



# Modernization Program

Peninsula Corridor Electrification Project (PCEP)



# August 2016

# Monthly Progress Report

August 31, 2016  
Revision 0



## 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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## **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.

Several major milestones were reached during the month of August. The 7-Party Supplemental Funding Agreement was approved by all partners and the PCEP received a \$20 million grant through the California State Transportation Agency. With the receipt of this grant, execution of the 7-Party Supplemental Funding Agreement, and bi-lateral agreement with California High-Speed Rail Authority (CHSRA), all local, regional, and state funding sources have been secured for the project. The PCEP program achieved a major milestone by receiving approval from the FTA to enter into the Engineering Phase of the project. A signing ceremony was held on August 15<sup>th</sup> with Stadler and Balfour Beatty Infrastructure, Inc. (BBI). The ceremony was attended by local and federal elected officials, the Peninsula Corridor Joint Powers Board (JBP) and executive staff, key stakeholders, and the project team.

### **2.1 Electrification Infrastructure**

The Contract Award signing for Electrification took place on August 15, 2016 at the Community Outreach Office. The Contract will begin with a Limited Notice to Proceed (LNTP) in September 2016, and is scheduled to proceed to full NTP in March 2017. The contract kickoff meeting for the Design-Build (DB) contract is scheduled for early September 2016.

### **2.2 Electric Multiple Units**

The Contract Award signing with Stadler for the Electric Multiple Units (EMU) took place on August 15, 2016 at the Community Outreach Office. The Contract will begin with a LNTP in September 2016, and is scheduled to proceed to full NTP in March 2017. The Contract kickoff meeting for the DB is scheduled for early September 2016.

### **2.3 Schedule**

The Revenue Service Date (RSD) in the Master Program Schedule (MPS) remains unchanged. Without adjustment for contingency, the RSD is forecast as July 2021. With the addition of 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.

**Table 2-1 Schedule Milestones**

<b>Milestones</b>	<b>Program Plan</b>	<b>June</b>	<b>July</b>
EMU Contract Limited NTP*	08/01/2016	08/15/2016	08/15/2016
Electrification Contract Limited NTP*	08/01/2016	09/06/2016	09/06/2016
Start of Electrification Major Construction	03/20/2017	07/24/2017	07/24/2017
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

\*MPS previously contained only Full NTP

## 2.4 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**

	<b>Baseline Budget</b>	<b>Accrued To Date</b>	<b>Estimate To Complete</b>	<b>Estimate At Completion</b>
Electrification Subtotal	\$ 1,316,125,208	\$ 65,432,231	\$ 1,250,692,977	\$ 1,316,125,208
EMU Subtotal	\$ 664,127,325	\$14,210,636	\$ 649,916,689	\$ 664,127,325
<b>PCEP Total</b>	<b>\$ 1,980,252,533</b>	<b>\$ 79,642,867</b>	<b>\$ 1,900,609,666</b>	<b>\$ 1,980,252,533</b>

## 2.5 Board Actions

At the August 4, 2016 meeting, the JPB received the 7<sup>th</sup> PCEP Quarterly update presentation.

A copy of the presentation can be viewed here:

[http://www.caltrain.com/Assets/\\_Agendas+and+Minutes/JPB/Board+of+Directors/Presentations/2016/2016-08-04+JPB+PCEP+Quarterly+Update.pdf](http://www.caltrain.com/Assets/_Agendas+and+Minutes/JPB/Board+of+Directors/Presentations/2016/2016-08-04+JPB+PCEP+Quarterly+Update.pdf)

## 2.6 Community Relations and Outreach

A number of community relations and outreach events took place during the month of August. PCEP staff gave a total of 5 presentations and participated and attended approximately 8 third party/stakeholder actions and meetings. A press conference was also held with U.S. Transportation Secretary Foxx at the Caltrain Santa Clara Station.





### **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, 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**

- Coordination continued with PG&E on the Power Quality Study. PCEP staff and PG&E worked to finalize the scope and necessary infrastructure to support Caltrain loads required for electrification.
- PCEP staff continued the coordination efforts with PG&E to refine interim power options to support PCEP testing. A final option for interim power will be selected for PG&E to proceed with design and implementation.
- Contract signing occurred on August 15, 2016
- The kickoff meeting was scheduled for September 6, 2016.

##### **Activity Next Month**

- PCEP Team will hold a kickoff meeting for the DB contract.
- PCEP staff prepared Supplemental Agreement No.2 for PG&E oversight of 115 kV interconnections and Supplemental Agreement No.5 for interim power. Both agreements will be presented to the JPB in September 2016.
- Work with PG&E on the Power Quality Study and finalize load profile submissions required for the California Independent System Operator (CAISO).

#### **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 is Rail Operations Center System (ROCS).

##### **Activity This Month**

- Activity was 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 status.

