



Modernization Program

Peninsula Corridor Electrification Project (PCEP)



November 2016 Monthly Progress Report

November 30, 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

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

	Page
1.0 BACKGROUND	1-1
2.0 EXECUTIVE SUMMARY	2-1
2.1 Schedule.....	2-1
2.2 Budget and Expenditures.....	2-2
2.3 Board Actions	2-2
2.4 Community Relations and Outreach	2-3
3.0 ELECTRIFICATION – INFRASTRUCTURE.....	3-1
3.1 Electrification	3-1
3.2 Supervisory Control and Data Acquisition (SCADA).....	3-1
3.3 Tunnel Modification.....	3-2
4.0 ELECTRIC MULTIPLE UNITS	4-1
4.1 Centralized Equipment Maintenance and Operations Facility (CEMOF) Modifications.....	4-1
5.0 SAFETY	5-1
6.0 QUALITY ASSURANCE	6-1
7.0 SCHEDULE.....	7-1
8.0 BUDGET AND EXPENDITURES	8-1
9.0 FUNDING.....	9-1
10.0 RISK MANAGEMENT	10-1
11.0 ENVIRONMENTAL	10-3
11.1 Permits	11-1
11.2 Mitigation Monitoring and Reporting Program	11-1
12.0 UTILITY RELOCATION	12-1
13.0 REAL ESTATE	13-1
14.0 THIRD PARTY AGREEMENTS	14-1
15.0 COMMUNITY RELATIONS AND OUTREACH	15-1
16.0 DBE PARTICIPATION AND LABOR STATISTICS	16-1
17.0 PROCUREMENT	17-1

18.0 TIMELINE OF MAJOR PROJECT ACCOMPLISHMENTS 18-1

List of Tables

	Page
Table 2-1 Schedule Milestones	2-2
Table 2-2 Budget and Expenditure Status.....	2-2
Table 6-1 Quality Assurance Audit Summary	6-1
Table 7-1 Schedule Status	7-1
Table 7-2 Critical Path Summary	7-2
Table 7-3 Near-Term, Near-Critical with Less Than Three Months of Float.....	7-2
Table 8-1 Program Baseline Cost Estimate Summary.....	8-1
Table 8-2 Electrification Budget & Expenditure Status	8-2
Table 8-3 EMU Budget & Expenditure Status.....	8-2
Table 10-1 Monthly Status of Risks.....	10-2
Table 10-2 Risk Classification	10-2
Table 13-1 Real Estate Acquisition Overview.....	13-2
Table 14-1 Third-Party Agreement Status	14-1

List of Figures

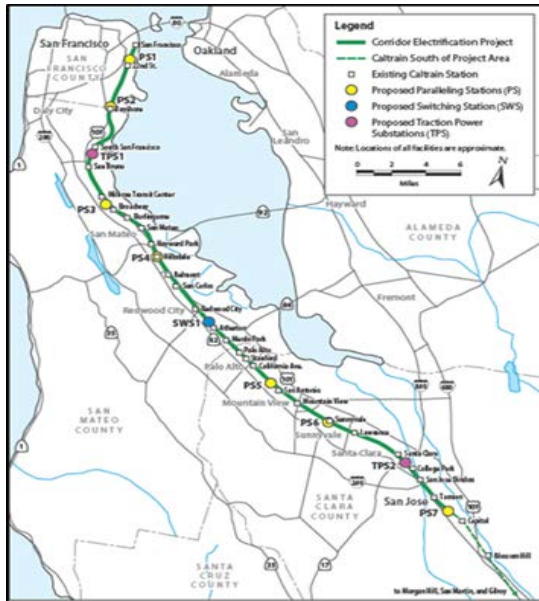
	Page
Figure 9-1 Funding Plan.....	9-1

List of Appendices

	Page
Appendix A – Acronyms.....	A-1
Appendix B – Schedule.....	B-1
Appendix C – SCC Reporting.....	C-1

1.0 BACKGROUND

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.

THIS PAGE INTENTIONALLY LEFT BLANK

2.0 EXECUTIVE SUMMARY

The Monthly Progress Report is intended to provide an overview of the PCEP and provide funding partners, stakeholders, and the public an overall update on the progress of the project. This document provides information on the scope, cost, funding, schedule, and project implementation.

The PCEP team has been working with Balfour Beatty Infrastructure, Inc (BBI) on the technical aspects of the project. Initial design and field investigations for Electrification started in November, as well as the physical geotechnical boring on the Caltrain right-of-way (ROW). Archaeologists have also conducted exploratory field analysis for construction sites in areas classified as “high” or “very high” for burial sites to comply with established mitigation measures for preserving and protecting any potential cultural resources below ground. The PCEP team has been actively reviewing and responding to requests for information (RFIs) from BBI. On November 10, the Electrification requirements were formally adopted by the California Utilities Commission (CPUC).

The PCEP team has continued to work with Stadler under the limited notice to proceed (LNTP) on the technical aspects of the project. Stadler has submitted several deliverables to the PCEP team for review. The PCEP team and Stadler are currently in discussions and coordination meetings regarding positive train control (PTC), equipment mockups and samples for public outreach purposes, and Caltrain operations and maintenance needs related to the EMU design. The PCEP team has been working with Stadler on initial conceptual design layouts for the EMUs. Initial discussions on design requirements on the Centralized Equipment Maintenance and Operations Facility (CEMOF) have also been moving forward.

The PCEP team is also working closely with both BBI and Stadler on program management items such as ensuring the proper protocols for safety, quality assurance, and document control are in place.

2.1 Schedule

The Revenue Service Date (RSD) in the Master Program Schedule (MPS) remains unchanged. Without adjustment for contingency, the RSD is forecast as August 2021. With the addition of approximately five months of contingency to account for potential risk to the project, the RSD is anticipated as December 2021. Table 2-1 provides a summary of the current schedule and milestones.

2.2 Budget

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

Peninsula Corridor Electrification Project
Monthly Progress Report

Table 2-1 Schedule Status

Milestones ^{1,2}	Program Plan	September	October
Full Notice to Proceed to Electrification Contractor	N/A	03/01/2017	03/01/2017
Full Notice to Proceed to EMU Manufacturer	N/A	03/01/2017	03/01/2017
Start of Electrification Major Construction	03/20/2017	07/24/2017	07/24/2017
First 8 Miles of Electrification Complete to Begin Testing	04/08/2019	10/08/2019	10/08/2019
Delivery of 1 st Vehicle	06/25/2019	07/30/2019	07/30/2019
Start Pre-Revenue Operations	09/08/2020	09/22/2020	09/22/2020
Potential Limited Service	12/31/2020	12/31/2020	12/31/2020
RSD (w/ Risk Contingency)	12/30/2021	12/30/2021	12/30/2021

Notes:

¹ Milestones reported on this table may differ from the current schedule. As the schedule continues to be refined over the coming months to incorporate approved baseline schedules from the Electrification and EMU contractors, changes to milestones will be thoroughly vetted prior to reflecting those changes in the Monthly Report.

