018				2019				2020				2021				2022																																																																																																			
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2																																																																																																						
1	MASTER CPM SCHEDULE C15.00		2001d	05/01/14 A	12/30/21																																																																																																																																			
2	MILESTONES		2001d	05/01/14 A	12/30/21																																																																																																																																			
3	PLANNING / APPROVALS PHASE		929d	05/01/14 A	11/22/17																																																																																																																																			
4	ENVIRONMENTAL		466d	05/01/14 A	02/11/16 A																																																																																																																																			
5	DESIGN/BUILDER PROCUREMENT		596d	05/01/14 A	09/02/16																																																																																																																																			
6	AGENCY COORDINATION / APPROVALS		635d	10/01/14 A	03/31/17																																																																																																																																			
7	FEDERAL TRANSIT ADMINISTRATION		424d	04/16/15 A	12/15/16																																																																																																																																			
8	JURISDICTIONAL AGREEMENTS		635d	10/01/14 A	03/31/17																																																																																																																																			
9	CALIFORNIA PUBLIC UTILITIES COMMISSION		465d	11/03/14 A	08/31/16																																																																																																																																			
10	PACIFIC GAS & ELECTRIC		548d	11/03/14 A	12/30/16																																																																																																																																			
11	CALIFORNIA DEPARTMENT OF TRANSPORTATION		322d	02/02/15 A	05/05/16 A																																																																																																																																			
12	BAY AREA RAPID TRANSIT DISTRICT		221d	06/18/15 A	04/29/16 A																																																																																																																																			
13	SANTA CLARA VALLEY TRANSPORTATION AUTHORITY		242d	06/18/15 A	05/31/16 A																																																																																																																																			
14	LABOR AGREEMENT		128d	01/02/15 A	07/02/15 A																																																																																																																																			
15	UTILITIES		359d	04/01/15 A	08/26/16																																																																																																																																			
16	PERMITS		530d	12/01/14 A	12/30/16																																																																																																																																			
17	FEDERAL PERMITS		317d	12/01/14 A	02/29/16 A																																																																																																																																			
18	STATE & REGIONAL PERMITS		510d	12/30/14 A	12/30/16																																																																																																																																			
19	RIGHT-OF-WAY		732d	02/02/15 A	11/22/17																																																																																																																																			
20	APPRAISAL, TITLE, & REAL ESTATE SUPPORT SERVICES		196d	02/02/15 A	11/05/15 A																																																																																																																																			
21	REAL ESTATE ACQUISITION MANAGEMENT PLAN		81d	07/01/15 A	10/23/15 A																																																																																																																																			
22	COOPERATIVE AGREEMENTS		433d	02/10/15 A	10/06/16																																																																																																																																			
23	PARCEL ACQUISITIONS		651d	05/01/15 A	11/22/17																																																																																																																																			
24	SCADA		481d	03/30/15 A	02/17/17																																																																																																																																			
25	DESIGN / ENGINEERING PHASE		960d	10/01/14 A	07/12/18																																																																																																																																			
26	UTILITY RELOCATION		272d	09/06/16	09/29/17																																																																																																																																			
27	PG&E INFRASTRUCTURE		389d	01/03/17	07/12/18																																																																																																																																			
28	TUNNEL MODIFICATION		802d	10/31/14 A	12/29/17																																																																																																																																			
29	CEMOF		799d	10/01/14 A	11/21/17																																																																																																																																			
30	VEHICLES PHASE		1887d	05/01/14 A	07/23/21																																																																																																																																			
31	SPECIFICATION		134d	07/01/14 A	01/12/15 A																																																																																																																																			
32	PROCUREMENT		597d	05/01/14 A	08/15/16																																																																																																																																			
33	DETAILED DESIGN (STADLER)		364d	08/15/16	01/22/18																																																																																																																																			
34	PROCUREMENT (MATERIAL & EQUIPMENT) (STADLER)		416d	12/15/16	08/03/18																																																																																																																																			
35	MOCK-UPS (STADLER)		170d	11/15/17	07/18/18																																																																																																																																			
36	ELECTRIC LOCO		1001d	07/01/16	06/10/20																																																																																																																																			
37	MANUFACTURING, TESTING, & TAKE OVER (STADLER)		953d	10/23/17	07/23/21																																																																																																																																			
38	CONSTRUCTION / INSTALLATION PHASE		902d	02/17/17	09/04/20																																																																																																																																			
39	PG&E INFRASTRUCTURE		547d	07/13/18	09/04/20																																																																																																																																			
40	TUNNEL MODIFICATION		356d	01/02/18	05/24/19																																																																																																																																			
41	SCADA		809d	02/17/17	04/24/20																																																																																																																																			
42	UTILITY RELOCATION		348d	03/01/17	07/12/18																																																																																																																																			
43	CEMOF		109d	11/22/17	04/27/18																																																																																																																																			
44	TESTING / STARTUP PHASE		426d	04/27/20	12/30/21																																																																																																																																			
45	PRE-REVENUE OPERATIONS		213d	09/22/20	07/23/21																																																																																																																																			
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					Prog Plan (C14.02)												Last Months Update												Progress												Critical												Risk Contingency												Start Milestone												Finish Milestone												Last Months Update												Critical Milestone																																			
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