**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 with particular focus on Tunnel 1 and Tunnel 4 Drainage Rehab projects.
- The construction schedule and cost estimate was revised and review by PCEP team.

**Activity Next Month**

- Coordination will continue on the Tunnel Modification design efforts.
- PCEP staff will assist with the field survey activities of Tunnel 1 and Tunnel 4 Drainage Rehab Project.

**3.4 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**

- No work was undertaken during this reporting period.

**Activity Next Month**

- The design contractor will resume their design activities now that a vehicle manufacturer has been selected.

#### **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 sixteen 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**

- The EMU Pre-Commencement Conference was held on August 11, 2016.
- The contract signing took place on August 15, 2016, with an LNTP scheduled to be issued to Stadler in September 2016.
- Stadler secured all required Bonding and Insurance documents and submitted these documents to Caltrain on August 16, 2016, in compliance with contract requirements.
- Weekly Pre-LNTP coordination teleconferences were conducted with Stadler's Project Team during the month of August. Action items and tasks were established and will carry over following LNTP.
- 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 was prepared by Caltrain and will be reviewed with Stadler prior to finalizing.

##### **Activity Next Month**

- LNTP is expected to be issued to Stadler in September 2016.
- Stadler will formally submit the EMU contract Mobilization Plan upon issuance of the LNTP.
- Monthly technical interface coordination conference calls with CHSRA will be scheduled.

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## **5.0 SAFETY**

The PCEP Safety staff 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 continued to work with the IndustrySafe hazard management software application that will also be utilized by the Electrification Contractor throughout the project life cycle.
- Safety staff continued to meet weekly with the JPB management to provide project updates, review project document deliverables, and initiated changes as directed.
- Coordination continues with the DB Contractor on a Site Specific Work Plan's (SSWP) for preliminary work.

### **Activity Next Month**

- 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.
- Safety staff will continue to work closely with Caltrain Rail Operations to update the SSWP review, approval and document control process.
- A meeting is scheduled to meet with DB contractor to review SSWP process.

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## **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**

- The QA staff coordinated and worked with LKG-CMC to close non-conformance report (NCR) 2 items. The re-audit for LKG-CMC Document Control will occur 60-90 days from finalization of LKG-CMC Scope of Work for Document Control.
- QA reviews were conducted in response to the Readiness Review comments.

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

**Table 6-1 Quality Assurance Audit Summary**

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

### **Activity Next Month**

- QA staff will continue to provide support of FTA document submittals and also provide reviews for Full Funding Grant Agreement (FFGA) items.
- QA staff will implement the Quality Manager Transition Plan until such time as a replacement Quality Manager joins the project.
- Meet with new Quality Manager to provide effective project on-boarding for Quality Management.

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**7.0 SCHEDULE**

The schedule provided in this Monthly Progress Report is the approved schedule from July 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 Scheduled (MPS). Without adjustment for contingency, the RSD is forecast as July 2021. With the addition of 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 (June) and the current update (July) to capture any potential changes in the schedule. A complete schedule can be found in Appendix B.

**Table 7-1 Schedule Status**

Milestones	Program Plan	June	July
EMU Contract Limited NTP*	08/01/2016	08/15/2016	08/15/2016
Electrification Contract Limited NTP*	08/01/2016	09/06/2016	09/06/2016
Start of Electrification Major Construction	03/20/2017	07/24/2017	07/24/2017
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

\*MPS previously contained only Full NTP

Items listed in Table 7-2 and depicted in Figure 7-1 show the critical path activities/milestones for the PCEP. Table 7-3 lists important schedules and activities in the horizon.

**Notable Variances**

Notable variances can be characterized as changes in the schedule that could lead to a significant delay. There were no notable variances during the reporting period.