² Program Plan only considered an NTP. It did not account for an LNTP and FNTP.

Table 2-2 Budget and Expenditure Status

Description of Work	Budget (A)	Cost This Month (B)	Cost To Date (C)	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
Electrification Subtotal	\$ 1,316,125,208	\$ 13,100,447	\$ 111,638,874	\$ 1,204,486,334	\$ 1,316,125,208
EMU Subtotal	\$ 664,127,325	\$ 564,217	\$ 17,145,038	\$ 646,982,286	\$ 664,127,325
PCEP TOTAL	\$ 1,980,252,533	\$ 13,664,664	\$ 128,783,912	\$ 1,851,468,621	\$ 1,980,252,533

2.3 Board Actions

At the November 3, 2016 meeting, JPB took action by giving unanimous support for the Amendment of the Fiscal Year 2017 Capital Budget to increase the budget authority for the PCEP and include the Federal Transportation Administration (FTA) funds.

As an information item, the Board received the PCEP Quarterly Update #8 presentation. A copy of the presentation can be viewed here:

http://www.caltrain.com/Assets/_Agendas+and+Minutes/JPB/Board+of+Directors/Presentations/2016/2016-11-03+JPB+BOD+PCEP+Quarterly+Update.pdf

The link to the full Board packet can viewed here:

http://www.caltrain.com/Assets/_Agendas+and+Minutes/JPB/Board+of+Directors/Agendas/2016/2016-11-03+JPB+BOD+Agenda+Packet.pdf

(Note: For viewers accessing the links above electronically, please cut and paste the link into a browser if it does not direct you immediately to the document.)

2.4 Community Relations and Outreach

A number of community relations and outreach events took place during the month of November. PCEP staff gave a total of three presentations and participated and attended 4 third party/stakeholder actions and meetings.

Direct mailers were sent to residents in Segments 2 and 4. In November, there were several calls from residents with questions about the project but no complaints.

THIS PAGE INTENTIONALLY LEFT BLANK

3.0 ELECTRIFICATION – INFRASTRUCTURE

This section reports on the progress of the Electrification, Supervisory Control and Data Acquisition (SCADA), and Tunnel Modification components. A brief description on each of the components is provided below.

3.1 Electrification

The Electrification component of the PCEP includes the installation of 138 miles of single-track and overhead contact system (OCS) for the distribution of electrical power to the EMUs. The OCS will be powered from a 25-kilovolt (kV), 60-Hertz (Hz), 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 DB delivery method.

Activity This Month

- The PCEP team continued working with BBI on initial design and field investigations. BBI continued conducting utility surveys, pothole location layouts, geotechnical boring layouts, and also began physical geotechnical boring on the Caltrain ROW for Segments 2 and 4.
- The PCEP team also reviewed requests for information (RFIs) and submittals from BBI. This effort is expected to continue during the upcoming months.
- Coordination efforts with PG&E continued for infrastructure improvements and traction power substation interconnects. A field investigation was conducted at Traction Power Substation (TPS) No.2 to review interconnection options for design.
- The Caltrain Electrification requirements were formally approved by the California Public Utilities Commission (CPUC) on November 10.

Activity Next Month

- The PCEP team will continue to work with BBI on design and field investigation activities and will respond to RFIs submitted for review.
- Coordination efforts will continue with PG&E on scoping and preliminary design documents.
- Geotechnical work will be completed in Segments 2 and 4 and potholing is anticipated to begin shortly after.
- BBI has begun ordering of long lead time materials and equipment.

3.2 Supervisory Control and Data Acquisition (SCADA)

SCADA is a system that monitors and controls field devices for electrification, including substations, paralleling stations and sectionalization. SCADA will be integrated with the

base operating system for Caltrain Operations and Control, which is the Rail Operations Center System (ROCS).

Activity This Month

- Activity continues to be limited to providing technical support on an as needed basis to the Caltrain Contract and Procurement Department for the procurement of the SCADA system.

Activity Next Month

- PCEP staff will continue to support Caltrain Contracts and Procurement Department on providing technical support during the procurement process.
- Finalization of procurement package for issuance in January to the sole-source supplier for a proposal.

3.3 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. Outside of the PCEP scope, 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. The Drainage Rehab Project is funded separately from PCEP and will be a Design-Bid-Build (DBB) construction package. Construction will occur concurrently with the Electrification contractor's efforts in Segment 1.

Activity This Month

- PCEP team continued coordination efforts with the design team on drawings and specifications as well as field survey investigations on Tunnel 1 and Tunnel 4 Drainage Rehab projects. The PCEP team finalized the track profiles which will enable the finalization of the depth of Tunnel Notching.

Activity Next Month

- Coordination will continue on the Tunnel Modification design efforts with Union Pacific Railroad (UPRR) and other stakeholders.
- PCEP staff will continue to move forward with final design, which is scheduled for completion at the end of 2016.

4.0 ELECTRIC MULTIPLE UNITS

The EMU procurement component of the PCEP consists of the purchase of 96 Stadler EMUs. The EMUs will consist of both cab and non-cab units configured as 16 six-car units. 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.

Activity This Month

- Stadler and the PCEP team participated in numerous coordination meetings regarding the EMU design elements such as the passenger car interior, and the Engineer's cab, console and controls.
- Stadler submittals included the Mobilization Plan, Project Preliminary and Master Schedules, Contractual Submittals Report, the Technical Compliance Matrix and System Safety and Quality Assurance Plans. The PCEP team is currently reviewing the submittals.
- Stadler visited the CalMod San Mateo offices on November 8. Individual meetings were held with the PCEP team to discuss positive train control (PTC), equipment mockups and samples for public outreach purposes, and Caltrain Operation and Maintenance needs as related to the EMU design.

Activity Next Month

- Stadler will work towards PCEP's approval of several documents including: the Mobilization Plan, Quality Plan, Master Project Schedule, System Safety Plan and Contractual Submittals Report.
- Stadler is anticipated to resubmit the Quality Plan.
- Conceptual Design Reviews (CDRs) are scheduled for several systems including: propulsion and auxiliary electrics, heating ventilation and air condition (HVAC), passenger side doors, and friction brakes.

4.1 Centralized Equipment Maintenance and Operations Facility (CEMOF) Modifications

The Centralized Equipment Maintenance and Operations Facility (CEMOF) Modifications project will provide safe work areas for performing maintenance on the new EMUs.