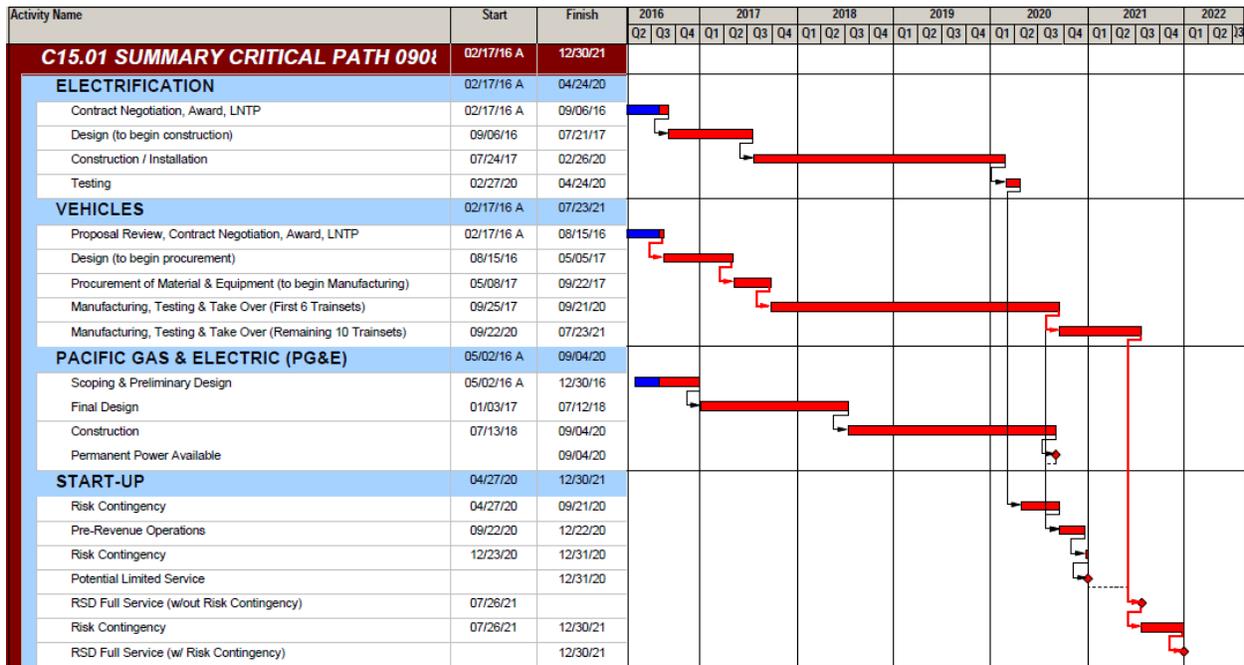
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**Table 7-2 Critical Path Summary**

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
Potential Limited Service*	12/31/2020	12/31/2020
RSD (w/out Risk Contingency)*	07/26/2021	07/26/2021
RSD (w/ Risk Contingency)*	12/30/2021	12/30/2021

\*Milestone activity

**Figure 7-1 Critical Path Bar Chart**



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

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

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**8.0 BUDGET AND EXPENDITURES**

In July, PCEP received from the FTA's PMOC, Readiness to Enter Engineering – July 2016 report. As part of the Cost Estimate review, the report recommended five changes to the budget allocations that did not change the bottom line number, but further refined the budget within the FTA's standard cost code (SCC) reporting structure. As a result, Baseline Cost Estimates were revised to reflect the changes. Some of the major changes involved allocation contingency and development of a simplified tool for translating PCEP cost estimates to the FTA SCC format.

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) <sup>1</sup>	Accrued To Date (C) <sup>2</sup>	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
<b>ELECTRIFICATION</b>					
Electrification	\$ 696,610,558	\$ -	\$ -	\$ 696,610,558	\$ 696,610,558
Tunnel Notching	\$ 11,029,649	\$ -	\$ -	\$ 11,029,649	\$ 11,029,649
Real Estate	\$ 28,503,368	\$ 62,150	\$ 4,817,966	\$ 23,685,402	\$ 28,503,368
Private Utilities	\$ 63,515,298	\$ 58,602	\$ 1,733,236	\$ 61,782,062	\$ 63,515,298
Management Oversight	\$ 141,506,257	\$ 613,954	\$ 58,252,771	\$ 83,246,332	\$ 141,506,257
Executive Management	\$ 7,452,866	\$ 6,800	\$ 2,255,911	\$ 5,196,956	\$ 7,452,866
Planning	\$ 7,281,997	\$ -	\$ 4,010,282	\$ 3,271,715	\$ 7,281,997
Community Relations	\$ 2,789,663	\$ -	\$ 757,459	\$ 2,032,204	\$ 2,789,663
Safety & Security	\$ 2,421,783	\$ 8,378	\$ 438,263	\$ 1,983,520	\$ 2,421,783
Project Management Services	\$ 19,807,994	\$ 311,649	\$ 6,345,188	\$ 13,462,806	\$ 19,807,994
Engineering & Construction	\$ 11,805,793	\$ -	\$ 1,733,481	\$ 10,072,312	\$ 11,805,793
Electrification Engineering & Management	\$ 50,461,707	\$ 92,445	\$ 13,905,828	\$ 36,555,879	\$ 50,461,707
IT Support	\$ 312,080	\$ 1,039	\$ 313,765	\$ 1,685)	\$ 312,080
Operations Support	\$ 1,445,867	\$ -	\$ 317,741.14	\$ 1,128,126	\$ 1,445,867
General Support	\$ 4,166,577	\$ 5,423	\$ 1,061,581	\$ 3,104,996	\$ 4,166,577
Budget / Grants / Finance	\$ 1,229,345	\$ -	\$ 86,235	\$ 1,143,110	\$ 1,229,345
Legal	\$ 2,445,646	\$ -	\$ 1,372,620	\$ 1,073,026	\$ 2,445,646
Other Direct Costs	\$ 5,177,060	\$ 188,220	\$ 1,321,060	\$ 3,856,000	\$ 5,177,060
Prior Costs 2002 - 2013	\$ 24,707,878	\$ -	\$ 24,333,358	\$ 374,520	\$ 24,707,878
TASI Support	\$ 55,275,084	\$ -	\$ 261,228.84	\$ 55,013,855	\$ 55,275,084
RRP Insurance	\$ 3,500,000	\$ -	\$ -	\$ 3,500,000	\$ 3,500,000
Environmental Mitigations	\$ 17,686,958	\$ -	\$ -	\$ 17,686,958	\$ 17,686,958
Required Projects	\$ 17,337,378	\$ -	\$ 367,028	\$ 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	\$ -	\$ -	\$ -	\$ -	\$ -
<b>ELECTRIFICATION SUBTOTAL</b>	<b>\$ 1,316,125,208</b>	<b>\$ 734,706</b>	<b>\$ 65,432,231</b>	<b>\$ 1,250,692,977</b>	<b>\$ 1,316,125,208</b>

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.

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**Table 8-2 EMU Budget & Expenditure Status**

Description of Work	Budget (A)	Actual This Period (B) <sup>1</sup>	Accrued To Date (C) <sup>2</sup>	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	\$ 64,139,104	\$ 712,821	\$ 14,210,636	\$ 49,935,621	\$ 64,139,104
Executive Management	\$ 5,022,302	\$ 11,800	\$ 1,350,331	\$ 3,671,972	\$ 5,022,302
Community Relations	\$ 1,685,614	\$ -	\$ 189,963	\$ 1,495,651	\$ 1,685,614
Safety & Security	\$ 556,067	\$ 4,584	\$ 102,752	\$ 453,316	\$ 556,067
Project Management Services	\$ 13,275,280	\$ 223,700	\$ 4,379,236	\$ 8,896,044	\$ 13,275,280
Engineering & Construction	\$ 89,113	\$ -	\$ 23,817	\$ 65,296	\$ 89,113
EMU Engineering & Management	\$ 32,082,556	\$ 312,544	\$ 6,079,933	\$ 26,002,623	\$ 32,082,556
IT Support	\$ 1,027,272	\$ 1,901	\$ 174,936	\$ 852,336	\$ 1,027,272
Operations Support	\$ 1,878,589	\$ -	\$ 266,079.16	\$ 1,612,509	\$ 1,878,589
General Support	\$ 2,599,547	\$ -	\$ 471,875.32	\$ 2,127,672	\$ 2,599,547
Budget / Grants / Finance	\$ 712,123	\$ -	\$ 18,142	\$ 693,981	\$ 712,123
Legal	\$ 1,207,500	\$ -	\$ 343,124	\$ 864,376	\$ 1,207,500
Other Direct Costs	\$ 4,003,139	\$ 158,292	\$ 810,447	\$ 3,192,692	\$ 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	\$ -	\$ -	\$ -	\$ -	\$ -
<b>EMU SUBTOTAL</b>	<b>\$ 664,127,325</b>	<b>\$ 712,821</b>	<b>\$ 14,210,636</b>	<b>\$ 649,916,689</b>	<b>\$ 664,127,325</b>

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.