Activity This Month

- A follow-up CEMOF Design Planning meeting was conducted on November 10 with HNTB, the PCEP team, and Caltrain Operations staff.

Activity Next Month

- HNTB is anticipated to provide a revised overview design and rough-order-of-magnitude (ROM) Cost Estimate.

5.0 SAFETY

Safety and Security requirements and plans are necessary to comply with applicable laws and regulations related to safety, security, and emergency response activities. Safety staff coordinates with contractors in reviewing and planning the implementation of contract program safety requirements. Safety project coordination meetings continue to be conducted on a monthly basis to promote a clear understanding of project safety requirements as defined in contract provisions and program safety documents.

Activity This Month

- Coordination discussions continued with BBI on the Site Specific Work Plan (SSWP) planning process as the SSWP procedural update is being finalized.
- Field visits were conducted to work sites to ensure SSWP was being followed by the contractors and sub-contractors.
- The Safety Staff continues to review EMU safety related documents including the Hazard Analysis program and Safety Certification programs.
- The Safety Staff is currently working with the PCEP team on the interim Ambassador program, which is being established to provide safe passage during single-tracking anticipated during construction.

Activity Next Month

- Safety staff will continue to review contractor safety and security contract documentation deliverables to ensure they meet project requirements. Meetings with continue with BBI and Stadler to progress project safety and security program implementation.
- Kick-off meeting for the project's Fire/Life Safety & Security Committee (FLSSC) is scheduled for December 8, 2016.
- Kick-off meeting for the project Safety & Security Certification Review Committee (SSCRC) is scheduled for December 15, 2016.

THIS PAGE LEFT INTENTIONALLY BLANK

6.0 QUALITY ASSURANCE

The Quality Assurance (QA) staff performs technical review for planning, implementing, evaluating, and maintaining an effective program to verify that all equipment, structures, components, systems, and facilities are designed, procured, constructed, installed, and maintained in accordance with established criteria and applicable codes and standards throughout the design, construction, startup and commissioning of the PCEP.

Activity This Month

- QA review of Volumes I, II, and IV of BBI’s Quality Management Plan (QMP) was conducted. The QA team provided 96 comments all of which were addressed and will be included in the revision slated for release this month.
- The required annual Management Review of the QMP was completed and documented on November 9 with the issues to be incorporated in the next revision of the QMP in 2017.

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	15
Audit Findings Issued	0	0
Audit Findings Open	0	0
Audit Findings Closed	0	0
Non-Conformances Open	0	1
Non-Conformances Issued	0	4
Non-Conformances Closed	0	3

Activity Next Month

- Audit for LKG-CMC Document Control corrective action verification will occur the first week of December and would include implementation of the Document Control Plan.
- QA Manager will continue to provide support of FTA document submittals, also provide reviews for Full Funding Grant Agreement (FFGA) items, and the review of technical documents from BBI and Stadler.
- Three audits have been planned and scheduled: Parikh Geotechnical Lab, BBI Purchasing, and Design Package DS-00-1135509, Traction Power – 65%.
- QA review of Stadler’s QMP revision for EMU procurement.

Peninsula Corridor Electrification Project
Monthly Progress Report

- QMP training for incoming PCEP employees will be conducted.
- Regularly scheduled QA staff meetings with BBI will occur.

7.0 SCHEDULE

The schedule provided in this Monthly Progress Report is the approved schedule from October due to the timeframe necessary to update and approve the schedule. As indicated in Table 7-1, the Revenue Service Date (RSD), which is the date in which the project is deemed completed, remains unchanged in the Master Program Schedule (MPS). Without adjustment for contingency, the RSD is forecast as August 2021. With the addition of approximately five months contingency to account for potential risk to the project, the RSD is anticipated as December 2021. A summary of the overall schedule status for the PCEP is provided in Table 7-1, which provides comparisons between the baseline schedule (Program Plan), the previous update (September) and the current update (October) to capture any potential changes in the schedule. A complete schedule can be found in Appendix B.

Items listed in Table 7-2 show the critical path activities/milestones for the PCEP. Table 7-3 lists near-critical activities on the horizon.

Notable Variances

There were no notable variances this month.

Table 7-1 Schedule Status

Milestones ^{1,2}	Program Plan	September	October
Full Notice to Proceed to Electrification Contractor	N/A	03/01/2017	03/01/2017
Full Notice to Proceed to EMU Manufacturer	N/A	03/01/2017	03/01/2017
Start of Electrification Major Construction	03/20/2017	07/24/2017	07/24/2017
First 8 Miles of Electrification Complete to Begin Testing	04/08/2019	10/08/2019	10/08/2019
Delivery of 1 st Vehicle	06/25/2019	07/30/2019	07/30/2019
Start Pre-Revenue Operations	09/08/2020	09/22/2020	09/22/2020
Potential Limited Service	12/31/2020	12/31/2020	12/31/2020
RSD (w/ Risk Contingency)	12/30/2021	12/30/2021	12/30/2021

Notes:

¹ Milestones reported on this table may differ from the current schedule. As the schedule continues to be refined over the coming months to incorporate approved baseline schedules from the Electrification and EMU contractors, changes to milestones will be thoroughly vetted prior to reflecting those changes in the Monthly Report.

² Program Plan only considered an NTP. It did not account for an LNTP and FNTP.

Table 7-2 Critical Path Summary

Activity	Start	Finish
Electrification Design to Begin Major Construction	09/06/2016	07/21/2017
EMU Design to Delivery of First Carbody	09/06/2016	10/13/2017
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 ¹	08/31/2020	08/31/2020
Vehicle Manufacturing & Assembly to Provide First 5 Trainsets	11/13/2017	09/09/2020
Pre-Revenue Operations	09/22/2020	12/10/2020
Potential Limited Service ¹	12/31/2020	12/31/2020
RSD w/out Risk Contingency ¹	08/16/2021	08/16/2021
RSD w/ Risk Contingency ¹	12/30/2021	12/30/2021

¹Milestone activity

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

8.0 BUDGET AND EXPENDITURES

The summary of 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. In order to be consistent with the reporting mechanism required by FTA, the budget is also provided in the FTA Standard Cost Category (SCC) format in Appendix C.