**Table 8-3 PCEP Budget & Expenditure Status**

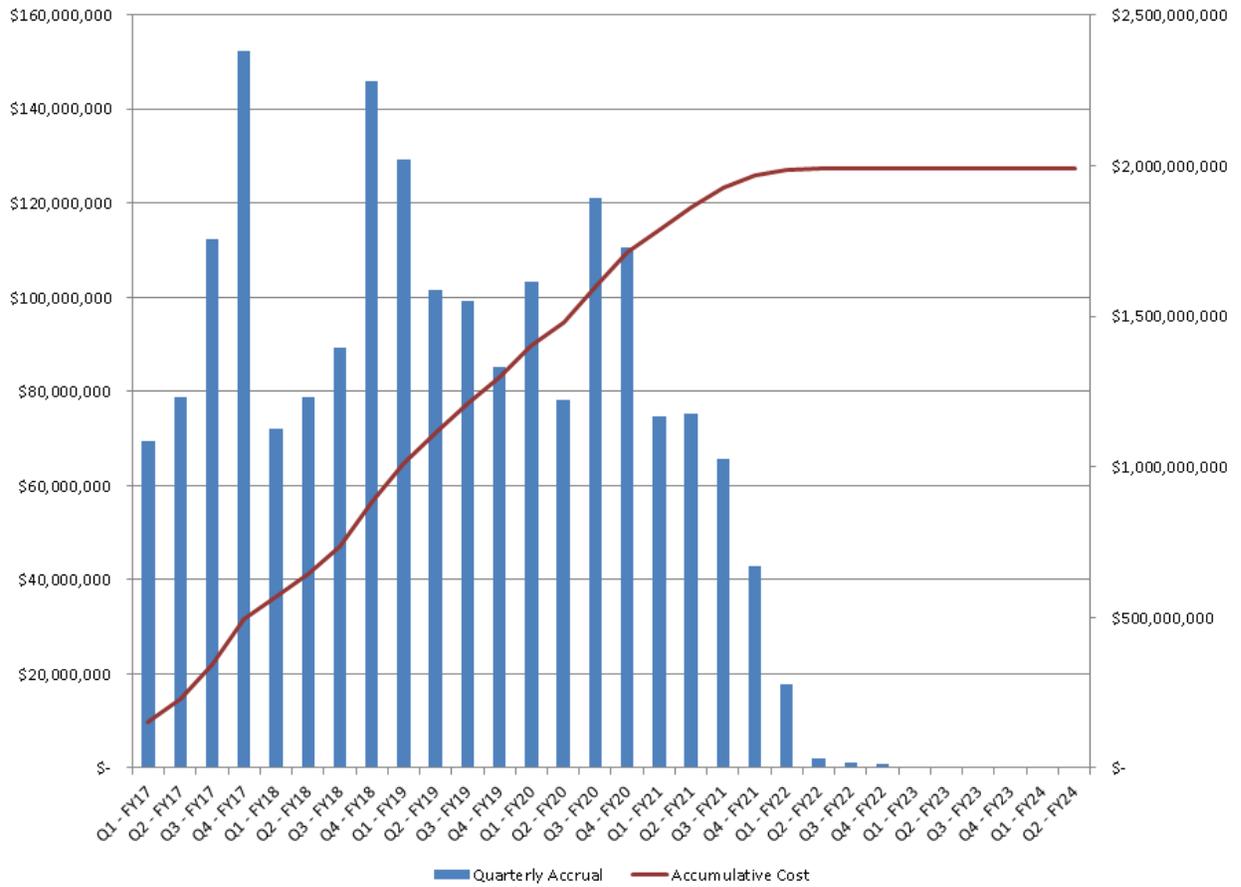
Description of Work	Budget (A)	Actual This Period (B) <sup>1</sup>	Accrued To Date (C) <sup>2</sup>	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
Electrification Subtotal	\$ 1,316,125,208	\$ 734,706	\$ 65,432,231	\$ 1,250,692,977	\$ 1,316,125,208
EMU Subtotal	\$ 664,127,325	\$ 712,821	\$ 14,210,636	\$ 649,916,689	\$ 664,127,325
<b>PCEP TOTAL</b>	<b>\$ 1,980,252,533</b>	<b>\$ 1,447,527</b>	<b>\$ 79,642,867</b>	<b>\$ 1,900,609,666</b>	<b>\$ 1,980,252,533</b>

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 below.

**Figure 8-1 Program Cash Flow Projections**

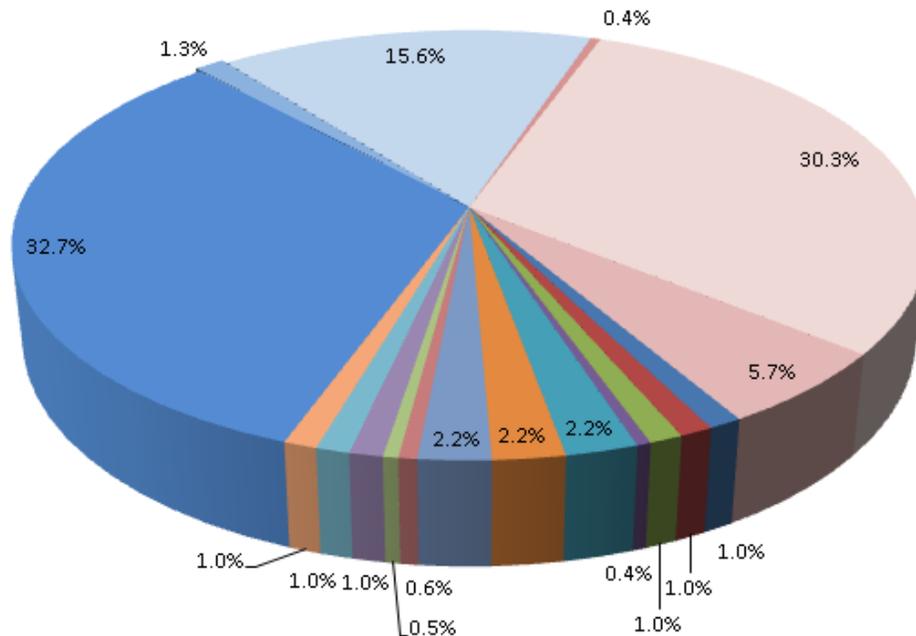


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**9.0 FUNDING**

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. In August, the California High Speed Rail Authority (CHSRA) Board with the City and County of San Francisco authorized the execution of the 7-party Regional Funding Supplement as well as the funding agreement to provide the original \$600M to the project identified in the 9-Party Memorandum of Understanding (MOU). The JPB was also notified by the California State Transportation Agency it will receive \$20 million in Transit Intercity Rail Capital Program funding. With the receipt of this grant and execution of the agreements by the CHSRA, all non-core capacity funds have been committed to the project.

**Figure 9-1 Funding Plan**



- \$647,000,000 FTA Core Capacity
- \$24,900,000 FTA Section 5307/5337 (Environmental / Pre Development only)
- \$309,770,000 FTA Section 5307/5337 (EMU only)
- \$8,000,000 Prop 1B (Public Transportation Modernization & Improvement Account)
- \$600,000,000 Prop 1A
- \$113,000,000 High Speed Rail Cap and Trade
- \$20,000,000 Transit & Intercity Rail Capital Program
- \$20,000,000 Carl Moyer
- \$20,000,000 RM2
- \$8,400,000 RM1
- \$43,170,000 SFCTA
- \$43,170,000 SMCTA Measure A
- \$43,170,000 VTA Measure A
- \$11,000,000 Bridge Tolls
- \$9,000,000 Caltrain Low Carbon Transit Operations Cap and Trade
- \$20,000,000 Santa Clara (VTA) Contribution
- \$20,000,000 San Francisco Contribution
- \$20,000,000 San Mateo (SMCTA) Contribution

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## **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.

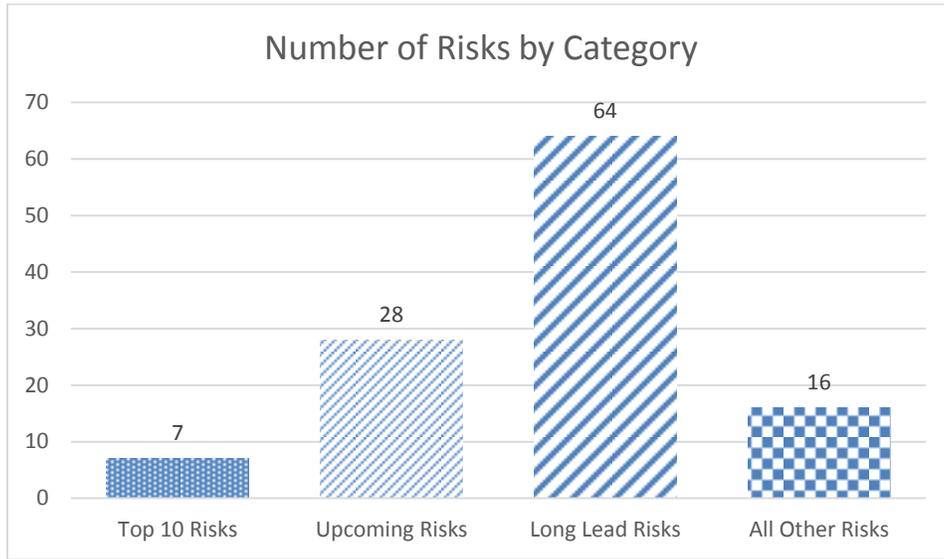
The Risk Management team has identified the following items as Top Risks for the project:

- If overhead utilities are not relocated in time, the Electrification contractor (BBI) 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.
- Transit America Systems Inc. (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 Union Pacific Railroad (UPRR) tracks. This will require further coordination with UPRR and the negotiation of a broad range of issues.
- Recruitment of key staff to the Program is an on-going effort.
- Delays in locating and relocating underground utilities may result in delays to the installation of the electrification system.

### **Activity This Month**

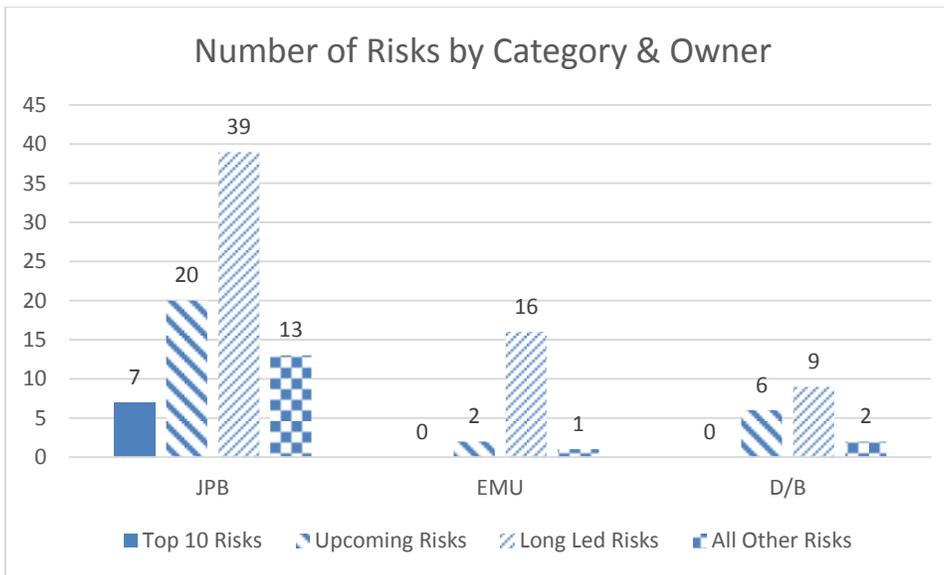
- PCEP Team participated in FTA-led risk refresh workshop and supported the effort by providing details and background on the risk register.
- Updates were made to risk descriptions, effects, and mitigations based upon weekly input from risk owners. Monthly cycle of risk updating was completed based 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.
- Continued weekly 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.