Table 8-1 Electrification Budget & Expenditure Status

Description of Work	Budget (A)	Cost This Month (B) ¹	Cost To Date (C) ²	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
ELECTRIFICATION					
Electrification ³	\$ 696,610,558	\$ 11,004,00	\$ 40,366,550	\$ 656,244,008	\$ 696,610,558
Tunnel Notching	\$ 11,029,649	\$ -	\$ -	\$ 11,029,649	\$ 11,029,649
Real Estate	\$ 28,503,369	\$ 307,769	\$ 5,310,155	\$ 23,193,214	\$ 28,503,369
Private Utilities	\$ 63,515,298	\$ 177,648	\$ 2,992,719	\$ 60,522,580	\$ 63,515,298
Management Oversight ⁴	\$ 141,525,948	\$ 1,036,440	\$ 60,954,547	\$ 80,571,400	\$ 141,525,948
Executive Management	\$ 7,452,866	\$ 149,992	\$ 2,633,146	\$ 4,819,720	\$ 7,452,866
Planning	\$ 7,281,997	\$ 105,564	\$ 4,185,794	\$ 3,096,203	\$ 7,281,997
Community Relations	\$ 2,789,663	\$ 26,987	\$ 845,596	\$ 1,944,067	\$ 2,789,663
Safety & Security	\$ 2,421,783	\$ 12,675	\$ 473,451	\$ 1,948,332	\$ 2,421,783
Project Management Services	\$ 19,807,994	\$ 91,245	\$ 6,792,046	\$ 13,015,948	\$ 19,807,994
Engineering & Construction ⁵	\$ 11,805,793	\$ (0)	\$ 1,816,828	\$ 9,988,965	\$ 11,805,793
Electrification Engineering & Management	\$ 50,461,707	\$ 375,223	\$ 14,798,363	\$ 35,663,345	\$ 50,461,707
IT Support ⁶	\$ 331,771	\$ 7,866	\$ 331,771	\$ -	\$ 331,771
Operations Support	\$ 1,445,867	\$ 10,167	\$ 350,685	\$ 1,095,182	\$ 1,445,867
General Support	\$ 4,166,577	\$ 67,788	\$ 1,194,295	\$ 2,972,282	\$ 4,166,577
Budget / Grants / Finance	\$ 1,229,345	\$ 56,437	\$ 181,928	\$ 1,047,417	\$ 1,229,345
Legal	\$ 2,445,646	\$ 65,238	\$ 1,512,120	\$ 933,527	\$ 2,445,646
Other Direct Costs	\$ 5,177,060	\$ 67,258	\$ 1,505,167	\$ 3,671,892	\$ 5,177,060
Prior Costs 2002 - 2013	\$ 24,707,878	\$ -	\$ 24,333,358	\$ 374,520	\$ 24,707,878
TASI Support	\$ 55,275,084	\$ 40,090	\$ 307,607	\$ 54,967,477	\$ 55,275,084
Insurance ⁶	\$ 4,305,769	\$ 137,500	\$ 943,269	\$ 3,362,500	\$ 4,305,769
Environmental Mitigations ⁶	\$ 16,861,499	\$ 397,000	\$ 397,000	\$ 16,464,499	\$ 16,861,499
Required Projects	\$ 17,337,378	\$ -	\$ 367,028.00	\$ 16,970,350	\$ 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	\$ 1,316,125,208	\$ 13,100,447	\$ 111,638,874	\$ 1,204,486,334	\$ 1,316,125,208

Notes regarding tables above:

1. Column B "Cost This Month" represents the cost of work performed this month.
2. Column C "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.
3. Accruals for "Electrification" include 5% Retention of the Contractor's retention until authorization of retention release.
4. The agency labor is currently accrued since end of October 2016 due to the upgrade of the accounting system. Expenditures for agency labor will be updated once the financial data is available
5. Actuals from September and October are lower than amounts accrued, and hence the deficit offsets the accruals from October.
6. An internal budget transfer is performed in the current reporting month. A total of \$825,459.32 is transferred from Environmental Mitigations to IT Support and Insurance at \$19,690.72 and \$805,768.60, respectively.

Peninsula Corridor Electrification Project
Monthly Progress Report

Table 8-2 EMU Budget & Expenditure Status

Description of Work	Budget (A)	Cost This Month (B) ¹	Cost To Date (C) ²	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
EMU	\$ 550,899,459	\$ -	\$ 1,242,300	\$ 549,657,159	\$ 550,899,459
CEMOF Modifications	\$ 1,344,000	\$ -	\$ -	\$ 1,344,000	\$ 1,344,000
Management Oversight ³	\$ 64,139,103	\$ 564,217	\$ 15,902,738	\$ 48,236,365	\$ 64,139,103
Executive Management	\$ 5,022,302	\$ 70,141	\$ 1,484,372	\$ 3,537,930	\$ 5,022,302
Community Relations	\$ 1,685,614	\$ 26,100	\$ 252,481	\$ 1,433,133	\$ 1,685,614
Safety & Security	\$ 556,067	\$ 12,328	\$ 146,141	\$ 409,926	\$ 556,067
Project Management Services	\$ 13,275,280	\$ 91,165	\$ 4,579,538	\$ 8,695,742	\$ 13,275,280
Engineering & Construction	\$ 89,113	\$ -	\$ 23,817	\$ 65,296	\$ 89,113
EMU Engineering & Management	\$ 32,082,556	\$ 204,956	\$ 6,915,115	\$ 25,167,442	\$ 32,082,556
IT Support ⁴	\$ 1,027,272	\$ 5,248	\$ 194,010	\$ 833,263	\$ 1,027,272
Operations Support	\$ 1,878,589	\$ 13,947	\$ 282,347	\$ 1,596,241	\$ 1,878,589
General Support	\$ 2,599,547	\$ 35,321	\$ 583,237	\$ 2,016,310	\$ 2,599,547
Budget / Grants / Finance	\$ 712,123	\$ 38,316	\$ 94,151	\$ 617,972	\$ 712,123
Legal	\$ 1,207,500	\$ 22,656	\$ 418,112	\$ 789,388	\$ 1,207,500
Other Direct Costs	\$ 4,003,139	\$ 44,038	\$ 929,417	\$ 3,073,722	\$ 4,003,139
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	\$ 664,127,325	\$ 64,217	\$ 17,145,038	\$ 646,982,286	\$ 664,127,325

Notes regarding tables above:

- Column B "Cost This Month" represents the cost of work performed this month.
- Column C "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.
- 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.
- In future reporting, the IT line item will be amended with a redistribution of funding from EMU to the Electrification to better reflect the overall program distribution of work efforts.

Table 8-3 PCEP Budget & Expenditure Status

Description of Work	Budget (A)	Cost This Month (B) ¹	Cost To Date (C) ²	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
Electrification Subtotal	\$ 1,316,125,208	\$ 13,100,447	\$ 111,638,874	\$ 1,204,486,334	\$ 1,316,125,208
EMU Subtotal	\$ 664,127,325	\$ 564,217	\$ 17,145,038	\$ 646,982,286	\$ 664,127,325
PCEP TOTAL³	\$ 1,980,252,533	\$ 13,664,664	\$ 128,783,912	\$ 1,851,468,621	\$ 1,980,252,533

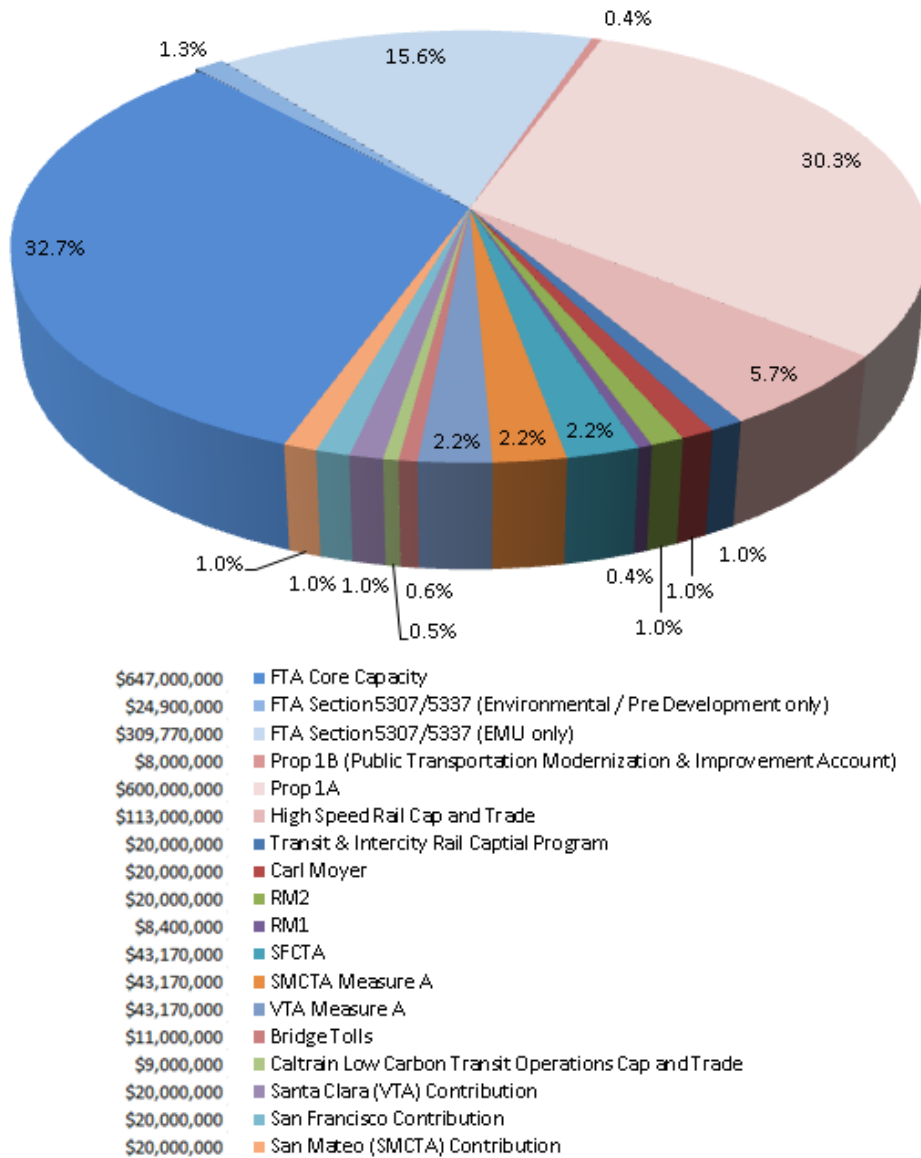
Notes regarding tables above:

- Column B "Cost This Month" represents the cost of work performed this month.
- Column C "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.
- 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.

9.0 FUNDING

Figure 9-1 depicts a summary of the funding plan for the PCEP. It provides a breakdown of the funding partners as well as the allocated funds. As previously reported, all non-core capacity funds have been committed to the PCEP project and the JPB continued to work with FTA to secure a FFGA for the \$647 million in Core Capacity funding.

Figure 9-1 Funding Plan



THIS PAGE INTENTIONALLY LEFT BLANK

10.0 RISK MANAGEMENT

The risk management process is conducted in an iterative fashion throughout the life of the project. During this process, new risks are identified, other risks are resolved or managed, and potential impacts and severity modified based on the current situation. The Risk Management team progress report includes a summary on the effectiveness of the Risk Management Plan, any unanticipated effects, and any correction needed to handle the risk appropriately.

The Risk Management team has identified the following items as Top Risks for the project:

- If overhead utilities are not relocated in time, BBI may incur delays.
- A delay in the execution of the FFGA by the FTA, could potentially result in delays to the project.
- 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.
- The final configuration of the electrification system requires the installation of a duct bank under Union Pacific Railroad (UPRR) tracks. This will require further coordination with UPRR.
- Transit America Systems Inc. (TASI) may not be able to deliver sufficient staff resources to support the construction and testing of the electrification system.
- Recruitment of Key Staff is necessary to support the project.
- As built Communications Based Overlay Signal System (CBOSS) drawings needed by BBI may be incomplete, and will need to be revised.