**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

## **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 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, SFBRWQCB, CDFW and the SF BCDC is 2016.

### **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>

#### **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**

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 schedule and relocation schedule, responsibilities of relocation, applicable design standards of relocation, 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 of relocations, agreements for the relocations, and design of relocations.
- PCEP Team continued work with UPRR, PG&E and other power providers to resolve relocation requirements with California Public Utilities Commission (CPUC). Until CPUC defines relocation requirements, work by the utilities cannot begin. This could result in significant delays to the DB contractor.
- Held joint review meetings with UPRR, power utilities (PG&E, Palo Alto, and Santa Clara Valley), and CPUC to discuss relocation requirements.

### **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.
- Relocation notices will be prepared and distributed.
- Coordination with UPRR, PG&E and other power providers to resolve relocation requirements with CPUC will continue. PCEP staff will work with telecommunication utilities to resolve relocation requirements with CPUC. Until the CPUC requirements are finalized, relocation cannot be finalized.

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## **13.0 REAL ESTATE**

The PCEP requires the acquisition of a limited amount of real estate including fee simple purchases, temporary easements, and permanent easements for various purposes. The PCEP Real Estate Program Management Team manages the acquisition of all property rights, including acquisition of fee simple title, temporary easements, and permanent easements. In general, Caltrain uses existing ROW for the PCEP, but will need to acquire additional real estate to expand the right-of-way (ROW) to accommodate installation of OCS supports, and wayside equipment (i.e., traction power stations, switching stations, and paralleling stations). 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. The ROW team continued work to complete all remaining appraisals for Segment 4. The JPB concurred with settlement amounts for all remaining Segment 2 acquisitions during the Closed Session of the Board meeting on August 4, 2016. Concurrence by the Board will allow the team to make offers. Real

- Segment 4 Status:
  - Initial parcels required for construction have been approved by JPB and are currently in progress for acquisition.
  - Negotiations are on-going on parcels 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:
  - Appraisal packages are complete for Segment 2 parcels.
  - The JPB provided concurrence on the settlement amounts for 20 parcels for Segment 2 at their August 4, 2016 meeting.
  - Phase 1 Hazmat assessments for Segment 2 have been completed. It is currently not anticipated that Phase II work will be needed for Segment 2.
  - The ROW team prepared offer presentation packages for six properties in Segment 2.

### **Activity Next Month**

- Continue negotiations for all outstanding offers.

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- Begin to present offer packages for remaining Segment 4 parcels and for Segment 2 parcels.
- Complete Phase II Hazmat assessment work for two commercial properties in Segment 4.

**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
<b>Total</b>	<b>64</b>	<b>32</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*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 <sup>1</sup>	City and County of San Francisco	In Process
		City of Brisbane	Executed
		City of South San Francisco	Executed
		City of San Bruno	In Process
		City of Millbrae	Executed
		City of Burlingame	Executed
		City of San Mateo	Executed
		City of Belmont	In Process <sup>2</sup>
		City of San Carlos	Executed
		City of Redwood City	In Process <sup>2</sup>
		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	In Process <sup>2</sup>
		City of Santa Clara	In Process
	County of Santa Clara	In Process <sup>2</sup>	
	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 <sup>3</sup>
	Operating Rules	California Public Utilities Commission (CPUC)	In Process
Transportation & Railroad	Construction & Maintenance	Bay Area Rapid Transit (BART)	Executed <sup>4</sup>
	Construction & Maintenance	California Dept. of Transportation (Caltrans)	In Process
	Trackage Rights	Union Pacific Railroad (UPRR)	Executed <sup>4</sup>

Notes regarding table above:

<sup>1</sup> 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.

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

<sup>3</sup> Master agreement and two supplemental agreements.