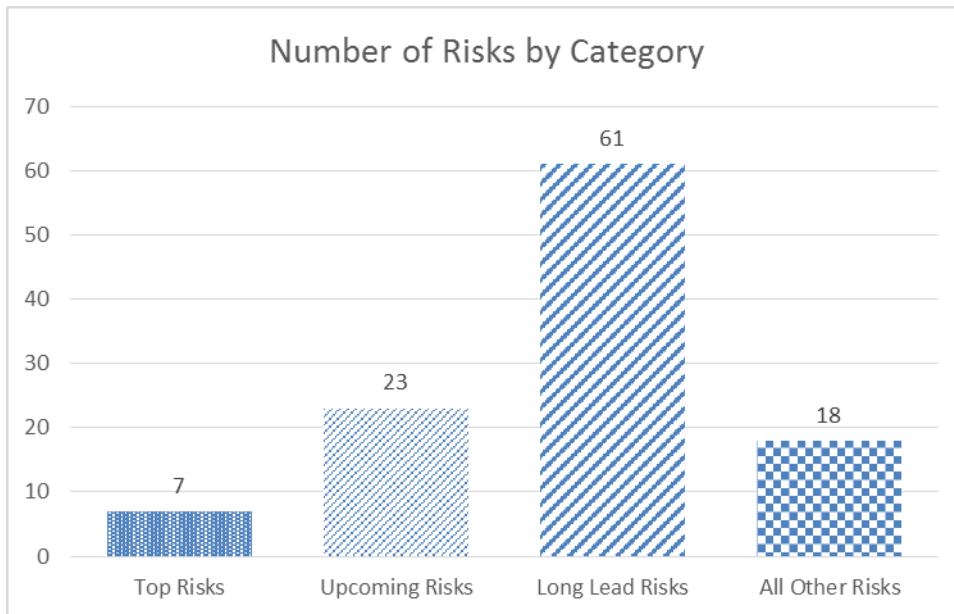
Activity This Month

- Updates were made to risk descriptions, effects, and mitigations based upon weekly input from risk owners. Monthly cycle of risk updating was completed based on schedules established in the Risk Identification and Mitigation Plan.
- Risk retirement dates were updated based upon revisions to the project schedule and input from risk owners.
- Continued weekly monitoring of risk mitigation actions and publishing of the risk register.
- PCEP Risk Management Team attended Electrification, Project Delivery, and Systems Integration meetings to monitor developments associated with risks and to identify new risks.
- The Risk Assessment Committee convened to review risks proposed for retirement and major changes to grading of risks. Initiated a study of reputational risk as a potential adjunct to current risk management efforts.

Peninsula Corridor Electrification Project
Monthly Progress Report

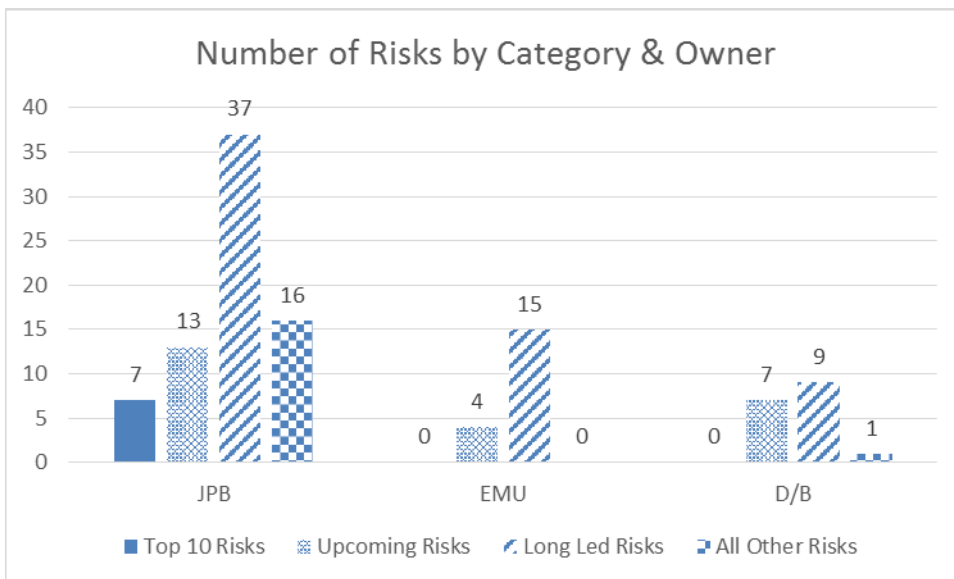
Tables 10-1 and 10-2 show the risks identified for the program. Risks are categorized as: top risk, upcoming risk, long lead, and all other risks. The categories are based on a rating scale comprised of schedule and cost factors. Simply put, top risks are considered to have a significantly higher than average risk grade. Upcoming risks are risks for which mitigating action must be taken within 60 days. Long lead risks are risks for which mitigating action must be taken as much as a year or more into the future. All other risks are risks not falling into other categories.

Table 10-1 Monthly Status of Risks



Total Number of Active Risks = 109

Table 10-2 Risk Classification



Total Number of Active Risks = 109

Activity Next Month

- Update risk descriptions, effects, mitigations, retirement dates.
- Conduct weekly monitoring of risk mitigation actions and continue publishing risk register.
- Further develop reputational risk analysis and submit recommendations.

THIS PAGE INTENTIONALLY LEFT BLANK

11.0 ENVIRONMENTAL

11.1 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 environmental permits have been obtained.

Activity Next Month

- There are no planned permit activities in the next month.

11.2 Mitigation Monitoring and Reporting Program

The California Environmental Quality Act (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>

(Note: For viewers accessing the link above electronically, please cut and paste the link into a browser if it does not direct you immediately to the document.)

Activity This Month

- Archaeologist for the PCEP team conducted exploratory field analysis for construction sites in areas classified as “high” or “very high” potential for encountering a burial site. This activity is consistent with measures found in the MMRP to mitigate for potential cultural resources below ground.

Activity Next Month

- Archaeologist for the PCEP team will continue exploratory field analysis.

THIS PAGE INTENTIONALLY LEFT BLANK

12.0 UTILITY RELOCATION

Implementation of the PCEP requires relocation or rerouting of both public and private utility lines and/or facilities. Utility relocation will require coordination with many entities, including regulatory agencies; public safety agencies; Federal, State, and local government agencies; private and public utilities; and other transportation agencies and companies. The section describes the progress specific to the utility relocation process.

Activity This Month

- PCEP team continued monthly coordination meetings with telecommunication and power utilities. These meetings focused on overall project and relocation schedules, designation of responsibilities, applicable design standards, and reconciliation of agreements and records.
- Work continued 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, agreements, and design of all relocations.
- The Caltrain Electrification requirements were adopted by the CPUC on November 10.

Activity Next Month

- Monthly meetings will continue with telecom and power carriers.
- PCEP team will prepare and send relocation notices to utility owners and will also provide design information for relocation designs.

THIS PAGE INTENTIONALLY LEFT BLANK

13.0 REAL ESTATE

The PCEP requires the acquisition of a limited amount of real estate. In general, Caltrain uses existing ROW for the PCEP, but in certain locations, will need to acquire small portions of additional real estate to expand the right-of-way (ROW) to accommodate installation of OCS supports (fee acquisitions or railroad easements) and associated Electrical Safety Zones (easements). There are two larger full acquisition areas required for wayside facilities (i.e., traction power stations, switching stations and paralleling stations). The PCEP real estate team (RE team) manages the acquisition of all property rights. Caltrain does not need to acquire real estate to complete the EMU procurement portion of the PCEP.