<sup>4</sup> Utilizing existing agreements

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## **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 August:

- **Presentations**

- Presented at SAMCEDA Policy and Housing and Land Use Committees
- Presentation at City and County Staff Coordinating Group
- Presentation at the Caltrain Citizen Advisory Committee
- Presentation at Local Policy Maker Group
- Testimony at the US House Railroads, Pipelines, and Hazardous Materials Subcommittee

- **Third Party/Stakeholder Actions**

- Unanimous support at SF Supervisors Committee regarding the 7-party Supplemental MOU
- Unanimous support at California High-Speed Rail Authority regarding the 7-party Supplemental MOU
- Unanimous support at San Mateo County regarding City Agreements
- Participated HSR Community Working Group Meeting
- Signing Ceremony Event with Key Stakeholders

- **Stakeholder Meetings**

- Meeting with the Potrero Hill Boosters
- Meeting with Senate Appropriations Staff
- Meeting with Diridon Station Working Group

- **Press Releases**

- Press Conference with U.S. Transportation Secretary Foxx at Santa Clara Station

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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 authorized the award of both the EMU and DB contracts at the July 7 board meeting. The LNTPs are expected to be issued in September 2016 for the EMU contract and the DB 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 August.

### Bids/Qualifications/Proposals Received this month

No Bids/RFQs were received in August.

### 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 (WO)/Purchase Order (PO) awards and amendments issued in August 2016.

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**Table 17-1 WD/PO Awards & Amendments**

<b>Work Directive No.</b>	<b>Task Description</b>	<b>Firm</b>	<b>Cost (Thousands) <sup>1</sup></b>
8505	EMU Consultant Support (July – Sept 2016)	LTK	901,183
8506	Elect EIP Support (D. Irwin) (July – Sept 2016)	LTK	60,300
8507	Electrification Support (July – Sept 2016)	GFI	1,498,605
8508	Program Management Support (July – Sept 2016)	AECOM	955,006
8509	EMU EIP Support (L. Welch) (July – Sept 2016)	AECOM	118,995
8510	Project Delivery Director Support (D. Couch) (July – Sept 2016)	DConsult	157,450
8511	Systems Safety Support (July – Sept 2016)	B&G	106,336
8517	IT Applications Support (A. Alano) (July – Sept 2016)	CompuCom	28,350
8532	Communications & Outreach Support (July – Sept 2016)	HNTB/Circle Point	27,623
8563	IT Applications Support (H. Charns) (July – Sept 2016)	Modis	79,822
8564	Chief Officer Support (M. Burns) (July – Sept 2016)	Transportation Consultant	66,250

Note: 1. Fiscal year 2017 Work Directives will be issued for LNTP Q1, incl. funding (July – September 2016)

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

**Table 17-2 Upcoming WD/PO Awards & Amendments**

Work Directive No.	Task Description	Firm	Cost (Thousands) <sup>1</sup>
8505-A1	EMU Consultant Support (Oct – Dec 2016)	LTK	TBD
8506-A1	Elect EIP Support (D. Irwin) (Oct – Dec 2016)	LTK	TBD
8507-A1	Electrification Support Oct – Dec 2016)	GFI	TBD
8508-A1	Program Management Support Oct – Dec 2016)	AECOM	TBD
8509-A1	EMU EIP Support (L. Welch) Oct – Dec 2016)	AECOM	TBD
8510-A1	Project Delivery Director Support (D. Couch) Oct – Dec 2016)	DConsult	TBD
8511-A1	Systems Safety Support Oct – Dec 2016)	B&G	TBD
8517-A1	IT Applications Support (A. Alano) Oct – Dec 2016)	CompuCom	TBD
8532-A1	Communications & Outreach Support Oct – Dec 2016)	HNTB/Circle Point	TBD
8563-A1	IT Applications Support (H. Charns) Oct – Dec 2016)	Modis	TBD
8564-A1	Chief Officer Support (M. Burns) Oct – Dec 2016)	Transportation Consultant	TBD
8582	Real Estate Project Management & Coordination - Segment 2 & 4	BRI	TBD
8674	Ops Simulation Plan	LTK	TBD
8430-A1	Appraisal Services Segment 2, 6 Parcels	BRI	TBD
8173-A2	Tree Avoidance	ICF	TBD
7428-A1	PCEP Permitting Support	ICF	TBD

Note: 1. Fiscal year 2017 Work Directives will be issued for LNTP Q1, incl. funding (July – September 2016)

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## **18.0 TIMELINE OF MAJOR PROJECT ACCOMPLISHMENTS**

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

<b>Date</b>	<b>Milestone</b>
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
2015	JPB Approves Final CEQA Environmental Impact Report (EIR) JPB Approves Issuance of RFP for Electrification JPB Approves Issuance of RFP for EMU
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 Receipt of EMU BAFO Completed the EMU Buy America Pre-Award Audit and Certification Negotiations completed with Stadler US, Inc. for EMU Vehicles Negotiations completed with Balfour Beatty Infrastructure, Inc., the apparent best value Electrification firm JPB Approves Contract Award (LNTP) Balfour Beatty JPB Approves Contract Award (LNTP) Stadler US FTA approval of Entry into Engineering

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**APPENDICES**

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Appendix A – Acronyms

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

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

**USFWS      U.S. Fish and Wildlife  
              Service**

**VTA         Santa Clara Valley  
              Transportation Authority**

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Appendix B – Schedule

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