Activity This Month

- Table 13-1 below provides a brief summary of the Real Estate acquisition overview for the project. As engineering design has progressed the following changes were incorporated:
 - 1 parcel was removed from Segment 3
 - 2 parcels were removed from Segment 4
 - 1 parcel was removed and 2 added in Segment 2
- Offer packages for parcels in both Segment 2 and 4 were prepared and 2 offers were made. There are currently 6 others pending appointments with property owners.
- The RE Team continues negotiations on offers pending, including working through relocation of one commercial business.
- Work directives were entered into to update all necessary appraisals.
- The PCEP team arranged for survey support to help property owners identify the exact location of property required for the project.
- PCEP team entered into work directives to provide appraisal support for acquisition activities.
- The RE Team provided a draft relocation plan for review by FTA.
- The RE Team continued development of the draft Electrification Parcel Acquisition Tracking System (E-PATS) for each Project segment, which will track the status of each required parcel for the Project.
- The RE Team has been developing an acquisition plan for Segments 2 and 4, as well as Segments 1 and 3.
- The agency continues to negotiate the Cooperative Agreement for eminent domain authority with the City & County of San Francisco. The target for completion is for early 2017.

Peninsula Corridor Electrification Project
Monthly Progress Report

Activity Next Month

- Negotiations for all outstanding offers will continue.
- Appraisals for parcels identified in Segments 2 and 4 will be updated.
- The RE Team will begin the process to initiate appraisals for Segments 1 and 3.
- The RE Team will work with PCEP team to develop a parcel by parcel delivery schedule which will be consistent with BBI's refined schedule.

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 1	8	0	0	0	0	0
Segment 2	27	24	17	0	0	0
Segment 3	11	0	0	0	0	0
Segment 4	11	13	4	0	0	0
Total	57	37	21	0	0	0

Note:
 During design development, the real estate requirements may adjust to accommodate design refinements. Parcel requirements will adjust 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	Executed
		City of South San Francisco	Executed
		City of San Bruno	Executed
		City of Millbrae	Executed
		City of Burlingame	Executed
		City of San Mateo	Executed
		City of Belmont	Executed
		City of San Carlos	Executed
		City of Redwood City	Executed
		City of Atherton	In Process
		County of San Mateo	Executed
		City of Menlo Park	Executed
		City of Palo Alto	In Process
		City of Mountain View	Executed
		City of Sunnyvale	Executed
		City of Santa Clara	Executed
	County of Santa Clara	Executed	
	City of San Jose	Executed	
	Condemnation Authority	San Francisco	In Process
San Mateo		Executed	
Santa Clara		Executed	
Utilities	Infrastructure	Pacific Gas & Electric (PG&E)	Executed ³
	Operating Rules	California Public Utilities Commission (CPUC)	Executed ²
Transportation & Railroad	Construction & Maintenance	Bay Area Rapid Transit (BART)	Executed ⁴
	Construction & Maintenance	California Dept. of Transportation (Caltrans)	In Process ⁵
	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. The Master agreement and supplemental agreements 1 and 2 have been executed. Supplemental agreements 3 and 4 are to be executed.
4. Utilizing existing agreements
5. Utilization of Peer Process forma; agreement not needed.

THIS PAGE IS INTENTIONALLY LEFT BLANK

15.0 COMMUNITY RELATIONS AND OUTREACH

The Community Relations and Outreach team coordinates all issues with all jurisdictions, partner agencies, government organizations, businesses, labor organizations, local agencies, residents, community members, other interested parties, and the media. In addition, the team oversees the design-build contractor's effectiveness in implementing its Public Involvement Program. The following PCEP related external affairs meetings took place in November:

- **Presentations**

- Peninsula Freight User Group
- JPB CAC
- Visitation Valley Community Center

- **Third Party/Stakeholder Actions**

- Unanimous support from the San Francisco Board of Supervisors regarding PCEP Interim Financing
- Unanimous support from the CPUC regarding PCEP safety requirements

- **Stakeholder Meetings**

- San Mateo County Economic Development Association (SAMCEDA)
- Peninsula Corridor Working Group

- **Resident Communication / Complaints**

- A direct mailer was sent to residents adjacent to the tracks in work Segments 2 and 4. The mailer language was coordinated with city staff before it was mailed. A copy of the mailer can be viewed here:

<http://www.caltrain.com/Assets/Caltrain+Modernization+Program/Electrification/Direct+Mailer+Work+Segment+2+and+4.pdf>

(Note: For viewers accessing the link above electronically, please cut and paste the link into a browser if it does not direct you immediately to the document.)

- In November, there were several calls from residents with questions about the project but no complaints.

THIS PAGE INTENTIONALLY LEFT BLANK

16.0 DBE PARTICIPATION AND LABOR STATISTICS

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

THIS PAGE INTENTIONALLY LEFT BLANK

17.0 PROCUREMENT

Contract Activity

- The JPB authorized the award of both the EMU and DB contracts at the July 7, 2016 board meeting. The LNTPs were issued on September 6, 2016 for the EMU and Electrification Contracts with a full NTP expected in March 2017 for both contracts.

IFB/RFQ/RFP Advertised this Month:

- RFQ - ARES Prism for Contract Management software.

IFB/RFQ/RFP Received this Month:

Quote - Received from ARES for Contract Management Software

Contract Awards this Month:

- No Contract Awards were made for November.

Work Directive (WD)/Purchase Order (PO) Awards & Amendments this Month:

- Multiple WD & PO's were issued to support the program needs for November.

Upcoming Invitation for Bid (IFB)/Request for Qualifications (RFQ)/ Request for Proposals (RFP):

- RFP - SCADA system to support CalMod.
- RFP - On- Call Ambassador Support Services.

Upcoming Contract Awards:

- Issue Amendment No. 3 to exercise Option Year 1 for the CalMod Program Management Support Services contract for URS (AECOM).

THIS PAGE IS INTENTIONALLY LEFT BLANK

18.0 TIMELINE OF MAJOR PROJECT ACCOMPLISHMENTS

Below is a timeline showing major project accomplishments from 2002 to 2016:

Date	Milestone
2002	Conceptual Design Completed
2004	Draft NEPA Environmental Assessment (EA)/Environmental Impact Report (EIR) (2004)
2008	35% design complete
2009	Final NEPA EA/EIR and Finding of No Significant Impact (FONSI)
2014	Request for Qualifications (RFQ) for Electrification Request for Information for EMU
2015	JPB Approves Final CEQA Environmental Impact Report (EIR) JPB Approves Issuance of RFP for Electrification JPB Approves Issuance of RFP for EMU Receipt of Electrification of Proposal for Electrification FTA approval of Core Capacity Project Development
2016	JPB Approves EIR Addendum #1: PS-7 FTA Re-Evaluation of 2009 FONSI Receipt of Electrification BAFOs Receipt of EMU Proposal Application for Entry to Engineering to FTA Completed the EMU Buy America Pre-Award Audit and Certification Negotiations completed with Stadler for EMU Vehicles Negotiations completed with BBI., the apparent best value Electrification firm JPB Approves Contract Award (LNTP) BBI JPB Approves Contract Award (LNTP) Stadler FTA approval of Entry into Engineering for the Core Capacity Program

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDICES

THIS PAGE IS INTENTIONALLY LEFT BLANK

Appendix A – Acronyms

THIS PAGE IS INTENTIONALLY LEFT BLANK

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

Peninsula Corridor Electrification Project
Monthly Progress Report

NHPA	National Historic Preservation Act	RRP	Railroad Protective Liability
NMFS	National Marine Fisheries Service	RSD	Revenue Service Date
NTP	Notice to Proceed	RWP	Roadway Worker Protection
OCS	Overhead Contact System	SamTrans	San Mateo County Transit District
PCEP	Peninsula Corridor Electrification Project	SCADA	Supervisory Control and Data Acquisition
PCJPB	Peninsula Corridor Joint Powers Board	SCC	Standard Cost Code
PG&E	Pacific Gas and Electric	SPUR	San Francisco Bay Area Planning and Urban Research Association
PHA	Preliminary Hazard Analysis	SFBCDC	San Francisco Bay Conservation Development Commission
PMOC	Project Management Oversight Contractor	SFCTA	San Francisco County Transportation Authority
PS	Paralleling Station	SFMTA	San Francisco Municipal Transportation Authority
PTC	Positive Train Control	SFRWQCB	San Francisco Regional Water Quality Control Board
QA	Quality Assurance	SOGR	State of Good Repair
QC	Quality Control	SS	Switching Station
QMP	Quality Management Plan	SSCP	Safety and Security Certification Plan
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.
RFI	Request for Information	TBD	To Be Determined
RFP	Request for Proposals	TPS	Traction Power Substation
RFQ	Request for Qualifications		
ROCS	Rail Operations Center System		
ROW	Right-of-Way		

TVA	Threat and Vulnerability Assessment
UPRR	Union Pacific Railroad
USACE	United States Army Corp of Engineers
USFWS	U.S. Fish and Wildlife Service
VTA	Santa Clara Valley Transportation Authority

THIS PAGE IS INTENTIONALLY LEFT BLANK

Appendix B – Schedule

THIS PAGE IS INTENTIONALLY LEFT BLANK

Appendix C – FTA
Standard Cost Code (SCC) Reporting

THIS PAGE IS INTENTIONALLY LEFT BLANK

Standard Cost Code (SCC) Reporting

In the month of the November, the PCEP team received a request for the FTA to remove costs which were incurred prior to entering into Project Development phase. Costs incurred prior to Project Development phase, that total \$49,581,599, are not included in the FTA's funding program for the PCEP. The removal of these costs affect only the Standard Cost Category (SCC) format which is used by the FTA. The overall project costs and budget remain unaffected and is not impacted by the SCC budget revision.

Revised SCC Budget & Expenditure Status

Description of Work		Approved Budget
10 - GUIDEWAY & TRACK ELEMENTS		\$ 14,256,739
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)	\$ 2,500,000
10.07	Guideway: Underground tunnel	\$ 8,110,649
10.07	Allocated Contingency	\$ 3,646,090
30 - SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		\$ 2,265,200
30.03	Heavy Maintenance Facility	\$ 1,344,000
30.03	Allocated Contingency	\$ 421,200
30.05	Yard and Yard Track	\$ 500,000
40 - SITEWORK & SPECIAL CONDITIONS		\$ 255,072,402
40.01	Demolition, Clearing, Earthwork	\$ 3,077,685
40.02	Site Utilities, Utility Relocation	\$ 62,192,517
40.02	Allocated Contingency	\$ 25,862,000
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	\$ 2,200,000
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	\$ 32,579,208
40.05	Site structures including retaining walls, sound walls	\$ 568,188
40.06	Pedestrian / bike access and accommodation, landscaping	\$ 804,933
40.07	Automobile, bus, van accessways including roads, parking lots	\$ 284,094
40.08	Temporary Facilities and other indirect costs during construction	\$ 107,343,777
40.08	Allocated Contingency	\$ 20,160,000
50 - SYSTEMS		\$ 504,445,419
50.01	Train control and signals	\$ 97,589,149
50.01	Allocated Contingency	\$ 1,651,000
50.02	Traffic signals and crossing protection	\$ 23,879,905
50.02	Allocated Contingency	\$ 1,140,000
50.03	Traction power supply: substations	\$ 72,410,462
50.03	Allocated Contingency	\$ 28,464,560
50.04	Traction power distribution: catenary and third rail	\$ 253,683,045
50.04	Allocated Contingency	\$ 18,064,000

Peninsula Corridor Electrification Project
Monthly Progress Report

Description of Work		Approved Budget
50.05	Communications	\$ 5,455,000
50.07	Central Control	\$ 2,090,298
50.07	Allocated Contingency	\$ 18,000
60 - ROW, LAND, EXISTING IMPROVEMENTS		\$ 35,675,084
60.01	Purchase or lease of real estate	\$ 25,927,074
60.01	Allocated Contingency	\$ 8,748,010
60.02	Relocation of existing households and businesses	\$ 1,000,000
70 - VEHICLES (96)		\$ 625,544,147
70.03	Commuter Rail	\$ 589,167,291
70.03	Allocated Contingency	\$ 9,472,924
70.06	Non-revenue vehicles	\$ 8,140,000
70.07	Spare parts	\$ 18,763,931
80 - PROFESSIONAL SERVICES (applies to Cats. 10-50)		\$ 325,681,648
80.01	Project Development	\$ 130,350
80.02	Engineering (not applicable to Small Starts)	\$ 180,227,311
80.02	Allocated Contingency	\$ 1,866,000
80.03	Project Management for Design and Construction	\$ 72,147,345
80.03	Allocated Contingency	\$ 9,270,000
80.04	Construction Administration & Management	\$ 23,677,949
80.04	Allocated Contingency	\$ 19,537,000
80.05	Professional Liability and other Non-Construction Insurance	\$ 3,500,000
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	\$ 9,055,913
80.06	Allocated Contingency	\$ 556,000
80.07	Surveys, Testing, Investigation, Inspection	\$ 3,287,824
80.08	Start up	\$ 1,797,957
80.08	Allocated Contingency	\$ 628,000
Subtotal (10 - 80)		\$ 1,762,940,639
90	UNALLOCATED CONTINGENCY	\$ 162,620,295
Subtotal (10 - 90)		\$ 1,925,560,934
100	FINANCE CHARGES	\$ 5,110,000
Total SCC Budget (10 - 100)		\$ 1,930,670,934
Pre-Project Development Costs (<i>Removed</i>)		\$ 49,581,499
Total PCEP Budget		\$ 1,980,252,533